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REPORT

TO THE

PARLIAMENTARY BILLS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION ON VACCINATION PENALTIES: THE PRINCIPLE OF COMPULSION IN VACCINATION.

By ERNEST HART,

Chairman of the Committee.

The Vaccination Act Amendment Bill of the Present Session.—The introduction into the House of Commons by Mr. Dodson, as representing the Government, of a bill designed to abolish multiple penalties for the non-observance of vaccination, and thus virtually to condone the permanent violation of a most necessary and health-preserving law by the payment of a merely nominal fine, is unquestionably an event deserving the very serious consideration of the Parliamentary Bills Committee. The question is one, moreover, upon which they have a peculiar right to be heard; for nine years ago, when a similar proposal was made in Parliament, and had actually been passed by the House of Commons, they were successful in getting it rejected in the House of Lords, and in securing its omission from the Vaccination Act of 1871. Dr. Stewart's motion, passed at the meeting of the Parliamentary Bills Committee on the 28th June 1871,* "That the purchase of immunity from the operation of the Act provided by Clause 10 of the Vaccination Amendment Bill is vicious in principle, and that such clause should be expunged," seems to me to be in perfect accord with the whole of professional and legislative experience on the subject. I am not oblivious of the fact that reasons of policy may be urged for this new (and entirely gratuitous) proposal of the Government; but I do not think that in a matter of this sort, affecting the life and health of the entire nation, expediency should take precedence of the requirements of the public health. The bill, if passed, will be legislation for the benefit of the few at the expense (the very terrible expense) of the many; and I hope to be able to show that such a bill is not required, and that the principle of compulsory vaccination is one that is accepted by the enormous mass of the people, and has been affirmed with increasing stringency by successive Parliaments. The arguments in favour of compulsory vaccination in the abstract are of much too complex and diffuse a kind to find any place in a report of this nature,† even if the committee needed to be assured of its necessity; but it may not be without profit to trace the gradual growth of the system of compulsion in this country, for the purpose of enlightening those who believe that the vaccination laws have been hastily and unthinkingly passed by the Legislature, under the pressure of public fear during epidemics. Our English vaccination law is a system of gradual growth; and, though there are undoubtedly defects in it, it is as excellent a system as such a law can well be. To carelessly sap its foundations, as it is now proposed to do, calls, I think, for the very strongest protest on the part of the profession and of this committee.

Vaccination Laws in Foreign Countries.—Very soon after the discovery of vaccination, most of the European Governments made provision for affording its benefits to the people of their respective countries. Even so early as 1803 an ordinance on the subject was issued in Sweden; and ordinances were issued soon afterwards in Denmark, and in several of the German states. At the date of the death of Jenner (1823) very few of the countries of Europe had not made laws and regulations as to vaccination (making it directly or indirectly compulsory), with the exception of the country of his birth and of the origin of vaccination. At the present time there are but few countries of Europe that have not a vaccination law of one kind or another. It is difficult to get accurate information on this head; but vaccination is compulsory in Germany, under a law of the 8th April, 1874 (Reichsimpfgesetz), making vaccination obligatory during the first year of life, and re-vaccination obligatory on every scholar of a public or private school in the course of his twelfth year. Fines up to fifty marks or imprisonment for three days may be imposed for contraventions of this requirement. This imperial law has replaced a number of ordinances that existed in various States now included in the empire, all of which made vaccination compulsory in some form or other. Thus, in Bavaria, which was the first country in which vaccination was made compulsory, every child was, by a decree of 1807, to be vaccinated before the 1st of July in the year following its birth. Fines were imposed on recalcitrants, and the law became a conspicuous success, a very small proportion, indeed, of the children not being vaccinated at the proper time. In Wurtemberg, all children had to be vaccinated within three years of birth, and there was a register of vaccination in each commune. Similar laws were in force in several other of the German States, as Baden, Hanover, and Electoral Hesse, till they were abrogated by the Imperial law of 1874. Indeed, it was only about a dozen years ago that anyone in Baden could marry who had not a vaccination-certificate. Vaccination is stated also to be compulsory in Norway, Sweden, all the cantons of Switzerland except three, Greece (where in times of epidemic the Government has the power to vaccinate all who have not been vaccinated, and to re-vaccinate all who have been vaccinated more than seven years ago) in Roumania, in Turkey (since 1850), etc.* Vaccination is not compulsory in Belgium, Italy, Spain, or France; although the compulsory vaccination of recruits under the conscription laws, and the requirement of vaccination certificates at all the national and free schools, go far in this direction. In France, an attempt is now being made by Dr. Liouville, the deputy for the Meuse, to obtain the assent of the Chamber of Deputies to a bill providing for the compulsory vaccination of infants within six months of birth, and for compulsory re-vaccination every ten years, in the tenth, twentieth, thirtieth, fortieth, and fiftieth year of life. Contraventions of this law are proposed to be punished by a fine of from 1 to 25 francs, and in case of a second offence by a fine of 25 to 100 francs. I do not feel called upon to offer any observations on this bill at the present moment, but it at least shows that the principle of compulsion and of punishment for neglect to comply with the law of vaccination is thoroughly appreciated elsewhere than in England.†

The first English Vaccination Law: Inquiry of the Provincial Medical and Surgical Association.—The first law with reference to vaccination made in England was passed in 1840; and it behoves us especially to remember that this Act was the immediate outcome of the labours of the Association, which has now grown into the immense and influential body of which we have the honour to be members. So fatal and prevalent was small-pox in the early part of the present reign, and so inadequate was the provision made for vaccination in the country, that the Provincial Medical and Surgical Association, at its annual meeting of 1838, appointed a committee to "inquire into the present state of vaccination in England". In the very able and comprehensive report which this committee drew up, and which may still be read with interest and instruction, the whole subject of vaccination up to that date was reviewed and commented upon. The committee traced the continued prevalence of small-pox partly to the continuance of variolous

* See BRITISH MEDICAL JOURNAL for July 1st, 1871, page 23.

† In a little pamphlet, however, which I have recently published through Messrs. Smith, Elder, and Co., on *The Truth about Vaccination*, the advantages of compulsory vaccination will be found fully set out.

* See Dr. Vallin in the *Revue d'Hygiene* for June 15th, 1880, page 415.

† It is stated, on the authority of a German book (*Die Impfung*, Darstellung des auf dem Gebiete der öffentlichen Gesundheitspflege.... Gileisten, Berlin, 1878), that Napoleon the First made a decree as to vaccination, but after his fall it became a dead letter. I have not been able to ascertain for certain whether or not this statement is correct.

inoculation, but chiefly to the neglect of vaccination. They showed that no proper provision for the vaccination of the poor existed, and they pointed out the necessity for a public system of vaccination. The Association, adopting the report, drew up a petition to Parliament, which was presented early in 1840, praying the Legislature to take steps to restrict the practice of small-pox inoculation, and to establish a system of public vaccination. They represented "that at this time there is no sufficient provision for the vaccination of the poor in this kingdom; that the practice, as offered to the poor at our public institutions in towns, as well as by private individuals, is by no means adequate to the wants of our greatly increased population"; and they suggested that the State should remedy this evil "by appointing regularly educated vaccinators, with suitable salaries, in districts sufficiently numerous to embrace the whole of the poor population of the country, and who shall offer gratuitous vaccination at stated periods to all within their bounds, keeping accurate registers of their proceedings, and communicating regularly with the National Vaccine Establishment".* These suggestions of the Association show that a medical organisation and supervision of public vaccination were contemplated by them; and considering the pains and care bestowed by the Association upon the subject, it is surprising that these important matters should not have received consideration at the time. But they were entirely lost sight of in the measure which Parliament then adopted for the extension of vaccination, and their full importance was not recognised by the Government for nearly twenty years after.

The Vaccination Act of 1840.—When the petition of the Association was presented to the House of Lords on March 10th, 1840, by the late Marquis of Lansdowne, Lord Ellenborough at once suggested that a Bill should be introduced to give effect to the wishes of the petitioners, and two days afterwards he presented such a Bill to the House. With the alterations made in it in its various stages, this Bill became our first vaccination law (3 and 4 Vict., c. 29). Its main features were that it provided the means of vaccination, at the public cost, for every person in England and Wales, by directing guardians of the poor to appoint one or more qualified medical practitioners to vaccinate all persons resident in the district who chose to avail themselves of the privilege. It also provided that any attempt to inoculate or otherwise produce small-pox should be punishable by imprisonment. The Act was not restricted to paupers; all persons had a right to claim vaccination at the public cost; and, with the view of making this intention clearer, an Act was passed in the next Session declaring in express terms that public vaccination was not of the nature of "parochial relief, alms, or charitable allowance", and did not therefore deprive the recipient of any "right or privilege", or subject him "to any disability or disqualification whatsoever" (4 and 5 Vict., c. 32).

Disadvantages of Public Vaccination being under the control of Poor-law Guardians.—The benefits conferred by this Act were very great, the small-pox death-rate being immediately and markedly reduced. But there were certain considerable drawbacks to the method of administering the Act, the chief of which was that it had to be worked by the guardians appointed for the relief of "the poor". Perhaps no other arrangement was at the time possible; but it is certainly remarkable that, during the forty years that have since elapsed—years of the inception and growth of sanitary administration, and the formation of authorities responsible for the sanitary welfare of every corner of the kingdom—the administration of the vaccination laws should still be allowed to remain in the hands of the local destitution authorities. It cannot be doubted that this has had a marked effect upon the imperfect readiness with which the working-classes avail themselves of the gratuitous vaccination of their children offered them by the State. No class of persons has such a horror of arrangements for the relief of the poor as those just above the ranks of pauperism. This is, of course, a proper feeling, and one to be encouraged; but free vaccination is not medical relief, and indeed has been expressly so defined by a special Act of Parliament. Notwithstanding this, and the efforts which the Poor-law Board and Local Government Board have constantly made to impress the fact upon the minds of the public, there has been (especially in the early days of the law, when the new Poor-laws and the Poor-law Commissioners were most unpopular) very great difficulty in securing the proper administration of the Act, because of its being under the control of boards of guardians. I quite think that it is a subject well worthy of consideration whether vaccination should not be removed from the control of Poor-law guardians to that of sanitary authorities, or combinations of sanitary authorities. I see no reason why, so soon as medical officers of health independent of private practice have been appointed throughout the country—a reform which is urgently needed for many reasons—such officers should not be *ex officio* vaccinators for their respective districts. Under such a system, we might hope for a much more perfect performance of the operation than is now witnessed in many parts of the country, because the operators would be highly skilled and their opportunities for vaccination much wider.

With regard to the Act of 1840, it was matter of notoriety that its success was largely hampered by the fact that many of the public, who were little able to pay a proper fee for vaccination, but were yet far from being paupers, would not avail themselves of the advantages offered by the guardians. Even the Poor-law Board expressed, eight years after the system had been in operation, their regret that people were deterred from seeking public vaccination because of its administration through their department; and, in 1854, the President of that Board openly expressed his doubts in the House of Commons "whether it was the wise course to place vaccination in connection with the Poor-laws in any way". So, however, it has remained up to the present, and doubtless it will be difficult now to disturb an arrangement of such long standing.

Inquiry of the Epidemiological Society.—The effects of the apathy which the public displayed in respect to vaccination, as thus administered, at once attracted the attention of the Epidemiological Society on its foundation in 1850. Though there had been a very considerable reduction in the small-pox mortality of England, the deaths from that cause were still more than five thousand every year. The Epidemiological Society appointed a Committee to investigate the causes of this mortality, and to suggest the remedies. In the course of the long and laborious investigation instituted by this Committee (of which the lamented Dr. Seaton was the honorary secretary and ruling spirit), they corresponded with nearly two thousand medical men engaged in vaccination both at home and in the colonies, and gathered together a vast fund of information as to the practice abroad. The great outcome of the inquiry was that the serious mortality from small-pox was not due to any diminution of the prophylactic power of vaccination, but to a still continuing neglect of it, and to the imperfect way in which vaccination had in many instances been performed. In the Report presented to the Society, and subsequently to Parliament,* the Committee showed that, on the part even of those parents who were glad to avail themselves of public vaccination for their children, there existed an habitual procrastination, which left the children exposed to small-pox at the very period of life when they are most liable to its ravages; and that, while the fatal force of that disease is most felt under one year of age, the rule was not to vaccinate children till they had more than reached that age.

Need for Vaccination being made compulsory.—Amongst the remedies which the Committee suggested were, that it should be made *compulsory by penalty* on every parent to have his child vaccinated, health permitting, within three months of birth; and that the birth-register should be the main basis for ensuring this compulsion, a child whose birth was once inscribed therein being followed up until the vaccination was also registered. I only allow myself one quotation from the Committee's Report, which, being the work of Dr. Seaton, was, like all his work, very careful and exhaustive:—"It is our unanimous conclusion that no measure which does not render vaccination *compulsory*, in some form or other, will be sufficient to ensure the efficient protection of the population of this country from the ravages of small-pox: a conclusion which is fortified by the fact that a very large majority of those medical practitioners who, in their replies to the queries issued by the Society, have proposed any remedy for the prevention of small-pox, have urged the necessity of compulsory vaccination. The mode of rendering vaccination compulsory it must be for the Legislature to determine; but, in the event of its being desirable to introduce a system of fines, we would suggest that the commencing fine be a small one, and that it be augmented from time to time until the requirements of the Act are complied with."

The Vaccination Act of 1853.—It so happened that just at this time Lord Lyttleton, having observed in the union of which he was chairman the very imperfect working of the law, had introduced into the House of Lords, without the knowledge of the Society, a Bill to make vaccination compulsory. He was communicated with by the Society, and subsequently modified his Bill considerably in order to carry out their suggestions. The Bill encountered some opposition out of doors with regard to its fundamental principle as well as its details; but that principle received the concurrence and confirmation of the Legislature, and the Act received the Royal assent on August 20th, 1853. By this

* "On the State of Small-pox in England and Wales and other Countries, and on Compulsory Vaccination, with Tables and Appendix," presented to the President and Council of the Epidemiological Society by the Small Pox and Vaccination Committee, 16th day of March, 1858. (House of Commons Sessional Papers, No. 434 of 1858.)

"Vaccination Extension Act", compulsory vaccination became the law of the land. Mr. Simon described it in 1857 as "a very important measure. Infantine vaccination was at length recognised at its full value. Henceforth it was to be counted among those conditions necessary for the maintenance of life, which a parent should not be entitled to withhold (any more than food or clothing) from his offspring."*

Mr. Simon on Compulsory Vaccination as an Interference with Private Rights.—Discussing the question as to the extent to which compulsory vaccination was an interference with private rights, Mr. Simon said:† "Persons unacquainted with the circumstances under which this law was made have doubted whether it was not an improper restriction of personal freedom. It being assumed, as the limitary principle of human law, that men may be left free to follow every inclination which relates only to themselves, it would certainly seem foreign to the principle of legislation to insist on one's caring for one's own health; and, if a man's having small-pox could affect none but himself, little need be said against his right of having it *ad libitum*. Even in this light, however, it deserves consideration that he who indulges a preference for small-pox does so to the detriment or danger of his neighbours; and, as they often suffer by his infection, so they might reasonably claim to be heard on that question of his privilege. Still the main object of the obligatory law, as I understand it, is not to prevent adults from circulating—if they be so minded—a personal taste for small-pox; its object is to prevent them from *compelling* (for in this case *allowing* amounts to compelling) their children to incur the worst perils of that disease. The interference of the law was an interference between parent and child: a kind of interference very sparingly exercised in this country, and the exercise of which on slight grounds would of course be intolerable. The practical justification of any such law depends on the amount of evil which it is designed to correct; and four or five thousand annual deaths by one specific parental omission constituted in this case a strong argument. It was under pressure of this appeal that the Compulsory Vaccination Act was passed. The option which the new law restricted was not that of a conscious agent deliberately preferring for himself the dangers of small pox to the securities of vaccination. The thousands who annually died of non-vaccination had never raised their voices for the privilege of unrestricted small-pox. The so-called 'liberty'—thenceforth to be abridged—was that of exposing unconscious infants to become the prey of a fatal and mutilative disease. It was this *liberty of omissional infanticide* which the law took courage to check."

Working of the Act of 1853.—By the Act of 1853 (16 and 17 Vic. cap. 100), it was required that every child whose health permitted should be vaccinated within three, or in the case of orphanage, within four months of birth, and that notice of this requirement should be given by the registrar to parents or guardians whenever a birth was registered. Parents or guardians who, without sufficient reason, after having duly received the registrar's notice of the requirement of vaccination, either omitted to have a child duly vaccinated, or the results of the vaccination inspected, were liable to a fine of twenty shillings. The impetus given by this Act to public vaccination was enormous. The year after its enactment the public vaccinations of children under one year of age were more than doubled; thus showing that the apathy felt by parents in bringing their children for vaccination was sufficiently counteracted by the threat of a small fine. But it was soon found that the Act was deficient in certain important respects, only two of which concern my present purpose. Though it was clearly illegal for a parent to neglect the vaccination of his child, and every parent so neglecting was liable to penalty and might be proceeded against by anyone who thought proper to do so, yet there was no officer whose business it was to set the law in motion. This was remedied by the passing of an Act in 1861 (24 and 25 Vic., cap. 59), which gave guardians power to appoint some person to institute and conduct proceedings under the Act, and made provision for meeting the expenses of all proceedings.

Question of Second Prosecutions under Act of 1853.—Another point was that the terms of the section of the Act of 1853, relating to proceedings, were such that it was held by the Court of Queen's Bench that a parent could not be convicted a second time for neglecting to have a child vaccinated. Lord Chief Justice Cockburn, in the case of Pilcher v. Stafford, tried on the 27th January, 1864,‡ said that there was no provision for a second notice by the registrar, and the Act did not meet the case of a continuance of neglect. If any other construction were admissible, a new offence would be repeated every day that the child remained unvaccinated. The continuous omission might be as much within the mischief intended as the failure to have the child vaccinated within the prescribed time, but it was certainly not met by the statute. This, however, could only be remedied by fresh legislation. It is important to note these words, because they bring us to the first hint of the continued prosecutions which are now such a bone of contention. It was not, however, for fourteen years after the Act of 1853 was passed that this defect was remedied, though the principle of compulsion was affirmed by the Legislature on at least three distinct occasions—in 1861, in an "Act to facilitate proceedings before Justices under the Acts relating to Vaccination" in England (24 and 25 Vic., cap. 59); in 1863, in an "Act to further extend and make compulsory the practice of vaccination in Ireland" (26 and 27 Vic., cap. 52); and the same year in an "Act to extend and make compulsory the practice of vaccination in Scotland"* (26 and 27 Vic., cap. 108).

Results of Central Inspection of Vaccination.—Meanwhile, the Vaccination Acts were, before the passing of the Act of 1867, very far short of what the Legislature had intended. Not only was the compulsion imperfect, and, as regards a great part of the kingdom, illusory, "but the condition which assuredly the Legislature intended to be a condition precedent to any enforceability of vaccination—the condition that thoroughly good vaccination, provided at the public expense, under proper and well notified arrangements, should everywhere and gratis be within reach of persons who may choose to avail themselves of it,† was very imperfectly realised. The results of the central inspection of public vaccination, which had been authorised by the Public Health Act of 1858 (21 and 22 Vic., cap. 97), as reported in the successive Annual Reports of the Medical Officer of the Privy Council, made so evident the defects of the Act of 1853 that in 1866 the Government brought in a Bill to "consolidate and amend the statutes relating to vaccination in England". This Bill, which was introduced by Mr. Bruce (now Lord Aberdare) as Vice-President of the Council, was read a second time without debate on the 8th March, but was referred on the 11th April, after considerable discussion, to a Select Committee.‡ The Select Committee reported on the 1st June; but on the 26th June the Ministry resigned, and the new Government withdrew the Bill, on account of the lateness of the session and the opposition it was likely to experience. The Lord President, however (the Duke of Buckingham), promised to consider the subject during the recess; and accordingly, on the 30th April, 1867, Lord Robert Montagu, who was at that time Vice-President of the Council, brought in a Bill similar to that of Mr. Bruce. After undergoing certain alterations in both Houses, this bill received the Royal Assent on the 12th August, and is still in force as the Vaccination Act of 1867 (30 and 37 Vic., cap. 84).

The Vaccination Act of 1867.—By this Act the obligation is imposed upon the parents of all children in England of having them duly vaccinated within three months of birth (section 16); or, in scattered districts, where public vaccination is performed at intervals of more than three months, when the opportunity of procuring public vaccination has been afforded (section 12). Neglect to take the child for vaccination within this period is an "offence" for which the parent can be proceeded against summarily, and for which he is liable to a penalty not exceeding twenty shillings (section 29). It will be observed that this offence is complete at the end of the three months or other period, and as therefore it can only be committed once, only one penalty can be inflicted on account of it.§

Repeated Prosecutions Sanctioned by Parliament.—Under section 31 of the same Act, however, an order for the vaccination of a child under fourteen years of age may be made by a Justice of the Peace if he see fit, upon the application of the registrar [now vaccination officer], and such order may be renewed or repeated again and again, as often as may be requisite, until the vaccination of the child is effected. This is not, it is true, said in so many words in the section, but it is the view of the clause which has been invariably held, and it has been distinctly confirmed by the Court of Queen's Bench. It was held by Lord Chief Justice Cockburn, in the case of Allen v. Worthy," that a person was rightly convicted for disobeying a second order, requiring him to have his child vaccinated, notwithstanding that he had been already convicted of disobedience to a previous order. He said: "It is clear that if the 31st section had not been introduced, the decision in Pilcher v. Stafford would have applied; but I think that that section makes all the difference as regards what may now be done with respect to a second offence and a second penalty. I think, therefore, that the power given by section 31 is not confined to one notice, one order, and one convic-

* *Papers relating to the History and Practice of Vaccination*, 1857, page 70.
† *Ibid.*
‡ Pilcher (appellant) v. Stafford (respondent), 33 *L. J.* (N.S.), M. C. 113; 9 *L. T.* (N.S.), 749; 4 B. & S. 775.

* As Mr. Dodson's Bill related to England only, I have not felt it necessary to do more than incidentally allude to the Scotch and Irish Acts, which differ in various important respects from those in force in England.
† *Fifth Annual Report of the Medical Officer of the Privy Council*, page 7.
‡ Hansard's *Debates*, third series, vol. clxxxii, 1243-1113.
§ See the case of Pilcher *v.* Stafford, before referred to.
" 39 *L. J.* (N.S.), M.C. 36; 21 *L. T.* (N.S.), 665; *L. R.* 5 Q. B. 163.

tion, but that the whole proceeding may be instituted *de novo*, so long as the disobedience continues.

Progress to Legislation: Appointment of Select Committee of 1871.—It appears to have been after the passing of the Act of 1867 that the league of anti-vaccinators began to make themselves heard; and so early as 1870 a Bill was introduced in the House of Commons by Mr. Candlish and Mr. Serjeant Simon, proposing to enact that no more than two orders should be made under section 31 of the Vaccination Act of 1867 for the vaccination of any one child. Though this Bill was not pressed, it was judged expedient by the Government of the day to propose to the House of Commons in the session of 1871 the appointment of a Select Committee "to inquire into the operation of the Vaccination Act (1867), and to report whether such Act should be amended." The labours of this committee, as is well known, were most thorough and complete. Their report,* with the appended evidence, is a document from which no one can rise without feeling that compulsory vaccination needs to be maintained if the nation would escape the horrors of unrestricted small-pox.

Further Witnesses as to Appeal Precautions.—It would be foreign to my present purpose to deal with the Committee's report, except in so far as it relates to the question of penalties. A good deal was said by different witnesses on the subject, and much variety of opinion was expressed. Mr. Candlish, M.P., thought that the penalties should be gentle, and should be limited to twenty shillings in respect of each fine, the repetition of penalties being abolished (Q. 58, 60, 69, 72). On this proposal Mr. Simon, in his official capacity of Medical Officer of the Privy Council, observed that he thought it would fully answer the purpose as regards the masses of the population (Q. 3386). Asked if he thought much harm would come from a few crotchety people being allowed to pay the fine rather than have their children vaccinated, Mr. Simon said (Q. 3390) that on the general population, very little effect would be in that way produced. The number of persons who really object to vaccination and would resist it, he believed not to be large, though there were plenty of people who required the compulsory law to make them have the vaccination performed in due time. But the number of persons who really object to vaccination, apart from those who, at a particular moment, are alarmed by the absurd falsehoods that have been propagated by agitators about the country, he believed to be very small. Later on, Mr. Simon said (Q. 3505) that if the parent, in spite of a *bonâ fide* penalty, will not have his child vaccinated, and the State, for reasons of its own, prefers not to press indefinitely for successive penalties, then it seemed to him that at this stage of the case must be substituted a new view of the parent's responsibility, and that he must be deemed to have accepted, instead of his former obligations, a special responsibility for otherwise guarding his child against small-pox. If he failed in this duty, and the child contracted small-pox, he should, without fail, be imprisoned for that failure of duty to protect his child.†

Mr. Simon and Mr. Fry on "Conscientious Objections".—Speaking of so-called "conscientious objections", Mr. Simon rightly said that when individuals set themselves up to struggle against the law, to see which should conquer, there was in such cases often "a strong dash of conceit, which makes the martyrdom less severe than it might seem to outsiders" (Q. 3504). To meet such cases, which is really what the Government are now trying to do, Mr. Fry, the present legal adviser of the Local Government Board, thought (Q. 3805) that a man might be exempted from penalty who took an oath or made an affirmation that he had conscientious objections to the vaccination of his child. I agree with the Select Committee, that if Mr. Fry's proposal was carried into effect as it stands, the law "would become a dead letter"; but I am not sure that if the conscientious objection was tested by making the affirmer pay something for it, and compelling him to appear publicly before a court of justice to testify to his conscientious objection, such a plan might not have its advantages over the proposed system of fines for the rare cases to which it would be applicable. The late Sir Dominic Corrigan proposed, with much insistance, that, in lieu of repeated penalties, unvaccinated children should be ineligible for admission to public schools, or to factories, or to the various public establishments in which young people are employed (Q. 4006, *et seq.*). I do not feel called upon necessarily to discuss this proposal; but I may point out that, in Spain and France, unvaccinated children are refused admission to the public schools and some other establishments. A somewhat similar prohibition prevails in parts of Germany and other countries. Certain other suggestions were made in the course of the inquiry with reference to this question of penalties, but I need not detain the Parliamentary Bills Committee with them.

Report of Select Committee.—I may pass at once to the very important report of the Select Committee, which, for reasons that will be sufficiently obvious, expressed the unanimous opinion of the Committee "that it is the duty of the State to endeavour to secure the careful vaccination of the whole population". On the question of the compulsory performance of vaccination, the Committee reported: "As it is almost impossible to enforce re-vaccination, it is most important that all children should be vaccinated, both for their own sakes and that of the community, to prevent their catching and spreading disease. There are three classes of children who being, by the conduct of their parents, left unvaccinated, are themselves in great danger, and may become centres of infection to others. 1. There are the children who are utterly neglected by their parents. 2. There is the much larger number of children of parents who, while not denying their duty or desiring to disregard it, postpone its fulfilment, and who, from carelessness or forgetfulness, delay to protect their children until driven to the vaccine station by the panic fear of an epidemic. 3. There are the children of those parents, very few in proportion to the whole population, who assert that vaccination will do harm. With regard to the first and second of these classes, there can hardly be any objection to the principle of a compulsory law, though there may be practical difficulties in its application; but, in dealing with the third class, it becomes necessary to weigh the claims of the parent to control, as he thinks fit, the medical treatment of an infant child, as against the duty of the State to protect the health of the community, and to save the child itself from a dreadful disease. While weighing these conflicting claims, your Committee have had to consider the effect of the change in the law introduced by the Act of 1867, which, contrary to the provisions of the previous English or present Irish Acts, makes the parent liable to repeated convictions and penalties for not allowing his child to be vaccinated. There appear to have been several cases of infliction of more than one fine or imprisonment in regard to the same child; and your Committee, though by no means admitting the right of the parent to expose his child or his neighbours to the risk of small-pox, must express great doubt whether the object of the law is gained by continuing a long contest with the convictions of the parent. The public opinion of the neighbourhood may sympathise with a person thus prosecuted, and may in consequence be excited against the law; and after all, though the parent be fined or imprisoned, the child may remain unvaccinated. In such a case the law can only triumph by the forcible vaccination of the child. In enactments of this nature, when the State, in attempting to fulfil the duty, finds it necessary to disregard the wish of the parent, it is most important to secure the support of public opinion; and, as your Committee cannot recommend that a policeman should be empowered to take a baby from its mother to the vaccine station, a measure which could only be justified by an extreme necessity, they would recommend that whenever in any case two penalties, or one full penalty, have been imposed upon a parent, the magistrate should not impose any further penalty in respect of the same child. It has been suggested that the parent's declaration of belief that vaccination is injurious might be pleaded against any penalty; but your Committee believe that, if the law were thus changed, it would become a dead letter. Prosecutions would soon cease, and the children of the many apathetic and neglectful parents would be left unvaccinated, as well as the children of the few opponents of vaccination."

Proposed Bill of 1871: Limit Number of Penalties.—I do not feel it needful on the present occasion to attack the logic of a report which, while considering it to be "the duty of the State to endeavour to secure the careful vaccination of the whole population", would give a not inconsiderable proportion of indolent and apathetic people the opportunity of escaping this requirement by paying a nominal fine. I pass on at once to state that, in accordance with the recommendation of the Committee, a clause was inserted in the Bill to the following effect. "10. After the commencement of this Act, no parent of a child shall be liable to be convicted for neglecting to take or cause to be taken such child to be vaccinated, or for disobedience to any order directing such child to be vaccinated, if either (*a*) he has been previously adjudged to pay the full penalty of twenty shillings for any of such offences with respect to such child; or (*b*) he has been previously twice adjudged to pay any penalty for any of such offences in respect of such child." This clause, which is identical with the clause now proposed by Mr. Dodson, was passed in the House of Commons by a majority of fifty seven to twelve, but was fortunately thrown out in the House of Lords. Though an effort was made to resuscitate it in 1872 by a Bill bearing the names of Mr. Pease, Mr. Leeman, and Sir Thomas Chambers, this was withdrawn, and since then the subject

* Report from the Select Committee on the Vaccination Acts (1871), ordered by the House of Commons to be printed, 14 July 1871. [Session papers of 1871.]

† At the time of writing, I am not aware whether the law is still in force, the parents of unvaccinated Prussian children were prosecuted if their children took small-pox.

has not again been raised in the House until the recent sudden proposal of the Government.

The Vaccination Act of 1874.—So far, indeed, has the House of Commons been from accepting the principle that Mr. Dodson now proposes, that in 1874 a further Act (37 and 38 Vic., c. 75) was passed to give power to the Local Government Board to make regulations prescribing the duties of guardians and their officers in relation to the institution and conduct of the proceedings to be taken for enforcing the provision of the Vaccination Acts (the Act of 1871 having left the law in a somewhat unsatisfactory position in this regard). Article 16 of the Order issued by the Local Government Board on October 31st, 1874, in pursuance of this Act, was as follows. "The guardians shall, in all cases in which the provisions of the Vaccination Acts for enforcing vaccination have been neglected, cause proceedings to be taken against the persons in default, and for this purpose shall give directions, authorising the vaccination officer to institute and conduct such proceedings; but no such directions shall authorise the vaccination officer to take further proceedings under Section 31 of the Vaccination Act of 1867 in any case in which an order has already been obtained, and summary proceedings taken under that section, until he shall have brought the circumstances of the case under the notice of the guardians, and received their special directions thereon."

Views of the Local Government Board on Repeated Prosecutions.—It seems to me that this is the right solution of the question, and I am quite in accord with the letter* which the Local Government Board addressed to the guardians of the Evesham Union on the subject of these prosecutions.† It is distinctly contemplated by Article 16 of the General Order of October 31st, 1874, that, independently of any proceedings which may be taken against the person in default, under Section 29 of the Vaccination Act, 1867, the vaccination officer shall be authorised to take proceedings against him if he continues contumacious, at least once also under Section 31 of that Act. Until, therefore, proceedings under the latter section have been taken in a case and a conviction obtained, the several means which the law provides with a view to ensure the vaccination of a child have clearly not been used. By Article 16 of the Order, it is provided that, in any case in which a magistrate's order has been obtained, and summary proceedings have been taken under Section 31 of the Vaccination Act, 1867, no further proceeding shall be taken by the vaccination officer without the express instructions of the guardians. The intention of this provision is that the guardians should carefully consider, with regard to each individual case, the effect which a continuance of proceedings is likely to have in procuring the vaccination of the individual child, and in insuring the observance of the law in the Union generally. It is, on the other hand, undeniable that a repetition of legal proceedings has, in numerous cases, resulted in the vaccination of a child, when such vaccination has not been procured by the previous proceedings; and it is therefore important, with the view of securing a proper observance of the law, that parents should be well assured that proceedings in case of non-compliance with its requirements will not be lightly discontinued. On the other hand, the Local Government Board admitted (and I agree with them) that, when in a particular case repeated prosecutions have failed in their object, it becomes necessary to carefully consider the question whether the continuance of a fruitless contest with the parent may not have a tendency to produce mischievous results, by exciting sympathy with the person prosecuted, and thus creating a more extended opposition to the law.

Mischief caused by Anti-vaccination Agitators, unless Prosecuted.—I must confess to entertaining the views of the Local Government Board (as enunciated in their Evesham letter) upon the particular question under discussion. The Board have guarded against an unduly zealous discharge of his duties by the vaccination officer, by providing that he is not to take more than one proceeding under each of Sections 29 and 31 of the Act of 1867, without the further directions of the guardians; and experience has certainly shown that guardians have generally erred on the side of over indulgence. Those persons who would appear from a casual view of the case, to have been prosecuted to the point of persecution for non-compliance with the Vaccination Acts, are almost invariably found to be those who go about the country, or about their district, spreading fabrications about the harm done by vaccination, and frightening mothers into thinking that their children will die or be permanently injured if they are taken to the vaccinator. It is absolutely necessary to prosecute such people, in order to secure due respect to the law; and it will be impossible to tell the mischief that will be caused if they are allowed to ride off triumphant against vaccination after the payment of a single fine of twenty shillings, or two fines which may be of nominal amount.

Parliamentary Return of Vaccination Prosecutions.—I have before me a return, made by order of the House of Commons, on the motion of Mr. James, of the proceedings taken against defaulters under the Vaccination Acts during the years 1872, 1873, and 1874.* I regret that I have been unable to obtain the figures for later years, as, although these were ordered by the House of Commons on the 29th July last, on the motion of Mr. Barran, the return has not yet been published. But the return for the three former years will afford a sufficiently good index of the extent to which these repeated prosecutions have been instituted. In England, at the present time, at least 95 per cent. of the births of every year are finally accounted for as regards vaccination, and the small percentage not accounted for contains cases postponed because of unfitness for vaccination, and cases which, though actually vaccinated, had not been so registered at the time the return was made. But the great majority of cases are those of children who, from removal of the parents or other cause, cannot be found. It can hardly be a matter of doubt that, if there were anything like the widespread feeling of opposition to vaccination that the anti-vaccinators aver, such results as these could not have been attained. It has, as a matter of fact, been found that, in the great majority of unions, the compulsory clauses of the Acts have not had to be put in force. Where such proceedings have been found necessary, it has not usually been on account of positive opposition (except in certain head-quarters of the league), but generally on account of the apathy and indolence of parents. Although there are between eight and nine hundred thousand births every year in England and Wales, I find on analysis that, during the years 1872, 1873, and 1874, there were only 637, 514, and 521 persons prosecuted under Section 29 of the Act; and 144, 199, and 228 prosecuted under Section 31. Of this number, only about 77 were prosecuted more than once. In 1874, the latest year for which we have information, whilst nearly three quarters of a million vaccinations were performed, only 749 persons were summoned for non-compliance with the law—521 being under Section 29 and 287 under Section 31. Under Section 29, as already stated, no second prosecutions are possible; and of the prosecutions under Section 31 the great majority were little more than nominal. In only about 50 cases out of the whole number had proceedings been pressed beyond the extent expressly laid down in Article 16 of the Orders of the Local Government Board.

Objections to Mr. Dodson's Bill.—It is beyond doubt inexpedient to excite opposition to the law by continued prosecutions against people who do not intend to have their children vaccinated, and who are, by such action on the part of the local authority, elevated to the dignity of martyrs. But I do not see how the State is to interfere in the matter if the vaccination of the country is not to suffer. It seems to me that, whether a parent is or is not to be prosecuted again must be a matter on which local knowledge is essential. The man may, by setting the law at defiance, be exercising a very injurious influence on his neighbours, and may by his individual action be seriously hampering the efficiency of the vaccination laws in his district. I do not think, therefore, that the limitation of penalties proposed by Mr. Dodson is a principle which this Association ought to approve. By it a man, if fined once in the sum of twenty shillings, is to be allowed to leave his child unprotected against small-pox, and to be a source of danger to the community. Translated into plain language, it means that for a sovereign he may buy exemption from the law of the land; it is a sale of indulgences. Equally objectionable is the proposal that, if a parent has been fined twice in any amount, he is similarly exempt. Under this clause, a man may pay two sixpenny or shilling fines, and remove his children from the operation of the vaccination law for ever after.

Suggestions.—If any change in the law in this respect is to be effected at all, which I would at the present moment strongly deprecate, it seems to me that a minimum of two prosecutions, one under Section 29 and the other under Section 31, with the maximum penalty at least on the last occasion, would be a more effectual way of testing the validity of the objections of a defaulter than that now proposed by the Government. A moderately severe fine under Section 29 would teach laggards that the law must be respected; and, if it then became necessary to resort to Section 31, the parent's objections would be fairly tested by a second prosecution. If, after the imposition of a fine under that section, the child yet remained unvaccinated, the particular circumstances of the case could then be taken into consideration, as at present. Moreover, it must not be forgotten that, even if a prosecu-

Parliamentary Paper, No. 110 of session 1876.

† The Irish Local Government Board hold even stronger views on this subject than their English colleagues. In a circular, dated 14th January, 1879, they observe: "Each case of default should be diligently and closely followed, until the child has been vaccinated, or the non-performance of vaccination has been satisfactorily accounted for."

* Parliamentary Return "Vaccination Act, 1867", ordered by the House of Commons to be printed August 6th, 1875 (see Paper 400, of 1875).

tion be instituted by the local authority, it is quite within the competence of the justices to refuse to make the order asked for, if they think fit. I would, therefore, most earnestly deprecate the sanction of this Committee being given to any such change in the law as Mr. Dodson would propose. The very large majority of defaulters are persons who are indolent and apathetic on the subject of vaccination; and these, sooner than take the trouble to bring their children for vaccination, will pay the bribe for being excused from it which Mr. Dodson's Bill would appoint. I trust, therefore, that the Committee, which was so successful in 1871 in securing the rejection of a similar clause, will use its influence against this proposed crippling of the law, which has been not improperly described as "the practical abolition of compulsory vaccination".

June 24th, 1880.

AN ILLUSTRATION OF THE SPECIFIC ASPECT OF PNEUMONIA.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the General Hospital, Birmingham, etc.

"PNEUMONIA", justly observes Dr. Sturges, "occupies a middle place between the specific fevers, so-called, and the local inflammations, and has something in common with both." The following particulars, simple in themselves, given to us by a very intelligent wife, whose husband was attended for fatal pneumonia by my friend Mr. Wilders and myself, together with the subsequent history, emphasise that part of the analogy which connects the disease with the specific fevers, in a manner which is probably more frequently accessible, were the introductory stages as carefully observed.

The case occurred in the person of a gentleman aged 70, of large build and vigorous constitution, but somewhat emphysematous. During the week preceding his illness, my friend had been attending him for an unimportant digestive disorder. On the Wednesday, he was thrown into a state of intense excitement by a very unpleasant business transaction, and was found by his servant in a state of extreme agitation and tremor. On Friday afternoon, he was somewhat exposed to the very cold east wind lately prevailing, and a little again on Saturday. On that afternoon, his wife, on her return from an absence from town of some days' duration, found her husband sitting in his greatcoat over a large fire—this, however, was his custom when he thought himself to have taken cold. She thought him pale and rather pinched. He passed a good night, but on the following morning (Sunday) she determined not to go to chapel, as she thought him unwell. He, however, denied being ill, and persuaded her to leave him; but he did not take his usual dinner, and immediately the meal was ended left the table, refusing dessert. Soon afterwards, however, he asked for an orange to allay his thirst. During the afternoon, he was very thirsty, drinking repeatedly and through a great part of the night was getting up, sometimes every hour, to drink milk or water. In the morning of Monday, he readily acceded to his wife's suggestion that he should put off receiving some friends till he was better. On the same morning, the only abnormal condition which Mr. Wilders could discover was some pain in the left haunch, which soon disappeared. The chest was even unusually free from morbid sounds; the pulse was 74. In the afternoon, being called upon to write a letter, he found himself unequal to the undertaking, and had to hand it over to his wife, only appending his signature; and having to enclose a second letter in the same envelope he became confused, and she had to give him help.

During the night, he became more confused; was getting out of bed continually to pass urine, and on one occasion forgot his purpose and returned to bed, having again to get out in a few minutes. As morning broke, the confusion had passed into mild delirium; and at 10 a.m. (Tuesday), Mr Wilders found his temperature 104.5, pulse 136, with mental confusion, and scanty but very characteristic rusty expectoration. The urine was free from albumen. He died at 11 P.M. of the next day from failure of the heart, the pulse exceeding 200 in the minute, and the intellect being very confused. The temperature, which had fallen in the morning to 102.4, had risen above 105. The expectoration continued scanty; the urine was copious. He afforded remarkable attestation to the fact that high pyrexia does not necessarily destroy digestion, inasmuch as, with his high temperature, he relished solid food to the last; he ate the breast of a chicken on the day preceding his death; and on his last day ate a chicken sandwich more than once, my colleague most judiciously following the lead of his patient's desire. The tongue was moist throughout. There was a commencing herpetic eruption on the lip. Respiration was 30. The single physical examination we were able to make discovered dullness with crepitation quite at the base of the left lung.

THE HARVEIAN ORATION,

DELIVERED AT

THE ROYAL COLLEGE OF PHYSICIANS,

Friday, June 25th, 1880.

By JOHN W. OGLE, M.D., F.R.C.P.,
Consulting Physician to St. George's Hospital.

MR. PRESIDENT, FELLOWS, COURTEOUS AND LEARNED VISITORS,—This is the great feast of our medical year, as it were our Asclepieia, formerly observed by us on the day sacred to St. Luke of our Gospels —the "beloved physician"—October 18th, but now kept on the anniversary of the opening of the building in which we are now assembled.*

We are here congregated amidst the effigies, the books, the relics, and memorials of our ancestors, "kindred spirits who rule us even from the tomb", in obedience to the will of one whose name is, and ever will remain, a household word, not only with those of our profession, but with all men of true science, and with all in the world who have at heart the welfare of the great body of humanity. We meet, each and all, to add a leaf to the laurel chaplet on the bust of the venerable and illustrious Harvey—the chief honour and ornament of our College, as Dr. Ent calls him—to cast incense upon his altar-fire, to do hearty homage to his undying memory, and to the grand work and method which for all time he has set before us his descendants as biologists and as practical physicians—"engaging in the sacred things of Apollo", to quote from Harvey. We this day spare a short hour from the absorbing current of our daily life, and strive to call to our recollection the character and aims and labours of Harvey, who has earned the eternal gratitude of mankind and of all in this College who followed in his wake, and to gather hence inspiration, guidance, and encouragement.

When I acceded, Mr. President, to your flattering desire that I should occupy the place in which I now stand, I did so out of unfeigned regard to yourself (*cui multum debeo*) and your distinguished office; out of staunch loyalty and allegiance to the College, of whose ancient dignity we must needs all be proud; and out of respect to the existing Fellows, Members, and Licentiates. But it was not without much hesitation; nor was my diffidence diminished when I came to review the efforts of my predecessors in this place, whether I regard the substance and intrinsic value of their productions, the propriety of their style, or their *curiosa felicitas* of expression; and when, penetrated with a sense of my own incompetence, I considered how difficult they had made the task for those who were to succeed them in their office.

Whilst reviewing the scope and purport of the various former Orations, I found that of late years the plan which for the most part had been adopted in earlier times had been departed from, in that the work of our ancestors has of late received but inadequate notice and a somewhat too faint acknowledgment. No doubt there are some whose tendencies are ever to depreciate the present, and, *laudatores temporis acti*, to see good only in times gone by. But, engrossed by the rapid strides and the real progress which are being made in all branches of natural science, and by the marvellous assistance which the practice of our art is receiving from collateral and dependent studies, we are chiefly tempted, as I think, to be too narrow and unsympathising in our retrospect, and too regardless of the beneficent influence of tradition, and of those who laid the deep and solid foundation on which we have built and are yet building. We are a little unmindful of the tedious paths which have been trodden in the attainment of our present position. Basking in the glorious splendour of modern science, and with a future so full of possibilities, we somewhat ungratefully forget the gloomy night and obscure dawn through which the good and true workers of times past have painfully toiled.

I propose, therefore, in the first place, and by your permission, to draw attention in a cursory manner to our forerunners and earlier benefactors; remembering how honourable and useful an observance it is to pay tribute to the memory of those illustrious dead who in their generation have handed down to us the torch by which we are illumined, trusting that our example may in turn benefit those who come into our inheritance.

Aristotle has said, "If Timotheus had not existed, we should have lost much music. Yet if Phrynis had not been we should have had no

* To the President, Sir Henry Halford, June 25th, 1825.

Timotheus. For we have received some opinions from certain philosophers, yet were there others to whom these owed their existence."

Anyone approaching this room in which we are assembled may have seen on the wall above, and at the head of the first flight of stairs, the emblazoned arms borne by our College. The arms were presented by Christopher Barker, Garter King of Arms, September 20th, 1546, twenty-eight years after the College was founded by Henry VIII, and, as all our Fellows know, appear at the upper part of the letters by which we are bidden to our committee meetings. Therein are depicted a hand feeling the pulse, an outstretched arm, and beneath, the pomegranate fruit, both most fitting emblems of our craft. The hand and pulse typify that which is the central truth of all in our profession that we know and act upon, viz., *the circulation of the blood*. The pomegranate, gaping that the included fruit may find an exit,* no doubt typifies the mysterious powers of what we call Nature.

May we suppose that the form of the human head which also appears in our letters of invitation above-mentioned, surrounded by emanating rays of light, is that of Apollo or the Sun, whose beams carry so many beneficent influences?

Familiar in some degree with the history of medicine in times gone by, and reflecting how all knowledge is gradually evolved and has its roots firmly and deeply implanted in the past, that no science, as Harvey says, "can flow save from pre-existing knowledge of more obvious things", permit me, passing over the most ancient epochs, to give a glance, of necessity sketchy and superficial, at the general history of our art, as regards such of its particulars as bear on the subject which I have chiefly in hand, viz., the works and method of Harvey.

Referring to the teaching of the Greeks in provinces of knowledge cognate to the medicine of the present, let us dwell for a short time on the glimpses which the sightless Homer gives us into the rough-and-ready method of the time when disease and death were in a great measure referred directly to the anger and interposition of the gods, and the modes of their prevention traced to a celestial origin.

Homer must be acknowledged to have been, as well by necessity as by choice, an attentive and curious watcher of Nature and her operations. His works show that the ancient Greeks had their physicians, in addition to their soothsayers and magicians, and he speaks of the art of medicine as well as of chariot-driving, prophecy, and navigation; and both the *Iliad* and the later *Odyssey* indicate that in the times to which they refer mankind had decided notions respecting the functions of the blood and of the action of the atmosphere. They had theories as to certain principles of animal and vegetable life; considerable knowledge of the character, treatment, and varied consequences of different kinds of wounds, and of the process of embalming the dead—knowledge gathered, no doubt, from observation in the sacred temples, in their schools of medicine and gymnasia.

It is of much interest to note that Homer records the arterial jet observed in wounds. He was also doubtless aware of the dependence of fevers upon the influence of the hot sun on marshland, as exemplified in his allegory of the action of Apollo's cruel darts on the Grecian soldiery; and he mentions the salutary use of sulphur as a disinfectant in epidemic disease. We are told that venesection was first resorted to among the Greeks in the Trojan war.†

Passing over a period of four hundred years, in the literature of which time are to be found imbedded in the fanciful cosmogony of philosophers, poets, and dramatists, allusions to theory and practice connected with our art, but in which, although medical schools of renown, as well as sacred temples to which the sick resorted, had been established in Greece, nothing of any real significance was written—we have the celebrated multifarious collection of medical writings with which the name of Hippocrates, that "divine old man" to whom the same honours as to Hercules were accorded, was especially associated.

Hippocrates, living at a period of unprecedented intellectual and ideal development, contemporary with Pericles, Thucydides, Sophocles, Æschylus, Democritus, Plato, and Socrates, and coming of a family connected with the study and practice of medicine, appears to have accumulated all that had been written by his ancestors on the subject. He seems to have striven to detach medicine from theology, and to base his general views and principles upon what appeared to be well ascertained and established facts, in what people often call the true Baconian spirit. Without seeking to explain phenomena, he specially directed his mind to the investigation of what we now term the natural history of disease. Hence it was that he was able to say that the medical art consisted entirely in observation, and hence it was that he was led to consider pathology as merely perverted and degraded pathology. To quote from an admirer, Dr. Daremberg, "Hippocrates cast such a splendour on medicine that it was immediately exalted into the rank of a positive and independent science, of an art liberal and submitted to precise rules". Our own practical Sydenham had called him "the Romulus of medicine, whose heaven was the empyrean of the art".

Being unable to gain information by dissection of man, though he had some knowledge of comparative anatomy—forasmuch as, like the pupils of Pythagoras, who preceded him, he was in the habit of examining the bodies of lower animals—it was impossible that he should have more than a slender and imperfect acquaintance with human anatomy. He thought the arteries, being found empty after death, contained only air during life; that the heart was the seat of the soul and the source of the heat of the body, and was kept cool by the action of the surrounding lungs. He observed sudden death to follow a wound of the heart. He considered the veins to be vessels carrying the nourishing blood to the body; and that the right ventricle of the heart and what we call the pulmonary artery supplied blood to the lungs solely for their nourishment. He was ignorant of the use of the nerves, and did not attribute to the brain any other function than that of a spongy gland.

Hippocrates recognised what is often termed a vital principle, and, though he has various meanings for it in his writings, he uses the word which we interpret Nature as indicating a power, or being, or intelligent action which superintends and regulates, and, so to say, co-ordinates the various functions of the organs, whether healthy and natural, or disturbed and altered.

Though he admitted and adopted many fanciful conceits and hypotheses, and ascribed diseases to alteration of the fundamental humours of the body (in which he was partly correct), he was a most studious and careful observer and historian of morbid processes; and this, co-operating with the influences of the Pythagorean doctrine of numbers, guided him to the recognition of crises and critical days, and to the use of fires for the prevention of the spread of epidemics. In addition to the use of remedies, many of which we ourselves now use,* Hippocrates laid great stress on bodily exercise, dietetics, and what we call hygienic treatment, using various forms of blood-letting freely, and cauterising with the moxa in cases of gout.

I will close this short notice of Hippocrates by quoting the following summary of his work and manner.

Dr. Daremberg observes: "No one since Hippocrates has had a higher idea of the dignity of medicine; no one has shown more respect for the sick, and more care for their cure—or, at the least, for their comfort and consolation. No one has shown more admiration for useful discoveries, more care to complete them; more deference for conscientious physicians who apply their intelligence to every part of the art, however insignificant it may be; more indulgence for the errors inseparable from all science and art—inasmuch as a consummate skill is seldom seen, and even in the case of good physicians resemblances cause mistakes and embarrassments; more aversion for such physicians as, altogether occupied by their fortune and reputation, make display of their learning, fondle the prejudices of the vulgar, and govern their conduct by the profit that they can draw from them; no one, in fine, who has given proof of so much experience and good judgment in the daily relations which the medical profession establishes between the physician, the patient, and the rest of the world."

Passing to the immediate followers of Hippocrates, I will only allude to the writings of the mighty thinker and naturalist Aristotle, the disciple of Plato, whose power of procuring all kinds of objects of interest through the means placed at his disposal by his royal master was almost illimitable. He made remarkable advances in comparative anatomy, and it was he who first gave the name of aorta to the large vessel which we know by that name. He also first described the large vessels as arising from the heart, but did not see the distinction between veins and pulsating arteries, as did his contemporary Praxagoras, who was the first to use the word pulse, but who, however, thought, as did Hippocrates, that the arteries only contained air, partly because after death they were empty, and partly because in the lungs they were thought to communicate with the bronchi.

Aristotle had clearer notions about the use of the nerves than his predecessors, but supposed that they had their origin from the heart, which organ he considered to be the seat of the affections of the mind.

* Harvey has this expression when speaking of the loosening of the ossa pubis and the enlargement of the whole hypogastric region, which occurs, as he says, "in a most miraculous manner", during labour.

† It may be noticed that he describes a case of lesion to the brain followed by a remarkable tendency to rolling around the arena shown by the injured person—a phenomenon connected with certain forms of cerebral mischief, which, I need hardly say to this audience, has of late years attracted much attention. It appears, also, that he was acquainted with hydrophobia. All his readers will remember that he mentions the Papaver somniferum, and probably the Cannabis Indica, under the name of Nepenthe. We must also not forget that many of the anatomical words and designations which we meet with in the Homeric Hymns are in use amongst us at the present day, and in connection with this fact the story of Achilles with his vulnerable heel will not be forgotten.

* From him we inherit the use of the poppy-juice, henbane, hemlock, hellebore, scammony, colocynth, elaterium.

The brain was, in his opinion, for the purpose of control and regulation of the heat of the heart. He held that during waking and sleeping there was a flux and reflux of blood like that of the sea, the Euripus. His erroneous hypothesis guided all the views of physiologists, and was the source of incalculable mischief until the time of Harvey.

In the school of Alexandria, the famous library of which was superintended by Aristotle (alluded to by Livy as "*Elegantiæ regum curæque egregium opus*"), anatomy made great advances, human dissection being encouraged by the Ptolemies; and the discoveries of Herophilus and Erasistratus, who belonged to it, were manifold and most important. The former of these two observers described with wonderful accuracy and ingenuity many parts of the brain; and the latter in a great degree recognised the difference between motor and sensory nerves, tracing the nerves up to their connection with the brain and spinal cord, and recognising to some extent the dependence of the action of muscle upon the integrity of nerve; and both noticed the lacteal vessels, though they were unacquainted with their use. They carefully described the valves of the heart, but still, like others before them, they looked on the arteries when in a healthy state as conveying only air, and they considered the veins to arise from the liver—ideas which, no doubt, as has been said, retarded for centuries the discovery of the circulation of the blood.

From Herophilus we have the name "trachea", and from him arose the false idea that the air (which in the philosophy of the time was looked on as the origin of life, the "spirits") which it conveyed was carried by the pulmonary veins to the left side of the heart, and thence by the aorta through the entire body. He also thought the arterial pulse was transmitted from the heart by the walls of that vessel.

The medical school of Alexandria considerably departed, however, from the teaching of the great Hippocrates, though it inculcated his theories of the "humours"; but it was a noted school for surgery, and some have tried to show that the operation of lithotrity was practised there.

Leaving now the consideration of what we can gather in connection with the matter I have in hand from the teaching of the Greeks, I will pass to the introduction of the cultus of Æsculapius into Rome. The inhabitants of this city, overwhelmed by pestilence, sought advice, as we are told, at the temple of this divinity at Epidaurus, in the Peloponnese. One of the sacred snakes, it appears, was sent from the temple, and on its journey to Rome escaped and found its way to an island in the Tiber; and on this island a temple was erected, in which the god was in future worshipped. That serpent, as we know, became henceforth the symbol of our art.

Italy having been colonised by the Greeks, Greek physicians and their practices were introduced into Rome, a distinct physician being allotted to each part of the body. Subsequently, as we read, the Romans, in accordance with their habits of personifying the phenomena of external nature, worshipped various deities consecrated to Health, Fever, Malaria, Midwifery, and to the various viscera of the body, and also to the bones; and the various votaries of medicine were divided into numerous controversial sects, wrangling with each other as to points of unattainable character, such as hidden and final causes, *à priori* reasoning, and other philosophical and metaphysical questions.

In course of time, the study of human anatomy was greatly advanced by comparative anatomy, and notably by the dissection of apes; and the nervous system was considerably studied.

Aretæus, who flourished in the time of Nero, like Hippocrates, thought that the heart contained the essence of the soul and life of man, and was the immediate cause of the breathing in animals, by reason of its action on the lungs; and also taught that the portal system in the substance of the liver anastomosed with the branches of the vena cava.

We now come to the time of the learned and astute and ingenious Galen, who lived in the first century of our era, the friend of Marcus Aurelius, of whom in England we have heard so much of late, whose philosophico-medical system prevailed, notwithstanding the discovery of the circulation of the blood, until the middle of the eighteenth century.

Galen was a close observer of material objects and operations, the first to practise reliable experiments, and for the most part an ardent supporter and [illegible] of the doctrines of Hippocrates, though greatly mixed up with the fantastic and hypothetical systems of medicine (so called) founded on the philosophy of Plato and Aristotle.

He adopted the theories of the humours and the four elements, and believed in the three kinds of spirits—the vital, the animal, and the natural—all flowing from one great cause, Nature. With him, heat is the potent principle which everywhere operates; and he studied comparative anatomy to a considerable extent, and also certain departments of experimental physiology.

From the [illegible] of M. Renan.

Some assert that he would have dissected the baboon, had he not thought the comparison with man might provoke opposition to such a procedure (an objection which certainly would not be offered in the present day); whilst others declare that he studied the internal anatomy of man, having opportunities of dissecting the bodies of criminals, victims of war, gladiators, and exposed children. At any rate, whether as a result of human necropsy or of analogy from the study of the lower animals, he advanced anatomy in a remarkable way, especially as regards osteology, the nervous system, the functions of nerves and spine and of the vascular systems; and he has bequeathed to us a good proportion of our anatomical nomenclature. Much of his physiology was, of course, mistaken. Thus, for example, whilst he was correct in considering the faculty of sensation and motion to be connected with the brain, he attributed this connection to the presence of an ethereal vital spirit, which he supposed to reside in that organ, and to be transmitted thence along the nerves.

Respecting Galen's views on the nature and circulation of the blood, he looked on this fluid as being elaborated and produced by the liver, the veins of which he considered to be the roots, so to say, of the general venous system. The heart, the seat of the greatest heat, and, as he terms it, the acropolis of the body, was recognised by him as being muscular and not under the dominion of the will, and as unprovided with nerves. He saw, by opening the thorax of living animals, and of those killed in sacrifice, that the auricles and ventricles contracted and dilated alternately, but he did not perceive that the blood was propelled by this contraction. He knew that the contact of cold water with an exposed heart would arrest its movements. He had had the opportunity of seeing the contraction of the heart in the case of a boy, who, by means of an accident at a gymnasium, had lost a portion of the sternum—an opportunity also enjoyed, as we know, by Harvey.

He thought that the blood, which was the origin of all the tissues of the body, was sucked in by the heart at its disastole, just as the air is by a pair of bellows, or as steel, as he said, is drawn by the magnet; and that the blood was distributed to the various parts of the body by a kind of attraction or selection acting upon it. He demonstrated pretty accurately the mechanical arrangements and use of the valves of the heart, and described the foramen ovale—known subsequently as Botalli's duct—as also its closure after birth, and was conversant with the "ductus arteriosus."

He knew experimentally that the arteries contained blood, for, as he said, if we ligature a portion of an artery of any animal in two places, and open it between the two threads, blood is found in the vessel; and he is said to have practised arteriotomy for the relief of pain.

It was his opinion that the vena cava and pulmonary artery were for the purpose of carrying the blood, containing a limited amount of a rare and subtle spirit, which it obtained from the left ventricle by means of small openings through the septum of the ventricles to the mass of the body and the abdominal viscera; but that it was the province of the pulmonary veins and of the aorta to transmit a large portion of this spirit with a limited amount of blood to the more important organs of the lungs and brain. He was thus [illegible] *arterial* and venous *blood*, the one being for the purpose of development and nutrition, the other for vital warmth. The passage of the spirit above mentioned to the lungs by the pulmonary veins, he thought, was permitted by the condition of the valves on the left side of the heart. He failed to discriminate 'twixt respiration and the pulse. Looking upon the heart as an organ of respiration, he thought that the thinner portions of the blood passed from the right to the left ventricles, *through the orifices in the septum above mentioned*, by virtue of the forcible dilatation of the latter, although he confessed he had never actually seen these apertures in the dead and rigid human body.

He determined also that, as the pulmonary artery carries by far more blood to the lungs than these organs require for their nutrition, the overplus, so to say, must find its way to the left side of the heart by way of the pulmonary veins. He considered that a species of anastomosis existed between the arteries and veins of the body. He combated the idea of Erasistratus, that the inhaled atmospheric air as such passed from the lungs to the pulmonary veins and the left side of the heart, and supposed that its only use was for cooling the blood.

The view above mentioned as to the passage of the spirit and blood through the septum of the ventricles may, I would suggest, have possibly originated from, or at any rate been supported by, the examination of the hearts of certain lower animals, in which foramina in the septa of the ventricles may have existed. For example, I find that my friend, the late Dr. John Davy, in his *Physiological Researches* (1863), page 534, describes the heart of an alligator from Ceylon, in which several small openings were found in the ventricular septum, some of which would admit a probe.

Dr. Bell Pettigrew has described the existence of an opening between

the ventricles in some of the snakes, and has figured it in a paper "On the Valves of the Vascular System" (see *Trans. Royal Soc. of Edinburgh*, 1864); and Professor Owen informs me that the Chelonian reptiles are instances of intercommunicating foramina, or passages in the substance of the ventricles of a four-cavitied heart. This structure is figured in Owen's *Anat. of Vertebrates*, vol. i, page 510, fig. 337.*

Again, in the Museum of the Royal College of Surgeons is a preparation of the heart of a serpent (*Pytho Tigris*), showing the incomplete character of the wall dividing the aortic from the pulmonary chamber of the ventricle, which also intercommunicate by several apertures of different sizes near the apex of the ventricle.†

Galen's therapeutical and anatomical views held sway through the middle ages, amidst all the conflicting teaching of the different schools of medicine and philosophy, and through all the social and national fluctuations which the world experienced (and in spite of the fact that, at the end of the thirteenth century, human dissection was permitted), until the time of the restorer of descriptive anatomy, Vesalius, and of Servetus, in the middle of the sixteenth century. In the meantime, however, it may be mentioned that the word "*capillaries*" had been applied to the small vessels of the liver by a teacher of the famous school of Salerno, the "*civitas Hippocratica*", and *the valves of different veins had been noticed* by Cannanus, Sylvius, and St. Estienne.

Sylvius, born towards the end of the fifteenth century, was the first to use injections for the purpose of demonstrating the course of the bloodvessels, and he observed the part played by the foramen ovale in the fœtal circulation.

Following him, must be mentioned Winter of Andernach, the master of Vesalius and of Servetus. He asserted that the *air inhaled by the lungs became altered within them*, an idea which no doubt had its fruit in the course of time.

Vesalius, eventually physician to Charles V and Philip II, breaking from authoritative teaching, differed greatly from Galen in many points of anatomy, but followed him pretty closely regarding his erroneous views of the physiology of the lungs and heart; considering, for example, that the heart was the origin of the heat of the body, and the dwelling-place of the affections of the mind. He recognised the valves of the veins as well as of the heart, but failed, as respects the veins, to see that they prevent the reflux of blood towards the heart; and, as did Galen, he thought the veins as well as the arteries carried blood from the heart. *He pointed out that intercommunicating openings do not exist in the septum of the two ventricles of the heart; and the establishment of this fact was, no doubt, the first very decided step towards the grand discovery of the general circulation of the blood.*

Vesalius was aware of the influence of artificial respiration. He recognised that Aristotle was wrong in supposing that the nerves took their origin from the heart.

We now come to a name that had the greatest possible influence on the true and proper theory of the blood's circulation, Michael Servetus, the impulsive, vain, sceptical, versatile, and metaphysical Spaniard. Endowed with a large measure of that imaginative faculty which now and then is so useful in science, by means of vivisections and varied experimental research, he made great advances in the physiology of the circulation and respiration, though the subject was in his hands entirely subsidiary to his views as to the function of a vital spirit, and explanatory of certain metaphysical and transcendental speculations. In fact, Servetus may be considered, as he has been termed, the inaugurator of practical physiology. Reflecting on the size of the pulmonary artery, he showed that the quantity of blood contained in this vessel was too much for the mere purpose of nourishing the lungs, and he recognised the fact that, in the fœtus, although the lungs required nourishment, no blood whatever is sent to them through this vessel before birth. Considering these facts, and seeing, as did Vesalius, that blood did not pass through the septum of the ventricles, he concluded that the blood must pass beyond the lungs, so to say, and must find its way from the right to the left ventricle through the lungs, mixing in its transit with air, and, by virtue of the expiration, freeing itself from what he terms fuliginous vapours. In this way, it became adapted as the dwelling-place of the vital spirit which was formed by a union of the inspired air with the most subtle part of the blood, and was substantially composed of water, air, and fire.

In fact, from the structure of the organs, Servetus inferred the mechanism of the smaller or pulmonary circulation as we hold it at the present day.

Servetus also taught that the blood underwent a change of character, acquiring a crimson colour and a "fiery potency", whilst passing across the lungs, and that, so changed, it found its way by the pulmonary veins to the left ventricle. He also taught that it was the mesentery which gave rise to the veins of the body.

The above views were committed to writing, but remained unpublished, owing to circumstances,* until about one hundred and fifty years after the time that he was shockingly and cruelly murdered by being burnt alive at the hands of the protestant Calvin.

Servetus clearly and incontestably saw and accurately described the smaller or pulmonary circulation, and in this way contributed a most important link to the chain of evidence of the general circulation. This was about the year 1553. Still, for him, as it had been for his predecessors, the movement of the blood in the general arteries and veins remained of a to-and-fro, a flux-and-reflux, and not of a circular character. The arteries were the sea of a double—an oscillating—current. The systemic or larger circulation was unrecognised.

Like others, Servetus thought that the venous blood originating in the liver was for the purpose of nourishment, and the arterial blood for the production of heat and for other special purposes.

Dr. Willis points out that Servetus does not speak of an intermediate system of vessels between arteries and veins of the body. Still, he may have had an intimation of the systemic circulation, as he speaks of "the natural spirits being communicated from the arteries to the veins by their anastomoses", but he did not think out his thought. When he speaks of the cerebral arteries ending in the cerebral membranes, or communicating the vital spirit with the tubes of the nerves, we may suppose that he had no accurate knowledge of the connection between the arteries and veins of the body by means of capillaries.

About the same period as Servetus, Columbus of Padua, relying on the results of vivisection, even more substantially established the same position.

Cæsalpinus of Arezzo followed. He was the first to use the word "circulation", but of necessity he failed to see the communication between the arteries and veins of the body by means of the capillaries, and he saw in the pulmonary veins a double current of blood—the one for the passage of air and blood *to* the left side of the heart, the other for the escape of fulingosities *from* the left side of the heart. He, however, proved by the anatomy of the veins, and by the effects of the ligature on them, that the blood did not flow along them in a direction from the heart. This was, of course, a most significant fact in the history of the circulation theory.

Cæsalpinus describes also the blood as being carried to the heart as to a heat-manufactory, and then propelled along the arteries to the entire body. He, however, traced the nerves, as well as the veins, to the heart, as did some of his ancestors.

The learned and excellent pupil of Fallopius, Fabricius, the master and friend of Harvey, at Padua, in 1574, gave a most complete and accurate demonstration of the structure, position, and uses of the valves of the veins.

[*To be continued.*]

THE DIAGNOSIS OF ROTHELN.

FROM the correspondence in the BRITISH MEDICAL JOURNAL, it would seem that there is a difference of opinion on the question of whether rötheln be a distinct disease, or a hybrid of measles and scarlatina. During the past autumn, we have had here a severe epidemic of measles and scarlatina; severe, because, in the village where the greatest fatality existed, the unsanitary conditions were simply frightful. Several cases of both diseases were typical, and, as rötheln was also prevalent, I had many opportunities of distinguishing between them. I found that an attack of rötheln afforded no protection from either of the others. Within twenty-four hours of the initial shivering and lassitude the rash appeared; it was quite distinct from that of scarlatina, but partook slightly of the character of that observed in measles. The throat was always affected, but never beyond what was just sufficient to cause the patient a little discomfort. In only one case was the temperature above 102°. There was no catarrh; always by the third day the patient was about well. There was then invariably a little branny desquamation, but never to the extent observed in scarlatina.

The late Dr. Tanner, in the earlier edition of his *Practice of Medicine*, seemed to think it was a compound of measles and scarlatina; however, in his last edition he has come to believe it a distinct disease, as from its invariable mildness it scarcely seems reasonable to think it a hybrid of two generally severe diseases.

Wansford, 26th June. FERGUS M. BROWN, L.R.C.P.Ed.

* On the same page is a figure of the heart of a more active, though cold-blooded, reptile, the crocodile, in which, though the septum ventriculorum is imperfect, that between the beginnings of the aorta and pulmonary artery is perforated, allowing circulation of mixed blood when the animal chooses to remain submerged. Professor Owen observes of it, "When actually respiring air, the semilunar valves are so disposed as temporarily to close the interarterial orifice, and the crocodile has the advantage of the cardiac character of the mammal".

† Preparation described in catalogue as 917 B.

See the interesting work by Dr. Willis.

LECTURES
ON THE
RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons of England, June 1880.

By HENRY TRENTHAM BUTLIN, F.R.C.S.,
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LECTURE III (Abstract).—CENTRAL SARCOMA OF BONE.

To the round-celled, spindle-celled, and mixed-celled groups, in which the subperiosteal tumours were arranged, must now be added a fourth group, to comprise the myeloid or giant-celled sarcomata. In this group I shall include only those tumours which are so largely constituted of giant-cells that these cells produce a decided effect upon the appearance of the tumour—in other words, that they colour the tumour maroon or red.

The 63 cases of central sarcomata here collected include 20 round-celled, 18 spindle-celled, 9 mixed-celled, and 16 giant-celled. For the better comparison of the central sarcomata, it will be convenient to adopt the same method as was employed in considering the subperiosteal tumours, and to study separately the tumours of the various bones affected. Those of the *femur* are again more numerous than the tumours of any other bone.

The *round-celled* tumours occurred in patients, most of whom were older than those who were the subjects of subperiosteal round-celled tumours. Only one case was of the upper epiphysis. In this case, the tumour became widely generalised. Among the organs affected by it were the lymphatic glands—a circumstance so rare, that in every case where it is noted I shall try with care to ascertain the cause. In this instance, it was probably due to the infiltrating nature of the tumour, which spread to the adductor muscles, whence it could obtain easy access to the deeper femoral glands, and thus spread along the lymphatic channels. With the exception of this case, these tumours were less malignant than the corresponding tumours of superficial origin.

One of the *spindle-celled* tumours, which grew from the upper epiphysis of the femur of a woman, thirty-six years old, was distinguished by being composed chiefly of cartilage of various forms, but for the most part cellular. It had been five or six months growing, when amputation at the hip-joint was performed. The patient died from blood-poisoning within three weeks of the operation, and at the necropsy a secondary nodule was found in the right lung. This case is mentioned particularly, because by many pathologists it would be regarded as one of enchondroma. But it is here ranged among the sarcomata on account of its rapid course and secondary affection of the lungs, and of the rich mingling with the cartilage of spindle-shaped and other cells. Affection of the glands was associated with one spindle-celled tumour, which, like the last, grew in the upper epiphysis. Of the relation which this glandular disease bore to the tumour I am not sure, but imagine the glands were affected through the medium of the blood and not of the lymph; for the femoral glands were not enlarged, those of the groin scarcely at all; while the glands of the pelvis and of one axilla were extensively diseased. If the disease of the pelvic and axillary glands was of the same nature, it is evident both sets of glands could not have been affected through the lymphatics from a single source.

The sub-group of *mixed-celled* tumours contains little of marked interest; for two of the patients were not traced after their recovery from amputation, and the third patient died from operation.

Of the *myeloid* tumours, I may point out that all five were unmixed with cartilage or similar tissue, and that neither of them grew into the surrounding soft parts. One case is distinguished by its fatal termination. In some respects, its history is very characteristic, not only of myeloid, but of other central tumours. Thus, the first symptom was pain, which endured a month, when the femur gave way almost spontaneously; but it was not till three or four months after the fracture the presence of a tumour was observed.

Regarding, now, the characters common to most of these tumours of the femur, the most apparent and most important are their less fatal nature, compared with the subperiosteal tumours, and often slower course. Of three patients, it is recorded they were alive and well at periods respectively of nine months, sixteen months, and three years after operation. Only eight deaths are reported—a mortality strikingly less than that of the cases of subperiosteal disease. Even of these eight deaths, three were due to causes directly connected with operation. Extensive generalisation was very rare. Affection of the glands, too, was very unfrequent. A noticeable feature in this group of tumours is the comparative simplicity of their structure; for, if we exclude two in which bony spicula were present, there remain only two with which cartilage was mixed. A strong disposition of central tumours to attack the lower epiphysis, or lower third, is very apparent. Lastly, many of the patients were older than those who suffered from subperiosteal tumours, the range of age extending from thirteen to fifty-seven, instead of from nine to forty-one; while the distribution of cases among the decades was pretty equal.

With perhaps one exception, the tumours of the *tibia* bear a similar relation to the tumours of the femur to that which exists between the subperiosteal tumours of the same bones. The exception is the rarity of ulceration of the integument. The points of accordance are the slightly more advanced age of the patients; the position of the growth, generally in the upper epiphysis of the bone; the longer duration of the cases, exhibited in the columns of duration to operation, of total duration, and in the final column; the absence of recurrence in the stump; and of affection of the glands. Let me here draw attention to the resistance offered by the articular cartilage to the growth of central tumours, not only of the tibia, but of all long bones. It maintains its integrity long after the hardest bone has been destroyed.

The two tumours of the *fibula* may be regarded as a kind of appendix to the tumours of the tibia. They occurred during the middle period of life, were of the upper epiphysis, and both displayed a less malignancy than the corresponding subperiosteal tumours.

The spindle-celled tumour of the *foot* occurred in the form of isolated medulla-like growths in the interior of several adjacent bones of the tarsus and metatarsus. The most interesting feature of the case was the condition of the lymphatic glands, for one popliteal, the lower inguinal, the pelvic, and the medistinal, were all affected by the disease. This is the only case of central tumour associated with affection of the glands in which the disease appeared to travel through the lymphatic channels directly from the bone. Nor can I offer any explanation of the cause of what appears to be a deviation from the common rule.

The first case of the group of tumours of the *humerus* is also an example of glandular affection, but of a different kind. There was a tumour of each humerus, and one of the medulla of one femur, but the mesenteric and retroperitoneal glands were the only soft parts affected. The relation of this gland affection to the tumours of the bones is not clear, but the disease could scarcely have been conveyed through the lymphatic channels.

The tumours of the *ulna* and *radius* attacked almost always the lower portion of each bone. A very modified malignancy is evident in four of the five cases, for even the fatal case is marked by a complete absence of secondary disease.

The cases of tumour of the *scapula* would be more numerous, were it not for the difficulty of deciding on their origin.

The central tumours of the *lower jaw* are far more numerous than those of subperiosteal origin, but I imagine No. 47 would more rightly be classed among the latter. Recurrence after operation is noted only of two of these cases, the one I have just mentioned, and a case in which the tumour was simply enucleated from the cavity in which it lay. In the latter the progress of the recurrent growth was very slow.

The tumour of the *sternum* might fairly be included with those of the skull; or might, perhaps, more rightly form one of a group, the members of which attack several bones almost at the same time.

The *pelvic* tumour did not affect the lymphatic glands, and the reason for this forbearance may probably be found in its relation to the cavity of the pelvis, and, therefore, to the glands. Almost the whole of the sacrum and coccyx was replaced by the new growth, which infiltrated the muscles posteriorly, but was limited in front by the periosteum, which separated it from the interior of the pelvis.

The tumours of the *skull* differ from the cranial subperiosteal tumours, first and most strikingly in the much older patients they attacked; second, in the fact that, although three of them were of the vault, only one produced multiple tumours of the skull. As in the subperiosteal tumours, so in two of these, there was wide-spread generalisation, chiefly in various bones. This leads me to speak of a class of cases in which many bones are attacked almost simultaneously by sarcomatous disease. This, I imagine, was the nature of a case recorded by Dr. Moxon* in the *Pathological Transactions*. Of course it cannot be absolutely asserted that most of these tumours were not secondary to one among their number. But their near equality in size, the absence of symptoms

* *Pathological Transactions*, vol. xxii., page 200 (1871).

Central Tumours of Bone.

No. of Case.	Sex.	Age.	Seat.	Simple or Mixed.	Affection of Surrounding Parts.	Duration to Operation.	Nature of Operation.	Total Duration.	Cause of Death.	Recurrence after Operation.	Affection of Glands.	Affection of Lungs.	Affection of Other Parts.
			Femur: Round-celled.										
1	F.	42	Lower epiphysis	Simple	0	96 months	Ampn. thigh	—	—	—		—	
2	M.	33	,,	Bony spicula	0	,,	,,	9 months	Disease	0		0	0
3	M.	37	Upper epiphysis	Simple	Ligaments & muscles	5 months	Resection	8 ,,	Pyæmia	0	Inguinal and lumbar	Yes	Liver, kidney
4	M.	20	Second and third thirds	,,	—	3 ,,	Ampn. thigh	—	—	—	0	—	(Well nine months after operation)
5	F.	21	Lower epiphysis	,,	0	3 ,,	,,	3 months	Shock	0	0	0	(No *post mortem* examination)
			Femur: Spindle-celled.										
6	F.	36	First third	Cartilage	Muscles	4 ,,	Ampn. hip	4 ,,	Pyæmia	0	0	Yes	0
7	M.	36	Lower epiphysis	Simple	0	4 ,,	Ampn. thigh	—	—	0	—	—	—
8	M.	13	First third	,,	Muscles	8 ,,	Ampn. hip	10 months	Disease	0	Axilla, pelvic	Yes	Tibia of same leg
9	M.	32	Third third	Cartilage		27 ,,	Ampn. thigh	27 ,,	Pyæmia	0		—	(No *post mortem* examination)
			Femur: Mixed-celled.										
10	F.	17	Lower epiphysis	Bony spicula	Muscles	2½ ,,	,,	—	—	0		—	—
11	M.	37	Lower third	Simple	—	4 ,,	,,	6 months	Pyæmia	0	0	0	0
12	M.	10	Lower epiphysis	,,	0	6 ,,	,,	—	—	0		0	
			Femur: Myeloid.										
13	M.	29	Lower epiphysis	Simple	0	10 ,,	,,					—	(Well sixteen months after operation)
14	M.	43	,,	,,	0	12 ,,	,,	—				0	—
15	F.	54	Second third or diaphysis	,,	0	0	0	8 months	Disease	0	0	0	0
16		18	Lower epiphysis	,,	0	7 months	Ampn. thigh		0	—		—	—
17	F.	21	,,	,,	0	15 ,,	,,	—	—	0		—	(Well three years after operation)
			Tibia: Round-celled.										
18	F.	45	Lower epiphysis	Simple	Muscles	25 ,,	Ampn. knee	26 months	Pyæmia	—	0	0	(No *post mortem* examination)
19	M.	27	Upper epiphysis	,,	0	6 ,,	Ampn. thigh			0		0	
20	M.	18	,,	Calcified	Ligmts. & muscles	30 ,,	,,			—	0		(Well five years and a half after operation)
			Tibia: Spindle-celled.										
21	F.	29	Upper epiphysis	Simple	—	13 ,,	,,	—	—	—		—	(Well a year after operation)
22	F.	54	,,	,,	Soft tissues & ligaments	13 ,,	,,	0	0	0	0	—	—
23	F.	43	Second third of diaphysis	,,	0	24 ,,	Ampn. knee	24 months	Exhaustn.	0	0	0	(No *post mortem* examination)
24	F.	65	Upper epiphysis	,,	—	3 ,,	Ampn. thigh	3 ,,	Bronchitis, etc.	0	0	0	0 0
			Tibia: Mixed-celled.										
25	M.	20	Upper epiphysis	Simple		18 ,,	,,	54 ,,	"Consumption"	0	0	—	0 0
26	M.	26	,,	,,	0	4 ,,	,,	—	—	0	0	0	0
27	M.	55	,,	,,	0	0	,,	12 months	Pyæmia	0	0	0	(No *post mortem* examination)
			Tibia: Myeloid.										
28	F.	32	Upper epiphysis	Bone	0	14 ,,	,,			—	0		—
29	M.	31	,,	Simple	0	18 ,,	,,	0		—	0		
30	F.	20	,,	,,	0	72 ,,	,,	—	—	0	0		—
			Fibula: Mixed-celled.										
31	M.	30	Upper epiphysis	Simple	Muscles	27 ,,	,,	33 months	Pyæmia	—	0	—	(No *post mortem* examination)
			Fibula: Myeloid.										
32	M.	37	Upper epiphysis	Simple	0	12 ,,	,,		—		0	—	(Well seven months after operation)
			Metatarsus: Spindle-celled.										
33	M.	31	Tarsal and metatarsal bones	Simple	—	—	0	11 months	Disease		1 popliteal, inguinal, mediastinal	Yes	0
			Humerus: Round-celled.										
34	M.	56	Upper epiphysis	Simple	Muscles		0	2 ,,	Disease	—	Lumbar and mesenteric	0	Other humerus and one femur
			Humerus: Spindle-celled.										
35	M.	70	Upper epiphysis	Simple	—	—	0	0	Pneumonia.		0	0	0
36	M.	73	,,	,,	0	1 month	Resection	1 month	?	0			
			Ulna: Round-celled.										
37	F.	30	Upper epiphysis	Simple	0	0 months	,,	—	—	0	0	0	0
38	F.	26	Lower epiphysis	,,	0	3 ,,	,,	6 months	Pyæmia	0	0	0	0
			Ulna: Spindle-celled.										
39	M.	20	Lower half	Simple	Muscles	12 ,,	Scooping out			0	0	—	(Well some months after operation)
			Ulna: Myeloid.										
40	F.	27	Lower diaphysis	Simple	0	72 ,,	Am. forearm	—	—	0	0	—	(Well four years after operation)
			Radius: Myeloid.										
41	F.	28	Lower epiphysis	Simple	0	12 ,,	Resection	—	—	0	0	—	0 0
			Metacarpus: Spindle-celled.										
42	M.	27	Second metacarpal bone	Simple	0	24 ,,	Removal of bone and forefinger	—	—	—	0	—	—
			Clavicle: Spindle-celled.										
43	M.	37	Sternal third	Simple	Muscles	15 ,,	Resection	—	—	—	0	—	—

CENTRAL TUMOURS OF BONE—*continued.*

No. of Case.	Sex.	Age.	Seat.	Simple or Mixed.	Affection of Soft Parts surrounding Part.	Duration to Operation.	Nature of Operation.	Total Duration.	Cause of Death.	Recurrence after Operation.	Affection of Glands.	Affection of Lungs.	Affection of Other Parts.
			Scapula: Spindle-celled.										
44	M.	4	Spine	Simple	Muscles	3 months	Resection	—	—	—	0	—	—
			Lower Jaw: Round-celled.										
45	M.	—	Body	Simple	0	18 ,,	,,	18 months	Shock	—	0	0	
46	M.	5	,,	,,	Muscles	7 ,,	,,	—	—	?	?	—	—
47	F.	5	,,	,,	0	2 ,,	,,	7 months	Disease	In 6 wks. & 3 mths.	0	—	(No *post mortem* examination)
			Lower Jaw: Spindle-celled.										
48	F.	17	Body	Calcified	0	12 ,,	Enucleated	—	—	Soon; removed 7 yrs. latr.	0	—	—
49	M.	—	,,	,,	Skin	120 ,,	Resection	12 months.	Operation	—	0	—	(No *post mortem* examination)
			Lower Jaw: Mixed-celled.										
50	M.	11	Body	Bone	,,	18 ,,	,,	—	—	—	0	—	—
			Lower Jaw: Myeloid.										
51	M.	30	Body	Simple	0	—	0	24 months	Mollities ossium	—	0	0	Two of jaw, one of sixth rib
52	F.	—	,,	,,	—	10 months	Resection	—	—	—	—	—	(Well three years after operation)
53	M.	27	,,	Bone spiculæ	0	10 ,,	Enucleation	—	—	0	0	—	(Well two years after operation)
54	F.	17	,,	Bone	0	5 ,,	Resection	—	—	0	0	—	(Well ten months after operation)
55	F.	—	,,	Simple	—	60 ,,	,,	—	—	0	0	—	(Well one year after operation)
			Ribs: Mixed-celled.										
56	F.	5	Shaft	Bone	0	—	0	3 months	Disease	—	0	0	Brain and head of femur
			Sternum: Round-celled.										
57	M.	2	Body	Simple	0	—	0	3½ ,,	Disease	—	0	0	Skull, ribs, vertebræ, pelvis
			Pelvis: Spindle-celled.										
58	F.	21	Sacrum	Bone	Muscles	—	0	12 ,,	Disease		0	0	0
			Vertebræ: Round-celled.										
59	M.	5	Sacrum and others above and below	Simple	Msc. etc.	—	0	21 ,,	Disease		0	0	Liver
			Skull: Round-celled.										
60	M.	7	Vault	Bone	0	7 months	Lig. common carotid	8 ,,	Hæmorrhage		0	0	0
61	M.	11	Vault occiput	Bone spiculæ	Soft parts		Incision	7½ ,,	Disease		Cervical and submaxillary	0	Multiple of skull, liver, spleen, ribs, and clavicles
62	M.	17	Vault	Simple	0	—	0	7 ,,	,,	—	0	0	Sternum, ribs, humerus, and vertebræ
63	M.	1	Sphenoid	,,	Adjacnt. bones	—	0	4½ ,,	,,	—	0	0	One rib

indicating long duration of any of them, and the absence of secondary affection of parts usually prone to such affection, all point to another origin than this. Probably several of the cases in this table are instances of this general sarcomatous disease; for example, the last three of those of the skull, that of the sternum, and perhaps the round-celled tumour of the humerus. All the tumours were round-celled, and the bones most frequently affected were the skull, the ribs, and the vertebræ.

Hitherto I have dwelt chiefly on the characters of the tumours of particular bones. Now let me point out certain features common to either or both of the two large classes. 1. As to their history and course: central tumours generally occur in persons older than those who are the subjects of subperiosteal tumours. Central tumours grow more slowly than do subperiosteal. Neither injury nor inflammation appears to exercise much influence in the production of either class of tumour. 2. The physical conditions of the tumours previously to their removal or to death are interesting in two particulars, their occasional pulsation and their situation. Pulsation was present more often in central than in subperiosteal tumours, in either case only in the tumours of certain bones, the femur, tibia, calvaria, and innominate bone. Where the cause of the pulsation could be ascertained, it was in every instance due to an abundant supply of vessels of moderate calibre.

Long bones, short bones, and flat bones are liable to sarcoma, but not all bones equally, nor even all the bones of each shape in equal proportion. The long bones of the lower extremity are more frequently attacked than the bones of the arm and forearm, the bones of the metatarsus and metacarpus are rarely affected, the phalanges almost never. The flat bones of the skull, the scapula, and innominate bone, are all subject to sarcoma, but the skull-bones most of all. None of the short bones are very liable to the growth of primary disease. But, more than this, these tumours show a decided preference for the articular ends or epiphyses of the long bones, and especially the tumours of central origin for one articular end of each long bone. In the upper extremity it is the upper epiphysis of the humerus, the lower of the radius and ulna; in the lower extremity it is the lower epiphysis of the femur, the upper of the tibia and fibula, which are most frequently affected. To these parts the following conditions appear to be common. They contain cancellous tissue in greater or less abundance; their position renders them liable to injuries of various kinds: in the process of development of the bones they are the parts which are the first to ossify, the last to be united with the shaft, and the direction of the nutrient artery is not towards but from them. 3. After removal of the tumour, a radiating appearance is observed on section of most subperiosteal tumours, which probably is solely due to the manner in which the tumour grows or is developed. For the chief growth or development takes place around the tiny vessels which pass from the periosteum almost at right angles through the cortex of the bone; and each of these becomes the centre of a column resting on the bone. 4. Their progress and termination show that all sarcomata of bone may be malignant, but their malignancy is of widely different degrees. Speaking generally, it may be said that central sarcomata are far less malignant than subperiosteal, and those of bones more distant from the trunk than those of bones more near. The former of these statements may be illustrated by the cases I have myself observed. Of eleven patients with subperiosteal sarcoma of various bones, I know that nine are dead. The tenth, whose tumour was of the tibia, and for whom amputation was performed at the end of two months, was alive and well when last heard of, fourteen months after the operation. In the eleventh case, amputation was performed scarcely more than a few weeks ago. Of 10 cases of central tumour, I have notes of the death of 3, of slow recurrence in a fourth case during seven years after operation, and of the good health of 4 patients at periods respectively of 1, 3½, 4, and 5½ years after operation. The least degree of malignancy is the infiltration of contagious structures, much more common in subperiosteal than in central tumours. Next in order is affection of the lymphatic glands, rarely occurring in connection with subperiosteal and still more

rarely with central tumours. It may be of the same nature as the affection of other organs where the disease is conveyed through the medium of the blood. Or it may probably originate in continuous infiltration of one or more lymphatic glands by the primary disease. Or, since I am not able to affirm the contrary, the disease may be conveyed through the lymphatic channels directly from the bone; but I venture to think this is the least common method of invasion, if indeed it ever occur, in connection with sarcomata of bone. The last degree of malignancy is that in which growths appear in organs and tissues more or less remote from the primary disease, in most cases undoubtedly conveyed thither by the blood, in some cases apparently due to distinct outbreaks of sarcomatous disease. Of all organs the lungs are far more commonly affected than any other, and the tumours which exhibit the most marked tendency to wide-spread generalisation are the round-celled tumours. But it is the round-celled tumours of certain bones which are thus liable to become widely generalised, and the subperiosteal which are far more likely than the central tumours to affect the lungs.

With regard to operation, it appears as if, setting aside cases of multiple sarcoma and of tumours so situated that they cannot be removed, no doubt can exist of the propriety of operation in all cases where the disease has not advanced too far. The advantages of operation are obvious. Complete removal of the primary disease arrests its continuous infiltration, and terminates the dangers incidental to the mere presence of a tumour, often of enormous bulk; for local recurrence may be regarded as an accident which might absolutely have been prevented by free removal; an accident almost unknown, when, for example, the thigh is amputated for a tumour of the tibra. Nor does there appear sufficient ground to doubt that, if the primary tumour be early enough removed, generalisation by the blood and affection of the glands may be prevented. Against these benefits the only disadvantage which can fairly be alleged is the danger of the operation itself, a danger marvellously less at the present time than it was even ten years ago, and not to be gauged by the horrible mortality exhibited in this table of central sarcomata.

TYPHOID FEVER IN NEW ZEALAND AND AUSTRALIA; ITS ORIGIN AND PROPAGATION.

By J. RUTHERFORD RYLEY, F.R.C.S., L.R.C.P.Edin., etc.,

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THE conflict of opinion which still exists on the question of the origin and propagation of typhoid fever is, I think, a sufficient justification for this contribution to the literature of the subject from our Australian colonies, where the disease has occurred, and still occurs, under circumstances which render the solution of the problem less difficult, I think, than has been found to be the case in older countries, such as England, even in rural districts, the favourite habitat of the disease. The publication of the paper may, moreover, and I hope will, stimulate others of the profession in the colonies to publish their experience on a subject in itself of much purely scientific interest to the medical philosopher, but of still greater interest alike to the practical physician, sanitarian, and legislator. Drs. W. Budd and Murchison are, in this country, the authorities whose views on the subject are representative. Both admit a plurality of poisons in the case of continued fever, and the specificity of the poison of typhoid fever. Dr. Budd is of opinion that the specific poison or contagium of the fever in question is invariably derived from a specific eruption of the intestine, like that of small-pox, which, on being discharged from the bowels with the excreta, constitutes the whole source of the disease. Dr. Murchison, while denying that the fresh dejections from the bowels of the affected person contain any such poison, admits that feculent matter in a state of fermentation or putrefaction, after its discharge from the bowels even of a person not at the time affected with the fever, may produce the contagium, and perhaps is the chief source of the disease; but he asserts that other organic matter especially of an animal nature in a state of fermentative putrefaction, is capable, under certain unknown conditions of the atmosphere, etc., of originating *de novo* the contagium. Both these distinguished authorities, however, are agreed that the great cause of the disease is the contamination of drinking-water by sewage or excremental matter, and both admit that the poison may be conveyed in other ways, such as by milk, and perhaps by the air-fomites, etc. The one considers the contagium very active and virulent; the other regards it as comparatively mild, and only very slightly contagious.

It is beyond the limits of this paper to enter on the discussion of disputed points. I proceed to give, as briefly as possible, my own experience on the subject, and the conclusions I have formed from such experience. Early in January 1864, I arrived in Westland, New Zealand, at the commencement of the great gold rush which occurred there. Only a few years before, this rich province—a large strip of land about two hundred miles in length, by an average breadth of thirty miles; on one side, a high range of mountains, which runs like a backbone throughout these islands; on the other, the Pacific Ocean—was almost a *terra incognita*, having only been visited by Dr. Hector, of the Geological Survey of New Zealand, and a few surveyors, and was inhabited only by a handful of aborigines, who lived on fish and the natural productions of the soil. The land was thickly timbered, and so covered by a dense jungle of scrub and undergrowth as to be almost impenetrable, so that the miner or "prospector" had to clear his way axe in hand. The rainfall, which in New Zealand generally is about ten inches higher than in England, was then at all events unusually high in Westland. The miner prospecting or travelling, therefore, was almost constantly wet, either from the direct rainfall, or from the drops from the trees or shrubs, or from the rank vegetation that everywhere covered the ground. Coupled with this, his scanty fare of "damper" of unleavened bread and perhaps bacon, and tea without milk, and his hard work and exposure, being sheltered at night only by his V tent, what wonder is it that he was attacked with disease? The chief diseases were fever, dysentery, rheumatism, and inflammatory chest-affections. Many cases of simple fever and a few of bilious fever occurred in the early days of the "rush", and I saw then a few cases of ague also, but only in those predisposed by previous attacks elsewhere, as in South America. I was appointed by the Government surgeon to the hospital, and for the first three years I had, at an average, twenty cases of fever constantly under treatment there, besides what I saw in private practice. This number gradually diminished until, when I resigned in the end of 1869, there were never more than two or three cases. I have not the figures before me, but I am sure I saw not less than four hundred cases during the time I was there, nearly five years. As is the case in epidemics generally, the disease was much more severe during the first six months, becoming gradually milder and the number attacked fewer, as time wore on. As much doubt was entertained by the profession at the time, both in New Zealand and Australia, not only of the genesis or etiology of the fever prevailing there, but as to its real nature, the name given to it by the public, and pretty generally adopted by the profession being "colonial fever", I resolved, having a large field for observation, to investigate the matter by a careful inquiry into the history of each case, by carefully recording the symptoms, and by making *post mortem* examinations of nearly every case of death from fever that occurred in hospital. Suffice it to say that the history, symptoms, course, and complications, together with the intestinal lesions discovered in every case after death, were those of typhoid or enteric fever. Among the preparations left by me at the hospital, showing the characteristic ulcerations of Peyer's glands, there were three where the bowels were completely perforated. The results were given by me in my annual reports published by the Government at the time. The persons attacked were chiefly the miners, new arrivals prospecting in the bush or working in their claims, and came not from any one part of the district, but from a circuit of fifty miles or more around. Very few indeed, comparatively, came from the townships or centres of population, nearly all being miners or others working in the "bush". I remember no case of relapse having occurred, and I know of no case of a second attack of the fever having occurred in any case.

What, under such circumstances, was the proximate cause of the fever? It could not be contagion, as the cases occurred sporadically all over the district simultaneously or in succession, and without any intercommunication—not from any centre or centres of infection. It could scarcely be excremental matters in a state of fermentative putrefaction, as many of the earlier cases occurred amongst prospectors shifting their camps daily or oftener; nor could it, I think, be animal matter in a state of decay. The water everywhere was loaded with vegetable matter in a state of more or less decay. This water was used by the miners as their ordinary beverage, and for making their tea, etc.; and to this cause, in my reports at the time, I attributed the fever; and my subsequent experience has only sufficed to confirm this opinion, especially my experience in Fiji, viz., that enteric fever may be produced independently of contagion, whatever may be its other mode of origin from the contamination of the drinking water, and perhaps, also the air by decaying organic matter of a vegetable nature. I have seen cases of the fever since in Fiji and Western Australia, both in the tropics and in South Australia, and New South Wales, in some cases apparently from this cause, there being no other cause apparent, certainly not contagion; in other cases apparently from the contamination of the drinking water, by human excretal matter, but in not a

single case have I been able to trace it to contagion, such a source being in all cases impossible to all appearance. Indeed, that the fever may not only have an origin independent of contagion, but is the chief if not the only source of the disease in the rural districts of the countries to which I have referred, at all events is the almost, if not the universal opinion now of the profession in those places. I have found, on inquiry, that it breaks out everywhere where a large population, as in the case of a gold rush, comes to occupy virgin soil, whether timbered or not, and apparently not from the massing of numbers of people together in townships and its consequences, but, as in Westland, amongst the thinly-scattered mining population. To return to New Zealand. Notwithstanding the overcrowding in the hospital at Westland for the first twelve months, for want of accommodation, in defiance of the rules as to cubic space, and with little or no attention for some time to other sanitary matters, such as the use of disinfectants, etc., up to the last cases of fever being distributed among the other patients of a general hospital, and using the same night-stools, during the five years I had charge of the hospital, no patient or nurse or officer of the institution was attacked with the disease; but one of the officers—the house steward—after residing in the house for two years, went up-country, caught the fever, and returned and died in the hospital.

I make no further comments. Such facts speak for themselves, and with no uncertain sound. I have only to add that my experience of the fever among the troops in the late war in Zululand, where I held the office of Senior Medical Officer, quite coincide with my former experience in the Australian colonies, etc.

OBSTETRIC MEMORANDA.

NOTE ON A RARE FORM OF UTERINE HÆMORRHAGE.

J. B., aged 28, was confined of her sixth child on April 12th. She was attended by a midwife at her own home. Her labour was natural. She got up on the ninth day, and in a few days more was attending to her household duties as usual. On April 27th, when sitting on her doorstep, profuse hæmorrhage came on. Her vagina was plugged by a surgeon in the neighbourhood. She was put to bed, and the plugs were removed on the 29th. No hæmorrhage followed their removal. On May 1st, when she was lying in bed, hæmorrhage recurred, so profusely as to leave her in a state of collapse. She was again plugged by another surgeon, and the hæmorrhage ceased. On the following day, she was admitted into this hospital, under the care of Mr. Wood. In a few hours, the plugs were removed, ergot and iron were administered, and she was kept quiet in bed. Hæmorrhage did not again take place until the afternoon of the 6th, when she had a sharp attack, losing a large quantity in a very few minutes before she was tightly plugged. In the evening, the plugs were removed. The uterine sound showed the uterus to be in its normal position, and its cavity only measured three inches. The external os was patulous, but the cervix was too tightly closed to allow the introduction of a finger; two sea-tangle tents were therefore passed up to the fundus, and kept in position by two good-sized pads of lint to the vagina. An attack of hæmorrhage occurring during the night, the tents being in position, led us to suspect that the hæmorrhage came from the cervix or vagina. The vagina was closely packed, and in the morning, the cervix being well dilated, the uterus was examined, but nothing was found to account for the hæmorrhage.

A Ferguson's speculum was then introduced, and on the cervix, just at the lower edge of the posterior lip of the os, a good-sized artery was seen distinctly pulsating. There was some superficial erosion of both lips of the os, but no laceration. There was no hæmorrhage now, and the vessel was distinctly seen plugged with a clot. Touching it with the point of a probe soon dislodged the clot, and the hæmorrhage again came on *per saltum*, the blood spurting to the middle of the speculum.

Pressure with a pad of lint soaked in liquor ferri perchlordi, and subsequently liquor ferri perchloridi fortior, only arrested the discharge so long as the pressure was kept up, bleeding being just as free immediately pressure was relaxed. The hæmorrhage was so copious, and its effect on the patient so marked, that we were obliged once more to pack the vagina lightly, which always temporarily arrested the discharge.

On May 9th, she had another copious hæmorrhage. At this time, there was a small plug steeped in liquor ferri perchloridi against the cervix, and a pad to keep it in position. The hæmorrhage was so profuse as to leave her quite pulseless, although five minutes could not have elapsed from the time the hæmorrhage commenced before the vagina was tightly packed, she having a nurse constantly by her, who had the plugs all ready to introduce. On the following morning, hæmorrhage recurring slightly, the plugs were removed, and the actual cautery applied. This had no good effect, the hæmorrhage coming on so profusely as to obscure all view of the parts; we therefore had again to resort to the plug.

About mid-day, more hæmorrhage came on, although she was plugged. Her condition had now become most critical; her pulse was scarcely perceptible. Up to this time, she had taken freely of brandy and milk, which, with enemata of turpentine and brandy, had been retained; but now the stomach and rectum began to reject all. Towards evening her condition became worse; she was rapidly failing; 30 minims of ether were injected subcutaneously and repeated in half an hour, but if it produced any good effect, it was only very temporary. Dr. Wilson now saw the case in consultation. It was agreed that her only chance was in transfusion. Blood not being readily procurable, a pint of Little's saline solution at 98° was injected, by means of Aveling's apparatus, into the median cephalic vein. Immediately after the injection, the pulse, which was previously scarcely perceptible, and from 160-180 beats a minute, became considerably stronger and slower. In about an hour, however, her condition became much worse; the breathing very rapid; the pulse could not be felt; she took milk, brandy and champagne, but they were rejected. In the morning, she rallied somewhat; the pulse became more perceptible; slight oozing of blood continued through the plugs; the vomiting became constant. She continued in this condition until the evening of May 12th, when she died. At the necropsy, twelve hours after death, only the pelvic viscera were examined. An artery, equal in size to the ulnar, was found, quite patent, at the lower edge of the posterior lip of the os uteri. On dissection it was found to be a branch from the uterine, which produced a loop in the cervix, extending as low down as the edge of the os, and ulceration through it had taken place at the point of bleeding.

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SURGICAL MEMORANDA.

HEREDITARY TENDENCY TO FRAGILITAS OSSIUM.

WITH reference to the interesting case of Hereditary Tendency to Fragilitas Ossium in the BRITISH MEDICAL JOURNAL for June 26th, 1880, Mr. Greenish will find the required information about a corresponding case which he has cited, and which was also hereditary for three generations, in a small volume entitled *Untersuchungen und Erfahrungen im Gebiete der Chirurgie.* Von Dr. Friedrich Pauli. Leipzig, 1844. Dr. Pauli's researches and observations were the results of fifteen years of private practice in the small and fortified town of Landau, in the Palatinate. In Dr. Pauli's case of hereditary brittleness of bones, which has been cited in one of my papers on limitation by sex in hereditary disease, published in 1863, four members of one generation, their father, and grandfather had suffered from fractures. The brittleness of the bones had been observed to come on during the advance from childhood to puberty, and, unlike the brittleness resulting from spirit-drinking and from diseases, in which the bony tissues are sometimes secondarily affected, the fractured bones in all of the persons affected in Dr. Pauli's cases, as in those described by Mr. Greenish, readily united. There are some early references to brittleness or "glass-like frangibility" of bones in Dr. A. W. Otto's *Compendium of Human and Comparative Pathological Anatomy.* (Translated with notes by John F. South. 8vo. London, 1831. Pp. 135-6.) And there are some bibliographical notices of this peculiarity appended to special articles on the bones in the later editions of the French dictionaries of medicine.

It is chiefly in country practice, and among small communities that the limitations of hereditary peculiarities and defects can be best studied; and well-marked cases, which have been occasionally limited by age as well as sex, have been brought under my notice in out of the way villages, where the family history could be traced with greater facility than in large towns. In many of such cases the peculiarities have been comparatively harmless and unimportant in character, but they have nevertheless been instructive, in consequence of their re-appearance, having been subject to well-marked and definite restrictions, whilst the exemptions from the family defect, which have been usually passed over as of no account, may be expected to assist in ultimately determining the range of hereditary disease.

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MR. FURNEAUX JORDAN'S LITHOTOMY.

SOME months ago, I read with some interest an article on lithotomy by Mr. Jordan, in which he advocated an incision upwards through the urethra for the extraction of stone.

A few days afterwards, an old man suffering from stone came to my hospital. After sounding, I was somewhat perplexed; there was no doubt about the existence of stone, but at first it appeared small, and

afterwards seemed to be large. I diagnosed either a very irregular stone or multiple stones. A short time before, I had had some difficulty with another patient in extracting with the ordinary incision, on account of the stone having made a sort of pouch for itself in front of the bladder, which it would not leave, and into which I could not get an instrument, and it was not till after long and patient manipulation that I succeeded. On the present occasion, I felt that I might have difficulty again with the ordinary incision, and I determined to try Mr. Jordan's plan.

I used a straight staff, cut down to it boldly as in lateral lithotomy, and, placing the index finger of my left hand on the staff, I passed it without further incision into the bladder, and removed the staff. I had some little difficulty in getting my finger in, but, by pushing gently and with a slight rotatory movement, I managed it pretty well. My finger was grasped very firmly by the urethra. I then passed a blunt-pointed bistoury along my finger, and, turning the edge upwards, incised the urethra to the depth of, I daresay, nearly half an inch. I then felt able to dilate it with my finger to any extent I wished. I then proceeded to extract. Feeling that the stones were multiple and small, I used a scoop. The bladder was simply crammed with stones; I removed sixteen, each about the size of a small walnut, and weighing altogether three ounces and a half; I removed them with the greatest ease. I feel that, with the ordinary incision, I should have had very great difficulty, and the operation would have taken a long time. There was very little hæmorrhage, though possibly more than I generally see in lateral lithotomy. The patient was put to bed and felt comfortable; he took food, and at night went to sleep. In the middle of the same night, he woke up, complained of feeling very weak, and gradually died. I mention this, for it would not be fair if I did not give the final result; but I do not think it had anything to do with Mr. Jordan's operation, my object being to recommend it whenever any difficulty is apprehended in the extraction of the stone. The patient died, but he would have probably died after the lateral operation, had I performed it. He was a very old, infirm man, and had suffered for many years, and was not a favourable subject for any operation. I did not examine the body after death, but, from what my assistants told me, I fancy there was no secondary hæmorrhage; in fact, there was nothing but extreme debility to account for the death of the patient.

E. DOWNES, Kashmir.

THERAPEUTIC MEMORANDA.

CHLORIDE OF CALCIUM IN PHTHISIS.

I AM pleased to be able to confirm Dr. Sawyer's conclusions as to the results of the chloride of calcium treatment in phthisis. Formerly I used tthe hypophosphites of soda and lime, but scarcely found the benefit from them I expected, and I was glad to hear from Dr. Sawyer, some months ago, of the good results he obtained from the use of chloride of calcium. I immediately began to prescribe it: of six cases in which I have given it, five have improved considerably, all presenting an increase in weight, improvement in appetite, and diminution or loss of night sweats. The remaining case, one of laryngeal phthisis, continued to get worse. For ordinary cases I simply give ten grains dissolved in water three times daily, conjoined, as symptoms indicate, with ergot, morphia, belladonna, etc., always at the same time giving cod-liver oil. It is best to keep the salt in solution because of its great tendency to deliquescence.

J. HUNT, M.R.C.S.

CHIAN TURPENTINE.

WITH reference to the letter of Mr. Jackson, in the BRITISH MEDICAL JOURNAL of June 26th, I desire to call attention to a remark of Mr. Clay, in his communication to the *Lancet* of March 27th. He says, in describing one of his cases, "The patient now complained of gastrodynia, with colicky pains in the bowels, but she had no diarrhœa or vomiting. I believe this to be due to the copper (she had taken a sixth of a grain of ammoniated copper), and it was consequently discontinued. It also occurred to me that the turpentine might not be efficiently digested in the solid form, and that it would be better if the remedy were administered in a state of minute subdivision, as in the form of an emulsion." He then goes on to give the particulars of his solution in ether. If the uncertainty as to digestion in the solid form might constitute an objection in any case, it surely might in the one to which Mr. Jackson refers, namely, cancer of the pancreas, and would it not be worth while to try the solution rather than abandon the chance of some good result from the drug? For my own part, I have administered the solution of Chian turpentine after Mr. Clay's formula, in a case of cancer of the breast, three times a day for the last three months, not only without any inconvenience to the patient, a lady 65 years of age, but to her great relief and comfort.

JOHN GILL, M.D.,
Surgeon to the Infirmary, Stratford-on-Avon.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. THOMAS'S HOSPITAL.

CONSTITUTIONAL SYPHILIS: POPLITEAL ANEURISM: TREATMENT BY IODIDE OF POTASSIUM, REST, AND INTERRUPTED ELASTIC BANDAGES: RECOVERY: SUBSEQUENT ANEURISM OF INNOMINATE ARTERY: DEATH.

(Under the care of Mr. JOHN CROFT.)

GEO. C., aged 34, a musician and ex-soldier, was admitted under Mr. Croft's care into St. Thomas's Hospital on June 3rd, 1878, for a popliteal aneurism of the left leg. On admission, the swelling was as large as a full-sized orange, was soft and fluctuating, and pulsated freely. The coverings were thinner on the outer side than elsewhere; the tumour had shown a tendency to increase in that direction. Pulsation in the left tibials could not be discovered distinctly and positively. The man had first observed the aneurism about five months previously, when the most prominent symptom to him was swelling of the leg. Rest relieved it; but the swelling returned on his leaving his military hospital. He experienced occasional aching pains in the calf.

He was a spare, light-built, but well-grown man, of fair complexion. He did not look healthy, but pale; and he was the subject of constitutional syphilis. At the time of admission, he presented a small periosteal node on the left radius, a similar thickening of the clavicle and first piece of the sternum, and numerous spots of psoriasis in various stages. He had contracted syphilis thirteen years previously, and had suffered from jungle-fever fourteen years before. For about a fortnight before his admission to one of Mr. Croft's beds, he had been in one of the physicians' wards, where he had rested and been brought under the influence of iodide of potassium. This had had the effect of reducing the œdema and all pain. He could not ascribe the appearance of the swelling to any accidental cause.

He was put upon a milk diet with a slice of meat, and not allowed any stimulants. No medicine was ordered. He was kept in bed. For a fortnight the aneurism was not interfered with, as it did not manifest any decided tendency to increase. The limb was kept slightly flexed.

At the end of a fortnight, a more active treatment was commenced. The leg was bent on the thigh, and the thigh on the abdomen. This produced no perceptible change in the state of the contents of the sac. On the third day, the "locking" plan of treatment was carried into operation by means of interrupted elastic bandages. Esmarch's elastic bandage was applied as far up the limb as the lower end of the aneurism. Then the man was made to stand up; and, whilst he was in the erect posture, a second bandage was put on from the top of the tumour to near the groin, where it was fastened off. The man then resumed the recumbent position. The aneurism was full of fluid blood, and the blood in the vessels between the bandages was in a state of stasis. The surface became dusky in hue. A subcutaneous injection of nearly half a grain of morphia was administered.

This operation was commenced at five minutes past 4 P.M. The circumference of the limb after the bandages had been applied was measured and found to be 15⅛ inches. The right knee measured 13⅜ inches. The pulse, when the patient was in the erect posture, was 102; when back in bed, 80. In less than an hour, he complained of great pain, especially about the foot. The bandage was slowly removed from the limb, first from the leg, then from the thigh. The contents of the sac were not in a solid state, but they were less fluid than before the application of the bandage. Digital compression was commenced immediately, without waiting to ascertain whether pulsation would take place when the upper bandage was removed. The contents of the sac seemed to be becoming gradually less fluid.

At 7 o'clock, or two hours after the bandages had been taken off, the sac was ascertained to be full of firm clot, and no pulsation could be felt when pressure was suspended. The aneurism had consolidated in two hours. Digital compression was maintained for two hours longer as a precautionary measure. No pulsation remained; no complication occurred; and the progress was uninterruptedly good. The superficial vessels remained congested for five or six days.

Pulsation in the tibials at the ankle-joint was never certainly felt even at the expiration of several months after he had left the hospital. More than once a feeble intermittent pulsation was felt in the posterior tibial artery; but a regular pulse was not discovered. Pulsation never recurred in the aneurism; the tumour steadily shrank in bulk; and he was discharged cured on June 3rd, the fourteenth day after the application of the "locking" treatment.

In November he consulted Mr. Croft about a pain in the right shoulder and side. At this time, the popliteal aneurismal swelling had become reduced to the bulk of half a walnut. The pain in his side was found to be caused by an aneurism of the innominate artery. For this disease, he was admitted under Dr. Stone's care. He died on the 1st of January following, having survived the cure of the popliteal aneurism about seven months.

ROTUNDA HOSPITAL DUBLIN.

CASE OF LABOUR OBSTRUCTED BY THE PRESENCE OF AN OVARIAN TUMOUR, AND COMPLICATED BY THE OCCURRENCE OF CONVULSIONS.

(Under the care of Dr. LOMBE ATTHILL; reported by Mr. ALFRED HARVEY.)

C. H., AGED 38, multipara, was visited as a patient of the extern maternity department of the charity on the afternoon of April 18th. She was then unconscious, and was reported to have had two or three fits of convulsions; the first occurring apparently at the commencement of labour, about two hours previously. Her history, as well as could be ascertained, was that her six previous confinements had been difficult; that, four years ago, she had been for some time an inmate of a lunatic asylum; and that, for the past fortnight, she had suffered from severe headache.

On making a vaginal examination, the pelvis was found to be occupied by a firm elastic tumour, which nearly occluded the vagina. The os uteri, which lay above the brim in front, and was with difficulty reached by introducing two fingers into the vagina, was dilated to the size of a shilling.

The patient was at 8 P.M. removed to the Rotunda Hospital; and, she being brought fully under the influence of chloroform, Dr. Atthill introduced his whole hand into the vagina, satisfied himself that the tumour was ovarian, and, making steady pressure upwards, succeeded in dislodging it, and in raising it above the brim of the pelvis; the lower segment of the uterus immediately descended into its usual place. A binder was now applied to the abdomen to prevent the uterus from falling forward; and, the chloroform being withdrawn, labour was allowed to proceed naturally, the os being still very small.

On examining the urine drawn off by the catheter, it was found to be loaded with albumen. Five grains of calomel were now given, followed by two drops of croton-oil; and chloroform was ordered to be administered if any symptoms indicative of a recurrence of the fits showed themselves.

The purgatives not acting, an enema was administered without effect. Towards midnight, however, she became partially conscious, and vomited several times. Labour progressed slowly, and she was delivered at 8 A.M. on the 19th, by the natural efforts, of twins, both females and alive. The uterus now contracted firmly, and shortly afterwards the placenta was expelled. There was no return of the convulsions; but the patient's general condition in no way improved, nor could the bowels be made to act, though another large dose of calomel and croton-oil was given, followed by the administration of an enema through the long tube.

At 8 P.M., the face being flushed and coma becoming profound, she was bled to eighteen ounces without any improvement following, and she died at 6 A.M. the following morning, twenty-two hours after delivery.

NECROPSY, performed by Dr. G. F. Duffey, pathologist to the hospital On opening the abdominal cavity, a small quantity (about four ounces) of dark-coloured turbid fluid was observed. The parietal peritoneum was slightly injected; as was also the great omentum, through an opening in which, in the umbilical region, the small intestine passed, being contracted to the size of the little finger. The uterus extended up to the umbilicus, and to its left side. Occupying the lumbar region, and extending three inches above the fundus, was a large ovoid tumour, about the size and shape of an ostrich's egg. This tumour, which was one of the left ovary, could be easily lifted out, its only attachments being above by one long slender band to the omentum, and below by a second similar band to the uterus. It was cystic in nature, and seemed to have been moved upwards in the pelvis from its original situation. The rectum and lower part of the descending colon were empty, as if pressed upon; while the upper part of the descending colon was filled with masses of fæces. Both kidneys were granular.

REMARKS.—Dr. Atthill, in commenting on this case, said that this was only the second case in which, in his practice, he had met with an ovarian tumour obstructing labour. In the previous case, as well as in this, he had succeeded in dislodging the tumour, which was of much smaller size than in the present instance, and in delivering with the forceps. The patient recovered; and the same favourable result might have followed now, had it not been for the state of the kidneys, to which death was due. The complete obstruction of the bowels was a remarkable feature in the case. This was evidently due to the pressure of the uterus on the tumour, which in turn, being pressed against the descending colon, occluded the bowel, and caused the obstinate constipation which has been alluded to. It would have been interesting to know how long the constipation had existed, but this could not be ascertained. Life would probably have been saved had this woman come under treatment at an earlier period.

REPORTS OF SOCIETIES.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, JUNE 4TH, 1880.

G. E. PAGET, M.D., F.R.S., President, in the Chair.

Menorrhagia brought on in Old Age by Emotional Disturbance.—The PRESIDENT related two cases in which a discharge of blood from the womb, which the patient spoke of as the menstrual discharge, had been brought on in advanced years through emotional disturbance. The influence of emotion is not often manifested in causing menorrhagia when years have elapsed since menstruation had naturally ceased. In the first case, a married woman, aged 65, a sanguineous uterine discharge had been continuing for three weeks before she presented herself. It had been brought on, she said, by the return of her son from abroad. In the absence of any other assignable cause, there could be no doubt that this emotion attending her son's return was really the exciting cause. He was her only surviving child, he was in prosperous circumstances, and his return had been eagerly expected. Fifteen years had elapsed since her last menstruation. The discharge soon ceased under treatment with iron. The second patient, aged 60, lost her husband, and soon after her daughter, who died suddenly in childbed. Her mental distress was very great, her mind became disordered, simultaneously menorrhagia came on, and she had also a delusion that there was a baby in the bed. The catamenia had ceased naturally many years before. As regards the first case, some explanation of the unusual occurrence might be found in the previous history of the patient. Though she had been quite well for years before her son's return, she had formerly been epileptic, and had had an epileptic son. This nervous constitution was probably a predisposing cause. The history of her epilepsy gave further hints of concurrent causes. The fits began when she was 45 years old, when her menstruation was beginning to be less regular than it had been. For two years previously she had been subject to attacks of faintness with vertigo. These syncopal, or minor epileptic attacks, had come on after the death of her epileptic son, in London, after a few days' illness with enteric fever. The fits were very severe, and kept recurring for some years. In one of them, in which she fell backwards, striking her head violently against the floor, there was, simultaneously with the fit, a slight "show" of the catamenia, which had previously not appeared for three years. Before the fit, she had a painful uneasiness in the right iliac region, and a kind of aura proceeding from this point, and occasioning a feeling of alarm. The same phenomena followed, and the epileptic fit two years later. The circumstances under which she became epileptic (the death of her son) indicated maternal feelings unusually strong. The time at which she became epileptic (when the catamenia were beginning to be less regular) indicated some connection between the functions of the organs of generation and the state of nervous system which manifested itself in epilepsy. The like was indicated more definitely by the slight menstrual discharge accompanying one of her fits, and by the abnormal sensations in the region of the right ovary on this and another occasion. Thus it was not wholly impossible to account for the unusual occurrence of menstrual flow being excited by emotion in this woman at the age of 65. The President related, also, in connection with the above cases, two cases of a disease that much more commonly follows emotional disturbance, viz., diabetes. In the one case, the patient was a woman aged 44, the wife of a farmer; the diabetes came on while she was, and had been for some weeks, anxiously nursing her only son in a dangerous illness. The quantity of urine was large, the specific gravity 1039, and there was a large quantity of sugar. In the other case the patient was a woman whose

husband died in good circumstances, leaving her as his executrix. Grief for the loss of her husband, combined with the worry of managing his affairs, brought on diabetes, of which she died six months after her husband.

Therapeutic Uses of Hyoscyamine.—Dr. BACON gave an account of the preparation known as "hyoscyamine," and of its therapeutic uses. There were two preparations sold under that name, both made in Germany. One was Merck's "extract of hyoscyamine", and the other was a crystallised preparation in the form of a whitish powder, and of variable strength. His experience had been limited to Merck's extracts. It was most conveniently administered dissolved in alcohol, one grain to the drachm. The solution mixed badly with water, a resin forming on the side of the bottle. The preparation deteriorated by keeping; if it became greenish in colour, it was a sign that its strength was lessened, and that its action could not be relied on. It was called by the manufacturer the "extractine amorphous alkaloid" of hyoscyamus, and was very costly. With this preparation, he had found the effects much more potent and more certain and reliable than those of ordinary henbane. Its action was that of a powerful sedative and hypnotic, and it was the only sedative and hypnotic, in his opinion, whose action might be certainly relied on. Doses as large as two or three grains (of Merck's extract) had been administered; he had himself never given more than a grain and a quarter, and his usual prescription was three-quarters or half a grain. If three-quarters were given to a maniacal patient in a state of excitement, he would be reduced, in half-an-hour, to absolute helplessness, and would be probably asleep or comatose. The lips became red, the face dusky, and the saliva flowed from the mouth. The pulse was quickened, and there was dilatation of the pupil, lasting for twenty-four hours; the other symptoms passed off in about twelve hours. Vomiting had occurred in two or three of his cases. The drug was especially valuable in treating the maniacal condition (chronic or acute). It had been used in delirium tremens, and its power of inducing quietude and sleep to a certainty indicated its value in that condition. In some cases the beneficial results, flowing indirectly from its use, had been so great that he had been able, after a time, to dispense with the drug. Two cases had occurred in his practice which would serve to show where caution was necessary. In the one case (a private patient) only half the prescribed dose was given, and the patient, instead of being sent to sleep, was put into a state of excitement and delirium. In the other, an accident, fortunately not fatal, followed the administration of the drug. The patient had become profoundly insensible, and had vomited, and part of the vomit (consisting mostly of partly digested bread) appeared to have got into the air-passages, giving rise to corresponding symptoms.—Dr. LATHAM could not join in Dr. Bacon's opinion that henbane, in its usual pharmacopœial form, was quite unreliable. The potency of the leaves no doubt depended on the time of gathering them, and on the care with which they were dried.—The PRESIDENT referred to the experience of a neighbouring practitioner, who had the henbane grown near him, and the extract made by a trustworthy person, and who always found the drug so obtained to be potent and reliable in its action. He had, the other day, prescribed henbane in a bad case of epilepsy, which no other drug had benefited; and the result was that the patient had been altogether free from fits for three weeks, and when they came back they were less frequent than before.

Secondary Pelvic Tumour.—Dr. HASBY showed a large tumour, weighing upwards of four pounds, which seemed to have grown from the left ilium, in a woman aged fifty-two, who had had the left breast amputated for cancer two years before.

Case of Gummata in Brain, Liver, and Testicles.—Dr. BRADBURY gave an account of a case in which gummata were found after death in the brain, liver, and testicles. The patient was a man aged thirty. The first symptoms, eight months before admission, were pain in the left arm and shoulder, and loss of power in the left arm and hand. Under treatment, the symptoms disappeared in a fortnight. Three months afterwards, he had pain in the supra- and infra-orbital regions on the right side, and gradually lost sensation over the whole of the right side of the face, the pain meanwhile increasing in severity. A month before he came in, he suddenly began to squint with the right eye, and he experienced "flashiness" before the eyes, which came on sometimes two or three times a day. About the same time both testicles began to swell, without pain, and continued to increase in size. He observed, also, loss of taste on the right side of the tongue. On admission, he had most of the above symptoms. The squinting referred to was marked internal strabismus; there was also a degree of ptosis. The tongue deviated a little to the left, and the levator muscles of the angle of the mouth on the right side were in almost tonic condition of spasm. A few days after admission, the conjunctival vessels of the right eye were congested (January 28th), and on February 9th there was a small spot of commencing ulceration of the cornea. The ulceration on the cornea continued to spread for some days, and then began to heal. On March 9th the ulcer was healed, a patch of opacity remaining. Congestion of the conjunctival vessels reappeared after a time, and a few days before his death (on 24th May) the opaque area of the cornea sloughed. Meanwhile, the pain in the face and the spasm of the facial muscles varied in degree from day to day, and there was some left facial paralysis. He began to pass evacuations in bed, and there ensued marked loss of strength, general tremors of the body, constant twitching of the lower lip, and speech almost unintelligible. Before death, the left hand was completely paralysed. He was treated with calomel and iodide of potassium. *Post-mortem*, the tunica vaginalis on both sides was distended with fluid; the body of the testis was considerably enlarged. On section, two large nodules of yellowish-brown (gummatous) substance were found in each testis, and there was an appearance of parallel whitish streaks (interstitial orchitis). The liver showed extensive puckered depressions of both surfaces, with the acini greatly enlarged in certain places, and gummatous nodules (up to the size of a bean) chiefly in the thin left lobe. Within the cranium, attached to the dura mater, and making a depression on the surface of the brain about the centre of the right ascending parietal convolution, was a firm round and flat gummatous body, about the size of a horse-bean. On the surface of the pons Varolii, on the right side, involving the roots of the fifth and sixth nerves, and just overlapping the origin of the seventh, was another flattened gummatous mass. Another gumma was found on the upper surface of the cerebellum, in the middle line anteriorly situated in the membranes, and not involving the substance. On section of the brain, a large mass of semitransparent gelatinous substance, with an opaque yellow centre, about the size of a walnut, was found in the occipital lobe of the left hemisphere near the surface. The right corpus striatum and optic thalamus were softened, and broke down readily under a stream of water.

Bovine Tuberculosis in Man.—Dr. CREIGHTON gave an account of observations, microscopic and others, on eight cases of a peculiar variety of tuberculosis, which he believed to be bovine tuberculosis communicated to man. The cases had lately occurred in somewhat rapid succession at Addenbrooke's Hospital, in the practice of Dr. Latham and of Dr. Bradbury, to whom he was indebted for the privilege of bringing them forward. Seven of the cases were in adults. The observations related to the lungs, lymphatic glands, and serous membranes. In the lungs, the more striking appearances were wedge-shaped embolic infarcts of new growth in some of the cases, and in others a condition that might easily be mistaken for bronchiectasis. In the lymphatic glands, thoracic and abdominal, a number of round bodies, encapsuled (large tubercles) occupied the substance of each enlarged gland. The serous eruption was characterised by the tubercles being large and flat (on the peritoneum), sessile, pedunculated, joined in pearl-like strings, apt to be associated with adhesions, and apt to form round the sharp margins of the lung.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

MONDAY, JUNE 7TH, 1880.

A. J. WOODHOUSE, L.D.S., President, in the Chair.

Hæmorrhagic Diathesis.—Dr. WALKER read notes of the case of a man, aged 38, the subject of hæmorrhagic diathesis, who had recently been under his care at the Westminster Hospital. When nineteen years of age, this patient had an upper molar removed in the country; he was laid up for a week with severe hæmorrhage, and the actual cautery was used. Four years ago, another upper molar was extracted; on this occasion, he was an in-patient at St. Thomas's Hospital for five weeks; various styptics were used, and the actual cautery was applied several times. For six or eight months after this, he was subject to occasional hæmorrhage, sometimes profuse, from the spot. Dr. Walker removed a carious wisdom tooth and a root of one of the previously extracted teeth, which had been left behind. The bleeding was arrested by plugging the sockets with cotton-wool soaked in liquor ferri perchloridi; these plugs had to be renewed next day, but the patient had after this no further hæmorrhage. He was discharged at the end of a week, but came to report himself several times afterwards.

Carious Teeth as a Cause of Illness.—Mr. E. CANTON brought forward some cases, illustrating the fact that carious teeth might be the unsuspected cause of serious illness. Bad teeth and consequent imperfect mastication of food were not uncommon causes of habitual constipation; he had met with many such cases. For instance, a gentleman was brought to him for supposed cancer of the rectum, and a lady on account of supposed tumour of the spleen; but the symptoms were due to large accumulations of fæces in the rectum and in the descending

colon respectively, and in both cases bad teeth and imperfect mastication of food were the real causes of the mischief. Another gentleman, aged 45, suffered from most troublesome spasms, affecting the muscles of the front and inner side of the thigh; these were supposed to be due to spinal disease, but the real cause turned out to be an impaction of fæces in the cæcum, which pressed upon and irritated the anterior crural nerve; this patient also was nearly œdematous. In all these cases, a set of artificial teeth would do much to relieve the obstinate chronic constipation generally present, and to do away with the necessity for purgative medicine. Accumulation of fæces in the rectum, pressing on the origin of the left sciatic nerve, was a common cause of sciatica, and imperfect mastication of food was frequently the primary cause. Bad teeth and consequent imperfect digestion often brought about a general state of weakness, which rendered the patient an easy prey to disease. Mr. Canton instanced the case of a gentleman who had been for a long time under medical treatment, and was said to be dying of "atrophy". Mr. Canton could find no evidence of organic disease; but, as the patient's teeth were in a very bad state, he advised him to have a set made. This was done, and the patient gradually recovered his health without taking any more medicine. In women, this low state of nutrition was frequently accompanied by barrenness. A young lady was brought to Mr. Canton by her husband; she had been married some time, but had no family; she was thin and weak, suffered from indigestion, *and had very bad teeth*. Mr. Canton ordered her to have a set fitted; the patient at once became stout and strong, soon became pregnant, and eventually had several children. Mr. Canton concluded by relating some cases in which diseased or misplaced teeth had caused nervous disorders, as epilepsy and paralysis—adding that he could quite confirm the conclusions arrived at by Dr. Brunton in his paper recently read before the Society.

Reflex Nervous Disorders.—Mr. MUMMERY read notes of some cases in which diseased teeth had caused reflex disorders of the nervous system. A young lady came to him in January 1878, complaining of severe neuralgia of the left side of the face, which had begun soon after the stopping of an upper molar some months before; she had also become subject to marked external strabismus of the left eye. Mr. Mummery extracted the tooth, and in two or three days both pain and squint had gone. In November, she presented herself again; the pain had returned as bad as ever; there was ptosis of the left eyelid, the pupil was widely dilated, and her hair was perfectly blanched to the extent of fully two inches over her left temple. Mr. Mummery found that the next tooth to that which he had extracted had become carious; he at once removed it, and in a very short time the pain disappeared, and the eye recovered its natural appearance; but the patient still retained the patch of white hair on her left temple. Mr. Mummery related several other remarkable and interesting cases; in some of these, retarded wisdom teeth had been the cause of reflex nervous disturbance; in others, exostoses had formed on the fangs, though the teeth appeared perfectly sound.

A discussion followed, in the course of which Dr. BELHSARIO of Sydney, New South Wales, related some instructive cases.—Messrs. CANTON and MUMMERY having replied, the PRESIDENT closed the Session with a short speech, and the meeting terminated.

REVIEWS AND NOTICES.

A TREATISE ON HYGIENE AND PUBLIC HEALTH. Edited by A. H. BUCK, M.D. London: Sampson Low, Marston, Searle, and Rivington.

WHEN the translation of Ziemssen's *Cyclopædia* was decided upon, the editors found that the first volume of the series—that relating to Hygiene—was totally unsuited to the wants of medical men in America and England. Public Health was treated by the German authors in a peculiarly German manner, and, in fact, entirely from their own standpoint. Fortunately for sanitary science, the American translators very wisely determined to publish these two volumes, which are entirely written by American sanitarians. We are glad to welcome this important addition to hygienic literature from across the Atlantic, as it contains much original and earnest work, and is also an excellent *résumé* of sanitary science and knowledge. A work of this kind is necessarily unequal; it is strong in those points of which the Americans have had special experience, such as quarantine, hygiene of camps, etc.; but it is weak in those cases where like experience is wanting. Here, however, the authors have availed themselves of the assistance of English, French, and German writers, giving excellent references, and in some instances the bibliography of the subject. Most Englishmen will feel an honest pride, on reading these volumes, at the frequent allusions to the works of such of their countrymen as Simon, Parkes, Farr, Buchanan, Hart, Ballard, Howard, Carpenter, and many others. So far, we have been in the van of sanitary science; but these volumes prove that we have powerful competitors who are doing right good work, and who are anxious to get at the truth, no matter if it be palatable or not. These American authors are, moreover, distinguished by an absence of crotchets and of preconceived notions, and their work is therefore all the more valuable.

The introduction contains an able *résumé* of the chief facts relating to the germ-theory, and urges the disuse of the term "bacteria", on the ground that these rodlike bodies are now proved to be microdemes in a stage of development. Microdemes are defined by the author of this article as minute living bodies, or granules, exceedingly small, of uniform size, independent motion, and having or showing signs of growth and reproductive division. This definition will include the forms known as the micrococcus, the microzyme of Burdon Sanderson, the microphyte schizomycetes of Du Barry, the *Spaltpilze* of Naegeli, and the cocco-bacteria of Billroth. Naegeli believes these microdemes to be of vegetable nature; but, as many other observers classify them as animals, this is at present unproved.

An account is given of Koch's experiments on charbon (malignant pustule, or splenic fever). It is stated that Koch found quantities of bacteroid microdemes in the blood and fluids of men and animals affected with this disease. He contrived to cultivate these organisms when out of the body, and observed their life and history. These threads or bacteroid bodies developed spores and soon died; but the spores retained their vitality for at least four years, and from them specific disease was produced anew in a living animal. Koch named this microdeme bacillus anthracis. It resembles the common bacillus subtilis in appearance, but is motionless, while bacillus subtilis moves. Dr. Ewart (*Proceedings of the Royal Society* 1878, No. 188), however, finds that bacillus anthracis is at times, though rarely, a moving organism. This question is, so far, but little understood; still it seems to hint that, under certain circumstances, there is a possible and probable connection between bacillus subtilis and the deadly bacillus anthracis. Dr. Klein conducted researches on "pneumo-enteritis" after Koch's method. He found that the microdeme causing this disease is also a bacillus, more delicate than bacillus anthracis, but having a moving stage like bacillus subtilis, and producing spores and filaments like the other species. A bacterium, therefore, is only a rodlike body, which is simply one developmental form of many microdemes. The author inclines to the view that bacterium of microdemes may alter and develop in intensity, and so become changed, either by the character of the pabulum from which it is derived or into which it migrates, from a harmless into a most dangerous bacterium. Burdon Sanderson's experiments on guinea-pigs prove that ordinary bacteroid forms not possessing septic properties may, by reinjection from one animal to another, acquire great potency in septicity. A bacterium or rodlike body may in the future become a harmless or a malignant microdeme. Our knowledge is yet very limited; but we act on this theory for the prevention of blood-poisoning after operations. (1). We endeavour to prevent the entrance of microdemes; or (2) we allow all dead and septic matter to escape easily and rapidly, so that specific microdemes may not be developed, and may not alight on a fertile pabulum. It is obvious that, if specific microdemes be in the surrounding air, the first plan will be the more successful.

The remainder of this article is devoted to the jurisprudence of hygiene, more especially as regards America. There are many complaints of the inefficacious and tentative nature of our sanitary enactments; but they are stringent as compared with American sanitary laws. Impecuniosity also hampers boards of health in America. The Board of Health of the State of North Carolina, for instance, is allowed about £20 *per annum* for expenses.

The article on Infant Hygiene, by Dr. Jacobi, is interesting and instructive. In it the author strongly advocates *boiled* milk for feeding, mixed with an equal quantity of barley-water, and with the addition of of salt and white sugar. Some of the directions given for feeding are, to say the least, peculiar. "In hot weather—but in the hottest days only—mix a few drops of whiskey with either water or food; the whiskey not to exceed a teaspoonful in twenty-four hours." Again: "Babies of ten or twelve months may have a crust of bread and a piece of *rare* beef to suck." Trousseau's prescription of raw beef answers admirably for certain diseases of children; still there is always danger of tænia. The above directions are, however, for children in ordinary health.

Dr. James Tyson, in his article on Food and Drink, gives a very good *résumé* of the main principles of dietetics as generally taught in this country, including the latest discoveries in digestion and assimilation. To prove the last assertion, we need only quote the substance of

one sentence. "From proteids three compounds are derived by digestion; viz., albumenose, tyrosin, and leucin; the two last being produced by pancreatic action. These proteid substances are absorbed from the small intestines, and changed into albumen and other substances suitable for assimilation, probably in the liver."

The remarks on Alcohol are sensible, and well worthy of the consideration of practitioners. It is quite a relief to read a well-balanced article like this, after the floods of unscientific tirades with which we are inundated, and which are likely to do more harm than good to the cause they advocate. We do not remark further on Food and Drink; for the matter it contains, though excellent, is not original.

Drinking-Water and Public Water-Supplies, by Professor Nichols, is an interesting account of all that is known on the subject. The author considers the animal charcoal filter best suited for American purposes, but acknowledges the efficacy of Bischof's spongy iron and sand filter, which has given excellent results, and which is certainly becoming popular in this country. There are some pertinent remarks on the value of chemical analysis of water. Most people have an idea that a chemist can tell whether a water will produce such a disease as typhoid fever or not; but chemistry alone cannot decide on water being suitable for drinking; the nature and surroundings of the water-supply must also be taken into consideration. We are glad to see that the subject of impure ice has received attention, ice being now very commonly used in medicine and dietetics. An outbreak of disease at an hotel in New Hampshire is ascribed to the use of impure ice cut from a foul and stagnant pond. The symptoms observed were "a disturbance of the digestive system, characterised by a sensation of giddiness and nausea, vomiting, diarrhœa, severe abdominal pain, all of which was accompanied by fever, loss of appetite, continued indigestion, and mental depression". In Germany, ice is often taken from most impure ponds; and the same is occasionally done in this country. Ice is always purer than the water of the supply from which it is taken; still analyses of ice show that care must be exercised, or evil consequences will ensue.

Physical Exercise, by Dr. Ball, contains some interesting facts. The substance of this article is contained in the sentence—"It may safely be conceded, therefore, that, *with proper precautions*, great bodily is entirely compatible with great mental activity, but only with proper precautions: *the candle must not be burned at both ends.*" We all believe that the brain shares in the improvement of nutrition induced by reasonable muscular exertion; but, unfortunately, athletes are not contented with a reasonable amount of muscular exertion, and, in fact, burn the candle at the muscular end. The remarks on Training, which form a large part of the article, are mainly in accordance with the views generally held in this country, and well expressed by Maclaren in his book, *Training in Theory and Practice.* The phenomenon of "second wind" is attributed to the restoration of the equilibrium of the pulmonary cardiac circulation; at first, the amount of blood forced by the right ventricle is more than the unrelaxed arteries of the lungs can accommodate, this entails engorgement, etc.; but when the vessels are relaxed (probably by the depressor nerve), the feeling of oppression ceases. One of the chief functions of training is to educate the vascular system to transmit a larger quantity of blood with greater rapidity, and so restore the equilibrium of the pulmonary cardiac circulation, so that exertion can be continued till the muscular power is exhausted.

The Care of the Person, by Dr. Harlingen, is below the average of the articles in this book. There are, however, some hints on baths and bathing which may prove useful to students: the use of warm baths after exercise; the prohibition of the practice of "cooling off" before bathing; not bathing when hungry or fatigued, or directly after a meal, etc.—precepts well known, but too little followed. Medical men too often give offhand advice on bathing without consideration, and this habit often injures both the patient and the reputation of the profession. Owing to neglect of reasonable precautions, sea-bathing is not nearly so advantageous as it might be. The rest of this paper is devoted to clothing, the care of the feet, hands, and hair. The author remarks that he has never heard of a case of general poisoning from hair-dyes composed of sugar of lead, arsenic, nitrate of silver, etc.

We now come to the most important article in the whole book, Soil and Water, by Dr. Ford. This contains the well-known views of Parkes, Pettenkofer, Simon, Buchanan, Bowditch, etc. It deals with drainage and purification of sewage (summing up in favour of purification of sewage by land), with the scavenging of towns, and with the diseases induced by certain conditions of soils, prominence being justly given to the independent simultaneous discovery by Buchanan in England, and by Bowditch in America, of the causation of phthisis by dampness of subsoil. This article is peculiarly instructive to all medical men interested in sanitary science; it is carefully written in an unbiassed spirit, and contains all the most recent opinions and discoveries.

The Atmosphere, by Dr. Lincoln, contains a vast amount of information, which has, however, been written about till it is almost threadbare; the Black Hole of Calcutta is an useful warning, but no novelty. Ventilation and heating are dwelt upon, and we are surprised that there is no mention of Tobin's system, which has obtained such admirable results in this country. Heating is treated from an American point of view.

Hospital Construction, by Dr. Brown, is an able contribution, containing valuable hints which deserve careful consideration. The author is in favour of rebuilding wards every few years, and quotes Galton in support of this theory; still, after the splendid results from antiseptic treatment and cleanliness in some of the old hospitals, this view is scarcely tenable. New hospitals are not free from erysipelas and pyæmia, as Hutchinson forcibly pointed out some years ago. The pavilion system is strongly recommended, on account of the advantages of cross ventilation and the facility of extension. Dr. Brown advises that a sun-bath should be attached to all hospitals; a sun-bath or sun-room is a sort of greenhouse facing the south, where delicate patients may enjoy the benefit of sunlight without exposure to the outside air. Dr. Crichton Browne instituted one at the Wakefield Asylum some years ago with extremely good results. Isolating wards, for noisy, delirious, and offensive patients, are, Dr. Brown says, a necessity; if would be well if this were more generally acknowledged, but the providing of nurses for such wards is often a difficulty in hospital administration, and the patients suffer from the economy thus exercised. Tents are recommended, but are, of course, unsuitable to our climate. The custom of allowing wards to lie fallow for definite periods is advocated on the ground of increased health to the inmates. Sanitary arrangements, ventilation, and heating are thoroughly entered into, and numerous plates are given explanatory of the text. The bibliography of the subject is given, and is likely to prove useful, and the whole article, though by no means exhaustive, is well worthy of perusal.

NOTES ON BOOKS.

Pott's Disease, its Pathology and Mechanical Treatment: with Remarks on Rotatory Lateral Curvature. By NEWTON M. SHAFFER, M.D. New York: C. P. Putnam's Sons.—In this publication, the author gives his reasons for objecting to treatment of spinal disease by plaster jackets, and prefers an apparatus which he has devised; to this he gives the name of "antero-posterior splint". It resembles in many respects certain appliances well known before Dr. Sayre introduced his gypsum bandages, and is very simple and inexpensive. The arguments for and against the two opposite methods of treating Pott's disease by mechanical means are fully discussed; but they are already well known to our readers. Dr. Shaffer considers that suspension can only reduce pathological curvature thoroughly when performed upon a narcotised patient, and this involves risk of severe local injury. When a subject of curvature is suspended without chloroform, muscular spasm prevents at the same time any danger from excessive tension on the diseased part of the column, and any benefit from complete rectification of the deformity.

Clinical Remarks on Gleet, its Causes and Treatment. Delivered in the Aberdeen Royal Infirmary. By J. C. OGILVIE WILL, M.D., Surgeon to the Aberdeen Royal Infirmary, etc. London; Churchill. 1880.—This address is an abstract on the mechanical principles upon which Otis and other authorities attempt the cure of gleet. It supplies, therefore, a want; for writers on urethral disease are occasionally too fond of minute detail; hence their works are not suited for the student. We are glad to find that Dr. Will begins by describing the disease as often purely constitutional, the patient being more in need of treatment than his urethra. Indeed, we wish he had laid even more stress on the fact. The student cannot be warned too strictly against the dangers of speculative operations on delicate organs—above all, when it is the urethra that is at fault.

HWANG-NAO.—In his just published Consular Report from Saigon, Mr. Tremlett furnishes some further notes respecting *hwang-nao*, which is said to cure the bite of the most venomous serpents, and has been successfully employed in curing cancer, and principally leprosy, in the treatment of which it has never given other than satisfactory results. The native physicians, Mr. Tremlett tells us, distinguish thirty-six kinds of leprosy, the most common attacking the feet and hands; it is considered to be hereditary, and is usually contracted by children at the age of puberty. After some generations, it has been noticed to confine itself to either the male or the female members of the family; the disease is considered contagious, which only would account for the large number of lepers in Tongking.

BRITISH MEDICAL ASSOCIATION:

SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 3RD, 1880.

LYING-IN HOSPITALS.

THE question of Lying-in Hospitals has engaged the attention of the profession over a series of years. The great mortality which has more or less existed in all these institutions has caused them to be regarded by many medical men with great disfavour. At first sight, they would appear to be most beneficent charities, and the object of their founders most praiseworthy; administered, however, as they have been, they have but too frequently proved a complete failure. The attempt to procure a comfortable home for women in childbed, by aggregating several women under one roof, has been attended with such a risk to human life as would appear almost incredible. A mortality of upwards of one in thirty over a series of years is no uncommon ratio in the history of many a lying-in charity; indeed, in some of the largest continental hospitals, one in twelve is about the mean. Out of 888,312 women delivered in lying-in hospitals in all parts of the world, the average death-rate was about one in thirty. Nor have our London lying-in hospitals proved any exception to the rule. It requires no argument to show that either some radical and searching reform must be effected in them, or they must cease to exist in this country. In this age of greater publicity and increased knowledge, no such condition of things as above stated could be allowed to exist. No medical officers in charge of such institutions, having regard to their professional position, no board of governors having regard to their public responsibilities, can be permitted silently to acquiesce in a mortality of one in thirty, and solace their conscience by the comfortable idea that it always has been so and always will be, without making some attempts to improve and reduce this death-rate. What was tolerated through indifference a few years back is no longer so now. Lying-in hospitals are on their trial. If with our increased knowledge of hospital sanitation and the etiology of zymotic diseases, the medical officers in charge are not able to reduce this mortality, to retain them any longer would not only be an abuse of charity, but a dereliction of duty. If the governors do not see the necessity of such a course, other agencies must be brought to bear upon them. The lives of women cannot be allowed to be endangered, even under the commendable plea of affording charitable relief.

About thirty years ago, an effort was made by the managing committees of three of the London lying-in hospitals to try to reduce the death-rate, either by erecting new hospitals, or by modifying the old ones, so as to bring them up to the sanitary standard of the day. This, however, has not resulted in producing any sensible reduction in the mortality; indeed, at one hospital—Queen Charlotte's—the death-rate has considerably increased since it was rebuilt.

In consequence of a great epidemic of puerperal fever in all the London lying-in hospitals, which entailed the complete or partial closure of all about two or three years ago, the governors felt it imperatively necessary in three out of those four institutions to spend large sums of money in reconstructing them, and bringing them up to the sanitary requirements of the day. So far, these structural alterations have not been attended with the desired result. Queen Charlotte's was compelled to be closed in the spring of last year, in consequence of a most severe epidemic of puerperal fever. The medical report of this epidemic is a plain unvarnished statement of facts, and contains most valuable and useful information. That the linen was a source of danger has been many times suspected, but we are not aware of any positive proof having been previously established that puerperal fever originated in the linen, and was conveyed by it. It adds one step more to our knowledge of the etiology of septicæmia. The City of London Hospital, which was only reopened last summer, has had to deplore already a fatal outbreak of puerperal fever.

The question naturally arises, Whence do these frequent attacks of puerperal fever proceed, entailing, as they do, such a fearful sacrifice of life? The hospitals have, at very great expenditure, been structurally improved, and yet the desired immunity not obtained. In the case of Queen Charlotte's Hospital, the answer is clear. The hospital was reorganised, and sanitary improvements were effected, but the internal administration, through a mistaken kindness, was left in the same hands—a person not trained or skilled in the modern use of antiseptics, nor imbued with the extreme necessity of paying the strictest attention to the most minute details. The mind of an unscientifically educated person must be trained by long and severe discipline, before it can appreciate the vital importance of most conscientiously fulfilling every injunction laid down for the proper carrying out of the antiseptic system.

Lying-in hospitals are most difficult institutions to manage. Those who have only had opportunities of judging of the lying-in woman from observing the requirements of the lying-in chamber in the private house, can form no conception of the dangers which surround the parturient woman in a lying-in hospital. One of the chief sources of trouble in those institutions is the confusion which rests in the unscientifically educated mind between "knowledge" and "experience". Because a midwife has skilfully attended a few thousand deliveries, or because a nurse has nursed a few hundred women successfully, it seems to many, and especially to lay persons, to be a necessary corollary that she must therefore, from her greater "experience", have more "knowledge" of what is requisite to prevent the incubation of disease and the spread of septic mischief, than the medical officers in charge. The two things, however, are utterly unconnected with each other, and are as widely different as any two things can possibly be. It is this mistaken notion which has been the bane of our lying-in hospitals, and has tended more to obstruct improvements in internal administration and structural alterations than any other thing. Instead of the Committee being guided by the opinions of their responsible scientific officers in dealing with such delicate and dangerous questions as the internal administration of a lying-in hospital, the history of many of such institutions proves that they are the last persons to whom they apply for direction and information; indeed, the treatment the medical officers have received at the hands of the governing authorities of our several lying-in hospitals has been a most disgraceful exhibition, whether we consider Dr. Rigby's case, Dr. Greenhalgh's, or the more recent case of Queen Charlotte's Hospital. They would rather trust, as they term it, to the practical experience of an apt matron, than listen to the advice of their medical officers, who are the persons held responsible for the deaths both by the governors and the public.

It is utterly impossible to expect of an ignorant (scientifically) person a sufficient knowledge of the etiology and mode of propagation of septicæmia, such as would enable him to prevent its origin and check its spread in such a hospital. Yet the opinion of such a person has been only too frequently taken by laymen, and, we regret to say, even by some medical men, who should know better, in preference to that of their responsible advisers. Would one of these gentlemen, if about to erect a dangerous building, take the opinion of the architect's foreman in preference to that of the architect? The attempts on the part of any medical officer of these institutions to try to reduce the awful death-rate which has reigned at these institutions have many times met with the most strenuous opposition on the part of the lay governing board; and not until a terrible outbreak of puerperal fever has brought the necessity

for improvement forcibly home to their minds have they yielded. The minute details required in carrying out any antiseptic system seem to the uninstructed mind so trivial, that the necessary rigour in enforcing them appears almost absurdity, and is, indeed, treated as ridiculous. Experience has shown that the neglect of the most apparently trifling order may lead to the most dire results. Thus in one hospital, of which the details are before us, not cleaning out thoroughly a vaginal tube, although it was placed in a carbolic solution, caused the death of two patients. Taking a pillow from a septic case, and giving it to another patient without baking it, although a clean pillow-case was applied, occasioned another death. A nurse concealing the fact that she had a whitlow on her finger occasioned the death of two patients. The use of a flannel-petticoat, which had been soiled by the discharges of other patients, by a woman during parturition, cost a life.

The physicians in charge of Queen Charlotte's Hospital state, at the end of their report, that the result of their experience of other recent investigations into the late outbreak of puerperal fever leads them more than ever to the conviction that puerperal fever is not a necessity in lying-in hospitals, but that, with proper hygienic and septic precautions, they can be made as safe as a private home. They have gone far to establish the proof of their assertion; for, out of four hundred and fifty deliveries since the reopening of the hospital in September last, there has been only one death—that of a girl afflicted with chronic Bright's disease, who was prematurely delivered of a putrid child and secundines. Such a low mortality has not existed in the memory of the hospital. If such great things can be effected by strict attention to antiseptic principles, the day cannot be far distant when lying-in hospitals will cease to be denounced as unjustifiable institutions. The investigation which is being conducted at the York Road Lying-in Hospital—into the internal administration—will, if the medical officers substantiate their case, prove that this hospital is no exception to the history of other lying-in hospitals: that the opinion and authority of the medical officers in charge have been disregarded. The only condition under which lying-in hospitals can be carried on with safety to the patients, is that the physicians have absolute and undisputed control over all that relates to the patients, and nursing. Where this is the case, as in Professor Tarnier's Pavilion in Paris and Dr. Freund's Hospital at Strasburg, the results are perfectly satisfactory; the mortality even falls below that which obtains among lying-in women outside the hospitals.

PROPAGATION OF INFECTIOUS DISEASES BY RAGS.

CASES of small-pox amongst the workers in rag-factories are not of unusual occurrence, but they do not seem to have been generally invested with the importance which they undoubtedly deserve. In a recent number (June 5th, p. 863), we reported certain instances of the propagation of small-pox on the continent in this way; and Dr. Alford of Taunton gave, in the JOURNAL of June 19th, a very interesting account of a similar outbreak in his district. Numerous other cases of the same kind have from time to time been communicated to us; and the circumstances of their occurrence present so many features of similarity, as to point to the necessity of some steps being taken for their prevention. Thus, at Canterbury, it seems to be the commonest of experiences in the existence of small-pox in the city that it should appear in the person of a rag-worker. This was so in April 1875, when a girl from the local rag-factory (to which large quantities of rags are brought from the metropolis), was attacked by small-pox, and conveyed the infection, directly or indirectly, to some twelve other persons, several of whom died. The then medical officer of health, writing at the time, said that, during a period of three years, there had been no case of small-pox in the city the origin of which had not been traced to the factory. In June 1878, there were two cases of small-pox in the city, the second of which had caught the disease from a woman suffering from it who was a worker at this factory. Last year, another case of small-pox occurred in the person of a girl who had been sorting at the same factory some very dirty and offensive rags a short time before she was taken ill. A similar case is reported by Dr. Butterfield in his last annual report on the health of Bradford. A girl, aged 15 years, who had not been vaccinated, was taken ill with unmistakeable symptoms of small-pox. There had been no case in the borough for many months, and the girl had not left the neighbourhood of her home. But she had been temporarily employed at an establishment for sorting rags, a large proportion of which had come from London. In a few days, another young woman, employed on the same work, exhibited symptoms of the disease. Two of the three deaths from small-pox in the Wakefield rural district in 1878 were those of girls employed in rag-warehouses. At Ossett-cum-Gawthorpe, in March 1878, several persons, residing in different localities, but working in the same room at a rag-warehouse, were simultaneously affected with small-pox, and from these the disease extended, so that more than thirty persons (excluding several in an adjoining district) were attacked with it. At Whittlesford, in the Linton rural district, there was quite a large outbreak from this cause in 1873, and a smaller one in 1875. At Thetford, an epidemic of small-pox that raged for six or seven months, and caused sixteen or seventeen deaths, was traced by Dr. H. J. Hunter to two women who were engaged together in cutting up some foreign rags, and who fell ill of small-pox on the same day.

Cases of a similar kind might doubtless be indefinitely multiplied; but those which we have given are sufficient to show the real danger that arises from infective rags. It is curious that all the cases that are recorded are those of small-pox, and have occurred amongst women. We should not have been surprised to hear of other infections having been spread by rags; for, in regard of many eruptive diseases, it is well known that certain sorts of things used by the sick—such as their clothing, bedding, towels, handkerchiefs, napkins, etc.—become imbued with infective matters, and are thus rendered for a longer or shorter time capable of conveying infection. In places where great epidemics are prevailing, and where often, in consequence of death, households are being more or less broken up, articles such as the above are very apt to pass into the hands of rag-collectors, and to form part of their general merchandise. It is not possible at present to measure at all accurately the quantity of danger which this merchandise represents to communities eventually receiving it, but certainly it would not be uniform for all diseases. Some infective products of disease—for instance, the discharge from small-pox pustules—can, if quickly dried, retain for a long while their infective power, while of others, apparently, the power soon ceases; and, according to differences of this sort, the rag-trade would, of course, be more open to suspicion in regard of some diseases than in regard of others. Doubtless this is the explanation of the cases recorded being exclusively those of small-pox. Some years ago, Mr. Simon, when Medical Officer of the Privy Council, took pains to gather together the then experience of England on this subject; and the result of an extensive inquiry (the particulars of which are set out in his eighth annual report) was that, except in regard of small-pox, no accusations were made against the rags in any of the eighty-six paper-mills visited by the inspector, Dr. Bristowe. The limitation of the cases to women is due to the fact that upon females devolves almost exclusively the rag-cutting and sorting, which in the majority of mills is the first process after the receipt of the rags. It is only in the preliminary stages of paper-making that any degree of danger can exist; for no sooner are the rags cut and dusted than they are boiled and subjected to chemical agencies, and thus rendered altogether innocuous.

As to the means to be adopted to prevent the spread of disease by infected rags, it is not easy to suggest a remedy at once efficient and practicable. It is obvious that the proper stage at which rags should be disinfected is that prior to the disposal of them to the rag-dealers; and that disinfection applied at any subsequent stage would leave all the persons engaged on the rags antecedently to that stage wholly unprotected. It is, indeed, under the Sanitary Act of 1866 and the Public Health Act of 1875, made a misdemeanour for anyone to knowingly give, lend, sell, transmit or expose, without previous disinfection, rags that have been exposed to infection; but it would probably be a

very difficult matter to convict anyone of the offence. The lesson which is strongly taught by the outbreaks referred to above is, that all infected clothing should be thoroughly washed and disinfected before being allowed to leave the house, or else burnt. It may be difficult to enforce this rule; but, inasmuch as small-pox is the form of infectious disease most likely to be carried by rags, it would not be at all difficult to enforce another; viz., that all workpeople at rag-factories (and especially at paper-mills, where the *employés* are frequently young) should be examined as to their vaccination before commencing work, and, if not found already to have been revaccinated or to have had small-pox, should, without fail, be revaccinated as a condition of employment.

VACCINE AND VARIOLA.

M. DEPAUL, at a recent meeting of the Académie de Médecine, said that he wished to recall to mind that he had expressed the opinion that vaccinal cicatrices are not so important as they have been represented to be, in reference to the immunity from small-pox conferred by them, since the cicatrices of small-pox itself, as the facts respecting the regiment of Turcos referred to by M. Depaul prove, would not be a criterion of immunity in relation to vaccine. Finally, as regards the question of secondary vaccinal eruptions, M. Depaul stated that, from this point of view, he has distinguished three kinds of virus; 1. Human vaccine virus, which rarely gives rise to secondary eruptions; 2. Calf-lymph, of which the inoculation is more frequently followed by these eruptions; 3. Finally, variolous lymph, if it may be so called; that is to say, attenuated variolous virus; for instance, that of discrete varioloid pustules, which often give rise to a generalised benign eruption.

In reference to M. Hervieux's report on small-pox, M. Pasteur wished to remind the Academy that M. Alphonse de Candolle of Geneva has, in a recent work, expressed an opinion confirmatory of M. Broca's, in relation to the immunity obtained with respect to certain virulent diseases, and from small-pox in particular. Before M. Broca's declaration, M. de Candolle had affirmed that Europeans owe their immunity from small-pox to the fact that they are the descendants of numerous generations of variolous parents, who have resisted the disease. M. Pasteur believes that this question may be solved by means of the experiments undertaken by him with regard to fowl-cholera; it remains to be seen if the young broods hatched by the inoculated hens will be less open to contract the disease than their parents.

As to the question of the community of origin between variola and vaccine, which was before the Academy of Medicine in 1868, M. Pasteur said that a number of medical men have remained under the impression that there is a community of origin between the two diseases, whilst the veterinary surgeons are led to admit, on the contrary, that they are independent one of the other. The physicians who, like MM. Depaul, Hervieux, Delpech, Broca, etc., believe in the relation of the origin of variola and vaccine, unfortunately only base their opinions on observations of very restricted value, which leave the question undecided. M. Pasteur, for his part, believes in the community of origin of variola and vaccine, and consequently relies on the results of his experiments on fowl-cholera, in which sometimes he produces so powerful a virus that it kills all the animals on which it is inoculated; sometimes he obtains a weaker and weaker virus, the inoculation of which preserves the hens from the attack of the most virulent virus. M. Pasteur asks why science should not admit that variolous virus may be changed into ordinary vaccine virus by successive attenuations, without having recourse to the hypothesis of the attenuation of variolous virus by its passage through the organism of animals. He believes that the results of his experiments on fowl-cholera have a very different value from the somewhat vague notions of medical men who, from observations of absolutely insufficient value, believe in the common origin of vaccine and human variola.

According to M. Pasteur, there is nothing to demonstrate the truth of Jenner's opinion, that horse-pox and cow-pox are nothing but human variola weakened by its passage through the organism of the horse or cow. M. Pasteur's experiments on fowl-cholera seem to him to demonstrate that it is possible to pass from variolous vaccine to vaccine virus, by successive attenuations, without any intervention of animal organism. To this, M. Jules Guérin replied that M. Pasteur did not seem to him to be well informed respecting the discussion which took place some years since, in the Academy of Medicine; and in which principles, now adopted into science, were first proclaimed. The origin of vaccine is now perfectly well known, and there is no need of M. Pasteur's experiments with fowl-cholera to clear up the question. M. Depaul has clearly shown, by observation and experiment, the principle which M. Guérin had laid down: that is, that vaccine is not a special virus, but the product of the inoculation of the variola of animals, not man. As to searching for the means of attenuating variola and rendering it benign, that was done more than fifty years ago; and the practice of inoculation in the last century was nothing else than putting this method into practice. At the present time, nothing remains to be done in this direction than to seek for the conditions in which the results of the inoculation of the variolous virus can be absolutely localised at the points of inoculation. M. Pasteur replied that this opinion of M. Guérin is absolutely contestable. In his opinion, there is nothing to prove that human vaccine is the product of the variola of animals inoculated into the human subject. There is no existing work in which this opinion is scientifically established. M. Blot said that M. Pasteur would find in the bulletins of the Academy of Medicine, which contain, in reports of the great discussion on the subject in 1868, the most peremptory proof of the truths questioned by him. It was in consequence of a communication made by M. Bouley, and of the observations of the Commission named to examine at Alfort the facts laid by him before the Academy that the disorder, up to that time known as grease (being its unscientific denomination), was recognised as being nothing else than horse-pox, and that horse-pox became the analogue of cow-pox. The error committed by the veterinary surgeons became profitable to science, and showed in an entirely new light the relations of grease with cow-pox and vaccine. In M. Blot's opinion, M. Pasteur made a great mistake when he thought it possible to conclude, from the manner in which certain viruses comported themselves, the manner in which all viruses would behave. From the fact that M. Pasteur has been able to directly attenuate the virus of fowl-cholera, it does not in the least follow that the variolous virus can be attenuated in the same way. M. Pasteur said that this is not the question, which is to know, one way or the other, whether there is an independent origin between variola and vaccine, between variolous vaccine and vaccine virus. The relations established between horse-pox, cow-pox, human vaccine, and human variola are founded on observations which have no scientific value, or, to speak more accurately, on mere impressions. M. Pasteur asks for proofs which may be accepted by an accurate and truly scientific intellect. M. Depaul, in response to an appeal on the part of M. Pasteur to take part in the discussion, said that, with all due deference to the talent of the latter, it was not right that he should only look to the results of his own experiments, and take no account of the observations of the medical profession on these essentially medical questions. If M. Pasteur had consulted the literature of the subject, he would have met with accounts of epidemics of variola in which sometimes the epidemic had commenced in animals and spread to man, and *vice versâ*. These are not laboratory experiments, taking place in a retort; experiments which M. Depaul will not accept, because they are scarcely applicable to the study of human diseases. To these he greatly prefers observations as nature offers them to the intellect, which knows how to observe and to study them. This great question of the origin of vaccine and variola is not, M. Depaul believes, amongst those which can be solved by experiments on fowl-cholera. As M. Blot had said, viruses do not all behave in the same manner; and M. Pasteur is by no means authorised to form conclusions from his experiments in fowl-cholera as to what occurs in variola and vaccinia. Medical science is built up with the accumulated observations of centuries, and laboratory experiments can never overthrow the great principles which form its basis. M. Pasteur, continued M. Depaul, has never approached

medical questions except by the more trivial side; their great aspects have escaped him. Much excitement has been created by his experiments on fowl-cholera and the discovery of the infinitely little, the microscopic organism which he regards as the cause of this disease. How does M. Pasteur, asks M. Depaul, know that the microscopic organism is really the cause of fowl-cholera? Might it not be maintained with equal probability that it is but the effect of the disease? Where is the proof that fowls inoculated with culture-fluid have really died of fowl-cholera? Might it not as well be said that they have died from the poison with which they have been inoculated? The proof of M. Pasteur's affirmations is sought for without being found. Returning to the question of the origin of vaccine and of variola, M. Depaul repeated that M. Pasteur singularly deceives himself when he attempts to solve it by experiments in his laboratory.

At the meeting of the Academy on June 1st, M. Pasteur submitted to the members, in reply to M. Depaul's objections, the results of his experiments on fowl-cholera. On taking, he said, a vessel containing perfectly pure fowl-broth—that is to say, in contact with a pure atmosphere absolutely deprived of any germs of change whatsoever, and of which the limpidity was beyond reproach; and, on the other hand, dipping the end of a rod in a culture fluid of the microbein of fowl-cholera, plunging it into the first liquid,—the little organism, notwithstanding the infinitely small amount of seed, germinated with such rapidity that, some hours afterwards, silky waves appeared in the liquid, formed by living clouds of microbes; and this liquid, which was ordinary chicken-broth of the most harmless character, of which one, two, ten, or twenty cubic *centimètres* might be injected under the skin of the animal without inducing either disease or death, was now so virulent that, if a small fraction of a drop of this liquid, even the thousandth part of a drop, were inserted under the skin, the animal would die and the whole body would become virulent. The proof that this small organism was the cause of the disease and of death was that, if the culture fluid were filtered so as to retain the microscopic organism on the filter, the liquid which passed through remained harmless. If a tube containing the virus were suspended for some days in an equal temperature, the germs would fall to the bottom; and if then the whole fluid portion were inoculated, the inoculation would be sterile; whilst, if the lower layers containing the small organisms were inoculated, disease and death would ensue. Therefore, in these inoculation experiments, disease and death were induced by the microscopic organism. M. Jules Guérin asked M. Depaul if he were convinced by the exhibition of M. Pasteur's results, as, for his part, he retained all his doubts as to the reality of the consequences which M. Pasteur believed himself to draw from them.

A MORTUARY is to be erected for Crumpsall, Manchester.

THE Bradford Fever Hospital is to be extended, more accommodation being required for scarlatina patients.

SMALL-POX last week caused 51, and typhoid fever 27, deaths in Paris.

SINCE the introduction of chloroform as an anæsthetic agent, thirty-five years ago, says an American contemporary, there have been 500 deaths from its use.

EXTREMELY hot weather has prevailed in the Eastern parts of the United States for several days. Forty-six deaths from sunstroke occurred at New York on Monday and Tuesday last.

A GARROD Memorial Fund has been set on foot with the object of reprinting in a complete and separate form all the papers published by Professor A. H. Garrod, both physiological and zoological.

THE new number of the *Bulletin* of the Belgian Geographical Society contains an interesting paper on the Island of Rotumah, by Dr. Litton Forbes.

THERE were 37 deaths from whooping-cough in London last week, which were 19 less than those in the previous week, and were lower than in any week since the beginning of November 1879.

DURING the past twelve weeks of the current quarter, the death-rate in London has averaged only 19.5 per 1,000, against 22.5 and 22.8 in the corresponding periods of 1878 and 1879.

SMALL-POX is still very fatal at Valparaiso, in Chili. During the month of March last, it caused 125 deaths out of a total of 464. The general death-rate for the month was equal to an annual rate of 55 per 1000.

AT Birmingham, James Daniel Haywood, an unqualified medical practitioner, has been charged with the wilful murder of Sarah Roper, a single woman, twenty-four years of age, who died, as alleged, from an attempt of the prisoner to procure abortion.

ON Thursday, June 24th, 1880, Mr. Richard Davy practised aortic compression *per rectum* on an operation case (uterine) of Dr. Potter's. The compression was maintained for about four minutes, pulsation ceased in both femoral arteries, the loss of blood from the operation was small, and the rectum sustained no injury.

AT the Preston County Police Office, John Collins, a prisoner at the county gaol, has been committed for trial for assaulting Dr. Moore, the gaol surgeon, by striking him on and cutting his head with a hammer. In opening the Preston Sessions, the chairman said, in his charge, that Collins was either insane, or pretended to be, when the offence was committed.

LAST week, there were 19 deaths from small-pox in Dublin, 14 in London, and one in Manchester, but not one in any of the eighteen other large English towns. These 14 deaths in London exceeded the number in any week since the end of April. The number of small-pox patients in the Metropolitan Asylums Hospitals was 237 on Saturday last; 47 new cases were admitted during the week.

THE Kent Justices have decided not to divide the present "Greenwich" coronership district into three (to be called the "Bromley", "Dartford", and "Greenwich" districts), as proposed, but to leave it as held by the late Mr. Charles J. Carttar. They have also reduced the fees to be paid to medical men for *post mortem* examinations where no inquest is held, from £2 2s. to £1 11s. 6d. Up to the present time, they have allowed the full fee, whether an inquest was held or not.

THE LEVÉE.

THE following members of the medical profession were presented at the *levée* held on Wednesday last by His Royal Highness the Prince of Wales on behalf of Her Majesty the Queen: Surgeon R. Cross, M.D., Queen's Westminster Rifle Volunteers, by Lieutenant-Colonel the Duke of Westminster; Surgeon-Major G. Borlase Childs, Royal London Militia, by Lieutenant-Colonel Dundas; Surgeon H. R. O. Cross, Army Medical Department, on return from service in South Africa, by the Adjutant-General; Surgeon W. D. A. Owen, Army Medical Department, by the Adjutant-General; Surgeon W. H. Platt, Tower Hamlets Rifle Volunteers, by Surgeon Gray, Tower Hamlets Rifle Brigade; Surgeon-General G. H. Ray, Bengal Army, by the Secretary of State.

VACCINATION IN JAPAN.

WE have already referred to the provision of an establishment for the provision of calf-lymph in Japan. We now learn from the first report of the Central Sanitary Bureau of Japan just issued by the Japanese Government, and written in excellent English by Magayo Sensai, the director, that, in the half year ending June 1876, 514,684 persons were successfully vaccinated, and 48,567 were revaccinated. In the half year previous to this, 295,940 were also vaccinated; 8,675 tubules of lymph were distributed to cities, villages, hospitals, and colleges, and the bureau not unreasonably hope for the entire disappearance of small-

pox from the country. Nor are the advantages of the public vaccine establishments administered for the exclusive benefit of the Japanese. San Francisco also owes them a debt of gratitude. On her last voyage from China, small-pox broke out upon the ship *City of Tokio*. On her arrival at Yokohoma, a sufficient supply of fresh bovine virus was supplied to the ship's officers. The cabin and steerage passengers, crew, etc., were all revaccinated; seventy per cent. of the operations were successful, and before the vessel arrived in San Francisco all danger of the disease becoming epidemic had disappeared. The period of quarantine was greatly shortened, and the passengers were not detained as they were on the previous trip.

THE LATE DR. MOSS.

A CORRESPONDENT, J. H. S., sends to *Nature* a notice of Dr. E. L. Moss, who has shared the fate of the *Atalanta*. It seems to have escaped the notice of the scientific world the loss it has sustained in the ill-fated *Atalanta*. Dr. Edward L. Moss, one of the officers on board that vessel, besides being a surgeon of renown in the navy, was also, in the best sense of that phrase, a scientific man. His papers read before the British Association, and his remarks at sectional meetings over a large range of natural history subjects, will be fresh in the minds of many. He was one who, always observing and storing up facts, a whatever part of the world he might be, could clearly and systematically arrange them, and also employ them, if required, with convincing force. Such opportunities for observation were many and various. His profession, and the high estimation in which he was held by the naval authorities, making him a picked man for any special service. By no means his least accomplishment was the masterly way in which he wielded brush and pen. In the Arctic Expedition of 1875-76, he served on board H.M.S. *Alert*, and, to the astonishment of every one, brought back with him from that expedition a number of most beautiful finished water-colour paintings and sketches in black and white. These were all made on the spot in those far-off regions, and are believed to be the only examples in colour, painted from nature, of those dreary cold solitudes, and consequently were the first intimation to the majority of people of the gorgeous effects of colour to be seen there. "I remember him", says the writer, "telling me about the trouble it was to keep his pigments fluid, and the devices he had to resort to to effect that result. Many of these paintings and drawings (in facsimile), with a vivid and most interesting descriptive narrative, were published in his book, *Shores of the Polar Sea*."

THE METROPOLITAN COUNTIES BRANCH.

THE annual meeting and dinner of this Branch will take place at the Ship Hotel, Greenwich, on Wednesday next. The Committee of Council of the Association will meet for the transaction of business on the same day; and we are informed that the President, President-elect, President of Council, Treasurer, several vice-presidents, and a considerable number of other members of the Committee have accepted invitations to join the members of the Branch at the dinner, at which the chair will be taken by the new president, Dr. Habershon of Guy's Hospital.

THE SALE OF PATENT MEDICINES.

IN respect to the sale of patent medicines, we might advantageously take a lesson from the Japanese. We learn, from the first report of the Central Sanitary Bureau of Japan, just issued, that they have established a public laboratory for the analysis of chemicals and patent medicines. The proprietors of patent medicines are bound to present a sample, with the names and proportion of the ingredients, directions for its use, and explanations of its supposed efficacy. During the year, there were no fewer than 11,904 applicants for licence to prepare and sell 148,091 patent and secret medicines. Permission for the preparation and sale of 58,638 different kinds was granted, 8,592 were prohibited, 9,918 were ordered to be discountenanced, and 70,943 remained still to be reported on. The majority of those which were authorised to be sold were of no efficacy, and but few were really remedial agents. But the sale of these was not prohibited, as they were not dangerous to the health of the people. If similar regulations were put in force in this country, it is probable that the sale of several patent medicines would be put a stop to.

A SENSIBLE SUGGESTION.

WE find, in the Registrar-General for Ireland's quarterly report, that the district registrar at Donaghmoyne, Carrickmacross, writes: "I would think it very desirable, as having a sure tendency in promoting the public health, if the reading of some elementary treatise on sanitary science were made compulsory, and encouraged by the national schools; the medical officers of health to have control over the same in their respective districts." It is quite certain that the sanitary condition of the people is to a great extent in their own hands, and that no enactments, nor even wholesome dwellings and pure water-supply, will be thoroughly utilised until the people are educated to know their value and to co-operate with the authorities who provide these sanitary requisites, by personal cleanliness and healthful habits.

HORSE-POX, COW-POX, AND VACCINE MATTER.

SOME specimens of vaccine respectively from the horse, the cow, and the human subject, having been entrusted to M. Megnin, that he might make a microscopical examination of them, he has submitted the following results to the Société de Biologie of Paris. Preparation No. 1, obtained by emptying on a glass slide the contents of a tube of vaccine filled from a pustule on a heifer, on which the culture of horse-pox, furnished by a horse of German breed, had been commenced, showed microbia either in groups or isolated, floating in the serum or adhering to epithelial cells in the midst of some fat-globules. These microbia were sporuliform, and had an uniform diameter of 1,000th of a *millimètre*. Preparation No. 2, obtained from fresh vaccine from another heifer, on which so-called Beaugency cow-pox, or cow-pox of Italian origin, had been for some time cultivated, showed, in fibrino-albuminous coagula, or floating in serum, grouped or isolated in company with some red blood-corpuscles, microbia exactly similar to and of the same dimensions as those in the first preparation. A third preparation, obtained by diluting, in a drop of water, the dry vaccine of the Academy of Medicine, showed microbia floating in the water, like the others, but a fifth smaller in diameter. A fourth preparation, obtained by empyting on a glass slide the contents of a tube of vaccine filled from the pustule of a child vaccinated at the Academy of Medicine, showed microbia of the precise dimensions of preparation No. 3, either grouped or floating in the midst of the serum with some red corpuscles or enclosed in coagula. The next day after that on which the above-mentioned observations were made, whilst examining his preparations, which had been sealed with wax, M. Megnin noticed a curious fact. In the first (horse-pox) preparation, the microbia had multiplied in their own serum to such an extent as to give a lactescent appearance to the liquid; microscopic examination showed them to be so abundant that they touched each other, forming several layers, and covering the whole field of the preparation. In the second (cow-pox) preparation, the same phenomenon was present, but in a less intense degree; the serum was only opaline, and the microbia were also very abundant, touching each other, but not forming such thick layers. In the third and fourth preparations no change had taken place, but six days afterwards, the serum of the fourth preparation had also become slightly opaline, and the microbia had multiplied abundantly. M. Megnin favours the inference from these facts that the vital or vegetative power is the greater in the microbium of vaccine in proportion as the vaccine approaches its equine origin.

LEVEN ON NERVOUS PHENOMENA OF GASTRIC ORIGIN.

AT the last meeting of the Paris Academy of Sciences, M. Leven called particular attention to the gastric origin of a certain number of medullary and cerebral nervous phenomena, which have been frequently attributed either to hysteria or to hypochondria. Thus, in his opinion, neuralgia, dermalgia, muscular and articular hyperæsthesia of the left side, thought to be caused by hysteria, are, as a rule, irradiations from lesions of the stomach. In the same way hypochondria, which alienist

physicians describe as a special neurosis, frequently results, either from a dilatation of the stomach or from another affection of that organ. In pursuance of the reigning opinion on the nature of these nervous phenomena, patients are treated by preparations of iron and quinine, which only aggravate the gastric troubles and dyspepsia. On the contrary, the affection of the stomach should be treated, and all the nervous irradiations will disappear with it. M. Brown-Séquard observed that it has long been known that all the organs, or, more correctly speaking, all the nerves of the diseased organs, might bring on hysteriform phenomena; but it is very certain that the stomach shows disorders which are secondary, and depend on the general hysteric affection. M. Leven did not deny the subordination of the stomach to general neurosis, but he laid great stress on the fact that every diseased organ induces special pathological reflexes.

SIGNS OF DEATH.

M. BEYRAUD of Libourne, in a communication to the Academy of Sciences in Paris, writes that real death may be recognised in a practical manner by means of the application of the cautery to the supposed corpse. If the eschar do not show itself, the subject is dead; if it be yellow and transparent, the subject is dead; if it be black or of a reddish-brown, the subject is living.

DARENTH ASYLUM FOR IMBECILE CHILDREN.

THE fifth annual report of the Committee, just published, contains many interesting particulars relating to the training and treatment of these children. From the report of Dr. Fletcher Beach, the medical superintendent, we find that, during the past year, 155 patients have been received, 21 have been discharged, and 30 have died. The total number under treatment has been 494, the average daily number resident 412, and the number in the asylum on December 31st, 1879, 443. It appears that during the five years the asylum has been in operation—first at Clapton, and now at Darenth—781 patients have been received, of whom 464 have been males, and 317 females. Dr. Beach remarks that the usual average of one-half as many more males than females found in idiot asylums prevails at Darenth. According to the census, an equal number of male and female imbeciles are born; but the excess of males in idiot asylums is said to be due to the fact that the females, unless very unmanageable, are kept at home. Five patients have "recovered"; and, of these, two girls have been retained in the asylum as servants, it having been found that their parents were unable to look after them. Of the remaining three, one has obtained employment; the other two are at home with their friends. The death-rate—7.2 per cent. on the average daily number resident—is the same as last year, and is accounted for by the feeble condition and extreme youth (several have been admitted at two years of age) of the patients when received. With the exception of an epidemic of whooping-cough and the occurrence of one case of measles, the asylum has been free from contagious disease. The health of the patients has considerably improved since their arrival at Darenth. A large number of epileptics have been admitted, and there were at the commencement of the year 130 epileptics in the asylum. The system of sending out patients "on trial" is about to be commenced. This is a common practice in lunatic asylums, and is often attended with good results; the medical man is enabled to test the mental condition of his patients when placed under new conditions of life. Several tables are appended to the report, giving information on various points. One of these, showing the probable causes of the mental disorder in the patients admitted during the year, is a very interesting one. From it, we find that, in fifteen cases, intemperance played a prominent part in the production of the disease.

THE DIAGNOSIS OF CANCER OF THE STOMACH.

AT a recent meeting of the Paris Société de Biologie, M. Leven pointed out to the Society the great difficulties which are sometimes met with in the diagnosis of cancer of the stomach from simple dilatation. The so-called uncontrollable vomitings are present in both cases. To prevent these vomitings, M. Leven recommends that the patients should take solid food once a day (150 *grammes* of meat), so as to avoid congestion of the mucous membrane. The rest of the alimentation consists of a *litre* and a half of milk, and six eggs in the course of the twenty-four hours. If, at the end of eight days of this regimen, the vomitings be stopped, it may be taken as certain that there is no cancer of the stomach. In support of his opinions, M. Leven related the history of two patients whom he treated in this manner, and effected a cure.

CURTAINS OR NO CURTAINS.

THE Commission charged with the arrangements relating to the new Maternity Hospital in the Rue d'Assas at Paris are greatly exercised as to whether there should be curtains to the beds or not. Some of the most eminent French obstetricians are in favour of them, others are totally opposed to their presence. The conclusion arrived at seems to be that those physicians who like curtains will have them to their beds, and those who do not will dispense with them.

RAILROADS AND MALARIA.

A BILL has been laid before the Italian Senate by one of the deputies for combating the effects of malaria in several of the regions traversed by lines of railroad. It is calculated that, in Upper Italy, 1,900 *kilomètres;* on the Roman lines, 903; in Lower Italy, 1,614; and in Sardinia, 229; making a total of 4,637 *kilomètres*, traverse regions infected by malaria, which does not only commit its ravages in the Roman Campagna. The expenses resulting from this state of things to the railway companies are computed at sixty thousand pounds sterling *per annum*. Hydraulic arrangements and the planting of trees, especially of *eucalyptus globulus*, are proposed as remedial measures. The successful results obtained at Rome by planting these trees round the convent of the Sue Fontane, which has led to the total disappearance of fever, has given the idea of the larger project.

SCOTLAND.

THE SANITARY ASSOCIATION OF SCOTLAND.

THE annual meeting of the above Association was held on June 23rd, in Stirling, when the President delivered an address on the object of the Association, and how its usefulness could be best increased. He concluded hy moving that the Association resolve to form district Sub-Associations as sectional organisations of the Association, subject to the general regulations and constitution. The motion was agreed to. Papers were read on the "Amendment of the Public Health Act", on "Ventilation in its relation to dwellings", and on "The Water-Supply of Towns and Villages". It was resolved to hold the next meeting in Glasgow.

UNIVERSITY OF EDINBURGH.

THE greater part of the fourth year's men who have been up for the final examination for the degree of Bachelor of Medicine have now been put out of suspense by the publication of the list of those who have passed. One hundred and fifty-nine candidates appeared for examination, and of that number seventy-seven have passed in all subjects, while there still remains a considerable number who, having not yet completed their attendance at the class of Medical Jurisprudence, have still to appear for that subject. Eight of the candidates passed with distinction. The new university buildings are advancing rapidly, and the greater part is now roofed; it is very desirable that certain departments should be ready for occupation next session.

CURIOUS METHOD OF TYPHUS-INFECTION.

IN the Sheriff Court of Dumbarton last week, important evidence was given of the manner in which typhus fever may sometimes be spread. Michael Gribben, from Renton, was charged with contravening the Public Health Act, by having kept lodgers in his house of one apartment at Renton. The prosecutor stated that Bridget Conway had been three weeks over from Ireland, and was living with the accused, and

had died of typhus fever. He had no licence to keep lodgers, otherwise he would have been bound to inform the sanitary inspector when the fever took place. The sanitary inspector went to the house after the death, and found extensive preparations being made for a wake. His information was that, although the sanitary inspector threatened the accused, the wake was held in spite of him, and the fever had thus been brought down to Dumbarton. A medical certificate was put into court to show that the disease which occasioned the death was typhus fever. Mr. James Marshall, the sanitary inspector, said that, when he went up to the accused's house, the accused told him, and the priest had said, the girl died of measles. The medical man certified that the cause of death was typhus fever. Accused refused to bury the body that day, and wished the revels continued. It was only on a threat to get an order from the Sheriff, and on a promise to pay the expenses of the funeral, that the body could be got under ground. Three men actually, who had gone from Dumbarton to attend the wake, came home with the infection on them, and are now in the hospital. Judgment was given against the defendant.

HYDROPHOBIA IN EDINBURGH.

TWO cases of hydrophobia have occurred in the Royal Infirmary, Edinburgh, during the summer session; the latter of the two cases was admitted on the night of Wednesday, June 23rd; he exhibited undoubted symptoms and signs of hydrophobia. He had been bitten about two months ago by a dog he was attempting to destroy. After admission, he continued to get worse, the paroxysmal attacks continued, and at four next morning he expired. No *post mortem* examination could be obtained.

POISONING BY CARBOLIC ACID.

ON Saturday last, a case of poisoning by carbolic acid occurred at Dalry. A widow, Mrs. Goldie, had in her possession a bottle of carbolic acid, which she had procured after the death of her daughter from fever the previous day, for the purpose of disinfecting. She incautiously placed it beside some ginger-beer, and when subsequently she went for some of the latter, in mistake she drank a quantity of carbolic acid. It speedily caused such swelling of the mucous membrane as to render the usual means of treatment unavailable. She died on Sunday morning.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending June 19th, it appears that the death-rate in the eight principal towns during the week was 20.6 per thousand of estimated population. This rate is exactly the same as that for the corresponding week of last year, and 4.2 below that for the previous week of the present year. The lowest mortality was recorded in Greenock, viz., 13.1 per thousand, and the highest in Paisley, 35.0 per thousand. The mortality from the seven most familiar zymotic diseases was at the rate of 3.9 per thousand, being slightly below that of last week. Acute diseases of the chest caused 88 deaths, being a decrease of 28 on the number recorded during the previous week. The mean temperature was 57.4, being 6.5 above that of the immediately preceding week.

UREA IN THE BLOOD.

AT the Royal Society, Edinburgh, on May 17th, Mr. J. B. Haycraft read a paper on a method for the quantitative estimation of urea in the blood. The method depended upon the fact that one can dialyse the fluid parts of blood into alcohol, into which the urea passes in a very pure form. The alcohol containing the urea is evaporated, the residue washed with petroleum ether, re-extracted, and estimated after the method of Huefner. This method yields urea from so small a quantity of blood as 10 cc., and shows that more is present than was formerly conjectured, there being, on an average, 35 parts per 100,000.

IRELAND.

A REPORT was current last week that an outbreak of small-pox had arisen in Roscrea; but, from recent inquiries, we learn that the statement was without any foundation, the town being free from contagious disease.

THE ROYAL IRISH ACADEMY.

DR. MACALISTER, Professor of Anatomy and Surgery in the University of Dublin, and one of the surgeons to Sir Patrick Dun's Hospital, has been unanimously elected Secretary to the Academy in the room of the Astronomer-Royal for Ireland, Dr. R. S. Ball, resigned.

THE ROYAL UNIVERSITY OF IRELAND.

THE Senate of this University held its first meeting on the 24th ultimo, in Dublin Castle, under the presidency of its Chancellor, His Grace the Duke of Abercorn, K.G. The Right Hon. Lord O'Hagan, Lord High Chancellor of Ireland, was elected Vice-Chancellor of the University. A Committee of twelve members of the Senate was appointed to draw up a curriculum of examinations for the several faculties, and a scheme of statutes, rules, and ordinances for the Royal University, and also a financial scheme for providing fellowships, scholarships, prizes, and the general maintenance of the University; and also for determining on a site and suitable buildings for the University. The Committee consists of the Right Hon. Dr. Ball, ex-Lord Chancellor, the Right Hon. the Earl of Rosse, Right Hon. Lord Emly, Sir Robert Kane, Very Rev. Dean Neville, Rev. Dr. Porter, Dr. Sullivan, Dr. Moffett, Rev. Dr. Scott, Rev. Dr. Molloy, Dr. Macalister, and Mr. Redington. It is not likely that the programme of examinations of degrees can be issued until next year; meantime, the Queen's University will continue its functions until the Royal University is in a position to confer degrees.

SCARLATINA IN CORK.

AT a meeting of the Cork Dispensary Committee last week, Dr. Crowley, one of the dispensary medical officers, reported that scarlatina again appeared to increase in his district, five fresh cases having occurred within the previous two weeks. All were nearly convalescent, but he believed that it was next to impossible to stamp out the disease; and that, until the pabulum in which it lived was all exhausted, it was sure to linger with remarkable tenacity. A large number of houses in the district referred to are let in tenements, families living in a single room, and several in the one house, mostly overcrowded and in bad sanitary condition, all of which must necessarily tend to the dissemination of the disease, once it obtains a lodgement in houses of the character described.

THE COOMBE LYING-IN HOSPITAL.

THE annual meeting of the friends and subscribers of the above hospital was held, in the board-room of the institution, on the 25th ultimo. The Right Hon. the Lord Mayor, M.P., occupied the chair. From the report—the fifty-second annual one—which was read by the Master of the Hospital (Dr. Kidd), we learn that during the past year 680 women have been treated in the house, and 1,953 attended in their confinements at their own homes. There have also been 1,754 attendances at the special dispensary for the treatment of the diseases peculiar to women, and 5,448 at the general dispensary. Of the 680 treated in the hospital, 559 were in the labour wards, and 121 in the wards for the diseases peculiar to women—the greater number of whom had to undergo operations of a serious character. The chronic complaint, as the Lord Mayor termed it—viz., want of funds—from which this valuable institution suffers, in common with the majority of the Dublin hospitals, to some extent impairs the great amount of benefit the Coombe hospital confers on the poor of the thickly inhabited district in which it is situated. It is to be regretted, therefore, that the efforts to free the hospital from its comparatively small debt have not yet succeeded. The administration of the hospital now is excellent; and, as stated by Lord

Powerscourt, Chairman of the Board of Superintendence of the Dublin Hospitals, "the hospital is very different from what it was a few years ago, and will bear comparison with any similar institution in the country". To the liberality of Sir A. Guinness, now Lord Ardilaun, much of this improvement is due; and a resolution, congratulating his lordship on his recent elevation to the peerage, was adopted by the meeting. The usefulness of the hospital, as affording a large field of instruction in obstetric medicine and surgery, was alluded to by many speakers at the meeting; and, from the high reputation of the present Master, the advantages of having studied in such a school are not the least important of the services rendered to the public by the Coombe Hospital.

SOUTH CHARITABLE INFIRMARY, CORK.

A MEETING of the trustees of this institution was held on the 25th ult., for the purpose of electing an assistant-surgeon. The minutes of the last meeting referred to the election of Drs. Macnaughton Jones and Tanner as surgeons; also that a question of seniority had arisen, and that it was decided that there should be no claim to seniority, but that, as Dr. Jones was first elected, his name should appear first on official documents. Several of the trustees, however, now objected to this arrangement, and after some discussion it was determined that there should be no distinction between them. The Mayor then proposed the election of Dr. H. R. Townsend, while Drs. Thomas G. Atkins, Charles A. Harvey, and Pearson were duly proposed by other trustees. A poll having been taken, there voted for Dr. Harvey 3, Dr. Atkins 2, Dr. Pearson 1, and Dr. Townsend 12, the last-named gentleman being elected.

THE OUTBREAK OF FEVER IN THE WEST OF IRELAND.

DR. STEWART WOODHOUSE of Dublin has been appointed temporary Medical Inspector by the Local Government Board for Ireland, to examine and report upon the nature and causes of the fever now existing in the county Mayo. From the statement made by Mr. Forster, the Chief Secretary for Ireland, in the House of Commons on Monday night last, it would appear that the epidemic is not what is generally called famine-fever; that is to say, it is not that mesenteric fever which was the great cause of death in the last famine. According to Dr. Grimshaw, the Registrar-General for Ireland, the outbreak is one of typhus. The Chief Secretary is also reported to have stated that, in most of the cases of which he has heard, the persons attacked were certainly not in great distress. The Dublin Mansion House Committee for the Relief of the Distress in Ireland are sending one of their members, Dr. Sigerson, to Mayo, to report on the fever; and have authorised him to take another medical man with him as an assistant commissioner.

THE ROYAL DUBLIN SANITARY COMMISSION.

THE Report of this Commission was presented to both Houses of Parliament this week. It will be remembered that the Commission, consisting of Mr. Rawlinson, C.E., and Dr. McCabe of the Irish Local Government Board, was appointed in September last "to inquire into and report upon the sewerage and drainage systems of the City of Dublin, and their effect on the sanitary condition thereof". The report, which has occupied seven months in its preparation, is a long document, with an appendix and several maps attached. The minutes of evidence occupy 254 closely printed pages. There is a minute *résumé* of the evidence given before the Commission, and then the Commissioners give the conclusions at which they have arrived. The most important of these conclusions are "That new and improved sewers are required; that the domestic sewers and privy accommodation is generally defective throughout the poorer quarters of the city, and that it is in the tenement-houses practically absent, and that as a consequence the inhabitants suffer both in health and in morals. The tenement-houses of Dublin, according to the medical evidence voluminously tendered at the inquiry and embodied in the report, appears to be a primary source and the cause of the excessively high death-rate. They also state that these houses are not properly scavenged, ventilated, and regulated. That they are dilapidated, dirty, ill-ventilated, and much overcrowded, and that disease and craving for drink, and consequent drunkenness and extreme poverty are thereby fostered, and, until the condition of these houses has been improved, the general health of the city will continue to be injuriously affected. That public scavenging is inadequately performed; that there is no municipal system of private scavenging, and that as a consequence the streets are dirty, and that courts and yards are at all times filthy. That slaughter-houses, cowsheds, and dairies are in improper places within the municipal area; and the Commissioners record with satisfaction that the Corporation have secured a suitable site, and have entered into an engagement for the immediate erection of a public *abattoir*. That there is no adequate provision for baths and washhouses specially planned and adapted for the use and benefit of the working classes. That there is an abundant supply of soft water for all public, private, and domestic purposes, brought into the city from the Vartry waterworks; but it is not made as fully available for the use of residents of tenement houses as desirable, and that a more efficient system of its filtration is required. That the river Liffey is polluted by the sewerage of the city of Dublin, so as to be offensive; that, although apparently not directly injurious to the health of the inhabitants, its condition is prejudicial to the interest of the city and the port of Dublin; that, upon the plan laid before them, the Commissioners cannot hold the Liffey accountable for the high rate of mortality which has prevailed, and continues to prevail, within the districts which it traverses. That, while regarding the improvement of the house-drainage of Dublin and of the tenement houses, better scavenging, and filth-removal, as matters urgently necessary for the improvement of the public health, the Commissioners are also of opinion that the river Liffey and port and harbour of Dublin ought to be freed from pollution, and that the sewage of the entire city and of its suburbs ought to be so disposed of as no longer to constitute a nuisance with the river Liffey and harbour of Dublin.' The report concludes with the recommendation of the plan of main drainage proposed by the City Engineer, which would cost, according to the Commissioners' estimate, about £300,000. This plan provides for the interception of sewage over the entire area, north and south; and also for the purification of the port and harbour from sewage by the construction of low level and high level intercepting sewers, and the discharge for the dry weather and ordinary flow of the sewage during moderate falls of rain by one main outlet sewer, continued along and beyond the North Bull water to deep water at low tide to a spot where the tide is likely to flow seawards. The Commissioners also state that, considering the extensive sanitary improvements necessary in Dublin, they are of opinion that the superintending medical officer of health of the city should devote his whole time to the duties of his office.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

The prizes gained by students in this College during the past year were distributed on Friday, June 25th last, by the Duke of Sutherland; Mr. Alderman Stone, the treasurer of the hospital, presiding. The ceremony took place in the Governors' Hall, which was filled with a large concourse of ladies and gentlemen. There were present on the platform: Sir Henry Green, K.C.S.I.; Sir Joseph Fayrer, K.S.I.; Mr. Baggallay, Treasurer of Bridewell and Bethlehem; Mr. Bonham Carter, Mr. Hicks, and others. The prizemen were in succession introduced to the Duke by members of the staff and lecturers. The principal prizes in the first year were gained by Mr. Williams (Beaumaris), Entrance Science Scholarship of £60; Mr. Reltin (Ealing), Entrance Science Scholarship of £40; Mr. C. D. Green (New Cross), the William Tite Scholarship of £30, and Messrs. Tomson, Caiger, and Tredwell; in the second summer, Mr. Bickle and Mr. Wansborough Jones; in the third winter, by Mr. Wansbrough Jones, holder of the College Scholarship of Forty Guineas, and now winner of a College Prize of £20. The Selby Medal and Prize for the best collection of Reports on Surgical Cases was gained by Mr. Balance; the Cheselden Medal, for Practical Surgery and Surgical Anatomy, by Mr. W. A. Duncan; the Mead Medal, for Practical Medicine, by Mr. C. F. Coxwell; and the Treasurer's Gold Medal, for General Proficiency and Good Conduct during the four years of Medical Study, by Mr. W. A. Duncan. The

Anatomical Assistants, Prosectors, House Surgeons, Resident Accoucheurs, and House Physicians, who had held office during the year, were also presented. Among them appeared Mr. Kanehiro Takaki, a Japanese student, who has shown great ability in the hospital, has recently passed with distinction the Fellowship Examination at the Royal College of Surgeons, and now returns to Japan to take an important naval medical appointment. The Dean, Dr. Ord, in presenting Mr. Duncan for the crowning distinction, the Treasurer's Medal, enumerated the distinctions gained by St. Thomas's men during the past twelvemonths. At the University of London, Dr. J. F. Nicholson had taken the Gold Medal in the M.D. Examination; Mr. R. P. Smith had gained the Scholarship and Gold Medal in Medicine, and the same honour in Obstetric Medicine at the M.B. Examination, being the third St. Thomas's man who had carried off the first of these distinctions in as many successive years. Turning to the older universities, Mr. Wansbrough Jones, one of the prizemen presented, had recently obtained the Radcliffe Travelling Fellowship at Oxford, an honour already held by Mr. Williams, a senior student, and recently by Dr. Sharkey, one of the assistant physicians; while at Cambridge, Mr. H. R. Hutton's name was on a recent occasion the only name in the first-class list at the M.B. examination. Mr. Haig-Brown had gained a gold medal at the Apothecaries' Hall, and Mr. Barker, who had gone out to Turkey under the auspices of the Stafford House Committee, had been placed first on the list of successful candidates at the first Army Medical Examination, held after the issue of the new warrant. In responding to a vote of thanks, the noble Chairman remarked upon the immense amount of suffering which this hospital relieved year by year, and stated that what had interested him in the institution was the large number of gentlemen who volunteered their services to the Stafford House Committee in aid of the sick and wounded soldiers who were victims of the Russo-Turkish war. Of the total number of medical men sent out by that committee, about one-fourth came from St. Thomas's Hospital, the names including, Barker, Edmunds, Hume, Lake, Sandwith, Goodridge, Douglas, Boyd, Lightfoot, and the assistant-surgeon of the hospital, Dr. McKellar. It was to their devotion to duty and the exercise of professional skill under most trying circumstances, that the great success which attended the operations of the Stafford House Committee was mainly due. The total number of cases treated by the Stafford House staff showed that 38,499 sick and 32,775 wounded passed through the hands of these medical men. The South African war had shown the value derived from trained nurses, and he trusted that the experience thus gained would give the result that no British army would leave home unaccompanied by a skilled staff of lady nurses.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual election of members of Council of the College was held on Thursday last, between the hours of 2 and 5 P.M. On this occasion there were four vacancies to be filled: two caused by the retirement in rotation of Messrs. Busk and Curling; one by the death of Mr. Hancock, whose turn to retire also happened this year; and the fourth by the resignation of Mr. John Simon, C.B. For these four seats there were eight candidates who presented themselves for election; namely, Messrs. Cadge of Norwich and W. Adams, Professor Lister, Messrs. Bryant, Sydney Jones, Hulke, Smith, and Berkeley Hill. At 2 o'clock, the President of the College, Mr. Luther Holden, attired in his robe of office, preceded by the mace, and attended by the two Vice-Presidents, Mr. Erichsen and Mr. Erasmus Wilson, entered the Library and declared the poll open. After that, the Fellows present proceeded to record their votes. Polling went on steadily till 5 o'clock, when the President announced the close of the poll. The counting of the votes then began; and at about 6 o'clock the President declared that, as the result of the ballot, Messrs. Cadge, Bryant, Lister, and Smith were elected to fill the four vacancies. The votes were recorded as follows.

Mr. William Cadge	174	including	14	plumpers.
Mr. Thomas Bryant	170	,,	15	,,
Mr. Joseph Lister	169	,,	1	,,
Mr. Thomas Smith	130	,,	13	,,
Mr. J. Whitaker Hulke	107	,,	6	,,
Mr. William Adams	87	,,	6	,,
Mr. M. Berkeley Hill	51	,,	6	,,
Mr. Sydney Jones	45	,,	4	,,

The four new members of the Council will be sworn in and take their seats at the next meeting of Council, which will, as usual, be held on Thursday next.

A PROVIDENT MEDICAL SOCIETY has been established at Horsham, and Messrs. Bostock and Vernon have been appointed the medical officers, subject to their approval of the constitution of the Society.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

A MOVEMENT was set on foot several months ago by some gentlemen in London interested in the progress of ophthalmic medicine and surgery for the establishment of an Ophthalmological Society for the United Kingdom. The first meeting of those who had been invited to take a share in its formation was held on the evening of June 23rd, at the rooms of the Medical Society of London. About thirty gentlemen were present, including most of the leading London ophthalmic surgeons and several from the provinces; and resolutions were passed constituting the Society and appointing officers.

The chair was occupied by Mr. BOWMAN, F.R.S. He alluded to the much more important rank assigned to ophthalmology in the present day by our medical corporations, schools of medicine, and general hospitals than formerly, and paid a tribute to the long array of great English surgeons and oculists of the first half of the century who contributed largely to place the theory and practice of the ophthalmic branch of our art on a rational and scientific basis. The immense advance in our knowledge of the nature and rational treatment of disease which was the immediate result of the improved methods rendered possible by the discovery of the ophthalmoscope and other instruments of exact research, was dwelt upon, especially in relation to ophthalmic medicine and surgery. In referring to the immense modern growth of ophthalmology and the natural tendency, in a department so extensive and in some directions complicated, to fall into still further subdivisions, the origin of the present movement was briefly mentioned as the outcome of a want which had been long felt, and which there had been more than one attempt to supply. A very general need was felt of greater facilities for encouraging work, discussion, and publication in ophthalmology. The formation of a special ophthalmological society had been decided, principally in view of the greater facilities for work which it would afford, more particularly as the Society already contained amongst its members a number of physicians and surgeons who were not specialists. An earnest hope was expressed that, in the active co-operation of such colleagues, the Ophthalmological Society would find much of its strength. In conclusion, it was not to be forgotten—it was, indeed, to be insisted upon—that, of all the subdivisions of medicine, ophthalmology, more than any other, exemplified the means and methods which all should strive to master and employ who aimed at becoming worthy practitioners of the healing art.

The CHAIRMAN then proposed: "That the Society publish *Transactions*, and meet about five times a year, ordinarily in London; that the subscription be one guinea a year; that members in future be elected by ballot; that the management be in the hands of a Committee consisting of the President, Vice-Presidents, Treasurer, Secretaries, and nine other members."

It was proposed by Mr. CRITCHETT, seconded by Dr. HUGHLINGS JACKSON, and carried unanimously: "That an Ophthalmological Society of the United Kingdom be formed," a hope being entertained that it would also include members practising in India and the colonies.

It was proposed by Mr. BRUDENELL CARTER, seconded by Mr. HENRY POWER, and carried *nem. con.*, "that honorary members, whose number shall not exceed four, be elected from gentlemen pre-eminently distinguished in ophthalmology or in the sciences bearing upon it."

It was proposed by Mr. JOHN COUPER and seconded by Dr. ALLEN STURGE, and carried *nem. con.*, that the following gentlemen be elected officers of the society for the first year:—*President*, Mr. Bowman, F.R.S.; *Vice-Presidents*, Mr. Critchett, Mr. Jonathan Hutchinson, Dr. Hughlings Jackson, F.R.S., Mr. Teale (Leeds), Mr. Walker (Edinburgh), Mr. Swanzy (Dublin); *Treasurer*, Mr. Streatfeild; *Secretaries*, Dr. Stephen Mackenzie, 26, Finsbury Square, E.C.; Mr. E. Nettleship, 4, Wimpole Street, W.; *Other Members of the Committee*, Mr. J. E. Adams, Dr. Barlow, Dr. Brailey, Mr. Brudenell Carter, Dr. Gowers, Mr. Higgins, Mr. Hulke, F.R.S., Mr. Henry Power, Mr. Warén Tay.

As an amendment, Mr. VOSE SOLOMON, whilst entirely approving the selection of names as regards London, moved, and Mr. LLOYD OWEN seconded, that in order to make the committee as representative as possible the number be increased, by the addition of nine extra-metropolitan members. Messrs. Couper, Brudenell Carter, and Adams were opposed to the enlargement. Mr. Henry Power suggested that three members might be added to the committee representing ophthalmic centres out of London. This suggestion was accepted by Mr. Solomon, and put from the chair but lost.

It was proposed by Mr. FREDERICK MASON, and seconded by Mr. SPENCER WATSON, and carried *nem. con.*, "that the committee be empowered to draw up rules, to be submitted to the Society at its second meeting in the autumn of the present year."

A vote of thanks to the Council of the Medical Society of London for the use of their rooms was moved by Mr. STREATFEILD, and seconded by Mr. HIGGENS.

The proceedings terminated with a cordial vote of thanks to the Chairman, proposed by Dr. GOWERS and seconded by Mr. WARREN TAY.

Applications for membership and intimations of intended communications should be sent to the secretaries.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-EIGHTH ANNUAL MEETING.

THE Forty-Eighth Annual Meeting of the British Medical Association will be held at Cambridge, on Tuesday, Wednesday, Thursday, and Friday, August 10th, 11th, 12th, and 13th, 1880.

President: DENIS C. O'CONNOR, A.B., M.D., Professor of Medicine in Queen's College, Cork.

President-elect: G. M. HUMPHRY, M.D., F.R.C.S., F.R.S., Professor of Anatomy in the University of Cambridge; Senior Surgeon to Addenbrooke's Hospital.

An Address in Medicine will be delivered by J. B. BRADBURY, M.D., F.R.C.P., Physician to Addenbrooke's Hospital; Linacre Lecturer in Physic.

An Address in Surgery will be delivered by TIMOTHY HOLMES, M.A., F.R.C.S., Surgeon to St. George's Hospital.

An Address in Physiology will be delivered by MICHAEL FOSTER, M.D., Hon. M.A., F.R.S., Prælector in Physiology in Trinity College, Cambridge.

The business of the Association will be transacted in Eight Sections.

SECTION A.: MEDICINE.—*President:* George Edward Paget, M.D., D.C.L., F.R.S., Cambridge. *Vice-Presidents:* George Johnson, M.D., F.R.S., London; P. W. Latham, M.A., M.D., Cambridge. *Secretaries:* W. B. Cheadle, M.A., M.D., 2, Hyde Park Place, London, W.; D. B. Lees, M.A., M.D., 2, Thurloe Houses, Thurloe Square, London, S.W.

SECTION B.: SURGERY.—*President:* William S. Savory, M.B., F.R.S., London. *Vice-Presidents:* William Cadge, F.R.C.S., Norwich; John Wood, F.R.C.S., F.R.S., London. *Secretaries:* John Chiene, F.R.C.S.Ed., F.R.S.Edin., 21, Ainslie Place, Edinburgh; George E. Wherry, M.B., M.C., F.R.C.S., 63, Trumpington Street, Cambridge.

SECTION C.: OBSTETRIC MEDICINE.—*President:* W. S. Playfair, M.D., London. *Vice-Presidents:* H. Macnaughton Jones, M.D., Cork; Henry Gervis, M.D., London. *Secretaries:* R. N. Ingle, M.D., F.R.C.S., 21, Regent Street, Cambridge; C. E. Underhill, M.D., 8, Coates Crescent, Edinburgh.

SECTION D.: PUBLIC MEDICINE.—*President:* Henry W. Acland, M.D., LL.D., F.R.S., Oxford. *Vice-Presidents:* Arthur Ransome, M.A., M.D., Manchester; Thomas Pridgin Teale, M.A., F.R.C.S., Leeds. *Secretaries:* William Armistead, M.B., St. Mary's Villa, Station Road, Cambridge; Thos. J. Walker, M.D., 18, Westgate, Peterborough.

SECTION E.: PSYCHOLOGY.—*President:* J. Crichton Browne, M.D., LL.D., F.R.S., London. *Vice-Presidents:* G. F. Blandford, M.D., London; P. M. Deas, M.B., Macclesfield. *Secretaries:* G. M. Bacon, Hon. M.A., M.D., Lunatic Asylum, Fulbourn, Cambridge; Henry Sutherland, M.A., M.D., 6, Richmond Terrace, Whitehall, S.W.

SECTION F.: PHYSIOLOGY.—*President:* William Rutherford, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Arthur Gamgee, M.D., F.R.S., Manchester; Robert McDonnell, M.D., F.R.S., Dublin. *Secretaries:* W. H. Gaskell, M.A., M.D., Grantchester, Cambridge; William Stirling, D.Sc., M.B., Marischal College, Aberdeen.

SECTION G.: PATHOLOGY.—*President:* Sir James Paget, Bart., D.C.L., LL.D., F.R.S. *Vice-Presidents:* Samuel Wilks, M.D., F.R.S.; W. Howship Dickinson, M.D. *Secretaries:* W. S. Greenfield, M.D., 15, Palace Road, Albert Embankment; Charles Creighton, M.A., M.D., Anatomical Museum, Cambridge.

SECTION H.: OPHTHALMOLOGY.—*President:* William Bowman, F.R.C.S., F.R.S., London. *Vice-Presidents:* Henry Power, F.R.C.S., London; Henry R. Swanzy, M.B., Dublin. *Secretaries:* W. A. Brailey, M.A., M.D., 38, King's Road, Brownswood Park, London, N.; David Little, M.D., 21, St. John Street, Manchester.

A Subsection of Otology will be formed, of which Mr. W. B. Dalby, F.R.C.S., of London, will be Chairman, and Dr. James Patterson Cassells of Newton Terrace, Sauchiehall Street, Glasgow, honorary secretary.

Treasurer: R. M. Fawcett, M.D., 3, Scrope Terrace, Cambridge.

Honorary Secretary to Museum: G. Wallis, Esq., Corpus Buildings, Cambridge.

Honorary Local Secretaries: Bushell Anningson, M.A., M.D. (Hon. Medical Secretary), Walt-ham-sal, Barton Road, Cambridge; A. P. Humphry, Esq., M.A. (Hon. Reception Secretary), Corpus Buildings, Cambridge.

Letters relating to the strictly medical work (Sections, Museums, etc.) of the meeting should be addressed to Dr. Anningson; other letters to Mr. A. P. Humphry.

TUESDAY, AUGUST 10TH, 1880.

2 P.M. —Meeting of Committee of Council at the Guildhall.
2.30 P.M. —Meeting of the Council of 1879-80 at the Guildhall.
4 P.M. —Short service, with sermon by the Bishop of Ely in King's College Chapel.
3 P.M. —General Meeting in the Senate House. President's Address; Annual Report of Council and other business.

WEDNESDAY, AUGUST 11TH.

9.30 A.M.—Meeting of Council of 1880-81.
11 A.M. —Second General Meeting in the Senate House. Address in Medicine.
12.30 P.M.—Conferring Honorary Degrees in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
8 P.M.—Soirée in the Fitzwilliam Museum and grounds of Peterhouse by the Reception Committee.

THURSDAY, AUGUST 12TH.

9.30 A.M.—Meeting of the Committee of Council at the Guildhall.
10 A.M. —Third General Meeting in the Senate House. Reports of Committees.
11 A.M.—Address in Surgery in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
6.30 P.M.—Public Dinner in the Hall of Trinity College.

FRIDAY, AUGUST 13TH.

10 A.M.—Address in Physiology in the Senate House.
11 A.M.—Sectional Meetings in the New Museums and Lecture Rooms.
1.30 P.M.—Concluding General Meeting in the Senate House. Reports of Committees and Other Business.
4 P.M.—Garden party in the grounds of King's College by the President.
9 P.M.—Conversazione in St. John's College and grounds.

Ladies will be admitted to the Soirée, Garden Party, and Conversazione.

The following subjects have been arranged for discussion in the various Sections.

1. Medicine.—On Hysterical Anæsthesia, opened by Dr. Bristowe; and on Asthma, introduced by Dr. Andrew Clark.

2. Surgery.—On the Treatment of Wounds, by Professor Lister; and on Stricture of the Urethra, by Sir Henry Thompson.

3. Obstetric Medicine.—On Uterine Hæmostatics, by Dr. Atthill; and on the Removal of Uterine Tumours by Abdominal Section, by Mr. Spencer Wells.

4. Public Medicine.—On the General Working of the Public Health Administration in Great Britain and Ireland, opened by Dr. Alfred Carpenter and Dr. Francis T. Bond; and on Diseases communicable to Man from Diseased Animals when used as Food, by Mr. Francis T. Vacher and Mr. Edmund J. Lyon.

5. Psychology.—On the Influence of Alcohol on the Causation of Insanity.

6. Physiology.—The evidence derived from Clinical Observations and Physiological Experiments as to the seat of the formation of Urea in the Body, by Professor Gamgee, F.R.S.; and on Sleep and Hypnotism, by Professor W. Preyer of Jena.

7. Pathology.—The Influence of Injuries and Morbid Conditions of the Nervous System on Nutrition, by Mr. Jonathan Hutchinson; and on Micro-organisms, their relation to Disease, opened by Professor Lister.

8. Ophthalmology.—The Nature of Glaucoma—some points relating to the perception of Colours, by Professor Donders.

Subsection of Otology.—The following questions will be discussed, viz.: The Therapeutic Value of Electricity in Ear-Diseases, and the Comparative Value to the various Mechanical Aids to Hearing, with special regard to the several kinds of Artificial Drumheads, and to those Instruments which assist Deafness, conducting or transmitting Sound, either directly or indirectly, to the Organs of Hearing.

ANNUAL MUSEUMS.

The Pathological Collection will be in the Anatomical Museum.

Honorary Secretary to the Pathological Collection: C. Creighton, M.D., Anatomical Museum, Cambridge.

The Exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetics, and Sanitary Appliances, will be in connection with the Reception Room in the Guildhall.

Honorary Secretary: G. Wallis, Esq., Corpus Buildings, Cambridge.

EXCURSIONS.

On Saturday, August 14th, there will be excursions to Ely, Peterborough, and Audley End.

Honorary Secretary Excursion Committee: G. Wallis, Esq., Corpus Buildings, Cambridge.

Notice is hereby given that, at the Annual General Meeting of members to be held at the Senate House, Cambridge, on Tuesday, the 10th day of August next, at eight o'clock in the afternoon, the following regulations for the conduct of Annual Meetings will be proposed for adoption, on behalf of the Committee of Council.

General Control of Meeting.

1. The programme of the Annual General Meeting shall be under the control of the Committee of Council. The following regulations shall guide the Committee of Arrangement and any local Committee that may be formed.

Necessity of Limiting the Expenditure.

2. The gradual and constant increase of the members of the British Medical Association renders it expedient to express the strong opinion of the Committee of Council, that the medical men of the locality at which the Association holds its meeting should not deem it necessary to incur a large expenditure; as, otherwise, the choice of a place of meeting must be more and more limited to the larger towns of the kingdom.

Annual Dinner.

3. The Annual Dinner shall be under the control of the Committee of Council.

Papers to be Read at Meeting.

4. All paper intended to be read at the Annual Meeting shall be forwarded, together with an abstract, to the Secretaries of Sections, ten days before the Annual Meeting takes place, excepting the Addresses of the Presidents of Sections, or the Addresses to be delivered in General Meeting.

Duration of Sections.

5. The President, Vice-Presidents, and Secretaries of Sections shall form a Committee of Reference, with power to accept, decline, or postpone any paper, and to arrange the order in which the papers shall be read.

Grouping of Papers for Discussion.

6. The papers in each section shall, as far as possible, be grouped together, so as ensure a general discussion on kindred subjects.

Length of time to be occupied by Papers or Speeches.

7. No communication shall occupy more than fifteen minutes, and no person shall be permitted to speak more than once or for more than ten minutes during the discussion thereon.

Resolutions at Annual Meetings.

8. No motion shall be brought forward at the Annual Meeting, unless it has been proposed by the Committee of Council or a Committee of the Association, or notice of the same shall have been given on the previous day, in writing, to the General Secretary, to be entered on the Agenda of the day and printed in the daily journal. This does not apply to amendments moved in due form.

Meeting of Committee of Council. Meeting of Council.

9. The Committee of Council shall meet on the first day of the Annual Meeting, in the afternoon. The Council of the Association shall meet subsequently, and the first General Meeting of the Association shall be held in the evening.

Reports of Committees.

10. All reports of Committees of the Association shall be printed in the JOURNAL before the Annual Meeting.

SPECIAL NOTICE.

ACCOMMODATION IN CAMBRIDGE.

MEMBERS of the Association who propose to bring ladies to Cambridge on the occasion of the Annual Meeting in August, and desire to have lodgings engaged for them, are recommended to make early application to the Honorary Reception Secretary, A. P. Humphry, Esq., 56, Corpus Buildings, Cambridge. The prices at which lodgings will be obtainable vary from three shillings to one guinea per day (inclusive of attendance) for a bed-room and sitting-room.

Hotels.—The following are the principal hotels in Cambridge.

"Bull" (Trumpington Street).—Bed, 3s. 6d.; sitting-room, 6s. to 10s. Attendance, 1s. 6d.; breakfast, from 2s.

"Lion" (Petty Cury).—Bed, 3s. 6d.; sitting-room, 5s. to 7s. 6d. Attendance, 1s. 6d.; breakfast, from 2s. 6d.

"Hoop" (Bridge Street).—Bed, 5s.; sitting-room, 7s. 6d. Attendance, 1s. 6d.; breakfast, from 1s. 6d.

"University Arms" (Regent Street).—Bed, 2s. 6d.; double bed, 3s. 6d.; sitting-room, 5s. Attendance, first day, 1s. 6d.; following days, 1s. Breakfast, with meat, 2s. 6d.; plain, 1s. 6d.

Applications for hotel-accommodation should be addressed direct to the landlords.

FRANCIS FOWKE, *General Secretary.*
British Medical Association.

161A, Strand, London, June 3rd, 1880.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 7th day of July next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, May 29th, 1880.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

THE annual meeting will be held at Forres, in Charleson's Hotel, on Wednesday, July 14th, at twelve o'clock; Dr. AITKEN (Inverness), President, in the Chair. Luncheon at 2.15 P.M.

The Secretary requests all members intending to read papers or to be present, to favour him with an intimation of this by July 7th.

J. W. NORRIS MACKAY, M.D., *Honorary Secretary.*

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Squirrel Hotel, Wellington, on Thursday, July 22nd, at 3 P.M., under the Presidency of J. MEREDITH, Esq., M.D.

Dinner at half-past five o'clock punctually.

Members who may wish to read papers, or make any communications to the meeting, are requested to send notice to the undersigned.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, June 21st, 1880.

METROPOLITAN COUNTIES BRANCH.

THE twenty-eighth annual meeting of this Branch will be held at the Ship Hotel, Greenwich, on Wednesday, July 7th, 1880, at 4 P.M.

At 6.30 P.M. the members will dine together; S. O. HABERSHON, M.D., F.R.C.P., in the Chair. Tickets, one guinea each. Members intending to be present are specially requested to give notice to the Secretaries on or before July 5th.

ALEXANDER HENRY, M.D.
W. CHAPMAN GRIGG, M.D. } *Hon. Secs.*

57, Doughty Street, W.C., June 14th, 1880.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Grand Hotel, Birmingham, on Tuesday, July 6th, at 3 P.M. An address will be delivered by the President, Mr. R. PROSSER.

The annual dinner will also take place at the Grand Hotel, at 5 P.M. precisely, for the convenience of country members. Dinner tickets (exclusive of wine), five shillings each. Members intending to be present are requested to communicate with the Honorary Secretaries on or before July 3rd, in order that suitable arrangements may be made.

E. MALINS, M.B., 8, Old Square,
E. RICKARDS, M.B., 14, Newhall Street, } *Hon. Secs.*

Birmingham, June 9th, 1880.

SOUTH-EASTERN BRANCH: EAST AND WEST KENT DISTRICTS.

A CONJOINT meeting of the above Districts was held at St. Bartholomew's Hospital, Chatham, on Thursday, May 27th. Dr. BOWLES of Folkestone, the President of the South-Eastern Branch, occupied the chair.

Papers.—The following papers were read:

1. Observations on Stertor. By Dr. Bowles.
2. On the Galvano-Cautery. By Mr. Golding-Bird.
3. Three Cases of Tracheotomy for Croup. By Mr. Tyson.
4. Five Cases of Strangulated Hernia. By Dr. Bell.

Dinner.—After the meeting, the members and visitors, to the number of twenty-four, dined together at the Bull Inn, Rochester.

SOUTH MIDLAND BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Board Room of the Northampton General Infirmary, on Thursday, May 27th, at half-past two o'clock, under the presidency of FRANK BUSZARD, M.D. After a luncheon at the house of the President, the members adjourned to the Infirmary. Thirty-two members and two visitors were present.

President-elect.—It was proposed by R. W. WATKINS, Esq., and seconded by Dr. BRYAN: "That the question of the election of President for the ensuing year be referred to the autumnal meeting."

New Members.—The following were elected: R. Gibbs, Esq., Harrold; J. B. Emmerson, M.B., Biggleswade; and — Winkworth, Esq., Shefford.

President's Address.—The PRESIDENT next delivered an eloquent and able address. He referred to specialists and to medical instruction. The subjects of diagnosis and prognosis were brought before the meeting. Specific treatment and homœopathy were also mentioned.

Papers.—The following papers were read:

1. A Few Words on Effects of Change of Air on Health. By D. J. T. Francis, M.D.

2. Scarlet Fever in Special Reference to its Sequelæ. By W. Newman, M.D.
3. Notes on an Interesting Case of Heart-Disease. By G. P. Goldsmith, M.D.
4. Cases in Surgery. By H. Veasey, Esq.
5. Some Notes on Surgical Cases. By R. H. Kinsey, Esq.
6. Case of Extra-uterine Fœtation. By G. H. Percival, M.B.
7. Notes on Carbolic Acid Poisoning. By W. H. Bull, Esq.
8. Case of Abdominal Tumour. By C. J. Evans, Esq.
9. Case of Pelvic Hæmatocele. By A. H. Jones, M.B.

Votes of Thanks.—It was proposed by R. W. WATKINS, Esq., and seconded by H. MASTERS, Esq.: "That a vote of thanks be given to the authors of papers.

It was proposed by Dr. BRYAN, and seconded by Dr. BARR: "That a vote of thanks be given to Dr. Buszard for his able conduct in the chair, and for his hospitality to the members and visitors in entertaining them at a sumptuous luncheon."

A vote of thanks having been given to the Treasurer and Honorary Secretary, the meeting terminated.

SOUTH OF IRELAND BRANCH: QUARTERLY MEETINGS.

A QUARTERLY meeting of this Branch was held in the Royal Cork Institution on February 24th; the President, Dr. O'FLYNN, in the Chair.

Medical Education.—The SECRETARY read a letter from Mr. Fowke, the General Secretary, requesting that the resolutions of the Metropolitan Counties Branch, as published in the JOURNAL of January 24th, 1880, should be submitted to this Branch. The Secretary read the resolutions, which were unanimously adopted, with the exception of resolution No. 2, in which it was unanimously agreed to substitute "three" months for "six" months.

Communications.—The following papers, etc., were read.

1. The PRESIDENT read a paper on Laceration of the Perinæum, strongly urging the necessity of introducing a quill suture deeply at the time of the accident. In support of this view, he mentioned several cases that occurred in his practice, in which this mode of treatment was adopted with complete success.—Dr. MACNAUGHTON JONES and Dr. W. J. CUMMINS strongly supported the practice.

2. Dr. MACNAUGHTON JONES read short notes of an interesting case of Incontinence of Urine of twelve years' duration, due to anteversion of the uterus, in which complete cure resulted from the replacement of the uterus and the use of stem-pessaries. Dr. Jones showed the pessaries used in the case.

3. Dr. C. A. HARVEY read notes of a case of Puerperal Eclampsia that occurred in a patient in the Lying-in Hospital. The case was treated successfully by bleeding.—Drs. W. J. CUMMINS and P. J. CREMEN advocated the practice, whilst the PRESIDENT and Dr. JONES were against its general use.

4. Dr. THOS. RIORDAN exhibited an enormously Enlarged Liver, taken from a patient of Dr. Cremen's who died in the Cork Workhouse, and who was the subject of syphilis.

The last quarterly meeting of the Branch was held in the Royal Cork Institution on May 29th; the President, Dr. O'FLYNN, in the Chair.

Counter-Prescribing.—The following resolution was unanimously adopted:

"That the practice of counter-prescribing on the part of pharmaceutical chemists being highly improper and dangerous, and the members of this Branch having learned with regret that such practice is largely pursued in this city, they therefore desire to point out the risk which is incurred by any person, not a registered practitioner, who thus prescribes. They trust that in the future this remonstrance may be sufficient to prevent a continuance of the practice; and they further desire to intimate their determination to bring the conduct of any pharmaceutical chemist so offending under the notice of the Pharmaceutical Society of Ireland, and also to withdraw their prescriptions from him; and that a copy of this resolution be forwarded by their Honorary Secretaries to each pharmaceutical chemist in Cork."

The meeting then adjourned.

The adjourned meeting was held in the Royal Cork Institution on Saturday, June 5th; Dr. O'REILLY of Lismore in the Chair.

Communications.—The following communications were made.

1. Dr. MACNAUGHTON JONES showed photographs of a Female Articulated Pelvis with ligaments set on a movable stand, which was so regulated that the pelvis could be placed at any angle to the horizon by means of hinge-joints and screws. He used this in his class for demonstrating the mechanism of labour.

2. Dr. MACNAUGHTON JONES showed a patient on whom he had operated nearly two years since for Contracted Tendons of the Knee-joint, with sinuses extending up the thigh to the buttock. The patient was now able to walk without the use of a stick. He also showed a patient in whom he had excised the ankle-joint and tarsus some two and a half years since. The patient was now able to stand on the foot and walk.

3. Dr. MACNAUGHTON JONES detailed short notes of an interesting case of Subperiosteal Multiple Sarcoma, occurring rapidly in a female patient aged about 48, with fracture of the right radius and left ulna; also of the left clavicle.

4. Dr. T. GELSTON ATKINS exhibited a cast of the Chest and Neck of the patient, showing the clavicle and tumour as the latter grew from the sternal half of the bone, involving the sternum and first rib. This tumour was also exhibited.

5. Dr. T. GELSTON ATKINS showed, for Dr. Grattan, a simple Splint which he had contrived for the treatment of Contracted Tendons of the Knee-joint.

Dinner.—In the evening, sixteen members dined at Lloyd's Hotel, and a most agreeable evening was spent.

CORRESPONDENCE.

THE NEW OPHTHALMOLOGICAL SOCIETY FOR THE UNITED KINGDOM.

SIR,—I have no doubt that the JOURNAL for this week will contain a notice of the meeting held on Wednesday, June 23rd, at the rooms of the London Medical Society, for the founding of an Ophthalmological Society for the United Kingdom.

On receiving, a week previously, a printed circular in reference to it, and an inclosure with a list of the names that would be proposed as officers, I was impressed, on its perusal, by the evident pains that had been taken to conciliate the various and divergent interests as represented by the London schools and hospitals, and at the same time to secure materials out of which to elect a publishing subcommittee of tried ability. So intent and concentrated have apparently been these efforts, that the national designation of the Society has been lost sight of, and of the existence of provincial ophthalmic interests and scientific life the originators of the movement have been manifestly forgetful. One would have thought that, in the present day, the principles of representative government are so generally accepted as the only just, righteous, and successful form of administration, that no body of men could be found who would enter upon the formation of a new society without basing it upon such principles. Experience has proved that societies which have cribbed and confined their sympathies to local interests have failed to secure a permanent or considerable success; and that these same institutions, on enlarging their basis of election to the administrative body, have acquired an influence and impulse for good that has far exceeded all previous experience and expectation. I can cite no better illustration of this than the British Medical Association, which now numbers its nine thousand members, while as the Provincial Medical and Surgical Association its numerical strength was less than two thousand.

So impressed were the founders of the Birmingham and Midland Counties Branch (nearly four hundred strong) with the importance of giving the "extra urban" members a full share in its management and interests, that they accorded them an equal number of seats on the Council; and I may note that, before the formation of the Branch, every medical society founded on purely local influence or cliquism died either of inanition or came to an untimely end. But it may be silently thought, and perhaps even privately expressed, that full and equal representation of the provinces and universities of Ireland and Scotland might possibly clog the wheels of scientific advancement. Let those who entertain such an idea consult the roll of successful Jacksonian prize essayists at the College of Surgeons, and they will find that in the last fifty years the town of Birmingham alone has had the honour of carrying off that prize, on an average, once in every ten years; and when the subject of the essay has been ophthalmological, two-thirds of the prizes have fallen to surgeons residing in the same town. The name of Mr. Woods of Southport, as the gainer of the Hunterian gold medal of the College, is familiar to us all.

I maintain that the future strength and stability of the "Ophthalmological Society of the United Kingdom", and the claims of fair dealing and justice, demand that the committee be enlarged by an adequate number residing in the provinces or cities outside of London; and, in order to surmount the difficulty of making a selection, I propose that, in the first instance, the present professors or lecturers on ophthalmology in the English provincial schools and in the universities of Scotland and Ireland shall be allowed to take precedence. With a proper code of by-laws, every ophthalmic surgeon in the three kingdoms who

desired it would have opportunity of being appointed on the committee in course of time.

To summarise my views: the object is an excellent one, but that is not enough to ensure practical success. Where we have to deal with many men of pretty equal claims in a variety of centres, experience teaches that the representative basis cannot well be too broad.—I am yours obediently, J. VOSE SOLOMON.

Birmingham, June 22nd, 1880.

OVARIOTOMY.

SIR,—I was surprised to see a leading article in the BRITISH MEDICAL JOURNAL of June 19th, headed "Ovariotomy", which, from its character, I should have supposed written by an interested person for some special object, and not scrutinised with that editorial care necessary before being sent to press, and for which the editor is held responsible; and I now call upon you to allow my reply equal publicity, and on you to explain on what ground you use the following words: "Dr. Clay had achieved fair success in the provinces, yet somehow he failed to inspire confidence among either provincial or metropolitan surgeons, and thus to really establish ovariotomy as a justifiable operation."

Now, this is a grave charge to make against a man who was the very first to rescue the operation from the obloquy of which you speak that unthinking surgeons chose to heap upon it after the failures of my old master Lizars (who had not nerve enough to rough the storm). I have lived, however, to see hundreds of surgeons recant their then extravagantly expressed condemnations. I have lived to see ovariotomy established as an operation years before Mr. S. Wells ever operated. Mr. Wells and Dr. Keith, as well as very many others, witnessed my operations long before any of them operated themselves. Then, after having operated four hundred times with a success quite equal to my competitors (excepting those of Dr. Keith), and having arrived at nearly fourscore years of age, I declined operating altogether, not from the want of public confidence, but from reasons you will understand should you ever arrive at the same period of life. I am frequently solicited even now to operate; and my extensive correspondence and almost daily consultations on such cases prove that I am in no want of public confidence, nor do I require to write advertising letters for help—*proving also the injury that your remarks are doing me.* You then go on to state that Mr. Wells "took great care to include the peritoneum in the sutures uniting the abdominal wound—a practice based on scientific experimental evidence". This has always been my practice since my first case in 1842, fifteen years before Mr. Wells ever operated at all, and was the advice given to him when he visited me; and I further stated that in a case where, by accident, one suture had not passed through the peritoneum, hernial protrusions followed, which required compresses. This plan of sutures was arrived at without any experiments on living animals. Contrary also to Mr. Wells's opinion, I look upon opium as one of the great anchors of safety in the after-treatment. I pass over your evident mistake in reference to Mr. Baker Brown, but cannot understand why you should be so silent on the claims of Dr. Keith, who has *entirely edged Mr. Wells in his success in the proportion to the numbers* operated upon; but, as these were not quite a *thousand*, perhaps they were not worth notice. There is one more point of which you, as an editor, should not be ignorant—my own cases of four hundred were all *private practice* cases, showing (in my opinion) a greater amount of public confidence than the boasted one thousand of poor hospital cases, which formed a large majority. In conclusion, I would remind you the very term *ovariotomy* was given to the operation by Professor Simpson in reference to my first cases. I can appeal with confidence to hundreds of communications in my possession, bearing out my claim to all of which you attempt to deprive me, embracing names of professional standing of the highest position not only in this country, but throughout Europe, and more particularly in America, where the operation was first practised. I have been honoured with the highest encomiums for the difficulties I successfully conquered at the commencement of my struggles, which I value far more than the attempts to deprive me of credit, and even to injure my character, by those nearer home.—Yours, etc., CHARLES CLAY, M.D.

Manchester, June 30th, 1880.

*** This subject is one of much historical interest, and we shall be glad to assign to all their due share in this great surgical triumph, which has reflected so much honour to British surgery. The completion of Mr. Spencer Wells's thousandth ovariotomy appeared to us a fitting occasion for a well-merited tribute to the illustrious labours of a British surgeon, whom the whole world honours for his grand achievements in this department of surgery. Dr. Clay may be well assured that there is no intention on our part of robbing him of any reputation due to his early and successful work in the same field.

We may state in this connection: 1. We entertain the belief that ovariotomy was not generally recognised by professional opinion as a legitimate operation until after 1860. 2. We are informed that Mr. Wells never saw Dr. Clay operate before he operated himself, and only once some years after his (Mr. Wells's) first case. 3. We do not know of any complete published record showing what Dr. Clay's results are. 4. Will Dr. Clay kindly refer us to any published record of his practice as to including the peritoneum in the sutures closing the wound?

ON AORTIC REGURGITATION AND THE CORONARY CIRCULATION.

SIR,—In a recent communication to the JOURNAL, Dr. Clifford Allbutt, in a friendly spirit of inquiry, blended with some scepticism, criticises some views on this subject held by Dr. Balthazar Foster and myself; and perhaps by some others who have given considerable attention to the diseases of the circulation.

The importance of the subject-matter is such, that a reply from me is unavoidable; but to frame that reply is not so easy. If Dr. Allbutt, after his "more or less unsuccessful pains," could have told us what he did think was the reason why the huge hypertrophy of aortic regurgitation is usually of so fleeting a nature, his paper would have been more instructive. That aortic regurgitation is the most swiftly fatal of all forms of valvular disease of the heart is my own experience, certainly. Further, Dr. Peacock, whose accuracy of observation is universally admitted, in his *Prognosis of the Valvular Diseases of the Heart*, places aortic regurgitation first in the order of seriousness, which I conceive to be danger to life. That some cases do not progress, but remain static, *i.e.*, the valvular lesion does not tend to progress in the course of years, is certain, and a case of this kind, in a surgeon, is given at page 449 of my book. "One such case is well known to me: for twenty years and more he has led an active life, and had a large practice; has at times worked himself nearly to death's door; has come round again, and is now much the same as he was when he consulted me first several years ago. His heart 'lets him down' and he is a crippled being; yet the disease in the aortic orifice manifests no tendency to grow worse; indeed, after the first mutilation of the valves the condition has been absolutely static". This is not an isolated case by any means. Nevertheless, aortic regurgitation is usually swiftly fatal—compared with other forms of valvular disease of the heart.

Nor from the passage quoted by Dr. Allbutt would I like to leave the reader to suppose that in the failure of the nutrition of the heart-walls there are no other factors in action than the defective cusps permitting the blood to flow backwards past the coronary orifices. In that necrobiotic process, "fatty degeneration of the hypertrophied heart", there is also in action, loss of elasticity of the aortic wall (p. 204); thickening of the tunica intima of the coronary arteries diminishing their lumen, and obstruction to the blood-flow in them from tortuosity (p. 205); and further, the form of the valvulitis, and the rapidity of the progress of the valvulitis. "If the mutilation of the valve be small, and the mischief stationary, then a slight muscular hyperplasia is sufficient for a perfect and durable compensation; while in progressing or contracting valvulitis, the changes in the valves require constant muscular changes to keep pace with them, or the compensation fails" (p. 189). Then there is that other factor of so great moment, indeed of cardinal importance, yet little understood, viz., the varying irritability of the tissues in different persons (p. 503). Admitting all these, however, I, though at the risk of being chargeable with holding "crude conceptions", and even of going back to "obsolete humourism", whatever that is (perhaps Dr. Stone will explain it in his third Croonian lecture, when it is finally prepared for publication), still cannot help thinking that defective aortic valves do affect the flow into the coronary vessels; and I would thank Dr. Allbutt heartily if he will point out how Dr. Foster's prognosis was so curiously verified, if it be of no moment which cusp is torn down, whether that subtending a coronary artery or not, in traumatic rupture of the aortic valves. I venture to think that "a shovel held in a running stream" would have an effect upon the direction of the current; an effect, in a stream of a certain size, sufficiently important to be worth taking into consideration. Also, arterial tension may not depend upon the force of the heart-beat, but it certainly falls as the heart muscle fails; or the whole of my observation is misleading. Dr. Allbutt also says: "Excessive arterial supply cannot alone give rise to hypertrophy". How about the growth of the cock's spur, when John Hunter transplanted it to the cock's comb? He

also points out that the coronary vessels are apt to have their orifices lessened, and even occluded by atheroma, and continues: "It was thus possible in many cases to trace fatty change in the muscular tissue supplied by one coronary artery to atheromatous or embolic blocking, and so to the arrest of the blood supply". And surely these changes in coronary vessels are more likely to occur if the cusp subtending a vessel is affected, than if the valvulitis affects the cusp without a coronary vessel behind it: so that Dr. Allbutt's idea of atheroma supports our view. I have not overlooked this matter, for at p. 472, under the head of "The Atheromatous Process", is written: "Masses may form at the coronary orifices, and occlude one or other of them; and, at p. 212, "the nutrition of the heart is impaired by local causes of malnutrition, as by an atheromatous mass at the orifice of a coronary artery, or by an atheromatous and earthy scale forming so as to occlude a coronary vessel". Farther, at p. 205, it is written: "This mural decay is not equally spread throughout the heart; it is most common in the left ventricle, which is also most commonly the seat of the hypertrophy. Neither is the heart-wall uniformly diseased alike all over". I am, then, in perfect accord with Dr. Allbutt when he says: "We must look, therefore, to some causes of systolic failure in aortic regurgitation other than differential pressure at the mouths of the coronary vessels". Certainly. But, at the same time, as long as I believe the aortic recoil to be the propelling power which sends the blood into the coronary circulation, so long shall I continue to hold that "differential pressures at the mouths of the coronary vessels" are not without effect upon the nutrition of the heart muscle. I certainly do remember that it was in Leeds and from Dr. Allbutt that I first learnt much practically of aortic regurgitation and the early failure of its large heart-wall; and Dr. Foster and myself will feel truly grateful to Dr. Allbutt if he will tell us something more than we know at present on the interesting point of why the hypertrophy of the gouty heart, when there is no aortic valvulitis present, is so persisting; while that of aortic regurgitation, the result of strain in young subjects, is so fleeting, if the mutilation of the valves affecting the blood-pressure at the coronary orifices is not an important matter; or, indeed, to anyone else who can throw more light on the matter than we either of us possess.

Finally, Dr. Allbutt writes: "Surely the whole circulation, since the time of Harvey, has been regarded as more and more a 'closed cell'. And surely, then, the pressure upon given square areas of semilunar valves is equal, whether these valves be present and efficient, or absent". And Dr. Stone, in his note, says: "Dr. Ottomar Rosenbach's experiments, moreover, show conclusively that tension and propulsion in the closed cell of the circulation are perfectly separable factors, and that the pressure is maintained unaffected even when the aortic and mitral valves are broken down". This is, indeed, an age of iconoclasm, and many things thought well-established are being overturned; and it seems that the cardiac valves are of comparatively little moment. Yet, after all, the utility of the heart is to pump the blood out of the veins into the arteries, and for this end the valves are very useful; and lesions of the cardiac valves do constitute very serious diseases clinically. Differences of opinion tend to throw light on obscure subjects; and if Dr. Allbutt's criticism only leads to fuller and exacter knowledge on this subject, it matters little to Dr. Foster and myself, and I surmise to Dr. Allbutt either, whether our "position is untenable", or we must "forgive his indiscretion".—I remain, etc., J. MILNER FOTHERGILL.

23, Somerset Street, W., June 12th, 1880.

ANTISEPTIC SURGERY.

SIR,—Will you be so good as to allow me to correct a slight error which occurs in the JOURNAL of June 19th in a review of Mr. Mac Cormac's work on antiseptic surgery? My own statistics of amputation, to which I referred in the debate at St. Thomas's Hospital, should be stated as follows:—Total number of cases of capital amputation, 52, of which 6 died during residence in the hospital. Of the 6, however, not one died from septicæmia or other allied disease, and only one from a cause attributable to the operation.—I am, Sir, your obedient servant,

W. MORRANT BAKER.

THE LOWER ENGADINE.

SIR,—At this season, when patients are apt to become restless, and to ask their physicians the oft-repeated question, "Where shall we go?" I would direct the attention of my professional brethren to the Lower Engadine, which affords an invigorating yet mild Alpine climate, which differs considerably from that of the Upper Engadine, whose climatic conditions resemble somewhat those of an Alpine pass. Here, on the contrary, owing to the protection afforded by the lofty mountains on the north and north-east, vegetation assumes a luxuriance and a beauty seldom seen at an elevation of over 4,000 feet. Forests of fir, larch, and pine tempt the pedestrian to shady walks, whilst the way-sides are covered with wild-flowers and wild-vines, and the mean temperature at Tarasp-Schuls for July and August is from 54.5° to 59° Fah., whilst the humidity of the valley during the same months is from 65°—75°. The sanitary arrangements are in advance of many English watering-places, the water excellent, and hotel accommodation good.

To those of my confrères who may be disposed to visit East Switzerland, I would say, "Try Tarasp-Schuls".

FRANCIS PARSONS, M.D.

Hôtel Belvedére, Schuls, June, 1880.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE appointment of Medical Officer of Health for the combined Kenilworth, Lillington, Rugby, and Warwick Urban, and Meriden, Rugby, Solihull, Southam, and Warwick Rural sanitary districts being about to expire, the Solihull Authority, in contemplation of the event, passed a resolution at their last meeting in favour of reducing the salary from £800 to £500, and of making the appointment for one year only.

TEMPLEMARTIN DISPENSARY DISTRICT.—A special meeting of the Templemartin Dispensary Committee was held recently, to consider a complaint made against Dr. Gwynne, medical officer of the district, for insufficient attendance in a case of fever. The committee having investigated the matter, and having heard Dr. Gwynne's explanation, considered his statement satisfactory, and characterised the charge against him as frivolous and unnecessary.

THE GOVERNMENT ANTI-VACCINATION BILL.

WE understand that the Paddington Board of Guardians have resolved unanimously to address a letter to the President of the Local Government Board deprecating the proposal to abolish multiple penalties for offences under the Vaccination Acts. The guardians point out that whilst the proposal, if carried into effect, would afford facilities for the operations of the anti-vaccinationists, it would seriously impede the work of those upon whom Parliament has thrown the onus of administering the vaccination laws. The proposed relaxation of the vaccination law has been denounced by Dr. Davies, Medical Officer of Health for Bristol, as a "fearful proposal", which would tend to a terrible extension of small-pox. The sanitary authority of the city has resolved to petition Parliament against the Government Bill.

A QUESTION OF FEE.

SIR,—I beg to ask you the following question. A parish patient in my district breaks his thigh, for which I received the fee of £3. Two months after the accident, in going out without my consent, he falls down and breaks it in the same place as before. Am I entitled to a second fee?—Yours truly, A MEMBER.

*** We are very much afraid that the Board of Guardians will refuse to pay a second fee, though morally we hold that our correspondent is entitled to it. We would advise that he sounds some of its members, and, if their opinions be favourable, then ask for it; if refused, there is the alternative of an application to the Central Board, who will order payment if they consider that a case be made out for their interference.

REGISTRATION OF INFECTIOUS DISEASES.

SIR,—I have read with pleasure a letter in last week's JOURNAL, signed by "A Member of the B.M.A.", and dealing with the question of "Compulsory Registration of Infectious Diseases".

As I, too, unfortunately, practice in a large seaside watering-place, where we are compelled, under a penalty of £10, to report every case of infectious disease occurring in our practices, perhaps you will allow me to add a few words from my own sad experience to what has already been stated on the subject.

In addition to the hardship, both to our patients and to ourselves, of our being compelled to make public every case of "measles", "scarlatina", etc., occurring not only in lodgings, but in private houses, although we ourselves may have taken all necessary steps for isolating the cases and afterwards disinfecting the premises, yet our patients' dwellings are liable to be invaded by the sanitary *employées*, who turn

the place upside down, burn sulphur and other abominations, and, in addition to frightening the people half out of their wits, nearly suffocate the whole neighbourhood. The public soon find out that those who employ the medical officer of health in his private capacity are exempt from this, to say the least of it, "heroic" treatment, and I leave your readers to surmise what the result of this is.

We are blessed here, also, with a "mutual puff and recommendation arrangement" between the medical officer of health and the lodging-house keepers. Advertisements have regularly appeared in the local newspapers, intimating that the medical officer of health will be glad, free of charge, to inspect any lodging-house, and, should the sanitary arrangements thereof meet with his approval, he will grant a certificate.

You will perceive that the lodging-house keepers are, therefore, obliged to keep on the right side of "our friend", or else they well know that they live with a "Damoclean sword" hanging over their heads; for woe be to them should a case of measles make its appearance, as the medical officer has the power to close their house, and so deprive them of the earnings that were to have supported them through the long winter.

Should any of your readers be anxious to obtain a little useful knowledge on the subject of "compulsory registration and its results", my brother practitioners here (to some of whom this letter has been shown and by them cordially approved) could astonish them pretty freely by showing what it is possible for a medical officer of health to accomplish by the aid of such powers as those obtained by this and other towns; and I cordially add my note of warning to that of "A Member of the B.M.A."—I am, sir, yours obediently,

ONE SUFFERER OUT OF MANY.

PROFESSIONAL AMENITIES.

A [illegible] and hospital [illegible] profession and of the Association sends us the [illegible] that has recently passed between Mr. J. [illegible] Kingsnorth, Stourbridge, and Mr. Harry Dove of Stowmarket. Mr. Thomson is the medical officer to the Stourbridge Union Workhouse. Recently [illegible] application to the board of guardians for an increase of his stipend, and, with the view to strengthening his appeal, sent out to several provincial workhouse medical officers the subjoined questions, accompanied by an introductory letter, explaining his reasons for sending.

"1. How many inmates has your workhouse? 2. How many patients have you [illegible]? What is the amount of your salary? 4. Have you any [illegible] supply medicines, splints, etc.?"

We may here observe that this plan for obtaining statistical information is frequently [illegible] by union officers, both medical and otherwise, and it is within our knowledge that it is always supplied. In this instance, we learn that, with one exception, the workhouse surgeons appealed to sent back prompt and satisfactory replies, which not only contained the information asked for, but were written in a kindly spirit, and contained the good wishes of the authors for the success of Mr. [illegible]'s application. This was as it should be. The exception referred to was Mr. Harry Dove; he sent the following:

"Stowmarket, June 11th, 1880. Sir,—As a type of cool impertinence, your circular letter is eminently triumphant; and, if impudence will help you towards attaining your object, you possess a strong auxiliary to success. Allow me to suggest that reference to the *Medical Directory* and Consolidated Orders will afford you the required information as to salary and extras, and that experience will sooner or later teach you that the number of pauper inmates in a union is always variable, whilst begging letters are always objectionable.—Yours, etc.,

HARRY DOVE."

If Mr. Dove had simply ignored Dr. Thomson's application for information, the worst that could have been said would have been that he had acted discourteously to a brother officer, but, having sent such a communication, we hold that there can be only one opinion, and that is, that it was eminently discreditable; and what [illegible] was the fact that it was written [illegible]

FEES FOR OPERATIONS.

SIR,—[illegible] on pauper patients, I am afraid neither he, nor any other district medical officer, will receive more than one fee for attendance on a patient, be the unfortunate sufferer the recipient of half-a-dozen severe injuries. Some years ago, I attended a man who met with a compound fracture of the leg, necessitating the removal of nearly an inch of the tibia, and a dislocation of the opposite hip; and, though I applied at the time for the double fee, viz., £3 and £5, I was informed by the [illegible] the two [illegible] in the same individual. What disgusted me at the time more than the refusal of the second and smaller fee, was the determination of the board of guardians not to [illegible]

I.R.C.P.

POOR-LAW MEDICAL APPOINTMENTS.

[illegible], L.R.C.P., appointed Medical Officer to the [illegible] Workhouse, vice Hunt, L.R.C.P.I., resigned.

KENNY, Maurice A., L.R.C.P.Ed. and L.M., appointed Medical Officer to the [illegible] District of the [illegible] Union, vice [illegible], M.D.

[illegible], M.R.C.S., Medical Officer to Cattistock District, appointed Medical Officer to the St. Mabyn District of the Camelford Union, vice Joseph Westmorland, M.R.C.S., resigned.

MILITARY AND NAVAL MEDICAL SERVICES.

NAVAL MEDICAL SERVICE.—The following appointments have been made: Fleet-Surgeons T. Browne and D. Hilston, M.D., to Yarmouth Hospital; Surgeons, H. D. Cox, to Bermuda Hospital; R. F. Yeo, to Haslar Hospital; J. M. Sibbald, to the *Northampton*.

MILITIA SURGEONS.

SIR,—In reply to a letter signed "Ignoramus", I beg to inform him that surgeons to militia regiments still exist, under a Royal Warrant of July 1870. Those included in the "Militia Medical Department" consist of two grades, "surgeons-major" and "surgeons", the latter grade being gradually absorbed by effluxion of time into the higher rank. There also remain a few surgeons to militia regiments who declined to enrol themselves under the Warrant of 1876. This warrant decreed "that no further first appointments of medical officers be made after the date of our present warrant to that portion of our auxiliary forces called the militia, but that militia medical duties be thenceforth performed under the orders of the Director-General of the Medical Department of our army".—I am, sir, yours obediently,

ROWLAND H. COOMBS, Surgeon Bedfordshire Militia,
Bedford, June 26th, 1880. Militia Medical Department.

ARMY MEDICAL OFFICERS.

SIR,—With reference to a question asked by Mr. Meldon in the House of Commons, perhaps you will allow me to refer him to the General Orders of His Royal Highness the Field Marshal Commanding-in-Chief. I enclose you a copy.

"February 1880. General Order 24—Medical Officers: 1. Exchanges between officers of the Army Medical Department at home and foreign stations will be permitted to the same extent as in the case of combatant officers, under the qualifying conditions as to promotion specified in Articles 15, 18, and 21, of the Royal Warrant of November 27th, 1879 (Clause 1, Army Circulars, 1880)."

Nothing more clear than this could be required.—Your obedient servant,

A SURGEON-MAJOR.

VOLUNTEER SURGEON asks: Where there are three surgeons to a battalion of volunteers, all gazetted about the same date, is there any distinction in rank? In the above case, which, if any, of the medical officers has the right to appear on parade mounted?

*** By military regulations officers of the same grade take precedence of each other according to date of commission. If the commissions of two officers of the same grade bear the same date, the officer whose name appeared first in the *Gazette* of that date takes precedence. If one only of three surgeons to a battalion of volunteers has the right to appear on parade mounted, the surgeon who has precedence by date of commission becomes the mounted officer.

OBITUARY.

J. W. REID MACKIE, M.D., CUPAR-FIFE.

ON Sunday, June 20th, Dr. Mackie died at Callander, whither he had gone for a short stay on account of his health. Dr. Mackie obtained the diploma of L.R.C.S.E. in 1848; the degree of M.D.St. Andrew's in 1849; and the Fellowship of the Edinburgh College of Surgeons in 1865. He was most successful in practice, and in possessing many good appointments; among them being the surgeonship of the Fife County Prison, besides factory, parochial, and insurance appointments, and honorary offices in the Fifeshire Volunteers and Artillery. He will be much missed in the district, where he has practised for over thirty years, and from which he has been removed at the early age of fifty-two.

WILLIAM JOY, M.R.C.S., L.S.A., NORTHWOLD, NORFOLK.

IT is with deep regret that we announce the death of Mr. W. Joy, one of the oldest practitioners in Norfolk. Mr. Joy commenced his professional career at Docking, but shortly afterwards removed to Northwold, in which village he practised for the long period of fifty-five years without ever taking a simgle holiday; for it was his custom to say that the pursuit of his profession furnished him with all the recreation he needed.

Mr. Joy continued his useful and laborious work till the very last, and died at the advanced age of 80, from an attack of pleuro-pneumonia. His death, which took place on the 17th ultimo, has caused a deep feeling of regret, not only amongst his large circle of patients, but amongst the profession generally. Mr. Joy, who was himself the son of a surgeon, leaves two sons, both of whom are in the medical profession.

PRESENTATION.—Dr. Charles Wm. Whitby, being about to leave Ottery-St.-Mary, has been presented with one hundred and fifty guineas and a gold watch by a number of his friends, and with a timepiece by the Oddfellows. The latter was inscribed, "To Charles William Whitby, Esq., M.D., by members of the Loyal St. Mary Lodge of Oddfellows."

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Licentiates in Dental Surgery of the College at a meeting of the Board of Examiners, on June 25th.

Messrs. George W. Parkinson, Sackville Street, Member April 1880; and William R. Harvey, Newgate Street, of St. Bartholomew's Hospital; Richard D. Ashby, Scarborough, Richard G. Bradshaw, Streatham, and Alfred Smith, Devonshire Road, of the Middlesex Hospital; Frederick N. Pedley, Camden Road, of Guy's Hospital; and Joseph Holland.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 24th, 1880.

Currah, George Ingersoll, Tottenham.
Goude, Herbert, Burton Road, Brixton.
Gould, William Robert, Westland Villa, Southsea.
Hoyle, William Evans, Newcastle-on-Tyne.
Shepherd, Timothy Arundel Jordan, St. Olives' Infirmary, Rotherhithe.
Whitworth, William, St. Agnes, Cornwall.

UNIVERSITY OF DURHAM.—The following gentlemen satisfied the examiners, and had their degrees conferred on June 22nd.

Doctor of Medicine—William White Day, L.R.C.P., M.R.C.S., L.S.A.; Andrew Fernie, M.R.C.S., L.S.A.; Samuel Fielden, L.R.C.P., M.R.C.S.; John Foster, F.R.C.S.Eng., L.S.A.; Milner Montgomery Moore, L.R.C.P., M.R.C.S.; Charles Steele, L.R.C.P., M.R.C.S.; Henry Elthington Price, M.B., L.R.C.P., M.R.C.S.; Arthur Henry Robinson, M.B., M.R.C.S.

Master in Surgery—Geo. Stokes Hatton, M.R.C.S., L.S.A.; George Jordan Lloyd, M.R.C.S., L.S.A.; William Barrett Roué; Herbert West Seager, M.R.C.S.; Joseph Pearse Budgett Wills.

Bachelor of Medicine—Walter George Augustus Bedford, M.R.C.S.; Jas. Thos. Calcott, M.R.C.S.; Walter Henry Cheetham, M.R.C.S.; Frederic Collins Coley, L.R.C.P., M.R.C.S.; Bernard Faraday Giles, M.R.C.S., L.S.A.; George Stokes Hatton, M.R.C.S., L.S.A.; George Jordan Lloyd, M.R.C.S., L.S.A.; Alfred Mantle, M.R.C.S., L.S.A.; William Pope Mears, M.R.C.S., L.S.A.; William Smith Porter, L.R.C.P., M.R.C.S.; William Barrett Roué; Herbert West Seager, M.R.C.S; James Parsons Thornton, L.S.A.; Joseph Pearse Budgett Wills.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BRADFORD FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION—Resident Medical Officer. Salary, £200 per annum. Applications, with testimonials, on or before July 1st.

BRISTOL GENERAL HOSPITAL—Physician's Assistant. Salary, £50 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary on or before July 12th.

*CARLISLE DISPENSARY—Junior House-Surgeon. Salary, £90, with apartments, coals, gas, and attendance. Applications, with qualifications and testimonials, to the Secretary.

*DUDLEY DISPENSARY—Resident Medical Officer—Salary, £120 per annum. Applications, with testimonials, to the Honorary Secretary on or before July 6th.

ENNISTYMON UNION—Medical Officer for Ennistymon Dispensary District. Salary, £100 per annum, with £20 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 10th July.

GREAT NORTHERN HOSPITAL, Caledonian Road, N.—Physician to Outpatients. Applications, with testimonials, to the Secretary on or before July 6th.

HERTFORD BRITISH HOSPITAL, Neuilly, Paris—Resident Clinical Assistant. Salary, 100 francs per month. Applications, with testimonials, on or before July 20th.

*HERTFORD GENERAL INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before July 28th.

*HOSPITAL FOR WOMEN, Soho Square—House-Physician. Applications, with testimonials, to the Secretary on or before July 3rd.

INISHOWEN UNION—Medical Officer for Clonmaney Dispensary District. Salary £120 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on 6th instant.

*KENT AND CANTERBURY HOSPITAL—Assistant House-Surgeon and Dispenser. Salary, £50 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary, on or before July 23rd.

LONDON HOSPITAL MEDICAL COLLEGE—Demonstrator in Anatomy. Salary, £200 per annum. Applications, with copies of testimonials, on or before July 8th.

LONDON HOSPITAL MEDICAL COLLEGE—Two Assistant Demonstrators. Salary, £90 per annum. Applications, with copies of testimonials, on or before July 8th.

NEWCASTLE-IN-EMLYN UNION—Medical Officer for the Kenarth District and Workhouse. Salary, £183 15s. 6d. per annum.

*PLYMOUTH PUBLIC DISPENSARY—Honorary Surgeon. Applications, with testimonials, etc., to the Secretary, on or before July 12th.

SCARBOROUGH UNION—Medical Officer for the Sherburn District. Salary, £40 per annum.

WILLITON UNION, Somerset—Medical Officer for the Porlock District. Salary, £50 per annum. Applications, with testimonials, before July 12th.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

DAVIES.—On June 26th, at 68, High Street, Newport, Monmouthshire, the wife of George A. Davies, L.R.C.P.Lond., of a son.

MARRIAGES.

BURNEY—BUNCOMBE.—On June 30th, at the Parish Church of St. Dunstan, Stepney, by the Rev. Joseph Bardsley, Walter Charles Skardon Burney, M.D., of Greenwich, surviving son of Henry Duncan Burney, Capt. R.N., J.P., of Howth, Co. Dublin, to Marion, daughter of Charles Hope Buncombe, F.R.C.S. Eng., of Bow Road.

ORFEUR—JOLLY.—At Torquay, on June 23rd, Charles Howard Orfeur, of West Town, Bristol, to Eleanor, younger daughter of Charles W. Jolly, Torwoodlee, Torquay.

PUBLIC HEALTH.—During last week, being the twenty-fifth week of this year, 3,238 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. The annual death-rate was 21 in Edinburgh, 20 in Glasgow, and 33 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Brighton 13, Bristol 14, Norwich 15, Plymouth 15, Salford 16, Bradford 17, Hull 17, Portsmouth 18, London 18, Sheffield 18, Birmingham 19, Wolverhampton 19, Leicester 19, Leeds 19, Newcastle-upon-Tyne 21, Sunderland 21, Nottingham 23, Liverpool 24, Manchester 24, and the highest rate 27 in Oldham. The annual death-rate from the seven principal zymotic diseases averaged 3.0 per 1,000 in the twenty towns, and ranged from 0.7 and 0.8 in Wolverhampton and Leicester, to 5.6 and 7.6 in Salford and Sunderland. In London, 1,273 deaths were registered, which were 109 below the average, and gave an annual death-rate of 18.1 per 1,000. The 1,273 deaths included 14 from small-pox, 25 from measles, 57 from scarlet fever, 10 from diphtheria, 37 from whooping-cough, 14 from different forms of fever, and 32 from diarrhœa—being altogether 189 zymotic deaths, which were 51 below the average, and were equal to an annual rate of 2.7 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 230 and 198 in the two preceding weeks, further declined to 176 last week, and were 19 below the average; 94 were referred to bronchitis, and 52 to pneumonia. Different forms of violence caused 43 deaths; 36 were the result of negligence or accident, including 15 from fractures and contusions, 3 from burns and scalds, 8 from drowning, and 4 of infants under one year of age from suffocation. Six cases of suicide were registered.—At Greenwich, the mean temperature of the air was 59.9°, and 1.4° below the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 7.6 miles per hour, which was 2.5 below the average. Rain fell on six days of the week, to the aggregate amount of 0.75 of an inch. The duration of registered bright sunshine in the week was equal to 25 per cent. of its possible duration. The recorded amount of ozone showed a considerable excess on Sunday and Monday.

THE UNITED HOSPITALS ATHLETIC SPORTS.—This meeting took place on Wednesday last at Stamford Bridge, when, the weather being fine, there was a large attendance of spectators. St. Thomas's Hospital repeated their triumph of last year by again winning the Challenge Shield. The following is a brief return of the various events. 100-Yards Challenge Cup: C. D. Nuttall, St. Bartholomew's, 1; L. Stokes, Guy's, 2. Won easily by three yards.—Throwing the Hammer (16lbs.): J. Orford, St. Thomas's, 85 ft. 3 in.—120 Yards Hurdle Race: W. R. Pollock, St. George's, 1; G. H. Dodd, St. Thomas's, 2. Won by a yard and a half. Time 16 4-5 sec.—One Mile Challenge Cup: H. W. Crosse, St. Mary's, 1; H. C. Howard, St. George's, 2; E. A. Simeon, King's College, 3. Won, after a good race, by twelve yards; a bad third.—Putting the Shot: J. Orford, St. Thomas's, 37 ft.—Quarter-Mile Challenge Cup: T. A. Guinness, King's College, 1; W. R. Pollock, St. George's, 2. Won by ten yards. Time, 51 4-5 sec.—High Jump: F. W. Cattle, St. Thomas's, 5 ft. 5 in.—Half-Mile Challenge Cup: F. W. Humphry, St. George's, 1; J. W. Taylor, St. Thomas's, 2. Won by 15 yards. Time, 2 min. 8 1-5 sec.—Long Jump: H. M. Massey, St. Thomas's, 20 ft. 2½ in.—220 Yards Race: H. M. Massey, St. Thomas's, 1; T. A. Guinness, King's College, 2. Won easily by two yards. Time, 23 1-5 sec.—Three Miles Race: J. R. Cater, St. Mary's, 1; H. C. Howard, St. George's, 2. Won by 60 yards. Time, 16 min. 45 4-5 sec.—One Mile Handicap (Open): P. H. Stenning, T.H. and H., 78 yards' start, 1; S. K. Holman, L.A.C., scratch, 2; R. S. Benson, Royal School of Mines, scratch, 3. Won by about 20 yards, the same dividing the placed men.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M. Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M. Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M. Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2, Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 0.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 2; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Specimens will be shown by Dr. Godson and others; after which, the adjourned discussion on Dr. Graily Hewitt's paper will be opened by Dr. Bantock.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, to which every of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS who answered are requested to look to the Notices to Correspondent of the following week.

POOR-LAW MEDICAL OFFICERS.—We have much pleasure in placing the Medical Officers of Health of the Metropolis in possession of their Annual and other Reports, to assist them with *Dr. Buchanan's Report*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their name and address not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

MEDICAL CORONERS.

AN informal inquiry was held at Abergele on Friday in last week, over which Dr. Pierce, the coroner, presided, respecting a quantity of human bones which had been found collected together, and which had given rise to a great deal of curiosity and excitement. Dr. Pierce pointed out that they were the bones of three individuals of different ages, and explained that they had been used in scientific studies. He thought they had been gathered from the surface of churchyards by the scientific investigator, whoever he was, and narrated some instances which went to show that, forty years ago, it was tolerably easy to make such a collection of the relics of "poor humanity". He further remarked that, had the bones been the remains of a murdered person, the probability was that they would have been burned, or otherwise destroyed, instead of being carefully buried in an earthenware vessel. The general opinion of the persons present at the inquiry was that the "mystery" had been lucidly explained, and Dr. Pierce took the opportunity of expressing his opinion that medical men alone ought to be appointed to fill the office of coroner. "The explanation", says the *Carnarvon Herald*, "given by Dr. Pierce redounds greatly to his credit and that of his profession, and the case is certainly one which may be cited with propriety whenever an argument is raised as to whether legal or medical gentlemen have the better qualification for the coroner's office. It is also satisfactory that, by the complete unravelment of the 'mystery', the Principality has no longer attaching to it the suspicion of a foul crime, which a certain section of the press seemed to be only too anxious to establish." And further remarks: "As things are, and according to the arguments that are allowed to prevail among some people at present, any legal booby who has passed the required examinations can be appointed to the onerous and most responsible office of coroner. I have heard, and I have heard it with a feeling akin to dismay, that it has been contemplated to make barristers, and barristers only, coroners in future. A more nonsensical proposition was surely never advanced. A close shaven barrister, with an expensive wig and devoid of surgical, anatomical, or medical knowledge, would have looked very foolish with the assorted collection of bones before him at Abergele, on Friday in last week."

PREDICTION OF SEX.

PHYSIOLOGISTS and physicians have both been very active of late years, and indeed from time immemorial, in attempting to discover the bases for the prediction of sex, and a great variety of expedients as means of diagnosis during the period of gestation have been very freely brought forward. The last note which we observe on this subject is as follows. The fifteenth Bulletin of the United States National Museum, Washington, 1879, contains an account of the Eskimo of the Sound, by Ludwig Kumlien, naturalist to the expedition. The author heard a young woman ask an "angekok", a functionary who may be regarded as the most primitive representative of the priestly office, if her child would be a boy or a girl. He went outside the hut for a time, and, on returning, said it would "be a boy", but "if it is not a boy it will be a girl". His fee for this was three sealskins and a knife.

DE PROFUNDIS.

Respectfully dedicated to Mr. Tennyson.

Out of your depth, my boy, out of your depth.
At embryology don't try your hand,
Until at least you faintly understand
How ova are developed from their source,
And then expelled at labour. Take a course
Of Leishman; then, and not till then, aspire
To ope the obstetrics with perfect fire.
Out of your depth, my boy, out of your depth.

Sat. Rev., *Obstet. Lancet*, June 1880.

CHRISMA, VASELINE, AND OZOKERINE.

SIR,—Will you kindly explain in your columns the nature of the difference between the various petroleum preparations now before the profession, such as vaseline, [illegible]?—Yours truly. M.D.

The various substances referred to by our correspondent are no doubt derived from crude petroleum, but their mode of manufacture is kept secret at present. Being true hydrocarbons they are practically inoxidisable, and therefore form good bases for ointments. Vaseline, Unguentum Petrolei or Cosmoline, Chrisma, and Fossiline, are said to be prepared from the [illegible] of petroleum distillation, and we believe Ozokerine is derived from the mineral Ozokerit. We understand that filtration through animal charcoal is the general method adopted in the preparation of these articles. Their chemical composition does not appear to vary much; we find, however, that some are more completely purified, and therefore better fitted for use in medicine than others. The simplest and best test to apply is that of taste—the tongue will detect what chemical analysis will fail to show. A hydrocarbon material of this class destined for employment in medicine should be free from [illegible] petroleum. The faintest traces of smell are rendered more apparent by warmth, and the slighter degrees of flavour are distinguishable by a subsequent tendency to acridity in the throat. The relative purity of the several substances now offered to the profession may be judged pretty accurately by their comparative freedom from these characteristics of petroleum.

There is some difference in specific gravity, and, what is of more practical importance to the invalid, [illegible] this Vaseline melts at 98°F., Unguentum Petrolei at 100°, Chrisma at 104°, and Ozokerine at 120°. These do not appear to vary much in consistency. There is some variety also in [illegible] colour, but they do not appear likely to be of practical importance. Thus, Vaseline is smooth and rather transparent; Unguentum Petrolei [illegible] Chrisma is rather [illegible] and firmer; Fossiline is smooth but very soft; whilst Ozokerine, both in character and consistency, approaches more nearly to lard than either of the others.

[illegible] several communications, and a letter on "Obituary", on a personal subject, [illegible] which, for many reasons, might claim particular indulgence; and it is very much to be desired that they should appear.

ACUTE PNEUMONIA WITH UNUSUALLY HIGH TEMPERATURE.

SIR,—The carefully reported case of so experienced a physician as Dr. Daly in the JOURNAL of last week is interesting and, I think, instructive. I would like to ask Dr. Daly if he thinks the beef-tea and alcohol were factors in the production of the high temperature? I can remember a similar case, attended by my assistant. The patient was ten years of age, and after having beef-tea, wine, and brandy, early in the disease, the temperature was 105°. I am aware Dr. Daly does not ask for an explanation of the high temperature, but he will I am sure forgive me for entering on a speculative point to which he does not call attention, and I am equally sure he will not believe me guilty of questioning the treatment of a patient I have not seen. The necessity for administering stimulants in some forms of pneumonia is generally acknowledged.—I am, etc., MARSHALL MONCKTON.

June 28th, 1880.

SIR,—I am a Licentiate of the Society of Apothecaries of London, and being anxious to commence practice, to make myself known I have put Dr. J. Smith upon my door. I am told I am finable for so doing. Would you kindly tell me if such be the case; and, if so, what ought I to put upon my door?—Yours faithfully,

June 26th, 1880. L.S.A.LONDON.

. 1. Yes. 2. Mr. ——, L.S.A.

IMBECILE CHILDREN.

SIR,—There was a query in the JOURNAL of the 19th June as to institutions where imbecile children would be received for ten shillings per week. I may mention that children of residents in the Northern Counties, *who cannot afford to pay more*, are received as patients of the Royal Albert Asylum at twenty-five guineas *per annum*. —Yours faithfully, G. E. SHUTTLEWORTH, Medical Superintendent.

A MEDICAL MICROSCOPE.

SIR,—In answer to the query of L.R.C.P., I can confidently recommend Pillischer's "International" microscope (83, New Bond Street) as being everything a medical man can wish. I have had mine about four years, during which time it has been in constant use to my complete satisfaction, and I consider it vastly superior to most other microscopes of the same value which I have seen; whilst for accuracy of definition, its object glasses equal those of Hartnack's. The cost is £7 10s.; and a glass slide plate with sliding clips (a great improvement) amounts to about 12s. extra.—I am, faithfully yours, W. A. DUNCAN, M.D.

THE HYPODERMIC SYRINGE.

SIR,—If Dr. Madden will read my last communication carefully, he will find I took no credit to myself or Messrs. Maw in the matter of the hypodermic syringe packed with brass. Having occasion to inject ether, I was annoyed by my syringe coming uncemented, and wrote to Messrs. Maw to send me one which would not come apart when used with ether. They sent me one packed as above, without any comment; and in writing my last note it struck me that it might not occur to everyone that the syringe as ordinarily made was not suitable for ether injections, and that, by my drawing attention to the fact, they might be saved the annoyance to which I was subjected.—Your obedient servant, FRANK SMITH.

Plumstead, June 28th, 1880.

SOFTENING OF THE OCCIPITAL BONE.

SIR,—I shall be much obliged for information as to the clinical significance of softness of the occipital bone. I remember reading something about it a short time ago—I think in the JOURNAL—but have entirely forgotten under what head. I have a patient now, aged about five months, in whom the occipital bone can be pressed in with the finger, and on removal of pressure springs out again, imparting to the finger a sensation of crackling, similar to that noticed on treating a tin box in the same way. The pressure was followed immediately by vomiting. The other bones of the cranium are firm and hard.—Yours faithfully, T. W.

THE DIAGNOSIS OF RÖTHELN.

SIR,—If your correspondent "Dubitans" had bestowed a little more care and thought on the perusal of my paper on "The Diagnosis of Rötheln", I think he would hardly have deemed it necessary to trouble you with the criticisms and queries contained in his letter of the 26th instant. However, as the questions have been raised, I will endeavour to reply to them as briefly as possible.

I mentioned in my paper that rötheln broadly presented three degrees in severity, and I shortly described the appearances in each. "Dubitans" asks in what my description of the mildest form of rötheln differs from a mild case of measles. I must confess that, to a careless observer, there would appear very little difference, but even "Dubitans" will admit that sore-throat is not usually considered one of the symptoms of measles, either mild or severe. He next inquires how my description of a severe form of rötheln differs from scarlatina. To this I reply, that the presence of catarrhal symptoms, such as bronchitis, coryza, and running nose, accompanied by sore-throat and enlarged cervical glands, would make one chary of pronouncing such a combination of symptoms to be scarlatina pure and simple. I admit that catarrh of the eyes, nose, or bronchi, may accidentally be present during an attack of scarlatina, and that sore-throat may occasionally be seen in measles; still, if these appearances and symptoms are invariably present in a number of cases at the same time, and are faithfully reproduced and communicated from one to another, their presence ceases to be a mere coincidence, and leads one to think, even at the risk of being designated a "scientific hair-splitter", that they must constitute a specific disease.

In reply to the third question of "Dubitans", I must point out that he has fallen into error in taking the general description I gave of rötheln as a special description of an intermediate degree of severity. And, lastly, I did not state that a high temperature was a distinctive symptom, but simply mentioned it as a symptom amongst others.

It is not by singling out for comparison special symptoms in the course of two diseases bearing some resemblance to each other, that a distinctive diagnosis can be made, but rather by a careful observation of all the symptoms, singly and collectively. Then, and then only, can we decide whether they are or are not identical in character.

Mr. Woodman, writing on the subject of rötheln in your last week's issue, inclines to the view that it is simply a modified form of measles occurring after a previous attack. How, then, does he explain its appearance in persons who have not had a previous attack of measles, as was the case with some of my patients? If this idea be correct, then persons not protected, as it were, by a previous attack of measles, ought to develop pure measles after exposure to the infection of rötheln; but such is not the fact. It would elucidate the question considerably if reliable evidence were adduced of measles following after rötheln.—I am, yours truly,

Dunscar, June 28th, 1880. JAMES ROBINSON, M.D.

SIR,—The proof demanded by "Dubitans" as to those suffering from rötheln having previously had measles or scarlatina, or both, and as to the distinct nosological standing of rötheln, is conclusively furnished, at least to my mind, by the following short history.

The parish of Old Deer contains, according to the census of nine years ago, upwards of 4,000 inhabitants. For several years back, there had been no cases of measles till it. January 1879 this disease made its appearance, and spread very rapidly. It broke out in the east end of the parish, gradually spread over the whole district, raging for three or four months, and as gradually disappeared westward. Of those children that had not had measles before, very few escaped infection. Notwithstanding the very inclement weather, the epidemic was mild, since out of upwards of three hundred cases, I had, so far as I recollect, but three deaths, and those were in poor half-starved children. In August following, scarlatina cropped up, and though the schools were just closed for the autumn holidays, it, like the cases of measles, spread very rapidly. This epidemic was likewise mild, as there occurred but one death, and it was from a sequelæ. Then, about the beginning of the present month, a few cases of unmistakable rötheln showed themselves; and to give one an idea of how fast it spread, I may mention that a fortnight ago, out of an average attendance of eighty girls and young boys at a female school, there were for a few days not more than thirty present. Now, according to all authority, it is rare, that is to say, comparatively rare, for those that have had measles or scarlatina to take these a second time. Would it not, therefore, appear strange, that out of so many children having measles or scarlatina, or both, one year, a large majority of them should the very next year be visited in a wholesale fashion by the very same diseases, though in a modified manner, even with no *bonâ fide* cases of either of these diseases in the immediate neighbourhood? And would not "Dubitans" or any other person begin to think that after all it must be some epidemic of a distinct type? Judging from the cases I have seen, the characteristics of rötheln are quite distinct from measles or scarlatina. From measles: 1. In the stage of invasion. Everyone knows that in measles this occupies from four to five days. In rötheln, on the other hand, the rash appears suddenly, there being scarcely any visible period of invasion. Many of the cases that came under my observation were as follows. A child would be quite well in the morning, take his breakfast, and go to school. Then he would suddenly sicken, the rash would be very apparent, and he would have to be carried home or left in some neighbouring house. Many, again, that went quite well to bed would wake during the night in a high fever, and would be quite distinctly marked in the morning. 2. No tendency to bronchitis. The eyes are red and swollen, nose and throat sore; but in all the cases that I have seen, not only has there been no tendency to bronchitis, but there has not even been a cough. From scarlatina: 1. In none of the cases have I seen the characteristic tongue of scarlatina. 2. The rash was always very similar to that of measles, with the skin between the papules of the natural hue. In none of the cases in which sore-throat was very much complained of was there that general efflorescence so common in scarlatina. 3. In none of the cases was there the slightest appearance of desquamation. Finally, rötheln differs from both these diseases in the eruption being quite gone at the third day, and in the patient being about again from the third to the fourth day.—I remain, yours truly, ROBERT M. WILSON, M.B.

Old Deer, Aberdeenshire, June 28th, 1880.

MILK-TYPHOID AT PENZANCE.

"CORNISHMAN" writes: A paragraph in last week's *Lancet* with reference to an outbreak of milk-typhoid at Penzance, may cause some apprehension and alarm, and I think it well, therefore, to explain that the outbreak of which your contemporary writes as though it were of quite recent occurrence, happened fully five months ago. How it falls out that the news has taken from the middle of January to the end of June to reach the *Lancet*, I am unable to divine; but there has certainly been no outbreak of milk-typhoid at Penzance since January. The facts are shortly these. During January, an unusual amount of typhoid fever appeared in the town, and, on inquiry, it was found that every case had been supplied with milk from one particular source. This milk came from a farm about four miles distant, where two or three members of the family were suffering from typhoid fever (one having died from the disease), and where it was subsequently discovered that the same woman who milked the cows, washed the buckets and pans, and looked after the milk generally, nursed the typhoid fever patients, and washed their clothes. The milk required for the sick family was admitted to be occasionally taken in the milking-pail into the infected house, and it is easy to see the possibilities of infection reaching the milk. Altogether, twenty-six cases were reported to the sanitary authority, and four of these proved fatal. On the connection of the milk with the outbreak being discovered, the supply from the farm was at once stopped, and the disease then died out.

INTERNATIONAL CONGRESS OF HYGIENE AT TURIN.

SIR,—It may interest some of your readers to be informed that I have this morning heard from Professor Giacinto Pacchiotti that the International Congress of Hygiene will be opened on the 6th of September and will close on the 12th; that the King, the Ministers, the Maire, the Prefect, and all the officials will take part; that the Minister of Foreign Affairs invites all foreign Governments to send delegates; and that there will be a reduction of 30 per cent. on the railway fares.—Faithfully yours, P. HINCKES BIRD.

1, Norfolk Square, W., June 21st, 1880.

IODOFORM.

How to cover the odour of iodoform has been a troublesome problem. Neither tannic acid nor ether succeeds well. Linderman reports that two parts of Peruvian balsam to one part of iodoform covers the smell completely. A convenient preparation is: Iodoform, one part; Peruvian balsam, two parts; Vaseline, eight parts. A fluid preparation may be made by mixing one part of iodoform, three parts of Peruvian balsam, and twelve parts of alcohol or glycerine.

SURGICAL INSTRUMENTS AND APPLIANCES.

SIR,—Would you kindly allow me to take advantage of your columns to ask the advice of some of my senior and more experienced brethren as to the nature and quantity of surgical splinting and apparatus for dislocations and fractures generally that an ordinary general medical practitioner should keep by him in order to be fairly ready in case of any ordinary emergency; also information as to the prices of the various splints and apparatus, and where they can, to greatest advantage, be procured? In looking over the illustrated catalogues at our disposal, one is apt to be perplexed; and I feel sure that many other commencing practitioners, like myself, would consider it a great boon to have offered, for their guidance in this matter, the suggestions and advice of those who have been taught by long experience. It is a wonder to me that the text-books do not afford more information than they do for the guidance of junior practitioners in outlying districts, in the very important matter of the provision of an adequate *armamentarium* that will probably suffice to render them fully and properly equipped for general practice and the ordinary emergencies therein occurring.—Enclosing my card, I am, sir, your obedient servant, A PERPLEXED PRACTITIONER.

Nerve-Stretching in Sciatica.

SIR,—I have seen a good deal about nerve-stretching for sciatica lately in our JOURNAL and also in other works; but the case reported by Mr. J. W. Long in the issue for June 26th, relating the treatment of W. A., aged 21, seems to me to be the acme of Surgery over Medicine. I have treated a great many cases of sciatica, some of them very obstinate, but have never yet found one that would not yield to quinine combined with opium or iron; and as in this case the pain is described as neuralgic, I should be very glad to know whether quinine had a fair trial before resection of the knee-joint, amputations twice, and nerve-stretching and subsequent section were resorted to.—I am, sir, yours faithfully, J. W. BARRETT.

King's Lynn, June 29th, 1880.

The Health of Sandown.

SIR,—A rumour being current that there is "a great deal of sickness at the Isle of Wight", and that "several cases of typhoid fever" have occurred, "one fatal case at Sandown", will you allow me the medium of your columns to give an unqualified denial to such report as regards Sandown. The town is in its usual healthy condition. There has been no case of typhoid fever. The death-rate during the last ten years has averaged 14 per 1000 including, and 13 per 1000 excluding, visitors. For the last three years, the death-rates have been 14, 14, and 11.3 per 1000 including, and 11.5, 10.6, and 10.6 excluding, visitors.

In the interests of the island generally, and of Sandown in particular, during the forthcoming season, I beg you will publish these facts and figures, which a discriminating public will find more trustworthy than such rumours as the one above mentioned.—I am, sir, your obedient servant, JAMES NEAL, M.D.,

Sandown, I. W., June 8th, 1880. Medical Officer of Health.

The Brussels M.D.

SIR,—In the JOURNAL of June 19th is a letter from Dr. Crean of Manchester showing that in the examination just concluded for the above degree only four out of thirteen candidates were successful; this means that either the examination is excessively severe, or the candidates often present themselves when not sufficiently prepared. In the hope of giving some useful advice to those who intend to go over for the next examination (November, I think), permit me to relate my experience at the Brussels University. I took the degree in May, and there were then four candidates; one was rejected at the first doctorate, a second (also L.R.C.P.Lond., M.R.C.S., and L.S.A.) was rejected at the second doctorate, whilst only myself and another (who had been rejected at the January examination) passed. I was told that five gentlemen went up for the latter examination, and "all were rejected". The fact is (as Professor James, the interpreter, told me), since the correspondence which appeared in the BRITISH MEDICAL JOURNAL last year concerning the M.D. Brussels, the professors have greatly raised their standard, and are determined to admit none but those who can pass a searching examination. It is a great mistake for candidates to go over before getting up all the subjects they will be examined in. It is pretty certain to result in the loss of their time and money, besides the humiliation of being rejected. At the May examination, one of my fellow candidates told me he had not considered it necessary to read up Ophthalmic Surgery since passing his M.R.C.S.; the consequence was he failed to satisfy the examiners in that very subject.

With regard to the examination itself, the following are the subjects:

First Doctorate—1. Theory of Medicine; 2. Materia Medica and Therapeutics; 3. Pathology—general and special; 4. Mental Diseases.

Second Doctorate—1. Theory of Surgery; 2. Ophthalmic Surgery; 3. Midwifery; 4. Hygiene; 5. Forensic Medicine (excluding Toxicology).

Third Doctorate—1. Clinical Medicine (one male and one female case in the wards); 2. Clinical Surgery (two male cases in the wards); 3. Operative Midwifery (on the manikin); 4. Operative Surgery (two amputations, ligature of two arteries); 5. Surgical Anatomy, with Dissections.

On the whole, the examination appeared to me to be an essentially practical and by no means easy one; in fact, I was agreeably surprised to find how the whole affair was conducted. I should advise gentlemen to endeavour to obtain honours in the various subjects. My successful colleague received honours in Operative Surgery; and I was fortunate enough to obtain first class honours in Medicine, Clinical and Operative Surgery, and Surgical Anatomy, for which I received (in addition to the ordinary diploma) a special certificate of honour. The fees amount to £22; so that altogether the cost of the degree (travelling expenses, etc., included) is from £35 to £40.—I am, sir, yours faithfully, M.D. BRUSSELS.

SIR,—The letter from Dr. Crean in the JOURNAL of the 19th instant relating to the Brussels degree is very significant and calls for comment. In it he states that thirteen candidates presented themselves at the last examination, and that four only were successful; six were rejected in the first doctorate, two in the second, and one in the third. Such an unusually large number of rejections proves that the examination is very stringent; but I wish to point out that the mode of conducting it presses very hard indeed upon candidates.

The examination is divided into three tests, viz., first, second, and third doctorates. The first doctorate comprises General Therapeutics, including Pharmaco-Dynamics; Special Pathology of Internal Diseases; Mental Diseases; General Pathology; and Pathological Anatomy, with the use of the Microscope. Second Doctorate: Surgical Pathology (including Ophthalmology); Theory of Midwifery, Public and Private Hygiene; Medical Jurisprudence. Third Doctorate: Clinical Medicine and Surgery, Obstetrical Operations upon the Manikin; Operative Surgery; and Regional Anatomy, including actual dissections upon the dead body.

It will be observed that the greater part of the first doctorate consists of Pathology; and it is in this subject that the majority of men fail. If a man does not pass the first doctorate he is not allowed to go in for the other two, the reason being, that a great number of men who are practically well qualified in every respect are rejected. In proof of this, I have known several men who have distinguished themselves at hospital, taken prizes, and held resident posts, who [illegible] have left the hospital solely on account of failing at the first doctorate, and not that they have neglected up on the mere chance of passing, but have honestly and industriously read up for it, and had they been further examined in the second and third doctorates, viz., in Midwifery, Clinical Surgery and Medicine, and Operative Surgery, etc., I feel confident that they would have shown their ability in readily passing the ordeal.

The [illegible] Pathology complained of generally by candidates, who [illegible] that the [illegible] with which examinations are [illegible] and that really practical work [illegible] part of the [illegible]. It is also stated that the [illegible] Medicine and Surgery [illegible] the best books to work [illegible] the difference in opinion of Continental and British pathologists in regard to many most important points and the [illegible] entails the most disastrous results upon those who have not fully studied the works of their own countrymen. I would, therefore, respectfully urge upon the Faculty of the Brussels University (of which I am proud to be a graduate) to examine candidates in the whole of the three doctorates, and then decide, after taking into consideration how a man has answered in all the subjects, whether he is worthy to pass or not. It must be borne in mind that all candidates must be "practitioners provided with surgical and medical qualifications", so that the University is examining men who have been already declared fit to practise their profession, but are now seeking a higher diploma; and it appears unaccountable that they should not be tested in all the subjects before their fate is decided upon, and I believe what I propose is the custom at all British final examinations.

The impartiality and high integrity of the examiners is so thoroughly recognised and appreciated by all graduates, that I trust my humble efforts in pointing out an existing hardship may lead to an act of justice towards men, who, at a great sacrifice of time and leisure, study hard amid the many cares and anxieties of practice to obtain an honourable distinction.—Apologising for the length of this letter, I am, sir, your obedient servant, M.D. BRUSSELS.

June 22th, 1880.

SIR,—In your issue of June 19th, there are three questions asked which the *Medical Digest* enables anyone to answer in the short space of three minutes. 1. Mr. Fisher wishes to refer to M. Liebreich's paper on the effects of certain faults of vision on painters: *vide* Section 1816:5. 2. A. M. D. asks for Surgeon Mulcahy's paper on the Similarity of Enteric and Malarial Fevers. In Section 558:3 is a reference to Mr. Barker's views on this subject; and there being no mention of Surgeon Mulcahy's paper is a fairly sure proof that it is not to be found in any of those papers which are searched for the *Digest*, and thus no time need be lost to search there. 3. T. W. B. requires information regarding gouty affections of the throat, which Sections 1468:3 and 1466:5 will enable him to acquire.—I am, etc.,

RICHARD NEALE, M.D.Lond.

60, Boundary Road, South Hampstead, N.W., June 21st, 1880.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. J. C. Steele, London; Dr. B. Joy Jeffries, Boston; Mr. W. Parker, Bath; Mr. H. E. Waddy, Gloucester; Dr. G. Birt, Stourbridge; Mr Eastes, London; Dr. C. P. Philpots, Poole; Mr. Walsham, London; Dr. J. B. Gill, Canterbury; Dr. J. Dreschfeld, Manchester; Dr. Hardwicke, Rotherham; Dr. Louis Henry, St. Kilda; Mr. F. Little, Leeds; Dr. L. Armstrong, Newcastle-on-Tyne; Dr. Creighton, Cambridge; Dr. John Walters, Reigate; Mr. H. T. Butlin, London; Our Dublin Correspondent; Observer; Mr. T. Dickinson, London; Dr. R. H. Coombs, Bedford; Dr. Coats, Glasgow; Mr. Frank Smith, Plumstead; Dr. Marshall, Wokingham; Mr. Marshall Monckton, Ashford; Mr. J. W. Barrett, King's Lynn; Mr. J. M. Brown, Wansford; Dr. Saundby, Birmingham; Mr. E. Nettleship, London; Dr. H. Barnes, Carlisle; Dr. J. Robinson, Redcar; Dr. G. E. Shuttleworth, Lancaster; Dr. Shinkwin, Cork; Dr. Bateman, Norwich; Mr. Sedgwick, London; Dr. Hill, London; Dr. Rabagliati, Bradford; Mr. Ralph Hordley, Stoke-upon-Trent; Mr. W. Austen, London; Mr. R. G. Ford, London; Dr. T. J. Burroughs, Croudall; Dr. G. E. Shuttleworth, Lancaster; Dr. Fletcher Beach, Darenth; Dr. Joseph Rogers, London; Our Edinburgh Correspondent; Dr. D. N. Knox, Glasgow; Dr. John H. Gray, London; Dr. John Gill, Stratford-on-Avon; Mr. F. G. Heath, London; Dr. Mackenzie, Glossop; Mr. R. W. Wilson, Aberdeen; Mr. W. R. Erson, Easingwold; Our Glasgow Correspondent; Dr. David Hart, Edinburgh; Mr. M. Smith, Durham; Dr. Felce, London; Dr. C. Clay, Manchester; Dr. J. Magee Finny, Dublin; Mr. Francis Fox, London; Dr. S. Rees Philipps, Exeter; Mr. F. M. Corner, London; Dr. F. W. Smith, Leamington; Dr. Macewen, Glasgow; etc.

BOOKS, ETC., RECEIVED.

The Practitioner's Handbook of Treatment, or the Principles of Therapeutics. By J. Milner Fothergill, M.D. London: 1880.

Home Nursing, and how to Help in Cases of Accident. By Samuel Benton, F.R.C.P. London: David Bogue. 1880.

House Architecture. By J. J. Stevenson. Two vols. London: Macmillan and Co. 1880.

The Therapeutics of Gynecology and Obstetrics. By W. B. Atkinson, A.M., M.B. London: Baillière, Tindall, and Cox. 1880.

Lessons in Gynæcology. By William Goodell, M.A., M.D. London: Baillière, Tindall, and Cox. 1880.

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THE HARVEIAN ORATION,

DELIVERED AT

THE ROYAL COLLEGE OF PHYSICIANS

Friday, June 25th, 1880.

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[*Continued from page 9 of last number.*]

SUCH, given very roughly and cursorily, and in a very condensed manner, is the course of the general progress of our approaches towards the full and proper discovery and presentation of the circulation of the blood.

One step led on to another, as is the case with all truth and all science, each the inevitable and irresistible result of the former.

Summarising in chronological order the most salient anatomical facts which had been established respecting the circulation, we may regard

1. The distinction between arteries and veins as demonstrated by Galen;

2. The non-communication between the two ventricles of the heart in man as demonstrated by Vesalius;

3. The true nature of the valves of the veins as arrived at by Sylvius, St. Estienne, Fabricius, and others;

4. The pulmonary or smaller circulation as determined by Servetus.

These great facts, these scattered limbs of truth, being recognised, the wonder surely is, not that they led up to anything further, but that the goal and consummation was not earlier reached, and that the world should still have had to wait for fifty years after Fabricius had published his views on the valves. The tree of knowledge at length fructified.

At last appeared the master mind, the interpreting genius, and the glory of his generation and century—the immortal Harvey, *Decus et desiderium nostrum*, the bright unclouded constellation standing out in relief from the dark background, never to be extinguished. It was, as Daremberg observes, "as at the dawn of creation chaos cleared up, the light separated from the darkness. Harvey considers a long time, and he finishes by seeing; he makes few experiments, but they are decisive; he uses arguments, but they are conclusive".

Renouncing the to-and-fro, or, as it may be termed, the tidal, theory of the circulation, and reasoning upon already ascertained facts, and upon his own observations, and direct, varied, and reiterated experiments on living and dead animals, fœtal and adult, Harvey changed everything. With a mind trained by the study of physics and classics, he was enabled by a wise insight, and by his powers of analysis and comparison, to trace a new route for the blood, to establish by precise demonstration its general circulation as we now know and understand it, and thus, by giving a foundation for rational physiology, he achieved for medicine an entire transformation.

But the greatest, perhaps the chief, support of his theory is obtained from his accurate observation and demonstration on the mechanism and use of the movements of the heart itself.

The ulterior demonstration of the circular movement of the blood by Harvey, as Daremberg points out, rests on the following three arguments. In the *first* place, the blood arrives under the impulsion of the heart in such quantity and in so continuous a manner from the vena cava into the arteries, that it is impossible it can be furnished by the food, and in such a manner that it should pass as a whole in a short time from the veins into the arteries. In the *second* place, the blood, constantly and uniformly propelled by the arteries into the limbs and other parts, enters in much greater quantity than is necessary for nutrition. *Finally*, from each limb the veins are constantly returning the blood to the heart; proving that the arteries receive nothing from the veins, but that, on the contrary, the veins receive blood from the arteries.

His predecessors had well-nigh reached the point which he attained, but they were all hampered, fettered, and prepossessed by false theories and assumptions, and were thus so blinded to the full import of their own discoveries that they failed to solve the great enigma of the world. They had hewn and polished the materials, but to him it was reserved to crown the edifice. "The true inventor", it has been said, "is he who definitely places the world in full possession of knowledge and of facts of which one can every day and at will verify the reality and accuracy. Let us not confuse the works of chance, which, finding some of the wheel-works of a machine, leave them, not knowing what to do with them, in a state of isolation. Let us not confound them with the works of a genius who searches, discovers, gathers, mates, and binds together all the parts of the machine and puts it in motion. Chance shows the chyliferous ducts to Aselli, but leaves them at the entrance of the liver. Chance shows to Pecquet the receptaculum chyli, but it was experimental research which conducted this skilful anatomist to the left subclavian vein, and permitted him to dispossess the liver of its functions."

It has been said by Dr. Willis, who has written the life of Harvey in so able and interesting a manner, that the discovery of the circulation of the blood came from him, as did Minerva from the brain of Jupiter, fully formed. This view surely cannot be held. The discovery was like that of so many others: it was the result of the growth of germs sown long before. It was not the work of one mind.

In many cases, no doubt, discoveries appear to have been anticipated, when, indeed, there has been no real anticipation, only happy guesses, just as the atomic theory of Dalton may be said to have been anticipated by Epicurus or Leucippus. But in the case of Harvey the discovery was not merely adumbrated, but was led up to in a proper scientific sense; just as, in the case of Lavoisier's chemical theories, he was duly and properly preceded by Becker, by Jean Rey, Robert Boyle, and John Mayow. Most inventors inherit from their ancestors.

It is to be noticed, in passing, that Harvey heard the passage of the blood by applying his ear to the cardiac region, and that Dr. Robert Hooke, towards the close of the seventeenth century, enunciated the philosophy of the stethoscope. From the writings of this admirable thinker, Tyndall, in his work on *Sound* (third edition, p. 40), quotes a most interesting passage, showing that Hooke was quite familiar with the sounds of the heart and of the lungs and intestines; and yet Laennec's name is the one inseparably and pre-eminently associated with the use of this instrument. Eck de Sulzbach proved experimentally that metals when they oxidise increase in weight, and attributed this augmentation of weight to a spirit, which is united with the metal, and is disengaged afterwards by distillation. In this, of course, he nearly anticipated Lavoisier and Priestley in their discovery of oxygen by three hundred years, as Draper observes.

It is interesting here to notice, in passing, that Harvey, like other discoverers and benefactors of the race, had his detractors and objectors; and the literature on the question of priority is something very considerable. It has been well handled by Flourens, by Huxley, and by very many others. Some professed that he was entirely mistaken. Others said the thing was true, but it was so simple and self-evident that no praise attached to the discovery; but, as Biot observed, quoted by Daremberg, "Rien n'est plus clair que ce qu'on a trouvé hier; rien n'est plus difficile à voir que ce qu'on trouvera demain." Others, again, asserted that he had been anticipated, and had pilfered and palmed off the wares of others as his own.*

In any case, it appears that Harvey's contemporaries in the practice of his profession, as we say, fought shy of him in consequence of what they thought to be his quixotic and impractical views; but Harvey at last triumphed, as did Jenner, and in a measure Sydenham also after him; and, like them, he lived to see, though late, the entire acceptance of his teaching.

Of the full effect and manifold applications of Harvey's discovery resulting hitherto, the time at my command will only permit a very superficial glance. It paved the way for other knowledge, by which it was in turn corroborated; for internal acts, as they have been termed, of plastic life, as well in health as disease; and upon that discovery rests all our knowledge of pathology, and of the action of remedies.†

The work of Harvey which transformed the face of physiology, as the teaching of Dalton did chemistry, or that of Sydenham practical therapeutics, and that of John Hunter surgery, had yet to find its completion.

After his discovery followed that of the lymphatic and chylous system, the result of direct observation and experiments by Aselli (by him noticed accidentally) and by Pecquet; then, as a direct result, the observations by the two friends Wharton and Glisson, the latter our Anatomy Reader at this College, on nutrition, etc.

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* I am sorry to find Hecker, the historian of the Middle Ages, so anxious as he seems to be to diminish the fame of Harvey. See a pamphlet of his, but little known, "Die Lehre vom Kreislauf vor Harvey, eine historische abhandlung", Berlin, 1831 (T. H. Herbig). He considers Galen to be the true discoverer of the circulation.

† Referring to such consequences, Harvey himself observes (see chapter xvi of his work on the Action of the Heart and Blood):—"Finally, reflecting on every part of medicine, physiology, pathology, therapeutics, when I see how many questions can be answered, how many doubts resolved, how much obscurity illustrated, by the truth we have declared, the light we have made to shine, I see a field of such vast extent, in which I might proceed so far, and expatiate so widely, that this my tractate would actually swell into a volume which was beyond my purpose, but my whole life, perchance, would not suffice for its completion."

But the brightest corollary to Harvey's teaching came with the era of descriptive anatomy, in which the names of Malpighi, a Fellow of our Royal Society, who first had ocular demonstration of the circulation of the blood,* of Ruysch, and of Leeuwenhaeck appear, when, by means of the microscope and of injections of the blood-vessels, the characteristics of the various textures of the body, and the nature of the blood, of the minute vessels, and of the capillary circulation in the substance of the tissues, were recognised.

Harvey had demonstrated the direct communication between arteries and veins in three situations, viz., the choroid plexus, the spermatic vessels, and the umbilical vessels. But the capillary circulation, of course, Harvey had never witnessed, and this could not have been seen until the *microscope* was revealed.

Later on, and following the discovery of Hales as to the nature of the alkalies, showing the importance of the relations of quantity in explanation of chemical facts, came the grand discovery by Black of Edinburgh, who explained the source of animal heat; the discovery of oxygen in 1774 by Priestley; and of Lavoisier on the theory of respiration and the process of combustion. The latter, by observation of the *rôle* played by the air in combustion and decomposition, overthrew the phlogistic theory, became the author of a new doctrine, and the originator of a new and the only true method in chemical research, viz., that of adapting the balance to the elucidation of chemical phenomena. All these theories could only have followed upon the discovery of the minute circulation of the blood, and upon these discoveries our knowledge and treatment of so many affections of the lungs depend.

To show in anything like a complete manner what practical and therapeutical benefits have grown out of Harvey's great discovery, or to attempt to inquire what still is to come, would require much time. Suffice it to say that our knowledge of diseases of the lungs and heart, of the use of the stethoscope; our acquaintance with embolism and its effects; our knowledge of the subcutaneous use of remedies; of the inhalation of anæsthetics; of transfusion of blood, first resorted to by Lower in the case of man after employing it on the lower animals (in cases of hæmorrhage and other affections); and of the transfusion of milk, first practised on dogs, rabbits, and then used on man by Dr. Hodder of Toronto, in 1850, then by Dr. Home of New York, and others, in cases of cholera, of phthisis, of anæmia, etc., and recently carried out successfully by Mr. Austin Meldon, are due to this discovery.†

What would Harvey have thought could he have foreseen the use of the sphygmograph, the cardiograph, and the corroboration afforded by their use to his teaching, and the possible service they may supply to the physician—the knowledge of the vasa vasorum, of the relation of the nervous system to the smaller blood-vessels and capillaries (and consequently of secretion), first apparently noticed by Nicholls about one hundred years ago,‡ and the consequent neurodynamic medicine, and the now universally necessary use of the thermometer?

I need hardly say to any one here present that, although Harvey's name is more particularly associated with the doctrine of the circulation of the blood and the heart's movements, his work on *Generation* is one of equal originality and of overwhelming interest, notwithstanding that since his time observation has shown that his proposition "omne vivum ex ovo" is, though of general, yet not of absolute and universal application. The [illegible] and the merits of that work have been put before this College in a very graphic, interesting, and instructive manner by Dr. Arthur Farre in his Harveian Oration for 1872. I will, therefore, [illegible] to it, nor to other published products of Harvey's mind.

We are almost left to conjecture the loss which both he and the whole world sustained in the destruction of other of his writings. Our College [illegible] of his work (1766) shows that he wrote on several subjects, including the generation of insects, besides those treated of in his works; and we know that he had put matters together under the heading of Medical Observations and Pathology. As it was with Galen, who bitterly regretted the loss by fire of some of his valuable Observations, Harvey had reason to complain of the loss of these writings by the fury of a revolutionary mob. Whether he lost the Medical Observations and Pathology in this way, or whether he bequeathed them to the College, and they were afterwards burnt in the fire of London, or dispersed, is uncertain. The matter has been discussed by Dr. Paget in his pamphlet on the MSS. of Harvey.* It is, of course, impossible to ascertain what are contained in his lost Observations; but it occurred to me that it would be interesting and instructive to adduce any indications of his knowledge of practical medicine which may exist in his extant works. This may be the more profitable, as during his life he had, as we know, enemies who declared that his professional skill was most scanty, and by no means equal to his knowledge of anatomy.† It is very clear, from what is recorded of his *clientèle*, that he must at one time have had considerable private practice. We learn that Descartes, Cowley, Hobbs, Dryden, and Boyle were amongst his patients; and he may have known Shakespeare, Vandyke, Rubens. He must have had a certain amount of practice amongst the poor whilst occupying the office of Physician to St. Bartholomew's Hospital. Still the hospital was very small at that time; and moreover, as there was no medical teaching in those days—an element so useful in perfecting the knowledge of the teachers—he might or might not have been as perfect and successful in his art as his colleagues.

The first practical matters to which I will ask your attention, as being referred to in his published works, are of a surgical nature; for Harvey did not disdain to practise surgery, and also midwifery, as well as his own special branch of the profession; and he was Professor, as we know, to this College, both of Surgery and of Anatomy. He describes cases in which he removed tumours, having first ligatured the main artery, and thus cut off the nourishment or "spirit", in order to facilitate the removal, especially one of the scrotum of enormous size: a procedure which modern skill still adopts.

We may in some degree picture to ourselves the enthusiasm with which, after determining the true nature of an artery, and to a certain degree of arterial blood, he first availed himself practically of that knowledge, and applied it for the relief of his kind.

The above case reminds one of the case of a scirrhous and cerebriform tumour on the side of a girl's head, which Dupuytren tried in vain to remove. M. Magendie sawed off large portions at different times, and the wounds healed. Nevertheless the patient became worse; and Magendie therefore ventured to tie the carotid artery, the result of which was that the tumour ceased to grow and the patient's life was preserved. The operation was successful as regards the tumour; but hemiplegia and permanent lesion of mental faculties followed.‡

With respect to tumours—illustrating the principle of the difference between the papillæ of the ovary, and *à propos* of the existence of a vital principle—Harvey observes that we frequently meet with cancers, sarcoses, melicerides, and other tumours of the same description, which increase as it were by their own inherent vegetation, taking up nourishment to themselves, and defrauding other parts of the body of their nutritive juices or proper genius: whence the ancient terms phagedæna and lupus.

With regard to bloodletting, he tells us that daily experience satisfies us that it has a most salutary effect in many diseases, and is indeed the foremost among all the general remedial measures; and in practising it we imitate nature, which, in indolent high-living people, by critical discharges of blood from the nostrils, hæmorrhoids, and in shape of menstrual flux, delivers us from serious disease—from fever, small-pox, headache, etc.

He notices the death from hæmorrhage in a short time, of animals after division of the vessels of the neck, and the occasional occurrence of rapid death from the same cause after amputation in man; these facts being adduced in support of his doctrine of the blood flowing in

[illegible]

to stifle) any infant opinion and partly consent thereto. But truth, though it may be [illegible] him."

‡ See M[illegible]

a circle. He notices that oftentimes in divisions of arteries in operations, the blood juts out from the vessel, not *per saltum*, because the smaller arteries do not pulsate, especially if a tourniquet has been applied; and that, in fainting fits or alarm, when the heart beats more languidly, there is a diminution or arrest of hæmorrhage.

He observes that impediment, or perversion, or excessive excitement of the blood's circulation in the veins, leads to varices, abscesses, pain, hæmorrhage; in the arteries, to enlargements, excruciating pains, aneurisms, sarcoses, fluxion, asthma, stupor, apoplexies, and many other affections, many of which are often remedied and dispelled as if by enchantment. He notices the interesting fact that, when an extremity has been so ligatured that it has become swollen, cold, and livid, especially if it be cooled by snow or cold water, and the fillet be unbound, the person becomes aware at once of a feeling of cold rising along with the return of blood towards the trunk; and this cold blood returning to the heart he looks upon as the probable cause of the fainting which often occurs after bloodletting. This, also, he thinks, may account for the accidents to many who die in travelling over snowy mountains.

He mentions the case of a man with aneurism at the lower part of the neck on one side, in whom the pulse in the corresponding arm was very small, owing, as he thought, to the greater part of the blood being directed to the tumour, and thus intercepted. He records the case of a gentleman who had been the subject of pain in the chest, dyspnœa, and dropsy, in whom, after death, the wall of the left ventricle of the heart was found extensively ruptured, although the wall was sufficiently thick and strong. This laceration he attributed to an impediment to the passage of the blood from the left ventricle to the artery.

He notices the absorption of pus and blood from the cavity of the pleura, and the discharge with the expectoration of liquids thrown into the cavity of the thorax.

As illustrations of his allusions to therapeutics, speaking of the effects of the action of remedies applied endermically, he says that colocynth and aloes used externally move the bowels, cantharides excites the urine, garlic applied to the soles of the feet arrests expectoration, and cordials give strength.

These illustrations occur in a passage demonstrating the circulation of the blood. In the same chapter, his pathological knowledge induces him to describe the morbific cause of tertian ague as seeking the heart in the first instance, and hanging about the heart and lungs, thus rendering the patient short-winded and disposed to sigh—the vital principle being oppressed, and the blood rendered thick and forced into the lungs.

He comments on the relief obtained in dangerous states of asthma by the application of cupping-glasses and of cold water affusion on the chest (I refrain from quoting his physiological views as to the action of respiration, in proof of which these facts are adduced); and, in speaking of the functions of the diaphragm, he alludes to the possibility of the heart and lungs being invaded by distension of the stomach and intestines by food and flatus; life itself, as he says, being oppressed in its citadel.

These observations recall to our mind certain cases of disease in which the diaphragm does not suffice to protect the contents of the thorax, and indicate how fatal such cases may prove unless promptly and timely relieved by puncture of the stomach or bowels.

In Harvey's works, I fail to meet with much material bearing on what was termed by Aubrey, when hinting at his supposed inability as a practical physician, his "therapeutic way". He mentions a curious case of one suffering from oppression and pain of the heart and breast, whose jugular arteries were large and like aneurisms, who only found relief when the whole of his chest was pummelled or kneaded by a strong man, as a baker kneads dough, and in whom arteriotomy was performed, but without good result.

He also mentions cases of ulcer of the womb and of sterility treated by uterine injections, and alludes to their use in cases of occlusion of the uterus requiring opening of the os uteri.

The treatment of himself in illness on one or two occasions was somewhat noteworthy. Thus he states that, in the attacks of gout (from which he eventually died), he was in the habit of applying cold water to the affected limb. "He would then sitt", we are told, "with his legges bare, tho' it were frost, on the leads of Cockaine House, putt them into a payle of water till he was almost dead with cold, and betake himself to his stone, and so 't was gone." When he could not sleep, he would "rise from his bed and walk about his chamber in his shirt, till he was pretty cool, and then return to his bed and sleep very comfortably". Again, in his fatal illness from the effects of gout, when aged—eighty "*annorum et fama satur*"—he found on the day of his death that he had lost the power of utterance; that, in the language of the vulgar, he had the dead palsy in his tongue. He did not lose his faculties, but, knowing that his end was approaching, and having made disposition of certain of his effects, he made signs to Sambroke, his apothecary, "to let him blood in the tongue". He died in the evening, "the palsy", as Aubrey has it, "giving him an easy passport".

Dr. Paget, in his notice of an unpublished MS. of Harvey's (1850), in the British Museum, refers to some notes on the physiology of the muscles, in which he groups together mania and somnambulism, seeming to indicate that he recognised the resemblance 'twixt the state of dreamland and insanity. Dr. Paget also points out passages in Harvey's writings, showing that he had assiduously investigated the physiology of the lungs, and had obtained a glimpse at least of one of the true uses of air in respiration. The chemistry of the day Harvey did not value, and, as Willis says, he showed his wisdom in despising the opinions of the age on the office of the lungs; but he well knew the vivifying force of heat, and saw in it the immediate indispensable agent in the reproduction of a living, sentient being.

In connection with the subject of midwifery, he alludes to several highly interesting cases. Thus he cites the use of the "uterine speculum", an instrument not for the better inspection of the parts, but for assisting labour, and by which, as he says, the business of distension is effected by force.

He speaks of the "labour stool" used by parturient women, and of delivery in a state of coma effected by means of powerful sternutatories, and also of labour effected after the death of the mother—cases cited for the purpose of proving how much the fœtus contributes to its own birth. He states that he has often seen the fœtus extracted alive from the uterus when the mother had been dead some hours, and has known the rabbit and hare survive when extracted from the uterus of a dead mother—a subject of great interest in a medico-legal point of view. To show the power of the uterus in delivery, he cites the case of a poor washerwoman who was pregnant with a uterus greatly prolapsed and projecting from the vagina, at first like the scrotum of a bull, and afterwards of the size of a man's head. He at first mistook it for a case of cancer, and thought of using the ligature or the knife, but unexpectedly a dead fœtus was expelled.

As regards the influence of affections of the uterus on the general health, and the sympathy of the whole body with it, he observes: "No one of the least experience can be ignorant what grievous symptoms arise when the uterus either rises up or falls down, or is in any way put out of place, or is seized with spasms; how dreadful then are the mental aberrations, the delirium, the melancholy, the paroxysms of frenzy, as if the affected person were under the dominion of spells, and all arising from unnatural states of the uterus"; and he shows the evil influence which retained and decomposing contents of this organ may occasion. He describes in a most practical manner the changes which take place in the female, corresponding with those of the uterus at different periods of life. He remarks on the long and creeping motion which the uterus exhibits directly after death in animals, surmising whether it may not be so in the case of hysterical women, and also whether it may not be so with the brain, in its actions and conceptions. The following references I find to the chemistry of the urine. After speaking of the serum of the blood being charged with mucus on being exposed to heat, he says that the watery portion of the urine, when lightly boiled, does occasionally run into a mucus which swims through the fluid. Again, he alludes to thick and turbid urine becoming clear and transparent when heated, and also to the urine becoming altered in colour by the use of certain articles of food, as figs, rhubarb, asparagus, etc. He describes experiments showing the effect of animal poisons on the body, and of the communication of diseases like pestilence, leprosy, etc., by a zymotic element contained in articles of clothing and furniture, even the walls of a house, cement, rubbish, etc.

Many illustrations he adduces of hereditary transmission, both physiological and pathological, and he to a certain extent anticipates the use of auscultation when he describes the distinct noise made by articles in the stomach of birds, rubbing against each other, and which may be heard by applying their bodies to the ear.

In Dr. Aveling's *Memorials of Harvey* (1875), alluding to the contemporary estimate of Harvey's practice, is quoted a hitherto unpublished entry from the books of the Barbers' and Surgeons' Company, containing a complaint of Harvey's malpractice, overlooking a fracture of the skull, and mistaking the vomiting caused by it for a symptom of "fouleness of the stomacke". Again, our Harvey is quoted (from *Gideon Harvey's Art of Curing by Expectation*) as having mistaken an affection of the mesenteric glands for an abdominal aneurism. On the other hand, skill and acuteness are illustrated and mentioned with high approval by his contemporary Dr. Hall (in his *Select Observations on English Bodies of Eminent Persons in Desperate Diseases*).

Dr. Aveling points out that, however he was estimated by physicians and surgeons, he was highly appreciated and admired by obstetricians,

and that his was the first book on midwifery written in the English language.

It was Harvey who invented the dilator of the cervix uteri, and first used stimulating uterine injections.

The above references and quotations will suffice to show that Harvey's knowledge of disease, and of the offices of a physician, was probably equal to his physiological attainments, and will amply vindicate him from unjust allegations.

[*To be continued.*]

INTRODUCTION

TO A

DISCUSSION ON THE INFLUENCE OF MOUNTAIN AIR IN THE TREATMENT OF PULMONARY CONSUMPTION.*

By J. HENRY BENNET, M.D., Weybridge.

My object in bringing forward the subject which forms the title of this paper is not so much to enunciate individual opinions, as to bring forward facts and to elicit discussion. There are few subjects which occupy the professional mind more intensely at the present time than the treatment of phthisis. I think I am warranted in stating that it is now generally conceded, both at home and abroad, that the therapeutical views which reigned during the first half of this century, with reference to the influence of climate on phthisis, were erroneous. It was then generally believed that a mild and moist or a warm and moist climate, like that of Madeira or of the West Indies, was the most calculated to arrest phthisis, and to promote a recovery when recovery was possible. I believe that I may claim for my namesake, the late John Hughes Bennett, the eminent Edinburgh professor, and for myself, as his disciple on this pathological question, the merit of having contributed to establish the fact that tropical or even semi-tropical climates are inimical to the constitutional states which lie at the root of phthisis, and in most cases accelerate its progress, tending to prevent instead of to secure recovery. We, and those who have adopted these opinions, have taught, and teach, that the temperature the most conducive to the treatment of phthisis is a day temperature between 55° and 65° or 70° Fahr., and a night temperature between 45° and 55°. In other words, we assert that the climate and temperature which are the most conducive to the physiological well-being of the Caucasian race are also the most favourable to the treatment of phthisis, viewed as a disease of defective vitality and of morbid nutrition.

The tendency of the medical profession up to the present time has been to seek for a cure, a panacea for this disease, which in towns and in densely inhabited communities terminates the career of a considerable proportion of the population. The curative treatment sought has been "medicinal, principally", and has hitherto been sought in vain in this direction. My experience and teaching have been and are, that the disease is merely an expression of lowered or defective vitality, acquired or hereditary; that it is merely, as I have worded it, "a mode of dying". Following out therapeutically this train of thought, the inevitable deduction is that the chief remedy for phthisis is the strict application of hygienic laws, that is, of the laws that regulate and secure healthy life, and so I have found it. Medicine and climate are merely adjuvantia, not to be despised or neglected, but occupy a very secondary position as compared with the strict observance of hygienic laws. Climate is principally of use in enabling the sufferer to obey these laws, and to ward off any physiological strain on peculiar organs. Medicine is principally of use in removing, or helping to remove, morbid complications, which interfere with the physiological play of organs.

When we come to examine the therapeutics of phthisis, we find undeniable evidence that phthisical patients recover in every region of the northern and temperate climates, the regions where it has been more especially studied. I found undeniable evidence of spontaneous cure in Paris in 1840, when resident physician to the Salpêtrière, in the 300 *post mortem* examinations I made on old invalid women above 65, who died under my charge. Professor Bennett, of Edinburgh, found many cases of similar cure among the 800 *post mortem* examinations he conducted when pathologist at the Edinburgh Infirmary. All other pathologists, who since those days have had similar opportunities of observation, and who have given their minds to the subject, have found simila evidence of spontaneous cure in the dead. Thus phthisical sufferers are found to recover often, as far as we know, without special treatment, wherever the subject is studied. Our English sanitaria—Ventnor, Bournemouth, Torquay, Penzance; all the sanitaria of the north Mediterranean shores, with Malaga, Algiers, Madeira, produce cures every year, and are full of cured residents. Moreover, there is, I firmly believe, scarcely any experienced physician in Great Britain who cannot enumerate cases of cure in his own practice.

We are now told, however, that the highest inhabited regions o Europe—regions between five and six thousand feet high—constitute a specially desirable climate for consumptives, both in summer and in winter, and offer greater chances of cure than any other locality. That cures can and do take place in these regions, even in winter, may be conceded to theory as well as to practice, if the habits of the sufferers are rendered hygienic. Many of those who have done well there, especially Germans, have consented to live in fine weather out of doors, whereas in the plains they had been, and would have been, shut up in unhealthy rooms. Much more, however, is demanded. It is asserted that there is an actual curative virtue in mountain altitudes, and that the chances of recovery are immeasurably increased by passing the summer or the winter, or both, at these elevations. This is the question we have to analyse and discuss to-day.

Within the last twenty years, a considerable amount of information respecting the meteorological and health condition of high altitudes has been brought forward by French physicians, who have resided and practised on the high plains of Central America, at Mexico, on the plain of Anahuac, at Santa Fe de Bogota, Quito, Potosi, and on the sides of the Cordilleras mountains generally. (Dr. Jourdanet, Dr. Coindet, Dr. Domec.) They may be said to have established that phthisis is rare amongst the natives at these elevations, although common in the neighbouring sea-coast towns, such as Vera Cruz and Guayaquil; and that in imported cases the progress of the disease is frequently arrested. I have lately been in correspondence with Dr. Domec, now a professor in the new University of Lille, who has recently passed four years at Quito, in Ecuador—a town of 70,000 inhabitants, and nearly 10,000 feet above the sea. He was one of the professors at the medical school, physician to the hospital, and engaged in active private practice. He only saw two or three cases of spontaneous phthisis among the natives during that time, and in all the cases of imported phthisis from the sea-coast that he met with, the progress of the disease soon appeared to be arrested. He has published an interesting memoir on the subject in the *Montpelier Médical* of July 1878.

Different causes have been brought forward to account for this comparative immunity from phthisis on the healthy, bracing, but mild mountain plains of Central America, the most prominent one being the diminution of barometric pressure. The same immunity has been claimed for the mountain elevations of Europe, and the diminution of barometric pressure has been adduced as one of the chief reasons. The claim, however, proves to be an error, as far as the Swiss mountains are concerned, so the explanation falls to the ground. Last summer I spent nearly two months in Switzerland, examining various mountain stations, and I was referred by Swiss medical friends to a very interesting work published in 1876, at Winterthur, in German, by Dr. Emil Müller, *On the Statistics of Phthisical Mortality in Switzerland*. I had seen no notice of this book in our medical press. It at once disposes of the argument that the diminution in barometrical pressure in the mountain elevations of Switzerland secures to their inhabitants immunity from phthisis. The statement has clearly been made without authority, and has been repeated without investigation. From Dr. Müller's tables, quoted in the recent edition (the third) of my work on the treatment of phthisis, p. 115, it appears that phthisis destroys its victims at all elevations, pretty nearly at the same ratio as in the plains. Thus the mortality, which in Switzerland is 10.2 per cent. at 1,500 feet above the sea, is still 9.8 at an altitude from 3,400 to 4,400 feet for those who are engaged in industrial pursuits (lace and watches). But for those who are engaged in agricultural pursuits it is only about half, respectively 6 and 5 per cent. Above 5,000 feet elevation, with an exclusively agricultural population, it is still 4 per cent.; not very much below that of the agricultural population on the plains and at 4,400 feet. These figures speak for themselves. In London, one of the centres of phthisis, the mortality is 12 per cent. In the mountain regions of Switzerland, the mortality is everywhere nearly doubled for those whose occupations are industrial and sedentary.

It cannot either be extreme cold that can give to mountain elevations an immunity from phthisis. The elevated plains in Central America are in the tropics. Quito is on the line; the snow-level is many thousand feet higher, varying in the tropics from 14,000 to 17,000 feet, and the climate is mild, equable, and bracing both in winter and summer.

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

Dr. Domec states that at Quito, in a large room, with doors and windows open day and night, he found the temperature to oscillate all the year round between 57° and 65° Fahr. The mean of the winter was 15.4, that of the spring 15.7, that of the summer 15.6, that of the autumn 15.7; that is from 59° to 60° Fahr. He states that during four years he watched daily the thermometer placed in the large drawing-room of the house in which he lived without fire, and open to every wind day and night. He never once saw it between six o'clock in the morning and ten o'clock at night above 63° Fahr. or below 57°. Sometimes in the night, with winds from the mountains, the thermometer outside was lower, but the falling of the temperature was always of short duration, and its fall never reduced that of the open rooms below 57.

I attended for two winters at Mentone a young married lady aged 26, from Guayaquil, the coast sea-port of Quito, sent to me by Dr. Gueneau de Mussy, of Paris. Educated and married in France, she there became consumptive, and finding that her recovery at Mentone was only a partial one, she returned, by my and Dr. Gueneau de Mussy's advice, to her native country. She has now been two years at Quito, and I am told that she has become quite well and robust. But then at Mentone she lived shut up. I never could make her open her doors or windows. At Quito she has lived in the open air constantly. I heard from her much about the domestic life at Quito. The rooms are large, fires are unknown, and doors and windows are always open, night and day. The entire population lives as it were in the open air, at all times and at all seasons.

May not this free and constant ventilation in a temperate, equable climate be the cause of the freedom from phthisis, which at first sight appears so singular? In these towns of the mountain plains of tropical America there are poverty, destitution, famine, vice, and all other evils to which flesh is heir. Owing, however, to the ideal, physiological climate, the entire population live in the open air, like hunters in the forest or on the prairie; like Arabs in the African deserts.

Dr. Domec states that other forms of tuberculisation, such as tubercular meningitis, tubercles in the bones or in the testicles, and acute miliary tuberculisation of the lungs, proved equally rare. He never met them in his medical or surgical wards, nor was pleurisy, acute or chronic, often seen; and yet various forms of scrofulous disease were so common as to impress a peculiar character on surgery. Catarrhal and inflammatory affections of the aerial passages of the bronchial tubes and of the lungs were frequent and severe—a fact which he rationally attributes to the great power of the sun in a generally clear mountain atmosphere, and to the sudden transition to shade temperature. This is a most important pathological fact, showing that severe inflammatory conditions of the pulmonary organs do not lead to phthisis alone, *per se*. There must be other constitutional conditions present for these to do so. In my opinion, lowered vitality, even when there is moisture in the air from all but continuous rain, a temperature of from 55° to 65° Fahr. generally speaking, produces no unfavourable results on the thoracic organs, and on the human organisation generally unless there be also a chill. This is exemplified by the exceptional health in summer of the inhabitants of the west coast of Scotland, and of the south and west coast of Ireland, proverbially rainy regions. Such weather with common care leaves the aerial passages free from morbid conditions. The general healthiness of such a temperature is exemplified by the low mortality of Great Britain during the two last months of rain and low summer temperature—June and July. The day temperature has only varied between 56° and 66° Fahr., and the mortality of London was only 17 per 1,000 for the first and second weeks in July (1879).

We have thus seen that altitude alone does not secure the mountain populations of Switzerland from phthisis; indeed, that according to Dr. Emil Müller's statistical researches the mortality from phthisis is still 4 per cent. in the strictly agricultural population—a very scanty one—living above 5,000 feet. The assertion persistently made of late that such immunity exists, is thus negatived on undeniable authority. It has also been persistently asserted that a dry cold atmosphere and climate preserve from and cure phthisis. This statement is likewise negatived by the investigation of the bills of mortality of the most northern regions of Europe, in which, during the winter months the cold is intense, the rivers frozen, the ground covered with snow, and the sky clear and blue.

Thus Dr. Lombard, of Geneva, in his recently published work, entitled, *Traite de Climatologie*, which I have quoted at p. 116 of my work on phthisis, states that the mortality from phthisis in the northern towns of Sweden is 14.7 per cent., in those of the centre 12.5, in those of the south 13.1. Norway presents the same high mortality, 13 per cent. or 1 in 8—a very high rate. In Russia the mortality is 16.4 in the four northern provinces, where the cold is extreme and prolonged.

Extreme coldness of climate evidently does not preserve from phthisis. Cold undoubtedly purifies the air, and may thus contribute to render respiration physiologically healthy, but this it can only do in the case of persons who are constantly out of doors in the open air and breathe pure air indoors. In cold climates and regions, but a very small proportion of the twenty-four hours can be thus spent. Generally speaking, often for days and weeks together, life is passed in close unhealthy stove-heated habitations, under conditions most prejudicial to health. By living in winter at the top of a Swiss mountain 6,000 feet high (St. Moritz, Davos), we merely reproduce, as regards cold and sunshine, the condition of Archangel, in Northern Russia, with a mortality from phthisis of 19 per cent., or of Woloyda, with a mortality of 20.4 per cent.

Ventilation is always defective in rooms heated by stoves, and respiration is thence incomplete. The products of retrograde changes are imperfectly eliminated in the lungs; health is lowered, and phthisis is engendered. Thence, no doubt, in a great measure, the cause of the frequency of phthisis in central and northern Europe.

I think I have thus demonstrated my position. The undoubted immunity, or comparative immunity, from phthisis enjoyed by the inhabitants of the elevated mountain-plains of tropical and subtropical America, from Mexico to the Argentine Republic, cannot be owing to mere elevation—to barometric conditions—inasmuch as phthisis reigns at all elevations, even above 5,000 feet, on the mountains of Switzerland. It cannot, either, be attributed to mere dry cold, as the mortality from phthisis is greater in Norway, Sweden, and Northern Russia, than in London or Paris. What, then, can be the cause? In my opinion, it is explained by the equable climate, ranging at Quito all the year between 57° and 66° Fahr. In such a climate, the habits of the people secure constant and free ventilation night and day. The entire population lives as it were in the open air. These health-data militate strongly in favour of the views of your distinguished countryman Dr. Mac Cormac of Belfast, whose work on *Consumption* is the most physiological and practical exposition of the evils of defective ventilation that exists.

I believe that I am warranted in saying that Swiss physicians generally do not send their patients suffering with chronic chest-affections to the higher mountain-elevations. Dr. Lombard of Geneva, the chief authority on the influence of mountain climates on health, certainly does not. Most Swiss physicians keep their patients, even in midsummer, at elevations between 2,000 and 4,000 at the highest, such as Weissenburg (2,940) and Gurnigel (3,783); and, as a rule, do not send them in winter either to these or higher elevations. They fear the rareness and extreme dryness of the atmosphere at the higher elevations in fine weather, and the frequent cloud (fog) or rain in bad weather in summer, or snow in winter. They fear also the great variations of the thermometer between day and night, and the lowness of the temperature at the latter period of the twenty-four hours. They say that these conditions often produce acute and subacute affections of the aërial passages, pharyngitis, laryngitis, bronchitis.

I have now spent twenty successive winters on the north shores of the Mediterranean, at Mentone—a good observatory for studying the Mediterranean; and there find several of the conditions claimed for the higher mountain regions of Switzerland in winter—dryness of the atmosphere, and intense sunshine and sun-heat. As winter in the northern hemisphere means north winds, and as on the north Mediterranean shores the north winds are necessarily dry cold winds, they leave the sky pure and blue, and the sun uncovered and ardent. These are the very conditions on which so much stress is laid at Davos and St. Moritz. But then, on the north Mediterranean shores, the night temperature is seldom low. Throughout the winter, it usually ranges between 40° and 50° Fahr. only; whilst the day temperature rises to between 50° and 60° Fahr. Such temperatures admit of free ventilation night and day. Breathing pure air is not confined to the few hours spent out of doors (say from three to five), with from nineteen to twenty-one hours passed in stove-heated, breath-poisoned rooms.

Fresh air may be breathed in the Mediterranean in winter for the entire twenty-four hours, with windows open from two to ten inches, according to weather, if patients can be convinced of its innocuity and of its beneficial influence. Indeed, in my experience, it is only those who can be thus convinced who improve and get better; those who cannot, remain as ill, and do as badly, as they would in London or Paris. I believe that it is in this respect principally that the north Mediterranean climate approximates, in its influence on phthisis, to that of the mountain-plains of tropical Europe.

But if, in the Mediterranean, these conditions—cold and dryness—are exaggerated, as is the case when polar waves of cold spread over western Europe, freezing the rivers and covering the mountains and country with snow, when a cold air and an ardent sunshine continue for weeks, we always suffer severely. Inflammatory affections of the

tonsils, fauces, larynx, and bronchial tubes become rife—quite epidemic; and yet these are the atmospheric conditions said to be all but permanent at Davos. On the Mediterranean shores, the last winter was an exceptional one in this respect. Frequent south winds tempered and modified the north winds; the sky was often covered with unusual clouds; the air was less dry; more rain fell; the nights were warmer. The visitors complained; but we, the physicians, did not. The winter was an exceptionally healthy one; there were very few catarrhal affections, no catarrhal epidemic. I myself, for the first time in twenty years, got through the winter without the slightest cold. I find my experience at Mentone confirmed by that of Dr. Marcet at Cannes, as contained in a recent valuable memoir in the BRITISH MEDICAL JOURNAL.

Dr. Clifford Allbutt, in a series of interesting papers, which have also recently appeared in the *Lancet*, attributes great importance to the antiseptic character of mountain-air, as evidenced by the subsidence of hectic fever produced by the absorption of the purulent products of the disease in the lungs. This same subsidence of hectic is constantly observed with us in the Mediterranean, provided the patients ventilate freely; not if they do not ventilate. If it be an antiseptic phenomenon, the proximity of the sea must impress the same characteristic on atmosphere—must equally deprive it of morbid germs. In all probability, however, free ventilation night and day would produce the same result anywhere.

The cases published by Dr. Clifford Allbutt and others—those from Danvers, Colorado, and St. Paul's, Minnesota, in the United States—triumphantly prove that consumption may get better in the coldest regions and climates, provided the sufferers throw aside vain theoretical fears and live hygienically, in the open air as much as possible. In this respect, they are valuable contributions to the therapeutics of phthisis. On the other hand, they by no means prove that such climates—climates in which twenty hours or more of the twenty-four must be passed, in the finest weather, in stove-heated rooms—are the best for consumptives; that they exercise a positive and exceptional curative influence on phthisis. We must also remember that, both in Europe and in America, it is the picked cases that are sent to the higher mountain-elevations in winter.

In conclusion, I would again draw forcible attention to the fact that pulmonary consumption, although a mere mode of dying to many, perhaps to most, may be recovered from anywhere in northern and temperate regions, either with or without treatment, as proved by the *post mortem* examination of the aged, and by the general experience of the profession. Phthisis also, except in the acute and subacute forms, is essentially a chronic disease, frequently taking some years to run its course even without treatment, and still more frequently so with rational treatment. Moreover, it is a disease which progresses naturally *per saltem*, as it were. It has periods of lull, of arrest, which do not imply eventual cure, and must not be mistaken for such. These periods of temporary lull may, it is now thoroughly proved, occur anywhere in temperate or cold climates—in Paris or in London, at Mentone or at Madeira, at Davos or at St. Paul's. This fact has been abundantly established; but it is a very different thing to claim for the extreme climates pre-eminence over the temperate ones. It will require a great deal of evidence to establish this as a fact; and so far the evidence, as detailed in this essay, seems to be antagonistic to such claims.

It appears to me that if we are guided by the laws of physiology, by those of general pathology, and by the meteorological facts brought from the mountain plains of central or tropical America, we are warranted in concluding that for Europeans the north shores of the Mediterranean offer the best attainable climates in winter. They constitute the nearest attainable approach to the American mountain plains, and admit of life being spent, as there, in the open air in the day, as also of free ventilation at night. I do not, however, believe that those regions exercise any specific curative influence on the disease. They merely act by improving the general health, by restoring nutritive power, and arousing general vitality. For all this to be accomplished the patient must be obedient to medical guidance, and surround himself with pure air day and night. If he does not do so, he usually dies, and, generally speaking, as rapidly as he would in London or in Paris.

Quito is a long, long way from us, or we might rationally make it a sanatorium for consumption. There is the Atlantic to cross, as also the Isthmus of Panama, a Pacific Ocean navigation; and when Guayaquil is reached there is still eight days' arduous travelling in the mountain in a palanquin, and all kinds of hardship to encounter on the road. Mexico is easier of access, but still not to be reached without great trouble, risk, and expense.

For summer, Alpine elevations in Europe are no doubt an immense improvement on the heated plains and cities of continental Europe, and it is easy to understand the rush made to them by the Germans and Swiss, but are they superior in climate and health advantages to the cool breezy shores and hills of Great Britain for invalids? I much doubt it. Even on the natives, mountain elevations in Europe, according to Dr. Lombard, are not altogether good, producing in the Alps and Pyrenees diminution of stature and often idiocy, cretenism, goitre.

I have myself noticed repeatedly that at great elevations in the Alps the conditions even in summer are not favourable to health or to those suffering from chest affections. Owing to the dryness and clearness of the atmosphere, when the weather is fine, not only is the heat of the sun intense, but the atmosphere itself is warm. Last year I was at the comfortable hotel at Murren, near Lauterbrunner, 5,500 high, on the 15th of July, on a lovely cloudless day, and found the thermometer in the shade 80° Fahr. at two o'clock. The sun was fierce and broiling, whilst at and after sunset at these altitudes, the nights are very cold. Whenever the weather is damp and rainy in the Alps at two, three, or more thousand feet, there are constantly clouds hanging on the mountain sides or ascending the valleys. These clouds are merely cold damp fog. Often there is snow in midsummer. These are not conditions favourable to health.

THE WINTER CLIMATE OF DAVOS PLATZ.*

By C. THEODORE WILLIAMS, M.D., F.R.C.P.
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THE valley of Davos lies in the Grisons, between the Lower Rhine and Upper Engadine valleys, and runs N.N.W. and S.S.E., being well sheltered on each side by lofty mountains, and is ten miles in length and one-third of a mile to half a mile in breadth, widening towards the south. Davos Platz, the sanitarium, stands 5,103 feet above the sea-level. Meteorological observations have been taken for four successive winter seasons by the Rev. Francis Redford, Mr. Gunnery, and Mr. and Mrs. McMorland; and of the many interesting climatic records kept the following is a summary.

The barometric pressure varies from 24.62 inches to 25.02.

The thermometric observations give a mean temperature for the winter months, based on four years, of 28.1° Fahr. The mean for each year is as follows: for 1876-77, 30.6° Fahr.; for 1877-78, 28.3° Fahr.; for 1878-79, 26.3° Fahr.; for 1879-80, 27.3° Fahr. The maxima range from 75° Fahr., registered in October 1876, to 12.5° Fahr. in December 1878; the mean maximum of the four years being 39° Fahr. The minima range from 43.1° Fahr. in October 1876, down to —16.7° Fahr. in December 1879; the mean minimum for the four years being 17.3° Fahr. The maxima only exceeded 60° Fahr. on eight days during last winter, and fell below 20° Fahr. on thirteen days. The minima fell below 0° Fahr. on seven days in 1876-7, on eleven days in each of the winters 1877-8 and 1878-9, and on fifteen days in last winter.

The black bulb *in vacuo* thermometer yielded the following extraordinary results of solar radiation in this mountain climate, giving a total mean of 114.4° Fahr. In 1876-77, the mean was 114.8° Fahr.; in 1877-78, 111.4° Fahr.; in 1878-79, 113.4° Fahr.; and in 1879-80, 118° Fahr. The maximum was 166° Fahr., in February 1879. The sun's rays are so powerful that, by placing black cloth behind the solar maximum thermometer, a temperature sufficiently high to boil water has been attained; but Dr. Frankland is of opinion that this permeability of the atmosphere to solar radiation does not increase with altitude, as the same results were obtained at the Fluela Pass, 2,700 feet above Davos, the thermometer not marking higher records. Tanning and browning of the skin is a result of this radiation.

The percentage of humidity varies from 72 to 62, the last two winters giving 63 and 62 respectively, indicating a very dry state of the atmosphere. Last January was a particularly dry month, the percentage falling to 40° Fahr. The number of days on which rain or snow fell during the three winters varies from forty-three to fifty-seven per winter, and the rest of the days were for the most part sunshiny. Last winter numbered one hundred and ten fine days, thirty cloudy, and forty-three wet or snowy. As may be concluded from the temperatures, but little moisture fell in form of rain, and nearly all as snow; and when snow falls, owing to the dryness and low temperature, it does not cling to the clothes—consequently invalids often go out in the snow with impunity. During the last winter there were few days on which outdoor exercise could not be taken, and in most seasons at least two-thirds of the days can be counted on for walks or drives. The prevalent winds are the north, north-east, and south-west; the latter, or *Fohn*, is most dreaded, on account of its melting the snow, and thus disturbing the winter conditions of equilibrium of climate. Wind, however, is very slight in force, and the general state of atmosphere is that of calm, or the low temperatures would be unendurable.

* Abstract of a paper read at the Meteorological Society, June 16th, 1880.

The effects of the Davos climate appear to be due to—1. The rarefaction of the atmosphere; 2. Its dryness; 3. The absence of wind, partly owing to the shelter of the mountains, and partly to the uniform layer of snow spread around; 4. The large amount of sun's rays transmitted through the rarefied atmosphere, as reflected on to the village from the extensive snow-plain lying to the east of it.

THE WATERING-PLACES OF THE AUVERGNE: THE MONT DORE.

By A. RABAGLIATI, M.A., M.D.,
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THE old district of the Auvergne (Arverni of Cæsar) contained the department of the Puy de Dôme, in which are found all the principal watering-places of this part of France, with the exception of Vichy and places like Cusset, etc., in its immediate neighbourhood. Vichy is so well known that I do not propose to describe it afresh, though I visited all the springs there, and inspected the "Establishment" and the baths. The part of the Puy de Dôme containing the springs is a volcanic country full of hills, showing often on one side basaltic columns or jagged peaks, with sharp ridges, and on the other sloping more gradually, so as to be tolerably easy of ascent from this side and almost impossible from that. Some of these mountains are between five and six thousand feet above the sea-level; while the Pic de Sancy, the highest of them, is over six thousand feet. The scenery is, therefore, very fine, being composed of varied hills and dales, rushing torrents, solitary, lofty, and imposing rocks, often showing remains of Roman or even pre-Roman times; green valleys smiling with hay or corn; the hill-sides in warm places being covered with vineyards, and responding plentifully to spade-culture; in others being planted with firs (mostly spruce), and beech-trees and hazels abounding on the roadside. In the lower parts, walnuts, chestnuts, and pollard poplars, with, of course, the acacia, common all over France, grow plentifully. Even if there were no other hygienic or sanitary attractions than those which such a varied country affords, it would probably be visited on account of its natural beauties, though the French are not so country-loving a people as the English. It is, however, to its springs that this district owes its great fame and the fortunes of its inhabitants. These springs jet out of the rocks all over the district, but most abundantly in a part of the country forming an irregular quadrilateral, and bounded on the north by a line joining Chateauneuf and Rouzat; on the east, by a line passing from Rouzat through Chatelguyon, Clermont-Royat, and St. Nectaire; on the south, by a line passing through the Mont Dore from St. Nectaire to La Bourboule; and on the west, by a line joining La Bourboule and Chateauneuf, and passing, in its course from north to south, through a large number of small places with one or two springs each, which have served to name the spots, such as Javel, Chateaufort, Pranat, Bourdeilles, etc. Except Clermont, not one of these places is accessible by railway (though one is in course of construction to the Mont Dore); and this no doubt adds to their charm as rustic retreats from the noise of cities and the cares of business. Many of them, if not most, were known to the Romans; such, for example, as the special subject of this letter—the Mont Dore—where, in the public "parc", any visitor may convince himself of the reality of this fact, and bring himself into much closer relation with that remarkable people, by examining the broken columns, carvings, and massive building-stones, disinterred about sixty years ago by the energy of Dr. Michel Bertrand, the recreator of the place. Still more interesting and realistic, if possible, is the appearance of some of the springs; such, for example, as that of "Rigny", at the Mont Dore, where the well is actually now in the very condition in which it was left by the Romans, not a new brick or trowel of mortar having been required to repair the well-done work which they have left us as their memorial. It is exceedingly curious, in human affairs, to note how similar conditions evoke similar necessities in life; and we are struck by the necessity felt by the Romans to get away from the noise and stir of their cities, and particularly from the toilsome energy of their employment, to quiet country watering-places, there to find, in retirement from the pressure of affairs, that rest which they found indispensable to brace them up to fresh endeavour on their return. That it was not merely city life, but labour, which necessitated these diversions, is evident from what took place in the Middle Ages, when, though cities survived, watering-places did not, the record of nearly all of them having disappeared or been forgotten, till, as in the present case, the recurrence of the old conditions raised again a demand for fresh sources of invigoration, and many of the old haunts were rediscovered. So completely do those overlook the necessities of our nature who preach of patient labour, and imagine that patient continuous labour is possible without at least one annual holiday and change of scene! Medical men, who can see this so plainly in the case of their patients, are particularly apt to imagine that in their own case it does not matter; and they may be found jogging on year after year, till some illness sharply reminds them of their error, too late often to profit by the instruction. But this by the way.

The valley of the Mont Dore runs north and south from the Puy Gros, a high hill which shuts it in at the former end, to the Pic de Sancy, which forms the southern boundary. On the east, the village is protected, as by a wall, by the *plateau de l'angle;* and the valley opens out to the west, though scarcely enough to let the sun warm it sufficiently, in the direction of the *Capucin* hill. This hill is so called because of its likeness to a monk's head. It rises some 4,500 feet above the sea-level, though only about 1,000 above the village, which has, therefore, a very considerable elevation. Owing to this cause, sojourners at the Mont Dore are apt to suffer from the cold winds which come down from the hills in the mornings and evenings, and which form a source of danger not by any means to be overlooked by those who go there suffering from chest-affections. Notwithstanding this drawback, the place is generally very hot in the summer months, and the temperature is said to average 63° Fahr. in July and August. My experience was less favourable, owing to the cold and wet which prevailed all last year; and very often we had to shut ourselves up in the hotel and sit round the wood fire in the *salon*, just as in cold weather in England, or to use a *chauffrette* or foot-warmer in our bedrooms. Evidently the visitor cannot absolutely count on fine weather, though it appears, from the testimony both of residents and of visitors, that the season of 1879 has been quite exceptional, and unparalleled for wet and cold. According to M. Hertz, "the elevated region of country between 2,500 and 6,500 feet is the proper dwelling-place for the phthisical in summer", and it is for its power over phthisis and bronchitis that the Mont Dore is chiefly famous. I propose, therefore, to describe, in its practical and theoretical aspects, the treatment to which sufferers from these disorders are subjected; and perhaps the best method of doing so will be to give an account of the waters and the method of their application.

The bathing establishment is fed by four principal springs, and the water used for bottling and exportation is obtained from a fifth. These are all hot springs; but there is besides another, a cold one—Sainte Marguerite—whose water is much used as a table-drink. The chief springs are: 1. That of the Madeleine, now called the Source Bertrand, after the restorer of the place; the temperature of this spring is 113° Fahr., and the delivery 140 *litres* a minute; 2. The Source du Pavillon, or Saint Jean, temperature 104° to 110° Fahr.; delivery about 49 *litres* a minute; 3. The springs César and Caroline; the temperature about the same as the last, and delivering about 80 *litres* a minute; 4. Two small springs, Ramond and Rigny. The composition of these springs is thus given by Jules Lefort, 1862.

	Source de la Magdeleine.	Source du Pavillon.	Source Rigny.	Source César	Source Ramond.
	Grammes.	*Grms.*	*Grms.*	*Grms.*	*Grms.*
Oxygen	[illegible]	[illegible]	0.71	0.98	0.73
Nitrogen	[illegible]	10.45	[illegible]	14.22	10.01
Free carbonic acid	[illegible]	[illegible]	[illegible]	0.5967	[illegible]
Bicarbonate of soda	0.5302	0.5452	0.5375	0.5361	0.5362
,, of potassium ..	[illegible]	0.0309	0.0232	0.0212	[illegible]
,, of oxd. of rubidium	Traces	Traces	Traces	Traces	Traces
,, .. cæsium ..	Traces	Traces	Traces	Traces	Traces
,, of lithia	Traces	Traces	Traces	Traces	Traces
,, of chalk	[illegible]	[illegible]	0.3092	0.3209	0.2720
,, of magnesia ..	[illegible]	0.1676	[illegible]	0.1676	0.1647
,, of protoxide of iron	0.0207	0.0235	[illegible]	0.0258	[illegible]
,, of manganese ..	Traces	Traces	Traces	Traces	Traces
Chloride of sodium	0.3685	0.3630	[illegible]	[illegible]	0.3578
Sulphate of soda	[illegible]	0.0771	0.0761	0.0756	0.0737
Arseniate of soda	[illegible]	[illegible]	0.00096	0.00096	[illegible]
Borate of soda	Traces	Traces	Traces	Traces	Traces
Iodide and fluoride of sodium ..	Traces	Traces	Traces	Traces	Traces
Silicic acid	[illegible]	0.1686	0.1653	0.1552	0.1560
Aluminium	0.0112	0.0094	0.0101	0.0083	0.0065
Bituminous organic matter ..	Traces	Traces	Traces	Traces	Traces
Totals	2.08016	2.07776	3.03546	[illegible]	2.11946

I have given this table as it appears in the works of two French authorities—one of whom refers to vol. viii. [illegible] of the *Annals of the Society of Hydrology*. Both have evidently copied from the same source; but, unfortunately, in neither case do the figures bear examination, as any one may see for himself on attempting to add them up. Probably there are errors in the original, and I suppose these are due to the misplacing of the decimal point; but though I have made several attempts to rectify the figures by altering the point, I have not succeeded. It is difficult to imagine how two men of eminence could copy, without question, figures so manifestly erroneous; but many men seem to lose themselves in the *terra incognita* of arithmetic. I believe the totals are correct, although the individual factors are not so.

Much discussion has taken place as to what is the active principle or principles of these waters. Jules Lefort and the authors of the *Dictionary of Mineral Waters* placed them amongst the mixed bicarbonated and ferruginous waters; Michel Bertrand among the slightly alkaline; but since his time most physicians tend to consider them as specially arsenical. Let us recall to mind the effects of arsenic. It seems to exert a moderating influence on the respiratory combustion. The Styrian peasants are said, on good authority, to use it for strengthening their wind. It seems to calm the thoracic movements, and renders easier the accomplishment of respiration, the necessity for which is not felt to so great a degree as usual. All these effects are experienced after a time by the Mont Dore bathers; and no doubt some of the effects are to be attributed to the fifteen-one-thousandths of a grain of arseniate of soda contained in every *litre* of the water, though, as I hope to point out immediately, I do not think that this is the sole agent in the treatment. The treatment generally lasts for three weeks, and consists of hot baths, hot douches, drinking the water, hot foot-baths, and subjecting the body after the bath and douche to a longer or shorter period of exposure to the vapour of steam in the "salle d'aspiration", obtained by boiling the same water. Let us follow out the course as the bather is recommended to take it. Owing to the large and increasing numbers of those who come to take the waters, it is generally the fate of new bathers to be compelled to rise at 3 A.M. for their baths. In the first place, they go, or are carried in sedan chairs, to the spring, where they drink a glass of the water. Then they go to the bath-rooms, which are in the same building, where they have a hot bath (from 90° to 113° Fahr.) for ten, twenty, thirty minutes, or even longer. This is very comforting, the water feeling at first sometimes just a little too hot, and causing also, sometimes, a sensation of dyspnœa; but this immediately passes off, and the patient surrenders himself to the enjoyment of the bath. The little bath-rooms are furnished with bells, by means of which an attendant can be summoned in case of necessity; otherwise the attendant returns at the appointed time at the end of the bath to remove the patient's clothes, to prevent their getting wet, and to turn on the hot douche. The water comes from this either in one stream about the thickness of the little finger, or through a rose. In either case, the force with which it descends is very considerable when turned fully on; but it can be regulated by means of a tap. The douche lasts for ten or fifteen minutes, and to most patients is very refreshing, though, if continued longer, it becomes fatiguing, and seems to induce rheumatic pains. The douche over, the patient is immediately wrapped in a hot linen dressing-gown, and the feet rolled in hot towels, and thus dried. There is no rubbing of any consequence, only sufficient to dry one. Some patients are recommended to take only the bath; others to take only the douche; while others, again, sit in a half-bath, covering the lower limbs only, while the douche is administered. Instead of this bath and douche, the foot-bath alone may be given; the patient sitting with the feet immersed in hot water for half an hour or longer, as the case may be. After this, patients are carried to the *établissement des vapeurs* across the square, for the purpose of inhaling the steam. For this, it is necessary to dress in a loose costume of thick flannel made for the purpose, as all garments become speedily saturated with the vapour. Wooden sabots are also recommended and invariably worn by the bathers, to keep the feet from the wet stone floors. The *salles d'aspiration* are three rooms about eighteen feet by thirty-six feet, which are filled with steam constantly rising from the mineral water through two funnels in each floor. Theoretically, the three rooms ought to be kept at temperatures of 73°, 77°, and 88°; but practically, especially as the morning advances and the steam more and more fills the rooms, they are somewhat hotter than this. Here patients are recommended to stay from twenty minutes to an hour, inhaling the steamy vapour from the mineral waters. They walk about, or sit on chairs provided for them, presenting a grotesque and ghostly appearance, as the outlines of the peculiar garments are dimly seen by candlelight through the thick mass of vapour that fills the rooms. It is impossible to recognise anyone at more than a yard's distance. The immediate effect of the inhalation is generally to produce free perspiration, for which the previous hot bath and douche are a good preparation. After this, patients, warmly covered with great-coats or cloaks, are carried back to the *source* for another glass of water, and thence to their hotel, where they immediately return to beds thoroughly heated by warming-pans; and, after a cup of hot coffee, try to sleep for an hour or two, according to the time at which they have been previously roused for the treatment. The hour for *déjeuner* being 10.30, this arrangement is a convenient one; and many patients prefer to remain in bed until this time, although the doctors do not order more than an hour's stay in bed. It is evident, in the absence of any cold application after the hot bath, that some such arrangement as this is necessary, in order to allow the subcutaneous muscular fibre to recover its tone, and, by closing the pores, to prevent persons from taking cold. Accordingly, the medical men lay great stress upon this adjunct to the treatment; and it is a curious fact that the most delicate persons, exceedingly susceptible to cold at home, seem never to take cold under this *régime*. Not only so; it seems to enable them to bear the outside cold much better for the rest of the day, much in the same way, probably, as persons who have returned to England after residence in a hot climate feel the cold of the first winter much less than they do subsequent ones, or than they expected.

The establishment is now in the possession and under the management of the *arrondissement;* and, as might be expected, the arrangements are very orderly and methodical. The poor have not been forgotten. On the ground-floor are large baths called "piscines", capable of receiving a dozen or more patients at once. The patients in the hospital may be admitted gratis on presenting an order from one of the doctors, and others pay small amounts in proportion to their means. In addition to chest-affections in general, great attention has been paid to the treatment of diseases of the mucous membrane of the nose, pharynx, and Eustachian tubes. The little instruments for the administration of the naso-pharyngeal douche are well worthy of notice, affording as they do a far more effective means than the ordinary syringe supplies of douching the whole naso-pharyngeal tract. The instruments are very simple, and consist of a bone or ivory or amber nose-piece, which is inserted into either nostril, the open end being directed slightly upwards as well as backwards. The douche is let on or off by means of a small valve worked by the thumb, and the flow of water is obtained by hydraulic pressure in the ordinary way. The tap either allows or stops the flow at will; and the arrangement is such as could easily be adapted to being worked by an India-rubber syringe, failing the proper disposition of cisterns containing the mineral water, such as exists at the Mont Dore. On being directed into the nostril upwards and backwards as described, the mineral water impinges obliquely upon the upper part of the posterior wall, and is thus driven gently into the opposite nostril, through the open mouth of which it thus escapes. After a little practice, therefore, the patient can irrigate the whole of the nasal and upper part of the pharyngeal mucous membrane by a stream of mineral water inserted into one nostril, and emerging, after having performed the circuit, from the other. I saw patients so acting on themselves, and, after a few seconds' trial, was able to manage it for myself. How useful such a method must be for treating all thickenings of this part of the mucous membrane, ozænas, chronic inflammation of the Eustachian tubes, etc., may easily be imagined.

Another point to which attention has been given at the Mont Dore (and which, as well as all the other arrangements, I was able thoroughly to inspect, through the courtesy of Dr. Colladon, who spared neither time nor trouble to enable me to see and understand everything) is what is there called "*pulverisation*". This process consists of dividing the jet of mineral water into a very fine spray or powder, so to say, which can in this form be inhaled, and so carried by the air well into the larynx and bronchial tubes. The *pulverisation* is effected by causing a jet of water to impinge forcibly on the back of a little metal plate. By this means, it is broken up into a very fine spray; and it appears certain, from a discussion that took place in Paris at the Academy of Medicine, and in which a large number of eminent men took part, that this very finely divided jet of spray actually enters the lungs and acts on the mucous membrane.

Physiological Effects of the Waters.—When drunk, the waters cause first a slight feeling of warmth at the stomach; and, if taken in moderate quantities (three or four glasses a day), they usually cause constipation, more or less pronounced. In large quantity, they may induce diarrhœa as a primary effect, to be followed, according to the general law of organic action, by subsequent constipation. The appetite is increased, or at least not diminished. Whether in consequence of the diet, which was very deficient in vegetables owing to the bad season, or as a consequence of the treatment in general, I cannot say, but I found the digestion rather upset. There is almost always induced a great and continual thirst, very difficult to satisfy; and I thought that the large quantities of fluid, taken on this account, to some extent accounted for the derangement of digestion and the feeling of weight at the stomach which I experienced. The doctors recommend water with a small proportion of coffee (a tablespoonful or two in the tumblerful), for the purpose of overcoming the thirst, and this acts fairly well, though nothing seems able quite to relieve one from this discomfort. For the constipation, the remedy recommended was one new to me, but which was effectual, and deserves to be more widely known. It consists of an infusion in cold fresh water of whole linseed. The seeds are set to macerate over night, and the liquor, which is of a thick glairy consistence, almost like uncooked white of egg, is added in about equal quantity to the *vin ordinaire* taken at breakfast. The effects are satis-

factory after the use of about half a tumblerful in this form twice a day. The mixture is not unpleasant, though it sometimes causes a little griping. As a remedy, it is, of course, superior to ordinary purgatives, which should never be used to combat chronic or recurring constipation; but it seems to me to share some of the objections to be charged against these, and to act somewhat after the same fashion. Both I think much inferior to a remedy whose use I have not seen anywhere recommended, but which I have used now for some years with the most excellent results, and without any drawback of any kind. This is simply the whole grain of wheat, taken after the grain has been thrashed, but before it goes to the miller to be ground. The grain has a light brown colour, due to the thin covering which surrounds the white glutinous and farinaceous matter inside. It is put into a pan with just as much water as will cover it, and must be slowly boiled till the covering bursts and shows the white inside, in much the same way as occurs in cooking a potato. This generally happens in from two to three hours, but sometimes requires four. The best wheat should be used, as inferior sorts sometimes cause a little griping. After boiling, the cook may serve it in whatever way is most palatable. It is not bad, though a little insipid if taken quite plain; but it can be used with white sauce as a side-dish at luncheon or dinner, or both, and it is also very palatable if served with savoury sauce, or it may be made into puddings if preferred. In any form, it is quite curative of simple constipation, due to atony of the intestine, large or small; while it has the advantage of being at the same time a wholesome food, which has sometimes, in my hands, not only cured the constipation for which it was recommended, but also put an end to the heart-burn which is a frequent precursor of chronic rheumatism in persons of that diathesis. The *modus operandi* evidently is that of acting as a gentle excitor of the intestinal peristaltic action, much in the same way as brown bread—to which, however, it is much superior.

Perhaps the most marked effect of these waters is, however, that on the skin. The slightest exertion induces free perspiration, and, even without any exertion, the patient finds himself covered with sweat. For this reason, bathers are recommended not to take long walks or rides, as the cold winds from the mountains, sweeping down on persons whose skin is acting freely, may induce dangerous chills. I was never quite certain that the free sweating I experienced was not partly due to the hot baths and subsequent exposure to the hot steam of the "salle d'aspiration", as much as to the drinking of the water. As I never took more than three glasses a day, and generally only two, I think this must have been so. At least I imagine that if, in England for example, a person were subjected to a hot bath (say of sea-water) for ten or fifteen minutes, then to a douche of the same for a similar length of time, and were then sent to inhale steam for forty or fifty minutes, he would probably find himself in a day or two suffering from enfeeblement and sweatings, much as the bathers do at the Mont Dore. The feebleness is also very characteristic, and, while the treatment lasts, patients find themselves disinclined for exertion, and unable to walk or climb as they are accustomed. The heart's action seems to be enfeebled for the time being, as is also the muscular energy in general. After getting into bed from the "salle d'aspiration", the patient, who is recommended to sleep for an hour if he can, often finds himself unable to do so, owing to a feeling of excitement of the brain, coupled with a sensation of throbbing or thumping in the head, as if the heart was acting very forcibly, which no doubt is the case. Physiologically speaking, I have no doubt that the baths first excite and then diminish the heart's action, for which reason one thoroughly agrees with the first recommendation of the doctors, who say that patients suffering from affections of the heart ought not to go to the Mont Dore.

Therapeutic Effects of the Treatment.—The waters of the Mont Dore are said to be specially useful in two classes of cases: 1. In affections of the respiratory organs; 2. In affections of a rheumatic nature. There can, I think, be no doubt that the treatment there pursued has been beneficial, year by year, to a large and increasing number of persons. To begin with the rheumatic cases, we should expect satisfactory results to rheumatic affections from waters containing a considerable amount of alkaline compounds. Of course, in all places of this kind, it must not be forgotten that, in addition to all the direct effects of treatment such as patients might have at their own homes, there are to be considered the adjuncts of perfect leisure, ease of mind, fresh air, and change of scene and diet. In the case of the Mont Dore, there are to be added a dry, sandy, and gravelly soil, very suitable both for rheumatic patients and those suffering from chest affections; and also the invigoration caused by mountains whose appearance is continually changing under the influence of sunshine and cloud and storm, and which give to the air coming down from them the same bracing character that is found in that of the Scotch Highlands or, still better, in Switzerland. Speaking generally, these natural agents have so beneficial an influence that many patients would recover, or at least much improve, under them, even if their ailments had not been diagnosed, and if no medical man had ordered them to any given place. Let us allow, however, in accordance with the weight of medical opinion, that the 30 or 40 grains of mineral matter in each *litre* of the waters drunk or bathed in have therapeutic influence as resolvent, diuretic, diaphoretic, alterative, and tonic agents; let us admit that the alkaline salts and the traces of lithia, calcium rubidium, etc., combat the rheumatic diathesis, and that the arseniate of soda and the bicarbonate of the protoxide of iron brace up the altered rheumatic patient,—after all these have been duly considered, the question remains: Are these the only factors in the cure, or is there anything else to be taken into account? We may even admit that the combination of these constituents, in a natural water, has an effect much more powerful and emphatic than we could hope to obtain by the administration of the ingredients in an artificial solution. Natural *serum sanguinis*, for example, has properties which no artificial imitation, however close, has ever yet succeeded in attaining, or may be hoped to attain. I cannot help thinking, however, after allowance has been made for all arguments of this kind, that part of the secret of the cure, even in rheumatic cases, is due to the *form* of the application as much as to its nature; while in chest-affections, I am sure this is so. In the case of rheumatism, there can be little doubt that the free carbonic acid acts as a calmative of the accompanying pain. At other places (Saint Nectaire, for instance), baths of carbonic acid gas are given to relieve neuralgic pains, and particularly sciatica, before patients can bear baths of mineral water. But, in addition to this, I think the *hot* baths and *hot* douches must exert an influence much more powerful than could be hoped for from *cold* applications of the same ingredients. In chest-affections, there can be no doubt that this is the case—the hot baths and douches there acting as large fomentations would, and soothing all irritation; while they cause a feeling of weakness and increase the action of the skin, just as hot poultices would do. In the "salle d'aspiration", the patient may be looked upon as being enveloped in poultices all over, and as having similar applications all along the interior of his inflamed mucous membranes as well, since the steam penetrates all the inner part of the breathing organs, and acts as a calmative agent, soothing all the irritation and reducing the thickening there. We are not, therefore, surprised to hear the unanimous verdict, both of doctors and patients, as to the benefit the bathers experience in all forms of bronchitis, and in those cases of chronic recurrent pneumonia that so often end in softening of the lungs with deposition of tubercle, night-sweats, diarrhœa, and death. As to the effects in tubercular consumption, I beg to refer the reader who may wish to know what has been done at the Mont Dore, to the work of the late Dr. Boudant, published (1877) after an experience of twenty years had enabled him to state authoritatively what the powers of the waters were. Dr. Boudant was well acquainted with the progress of medicine, from the time of Laennec, both in France and in Germany. As might have been expected, he supported the views of the French pathologists, rather than those held on the other side of the Rhine; but his remarks are all fair and judicial. There is not space here for much quotation; but the following passages indicate his opinions. After remarking upon the terrible character of pulmonary consumption, and the folly of those medical men who have mistaken accidental cures for examples of a general law, he says: "Nevertheless, the waters of Mont Dore may moderate and relieve the affection, and occasionally cure it, if it is accidental and of slow and sluggish progress, and if circumscribed and in its initial stage. Finally, in certain cases, our treatment contributes to the cicatrisation of larger or smaller vomicæ, by means of the water drunk and used for inhalation. This last means is a true topical treatment, comparable with the dressing of a wound, and whose phases of cicatrisation it is extremely curious, as well as interesting, to follow. In certain circumstances, this process takes place even rapidly, either by the approximation of the sides of the cavities with occlusion of them, or by cicatrices at the free surfaces, or by depressions more or less excavated. Frequently, when the cavities are closed, the lung sinks, and flattening may be observed at one or more points of the chest-wall, particularly at the upper part, at the subclavicular region."

This writer then proceeds to remark upon phthisis in general, and sums up his remarks in the following conclusions.

1. There are two kinds of pulmonary phthisis—the tubercular and the pneumonic.

2. The latter are caseous, by infiltration grey gelatinous purulent, and finally ulcerative. They are less grave, less frequent, more susceptible of cure than the former, and almost always unaccompanied by hæmoptysis.

3 and 4. A differential diagnosis can be generally made between these two kinds; but, in diagnosing tubercular phthisis, it is almost more important to take account of the circumstances, corroborative, hereditary, and organic appertaining to the case, than of the signs furnished by inspection, auscultation, percussion, etc.

5 and 6. There is no specific remedy for tuberculosis. Good is obtained by attention, for the most part, to hygienic rules.

7. The study of diathesis and of circumstances, hereditary or acquired, in the constitution, is of the utmost importance.

8. Once tuberculosis or granular degeneration have been set up, it is most important to observe their presence in the lung whose tissue they congest or inflame in a manner quite peculiar. Attention should then be directed to such symptoms as hæmoptysis, more or less frequent and copious, to cough, etc.

9. Medical aid should be directed to favouring the tolerance or evacuation, and then the cicatrisation of cavities, since therapeutics do not directly attack tuberculosis.

10. For centuries certain mineral waters have been found useful in this affection. Among them are the Mont Dore, Bonnes, and Cauterets.

11. When these waters do not cure, they have at least the advantage of calming the cough, checking the evening fever, arresting sweats, etc.

12. Finally, it is important to delay the progress of this affection and to enable the patient to arrive at that period of life where the functions come into definite equilibrium.

As an example of the care with which Dr. Bertrand preserved accounts of his cases, and of the effects of the treatment, I take this case, entitled by him Observation 68.

Tuberculous Phthisis of the Upper Part of Both Lungs. Slight Hæmoptysis on Three Different Occasions. Marked Oppression in Climbing Stairs or Walking up Hill. Wandering Pains in the Chest. Treatment in 1859. *Apparent Cure. Return in* 1861 *and* 1862. *Permanent Cure thereafter. At different times, two other Courses of the Waters as Preventatives.*—In 1859 Madame P., of Paris during the winter and of Berry in summer, 32 years of age, with four children, of delicate organisation, nervous, rather lymphatic, regular, was attacked, two years before, by an illness, which left a tracheo-bronchitis aggravated by cold and damp, so as to induce bloody expectoration and fugitive pains in the chest. As she daily became thinner as a consequence of mal-nutrition, her medical adviser sent her to the Mont Dore, in the hope of arresting a phthisis which announced its approach by rapid steps, with dry, crackling sounds at certain points of the lungs, and moist at others.

From the first examination, the diagnosis of this grave malady was not doubtful, the stethoscopic sounds above mentioned were manifest, and, in addition, the respiration was short, harsh, with much prolonged expiration and remarkable subscapular dulness, and here and there diffused pectoriloquy: all these symptoms were more marked on the right than the left side. On the other hand, the appearance, the general bearing, and the difficulty of respiration, all denoted a real disease of the lungs, at the same time that a slight dry cough followed, seldom by muco-purulent expectoration, and night sweats preceded generally by a slight evening pyrexia, with hæmoptysis to the extent of half a glassful of blood, eight days before her departure for the Mont Dore, which hurried her departure, all tended to confirm the diagnosis.

Treatment.—This consisted of three half glasses of mineral water mixed with milk (in some cases, where the water is not well borne alone, it is well to mix it with milk), demi-baths at the César spring at 93° F., inhalations for half an hour. She was directed to have the *regimen* of the hotel, the digestive organs showing no evidence of being out of order; to walk in the fir plantations when the sun was shining, and to talk as little as possible. About the eighth day, menstruation coming on, she was directed to omit the demi-bath, have four half-glasses of mineral water without milk, and inhalation for forty minutes; as soon as the menses ceased, to recommence the demi-baths; a certain amount of sanguinolent expectoration making its appearance, the red colour of the sputum disappeared. Four days later she was ordered to have inhalation in the small room for twenty minutes, and forty-eight hours afterwards inhalation in the large room, and to have four glasses of the water. Madame P. found herself improving, and continued the treatment till the twenty-first day. She went away in the best possible condition: auscultation was, so to say, normal, percussion the same, and the whole appearance denoted health.

[illegible] 1861, in a worse state than on the previous occasion: the face yellow, pale, emaciation general, cough severe, expectoration muco-purulent, and often bloody; sibilus, rhonchus, and mucous râles at the right apex; gurgling, pectoriloquy, vocal resonance, dulness, respiration short, slow fever; in fine, tuberculosis passed from the second to the third stage, with small cavities. Treatment was recommenced as on the former occasion, but it overexcited the patient, the chest being irritated, the sputa reddened, and on the [illegible] day half a glassful of blood was expectorated in the morning on waking: then fever followed, in consequence of which treatment had to be suspended and replaced by syrup of the phosphate of iron, four cuppings over the chest, and pediluvia. After some days the acute symptoms disappeared, when warm pediluvia, and two half glasses of water with milk, were ordered. The health appeared to be returning, when the pediluvia were replaced by demi-baths, so as to produce a revulsion, and she was ordered 20 minutes of the water pulverised. Five days later she had four half glasses of water with syrup of gum: by little and little the water was taken pure, the cough became quieted, and there was no more blood in the sputa, which became less abundant and more frothy: the appearance improved, and the respiration became easier. In brief, Madame P. continued the treatment which did her much good, and she left on the 25th day in good condition. The following season she was scarcely recognisable, so much had she improved: she had no cough, no sanguinolent expectoration, her only trouble being some remaining difficulty of breathing when walking quickly or going up hill; auscultation was good. I considered Madame P. as cured; still she followed the treatment, to which she returned again on two subsequent occasions. At the time of writing, Dr. Boudant says of her: "To-day, without being robust, the health remains good, and I have no doubt that Madame P. may attain advanced life with care".

This is by no means the only case that might have been chosen in which the Mont Dore course has been useful in phthisis. Observations 69, 70, 71, 72, etc., give other examples, whose fidelity to truth I am the more ready to credit that I saw several cases improving during my stay at the place. These observations, as also the whole book, attest the painstaking carefulness of Dr. Boudant, who also describes cases of leucorrhœa and uterine catarrh cured by the course at the Mont Dore.

To sum up: the course is suitable for the treatment of affections of the tonsils, pharynx, and uvula, for coryza and ozæna, for inflammation of the Eustachian tubes spreading to the middle ear and causing deafness; for chronic tracheitis and bronchitis; for phthisical affections in general, even when accompanied by hæmopytsis (though here much depends on the experience and skill of the medical attendant, since over-excitation might induce this condition), for chronic pneumonia and pleurisy; for asthma; for articular, but especially for muscular rheumatism; and for some forms of dyspepsia and uterine catarrh.

It only remains for me to add a word or two about the diet and general regimen. Dr. Boudant's opinion was that in general patients eat too much when undergoing the treatment, under the temptation of good cooking and the diversity of dishes for which the hotels are famous. He recommends merely a moderate allowance of meat, with a free supply of fruits. Strawberries, cherries, plums, and apricots are abundant in ordinary seasons, and may be freely taken; but pastry should be avoided. I have already mentioned weak coffee as a means of quenching thirst; and, as a rule, coffee in stronger solutions is not forbidden, nor is the thin *vin ordinaire* of the country. It is well to go straight on with the treatment when it has once begun. For this reason, women should try to arrange so that it is not necessary to intermit it on account of the menses; but should these appear, the rule is to intermit the baths, but not the drinking of the water, nor the *salle d'aspiration*, which are continued as before.

NOTE ON OÖPHORECTOMY.

By LAWSON TAIT, F.R.C.S.

THE discussion, which I have just read in the Section of Obstetrics and Diseases of Women of the American Medical Association, on June 1st, shows conclusively that this operation is accepted amongst our transatlantic brethren, as not only one that is to be justified, but one that is to be welcomed as an immense addition to our power of relieving suffering women. In this country, it has not yet achieved such a position; and, therefore, every one engaged in its practice is bound fully to disclose his experience, and not to publish only successful operations.

To establish this operation, unlike many others, two steps are required. The first is to show that its immediate results are sufficiently free from danger to justify its performance merely as a matter of risk. The second is to show, by its more remote results, that it does really confer upon the sufferers the relief which theoretically it promises. I therefore [illegible] to give [illegible] of all the cases I have performed since the revival of the operation. Full particulars will be given for each case in future communications which I hope to make to the JOURNAL. Meantime, the following experience—larger, I think, than that of any other operator but Professor Hegar—will, I think, be enough to show that the operation is far more free from risk than many others long since accepted, and which have had, in my opinion, far less satisfactory results in the way of permanent relief.

I.—*Complete Operations.*

No.	Age.	M. or S.	Date of Operation.	Residence.	Reason for Operation.	Result.	Condition up to June 1st, 1880.
1	26	S.	July 10, 1879	Leamington	Dysmenorrhœa	Recovery	Complete relief.
2	26	S.	Dec. 3, 1879	Stafford	,,	,,	,, ,,
3	34	S.	July 18, 1879	Leamington	,,	,,	Great relief; progress satisfactory.
4	43	M.	Aug. 11, 1879	Birmingham	Menstrual epilepsy and mania	,,	Complete arrest of epilepsy; mania slowly disappearing.
5	29	S.	Oct. 3, 1879	Wednesbury	Dysmenorrhœa	,,	Complete relief.
6	24	S.	Oct. 15, 1879	Nuneaton	,,	,,	Great relief; progressing satisfactorily.
7	21	S.	Nov. 22, 1879	Gloucester	,,	,,	Complete relief.
8	29	M.	Jan. 3, 1880	Leamington	,,	,,	,, ,,
9	22	M.	Feb. 4, 1880	Wednesbury	,,	,,	,, ,,
10	34	M.	Feb. 13, 1880	Hereford	,,	,,	Great relief; progress satisfactory.
11	37	M.	Mar. 18, 1880	Birmingham	,,	,,	Relief immediate and complete.
12	17	S.	April 5, 1880	Birmingham	Menstrual epilepsy and mania	,,	Great relief (case to be given in full at Cambridge).
13	23	M.	April 23, 1880	Birmingham	Dysmenorrhœa	,,	Relief immediate and complete.
14	21	S.	Aug. 8, 1879	Wellington, Som.	Menorrhagia (cause unknown)	,,	Complete arrest.
15	47	W.	Oct. 18, 1879	Leamington	Hæmorrhage from myoma	,,	,, ,,
16	52	W.	Nov. 30, 1879	Cannock	,, ,,	,,	,, ,,
17	34	M.	Jan. 13, 1880	Brownhills	,, ,,	,,	,, ,,
18	48	S.	Jan. 17, 1880	Tipton	,, ,,	,,	No hæmorrhage up to March 3rd; since lost sight of
19	36	S.	Feb. 28, 1880	Northampton	Menorrhagia from hypertrophied ovaries	,,	Complete arrest.
20	52	S.	Mar. 19, 1880	Nottingham	Hæmorrhage from Myoma	,,	,, ,,
21	42	S.	April 7, 1880	Leicester	,, ,,	,,	,,
22	33	M.	April 9, 1880	Birmingham	,, ,,	,,	,,
23	38	S.	Aug. 28, 1879	Bilston	,, ,,	Death	
24	46	S.	May 8, 1880	Solihull	,, ,,	Recovery	,, ,,
25	39	M.	April 22, 1880	Walsall	,, ,,	,,	,, ,,
26	38	M.	June 21, 1880	Wolverhampton	Abscess of ovary	,,	

II.—*Incomplete Operations.*

1	34	M.	Aug. 9, 1879	Birmingham	Dysmenorrhœa	Recovery	Great relief given by strangling both broad ligaments by ligatures, as ovaries were so adherent they could not be removed.
2	46	M.	April 22, 1880	Rugby	Hæmorrhage from myoma	Death	One ovary removed, and the other partly.

In twenty-five completed operations, there was only one death, and I have to regret ever having attempted the operation. The patient in that case was almost moribund from hæmorrhage when I saw her, and I certainly would not undertake such a case again. The death among the incomplete operations warned me that, unless the ovaries can be fully removed, they had better not be touched.

The ultimate results will be given after twelve months have elapsed from the operation in each case.

CLINICAL MEMORANDA.

THE DIAGNOSIS OF ROTHELN.

HAVING met with some cases similar to those described as rötheln, I have been much interested in the correspondence on the subject. From what I have seen, my conclusion is, that rötheln cannot be separated from either measles or scarlatina; and that the old name of hybrid measles exactly describes the real nature of the affection; for I have never yet met with a case presenting any characteristic sign not common to either measles or scarlatina. Until I do so, I shall continue to believe that rötheln is a hybrid of the two diseases. That a child may be exposed to the contagia of both is self-evident; and that the patient may be affected at the same time with two poisons I know of no reason to believe impossible. For instance, the presence of the syphilitic virus is by no means protective against other blood-poisons, but still it has a modifying effect upon any pathological accidents happening to the patient. At the same time, it appears to me only reasonable to suppose that, in the hybrid affection, neither disease has fair play as it were; and, just as the infant is very soon susceptible to vaccine lymph when vaccination is imperfectly performed, so the fact that children who have suffered from rötheln may not be protected from either measles or scarlatina, or both, is accounted for.

In rötheln, the majority of cases exhibit the measles type rather than that of scarlatina. This is what might be expected, as the longer incubative period of measles renders the patient, already in the latent stage, likely to get in the way of the other contagium, and thus suffer from scarlatina superadded.

W. PERRIN BROWN, L.R.C.P.E., etc., Bradford Infirmary.

THE recent discussions in the columns of the BRITISH MEDICAL JOURNAL as to the essential nature of the so-called rötheln, must be my excuse for referring to a series of twenty-seven cases, occurring amongst patients of the Royal Albert Asylum in the summer of 1874, and described by me, under the designation of "Rubeola Notha", in a paper read at the annual meeting of the British Medical Association at Edinburgh in 1875. I would refer those who take interest in the matter to an abstract of the paper published in the JOURNAL for August 21st, 1875 (page 230); but my present object is to put in evidence more recent experience with regard to the same cases, which may tend to throw some light upon the vexed question of the relation of rötheln with measles and scarlatina. Of the twenty-seven patients referred to in the above-mentioned paper, thirteen have remained in the Institution up to the present time, and have been exposed, in 1877 to an epidemic of scarlatina, and in 1880 to an epidemic of measles, both of which spread pretty extensively through the establishment. Of these thirteen patients, no fewer than five had, in the most unmistakable way, both scarlatina and measles in the successive epidemics; whilst of the rest, two had measles only, and one scarlatina, in addition to rötheln. Thus more than half of the patients remaining under observation from the rötheln epidemic were subsequently attacked with scarlatina or measles, the majority with both of these exanthems. One is justified, I think, in concluding from these observations that the former has no protective influence against the latter. Conversely, it is noteworthy that, of the seven patients who had measles in 1880, only one was said to have had that disease previous to the rötheln epidemic. This patient had, at any rate, a well marked attack of measles this year. The other six patients who had rötheln in 1874, and escaped the measles in 1880, are reported to have had the latter in infancy.

I have advisedly left out of consideration in this communication the fourteen cases making up the twenty-seven included in my original paper, several having died, and others living at a distance with their friends. I trust, however, that the statistics given above, being derived from continuous personal observation, may not be without value; and, so far as they go, I think they tend to confirm the views of those who hold with Babington, Squire, and Tilbury Fox that, in spite of its resemblances to measles, or sometimes scarlatina, the affection variously designated "Rubeola Notha", "Rötheln", or "Epidemic Roseola", is entitled to be regarded as "a distinct and specific exanthematic fever". (Tilbury Fox, *Skin-Diseases*, third edition, page 93.)

G. E. SHUTTLEWORTH, M.D., etc.,
Medical Superintendent Royal Albert Asylum, Lancaster.

A CHERRY IN THE ŒSOPHAGUS OF AN INFANT.

ON the 25th of June, I was sent for to attend a child seven months old, who was said to be nearly choking in an attempt to swallow a cherry. The child was seen to put a cherry in its mouth, and, before it could be prevented, attempted to swallow it. A short paroxysm of apnœa resulted, which was followed by inability to swallow, the child crying constantly, and attacks of apnœa occurring at intervals. On passing a full-sized gum-elastic catheter down the œsophagus, an obstruction could be felt just above the cardiac orifice of the stomach, which resisted the further progress of the catheter, even when moderate force was used. After withdrawal of the instrument and tickling the fauces to produce

retching, so as to dislodge the foreign body, a second introduction succeeded, and the cherry was pushed down into the stomach. The symptoms ceased and did not return, and the cherry-stone was passed in the motions.

Though such cases are probably not uncommon, this one presented a feature sufficiently remarkable to deserve a passing notice. It seems extraordinary that a child so very young should be able to swallow a foreign body of such a size, large enough, indeed, to have caused obstruction of a serious nature in some cases of adults.

CHARLES E. STEELE, M.R.C.S., etc.

SURGICAL MEMORANDA.

FOREIGN BODIES IN THE EAR.

IT is well known to all medical practitioners that it is a difficult matter at times to remove foreign bodies from the ear. Having lately come across a cherry-stone firmly impacted in that organ, I failed to remove it with the ordinary instruments, and adopted the following method with complete success. Having made an imitation sucker, such as boys use for lifting stones, by attaching a small piece of leather to a strong thread, I cleaned the presenting part of the cherry-stone, and then applied the sucker, previously moistened with strong cement. By means of a small wire, I pressed it firmly against the stone, and allowed half an hour to elapse before attempting to withdraw it. On doing so, I found a considerable pull necessary (as the stone had been in for forty-eight hours); but the cement had adhered so firmly that I had no difficulty in extracting the stone. D. MCLEOD, Hawick, N.B.

REVIEWS AND NOTICES.

ATLAS OF OBSTETRICS AND GYNÆCOLOGY. Edited by A. MARTIN, Docent in the University of Berlin. Second Edition. Translated and edited, with Additions, by FANCOURT BARNES, M.D., M.R.C.P., Physician to the British Lying-in Hospital, Assistant-Physician to the Royal Maternity Charity of London. London: H. K. Lewis. 1880.

THIS valuable and classic series of illustrations, first published by Professor Edward Martin of Berlin in 1861, has long had a great reputation in Germany as being of great service to practitioners as well as students of midwifery. It includes ninety-eight pages of plates, with an average of five illustrations on each, many of which are coloured, and some drawn on a large scale, so as to occupy the whole page, where this has seemed desirable. The subjects treated range through the whole of midwifery and gynæcology, beginning with normal and abnormal pelves, and ending with illustrations of some of the most important obstetric and gynæcologic instruments used in Germany and in this country.

To take as an example some of the more valuable plates, we notice with great interest Plate 24, which shows a whole page illustration of the vertical section of a normally formed pregnant woman about twenty-five years old, after death from hanging, taken from a frozen section. This interesting plate, which was published by Braune in his *Atlas of Topographical Anatomy*, has perhaps hardly attracted sufficient attention from gynæcologists, and has hitherto been brought principally under the attention of surgeons. The utilisation of frozen sections of this kind will, we believe, open up a new and useful field of research to gynæcologists and obstetricians. Another very interesting series of plates which we notice is Plate 42 and following pages, showing lithographs from heliotypes of the pathological relations of the uterus and its appendages in retroflexion and retroversion with prolapse; of anteflexion at various angles; and of the changes in the senile uterus and other pathological changes. These are after the life-sized photographs of F. Winckel.

Illustrations of the chief obstetrical instruments used in this country have been added by Dr. Fancourt Barnes to the English edition, as well as some plates at the end, which he has selected as completing the work of Martin, showing as they do complete procidentia, fibroma uteri, occlusion of the vagina, atresia vaginæ, etc. They are after Robert Barnes.

The descriptive letterpress is very full and accurate, and the whole makes an extremely handsome volume, of portly yet not of cumbrous size. This atlas has nothing of its kind to compete with it in the English language, and will no doubt be warmly welcomed by obstetricians and gynæcologists and students of the advanced class. In its present dress, with gilt edges to prevent the destructive effect of dust, and half-bound in morocco, it is a very handsome library book, and published at so moderate a cost as could only have been achieved by the intervention of German producers. On the whole, it will be admitted by all who avail themselves of the use of this book, that Dr. Fancourt Barnes has added to the claims to the confidence of the profession, which he has already established by his very trustworthy and successful *Manual for Midwives*, in editing this more important contribution to gynæcological literature. It is a book with which any obstetric physician may be proud to connect his name, for it is one of the highest class both with respect to learning and to practical usefulness.

CONTRIBUTIONS TO CARDIAC PATHOLOGY. By JOHN COCKLE, A.M., M.D., F.R.C.P., Physician to the Royal Free Hospital, etc. Pp. 85. Baillière, Tindall, and Cox. 1880.

THIS little book is composed of a revised reprint of half a dozen papers, all more or less noteworthy, which have before appeared in medical periodicals. With regard to cardiac sounds, murmurs, movements, etc., the author supplies careful minutely clinical descriptions of cases he has observed; and, in his comments upon them, he shows considerable skill and ingenuity in the construction of hypotheses, to which the attention of accomplished observers may well be directed. His descriptions, however, are sometimes injured by the undue use of metaphorical adjectives, and his hypotheses are sometimes marred by obscurity of phrase and inaccuracy of expression. For example, on page 8, in reference to a case presenting accentuation of the second sound, we read: "The loud second sound might be explained on the hypothesis that the inflammation of the aorta had induced unusual contractility of this vessel, and thus, by rendering it more rigid, making it a better conductor of sound." As a matter of fact, how can it be alleged with accuracy that inflammation of the aorta does induce unusual contractility of that vessel? Contractility and rigidity in the aorta are certainly not concurrent qualities; and it seems open to question whether increased rigidity in the wall of an artery makes it "a better conductor of sound". Again, on page 12, a degenerated aorta is described as being "nearly converted into a bony tube"; here the use of the word "bony" is surely not accurate. On page 14, a fremitus is described as being "silvery"; the introduction of such an obscure metaphor into a clinical description is much to be deprecated. On the whole, we may, however, conscientiously recommend this book to working physicians and clinical observers; its chapters are clearly founded on earnest practical work, and they exhibit also satisfactory evidences of much literary research.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE SULIS WATER.

THIS water, which is practically the "Bath waters" saturated with carbonic acid gas, should form a valuable addition to the resources of the physician desiring to administer a mild chalybeate. Most iron waters, and the ordinary Bath water when not thus impregnated with carbonic acid, deposit their carbonate of iron in the form of the well-known rusty oxide of iron, which distinguishes the drinking glasses or bottles which have served for the supply of iron waters. The excess of carbonic acid gas forced into the water here prevents the deposit, and Professor Attfield finds that the carbonate of iron which is contained in the natural water is practically undiminished in the bottled aerated water. These circumstances should recommend this chalybeate as one which the physician can prescribe with confidence in suitable cases: in many iron waters now in use it will be found that the majority of the iron which this water originally contained when it issued from the source is deposited on the sides and at the bottom of the bottle, and that the patient who drinks the water gets very little of the ferruginous element for which it is recommended to him.

BIRKENHEAD. The late Mr. W. S. Dixon, ironmaster, has left for division between the Western Infirmary and Royal Infirmary, Glasgow, the sum of £10,000. It is stated that if an Infirmary should be erected on the south side of the river about Crosshill or Govanhill, that Mr. Dixon has left instructions that the above sum should go to it in preference to the before-mentioned Infirmaries. Such an Infirmary for the south side has been proposed before this, but never carried into effect, owing to dull trade and other circumstances; but the prospect of securing £10,000 may cause the scheme to be taken up in earnest.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 10TH, 1880.

GOVERNMENT BILL FOR THE SALE OF INDULGENCES FROM VACCINATION.

IN another column will be found a report of the meeting of the Parliamentary Bills Committee of the British Medical Association, held to consider the Bill which the present Government has unhappily introduced for the abolition of continued penalties for infractions of the vaccination law. Under this Bill, which consists of only two clauses, it will be within the power of any person, choosing to set at naught the safety of his children and of his neighbours, to deprive those children of the protection from small-pox offered by vaccination, by paying either one penalty of twenty shillings or two penalties of any smaller amount down to sixpence. We have already in these columns, in the report by the Chairman of the Parliamentary Bills Committee, which we last week published, given a sufficiently full review of the facts in connection with the subject of compulsory vaccination, and may abstain this week from further comment. As might be expected, the proposition of the Government has aroused universal indignation throughout the profession, and will, no doubt, be met with the strongest opposition from all quarters. The Parliamentary Bills Committee have adopted a form of petition; and it is hoped that this petition, which will be circulated with the express authority of the Committee of Council of the Association, will be very extensively signed and copies returned to this office, in order that the names so forwarded may be appended to a petition which will be presented to Parliament, and which will, by the number and influential character of the signatures, indicate the opinions of the profession as to this most uncalled for interference of the Government with the successful working of the vaccination laws.

Attempts have been made in official quarters to bolster up the proposal of the Government, by the argument that Scotland and Ireland have no repeated penalties for non-compliance with the vaccination laws, and have got on very well without them. It may be as well to state at once (pending the publication of a supplementary report by the Chairman of the Parliamentary Bills Committee detailing the procedure in these two countries) that, in the laws of both Scotland and Ireland, the principle of repeated penalties is fully recognised. Thus, under the Scotch Act, a parent whose name is on the half-yearly list of defaulters is told that the vaccinator appointed by the local authority is coming to vaccinate his child (Section 18); and if he refuse to allow the operation to be performed, "he shall, *for every such offence*, be liable to a penalty not exceeding twenty shillings, and, failing payment, to be imprisoned for any period not exceeding ten days". The words in italics, when considered in connection with the regulations of the Board of Supervision, can have no other meaning than that, after the receipt of each half-yearly list on which his name appears, a defaulter may, if he still continue contumacious, be fined on each occasion of refusal. Again, as regards Ireland, there was a section (58) in the Public Health (Ireland) Act of 1874 which reproduced almost the exact phraseology of Section 31 of the English Act of 1867, under which repeated proceedings are sanctioned and are constantly being taken; and this clause has been re-copied *verbatim* into the consolidated Public Health Act of Ireland, passed in 1878 (Section 147). To attempt to draw any argument in favour of the Government proposal from the law of Scotland or Ireland is therefore entirely fallacious.

We are happy to be able to point to the fact that, on this occasion, the sentiments of the great medical corporations in England have been voluntarily and promptly expressed; and the College of Physicians of London is taking steps, in concert with the College of Surgeons and the Royal Society, to make combined representation on their part to the Government of the dangerous character of the legislation proposed by Mr. Dodson. Copies of a petition will also be addressed to each of the Branch Councils, and it is earnestly to be desired that each Branch Council will address a separate petition and a separate remonstrance to the Government, and to the members of Parliament representing the district in which each Branch is situated. We have good parliamentary authority for saying that the fate of this Bill lies in the hands of our Association, and that, if the Association chooses promptly and rapidly to put forward its strength, it may at once set its foot on and crush this ill-advised interference with the protection of the country against small-pox. For this purpose, however, it is eminently necessary that every Branch, every officer, and every individual member of the Association, should feel it to be his duty promptly and effectually to bring all his influence to bear in Parliament against the Bill. Any member of the Association who may happen to have such personal relations with a member of the House of Commons as to justify him in directly communicating with him, will render a service by addressing to that gentleman a remonstrance on the subject; and, to anyone who desires a document bearing on the subject, we shall be happy to forward a separate copy of the report of the Parliamentary Bills Committee, which is now being reprinted in a separate form. The same may be said of officers and councillors of the Association. It is certainly within their power, as it is eminently within their duty and function, to approach local members on this subject, and to bring before them the strong objections which they entertain against this sale of cheap indulgences for the propagation of small-pox. Any communications either asking for information or requesting aid, or suggesting means for making this opposition to the Vaccination Bill more prompt and more effective, may be addressed to the Chairman of the Parliamentary Bills Committee at the office of the Association, and will have immediate attention. It is the more important that the universal sentiment of the medical profession on this subject should be energetically and powerfully expressed, because a medical paper, which describes itself as "the organ of the medical profession", has undertaken on this occasion entirely to misrepresent medical opinion, and to support this most pernicious and dangerous measure.

THE DOOM OF A LUNATIC.

AN important trial took place on Friday, Saturday, and Monday last, at the Central Criminal Court, before Baron Hawkins, in which the question of the amount of lunacy which will excuse a man from the penalty of murder under the laws of England was litigated. The mental history of the prisoner James Sweetland was exceptionally complete. He was a journeyman baker until three years ago, when his master died, and he married the widow. Before this event, and for some time after it, he was a sober, steady, and industrious man. His mother's sister, however, died in a lunatic asylum, and her first cousin is confined in one at the present time. About eighteen months ago, he suffered a very heavy money loss upon a quantity of flour he had bought; and, after this, he was proved to have become, in the judge's words, a changed man. He became intemperate, drove a fast mare in his trap, and not unfrequently attended race-meetings and shooting-matches. He was himself a good shot; but he was turned out of the local gun-club because the members thought, from his conduct, that he was a madman. He was known, indeed, in the district as "the mad baker", and people were afraid of him. In October last, he was thrown out of his cart, pitched upon his head, received severe contused scalp-wounds, and was picked up insensible; and in April last this process was repeated. After the first of these events he be-

came still more wild, excited, and strange than he had before been. He complained greatly of pains in his head; and he had muscular twitchings and movements which were new to him. It was observed that even a single glass of sherry would greatly excite him, and cause him to become incoherent in his talk. When he was quite sober, however, it was proved that he had become strange, irritable, and suspicious, and prone to extravagancies of conduct. Without the slightest grounds, he thought that people were his enemies.

Nearly opposite to the prisoner's shop in the Junction Road, Holloway, lived a man named Samuel Warr Buckley, who kept a provision shop, and with whom the prisoner had been on terms of neighbourly goodwill. But on the Wednesday evening preceding the homicide, which occurred on Saturday, May 22nd, the prisoner was so drunk and excited that a crowd gathered round his shop. Buckley assisted the prisoner's stepson to close the shop by putting up the shutters. For this kindly act it was assumed by the prosecution that the prisoner bore Buckley a grudge, and that, on the evening preceding the homicide, he had threatened that he would put Buckley's shutters up. What the prisoner did say, however, was, "Let him take care that he don't have to put his shutters up. I have never had to pay five shillings in the pound like him." That evening, also, a female relative who saw him, but whom he at first did not recognise, described him as not knowing what he was about, looking fierce, and then vacant, and then smiling. He told her that his father and mother and one of his brothers were dead and buried, and that his other brother was driving a coach and pair, all of which statements were without foundation. In the night he twice rushed from his house in his shirt to the door of Buckley, at which he caused a disturbance by rapping loudly, but did not speak. At seven in the morning he again came down in his shirt, sent his shopman three times for half-quarterns of gin, of which he was seen to drink five half-quarterns, and might have drank two more, making altogether seven-eighths of a pint. He filled his mouth with dry flour, and appeared to be out of his mind, and not to know what he was doing. After this, he went across to Buckley, took him by the collar, and behaved with great excitement. He said to Buckley, "Why can't you be quiet, like that man?" pointing to the shop of another neighbour. Shortly before eight, he went to a gunmaker's shop, and asked for the largest shot the man kept; and being shown No. 2, he said they would do fine, and bought a pound. The gunmaker saw nothing unusual in him. About a quarter of an hour afterwards, he fired four shots from two breech-loading guns in rapid succession in the direction of the shop of Buckley, who was struck by sixty or seventy pellets of No. 2 shot, one of which, penetrating the temporal bone, lodged in the brain, and caused death on the third day. After the shots, the prisoner said, "I've done it. Where's a policeman?" On the way to the station, he said, "I saw him" (Buckley) "come to his door with a knife in his hand, and I determined to have the first chance." From the evidence of the son of the deceased, it appeared that Buckley did come to his door with a knife in his hand about a quarter of an hour before the shots were fired, and therefore about the time that the large shot was bought. On his way to the station, he did not appear to be drunk; and during his detention before the trial the medical men who visited him observed no symptoms of insanity. He was very reticent, and he declared that he could not remember what had taken place.

During the first day of the trial, however, some new and remarkable evidence was elicited from two of the witnesses for the prosecution, namely, that the prisoner had for some time thought that Buckley had watched him for the purpose of doing him harm, and that, acting upon this opinion, he had caused papers and sheets to be spread over the wire-blind of his parlour, although the blind alone could not be seen through. Struck by this evidence, which was clearly trustworthy, Dr. Bucknill and Mr. Gibson visited the prisoner in Newgate after the Court rose for the day, and elicited from him the repeated avowal that he had been so watched by the deceased for the purpose of doing him harm or doing him an injury; and Mr. Gibson, called for the prosecution, and Dr. Bucknill for the defence, concurred in the expression of their opinion, that this belief was an insane delusion of a dangerous nature, and likely to lead to the homicide. Probably the import of this evidence of being watched was fully felt only by the medical men present. No comment whatever was made upon it; but counsel for the prosecution did not hesitate to declare that the prisoner, seeing the line of defence, had lent himself to it, by wilfully deceiving the medical men who examined him thereupon—a cruel and improbable suggestion.

The judge summed up with admirable impartiality, and it was easy to see that he at least fully appreciated the mental condition of the prisoner. But he was compelled by duty to expound the law in all that perplexing difficulty and obscurity, which is so frankly recognised by the great judges who drew the report on the proposed criminal code. Baron Hawkins had to leave it to the jury whether or not the prisoner knew the nature and quality of the act, notwithstanding the frank avowal of the Chief Justice of England in his last year's letter to the Attorney-General, that he "really does not know what is meant by the term". The jury might roughly determine of course that he did know the nature of the act, for was he not a skilful pigeon shot? and that he did know that it was wrong, or why should he have said, "Where's a policeman?" As for the delusions, although the belief that deceased was coming at him with a knife was a valid excuse, the delusion that he was watched would not justify him in shooting the watcher. Then the judge said that madness caused by drink must be permanent insanity, to excuse the man, which did not seem to be certain in this instance; and had not counsel assured them that this was the common recklessness of a drunkard, and that no one would be safe in the streets of London or in any other place unless such a man were executed? The verdict is intelligible as a rough interpretation of a harsh and obscure law, and a man lies under sentence of death for a deed which he certainly committed as a lunatic. But there is an appeal, and the very last combined expression of judicial wisdom points to it as necessary to redress the obscurity of the criminal law, the ghastly struggle of counsel to ensure victory even in the condemnation of a madman, and the ignorant prejudice and fears of a common jury. The Royal Commissioners, Blackburn, Barry, Lush, and Stephen, reporting on this subject, see no better way out of this difficulty than to leave the law very much as it is, while pointing to the remedy for the cruelties which may be inflicted under it by a frequent appeal to the mercy of the Crown. We heartily trust that this remedy may not fail in the present instance; for assuredly a man has been condemned to death for an offence for which science and enlightened common sense will declare that he is not responsible.

But in order that the appeal may be fairly answered, the Home Secretary ought fairly, if the judges so advise, to reopen the question on its merits, and on competent advice. Under the present practice of the courts, medical men are debarred from expressing an opinion on the real question at issue, that is to say, the existence of insanity at the time of the homicide; the sole instance we are aware of in which skilled knowledge is excluded, in the administration of justice. The Home Office, in the spirit of economy so laudable in its proper function, attempts to remedy this defect by sending prison-inspectors, who, taking a criminal view of the universe, might have hanged Saul or Nebuchadnezzer, to report upon the prison condition of the condemned man, a proceeding quite likely to lead to a final act of economical injustice. Surely when the Royal Commissioners on the Criminal Code see no better way out of the difficulties of the plea of insanity than a system of appeals to the Home Secretary, this high official, the keeper of the Queen's conscience in its most awful sphere, is bound to act upon the very best evidence he can obtain, and upon the widest and wisest consideration of humanity and justice.

EXCESSIVELY hot weather has prevailed in the United States lately. Forty-six deaths from sunstroke were reported in New York on the 28th and 29th ult., and thirty-three on the 30th alone.

THE Mercers' Company have given one hundred guineas in aid of the funds of University College Hospital.

THE sum of £3,661 has just been forwarded from India to the Princess Alice Memorial Fund, being contributed chiefly by native princes and gentlemen. The Fund now amounts to over £7,000.

THE Hospital Sunday Fund now amounts to close upon £28,000. The fund already exceeds that of last year, and many collections have yet to come in.

IT has been reported that a severe epidemic of small-pox has broken out in Christiania, the capital city of Norway. This is, however, now contradicted. The only patients affected were some unvaccinated children.

MR. W. H. BENNETT, F.R.C.S., has been appointed an Assistant-Surgeon to St. George's Hospital, in the place of Mr. Stirling, whose resignation we recently reported.

SMALL-POX last week caused 14 more deaths in London and its outer ring of suburban districts, but not one in any of the nineteen large English provincial towns. Fourteen deaths were also caused by small-pox in Dublin.

DURING the thirteen weeks of the quarter ending last Saturday the death-rate in London has averaged only 19.4 per 1,000, against 22.5 in the corresponding periods both of 1878 and 1879.

THE Board of Health for Croydon has purchased seven acres of land in Park Lane, in the town, to preserve as an open space for the public. The cost of the land and its conversion into a park and recreation ground will be £14,000.

IT will be seen that Dr. Ogle, in delivering the Harveian Oration, announced that Mr. Richmond had presented to the College of Surgeons a copy in oil made by himself of Holbein's portrait of Sir William Butts, physician to Henry VIII, immortalised by Shakespeare, lent by Mr. Polè Carew of Antony, Cornwall; and also a crayon drawing of Dr. Mayo, formerly President of the College.

THE Home Secretary has made known to the committee of visitors for the joint counties of Monmouth, Brecon, and Radnor that, acting upon the advice of the Lunacy Commissioners, he must refuse his sanction of the proposed enlargement of the joint counties lunatic asylum at Abergavenny from five hundred to seven hundred and fifty beds, on account of the site being ill adapted for the purpose.

THE Committee of Management of the Metropolitan Convalescent Institution have placed at their disposal the sum of £6,500, on condition that they at once add to their institution a seaside branch. This it is proposed to do at a cost of about £12,000, and the Committee appeal for funds with which to support the branch establishment. Subscriptions will be received by the London Joint-Stock Bank, and by the Secretary, at 32, Sackville Street.

AT the last sitting of the International Congress of the Societies for the Protection of Animals the following resolutions with regard to vivisection were adopted: "That it is desirable to have the employment of vivisection regulated by law; that the rights of science should be respected, while abuses should be prevented; that vivisection be allowed only for purposes for which dead animals cannot be used; that anæsthesis be obligatory in all cases where it is possible; that the animal, after having served for the experiments, be killed immediately; and that it be forbidden to repeat experiments of which the result is definitively acquired for the purposes of science." The question of homes for lost dogs was discussed; and the Congress declared, with regard to the mode of the destruction of dogs, in favour of asphyxia in a dark room. Vienna was chosen as the place of meeting of the Congress in 1882.

DR. GODSON has communicated to us his final resignation of the temporary post which he had accepted as *locum tenens* at the General Lying-in Hospital; and he explains that the long delay arose from the difficulty he found in obtaining accurate information on the subject. We congratulate Dr. Godson on the step which he has taken; but must point out that it was at any moment within his power to obtain accurate information on the subject, by communicating either with Dr. Hayes or Dr. Fancourt Barnes, the physicians who had resigned. This step he forebore from taking; but either prior inquiry or inquiry at any stage would have put him in possession of the information which he desired. On the whole, however, we think it right to state our impression that Dr. Godson's conduct in the matter, although ill-advised, inasmuch as he did not communicate directly with the physicians of the hospital, and thus open to professional objection, was taken in *bona fides;* and the course which he has subsequently adopted has testified practically to his desire to adopt the correct proceeding in the matter. Since the above was written, however, we deeply regret to learn that the hope that on this occasion something like professional unity of action has been destroyed by the proceedings of Dr. Grigg, Physician-Accoucheur to the Westminster Hospital, who has—astonishing as it must seem—volunteered to take up the office which Dr. Cory so properly declined, and from which Dr. Godson, in deference to professional opinion, has withdrawn. What makes the matter more serious is that Dr. Grigg is an active and efficient Honorary Secretary of the Metropolitan Counties Branch.

THE SUPPOSED POISONING AT WELBECK.

THE mystery which surrounds the death of four persons, and the illness of many others, in the Worksop district, fails, according to the *Globe*, to be explained in any satisfactory manner. An inquest has been held in the fatal cases which have occurred at Mansfield; and Dr. Wills, the medical officer of health for the district, stated that he attributed the death of Mrs. Lee to English cholera, and not to poison. He considered all the cases said to have arisen from the Welbeck sale were cases of English cholera. He should say the disease, as in this case, spread through the atmosphere. There were cases where persons had not partaken of the same food, and yet were affected. In the case of the Radford family, it was denied they had any of the food. The disease, therefore, must have spread through the air, because they had nothing in common with the rest of the family affected. The Deputy-Coroner expressed a strong opinion that, notwithstanding the medical evidence, there was something of a poisonous or irritant character partaken of at Welbeck. The jury ultimately found that Mrs. Lee died from choleraic diarrhœa, caused, in their opinion, by partaking of impure or bad food. At Worksop, Henry Kirkby, who was present at the *post mortem* examination of Mr. Wilkinson, became ill, suffering from vomiting and syncope. It is supposed that he received a severe shock whilst present at the *post mortem* examination. A case of serious illness is also reported from Checker House, attributed to eating food at the Welbeck sale. Symptoms, similar to those described in cases which have terminated fatally, have been noticeable in Gainsborough. One case—that of Mr. Needham, tailor—was of a very serious nature, but that gentleman is now out of danger. Messrs. J. and T. Layne, dealers and butchers; Mr. George Wells, farmer; Miss Groundwell, and Mr. Travis have also been very unwell.

THE DIETARY IN COLDBATH FIELDS PRISON.

RESULTING from circumstances disclosed at three recent inquests held on the bodies of prisoners in Her Majesty's Prison of Clerkenwell, a Committee is announced to be in the course of formation with the object of bringing under the notice of the Government and the public the dietary and treatment of short-term prisoners, as well as the allegation that in the prison referred to there are cells unfit for delicate men. To this

end, the aid of the Howard Association will be invoked. Two of the inquests were held last Saturday, one of the cases resulting from the suicide of a prisoner named Hellier, aged 17, a Great Northern Railway van-attendant, who, by reason of his term of imprisonment being only one month, received only bread and water for breakfast and supper, with porridge for dinner. In the other case, that of John Harvey, who died from acute pneumonia, and whose sentence was two months' imprisonment, the dietary was as follows: Breakfast daily—bread, six ounces; gruel, one pint. Dinner, Sunday and Monday—bread, six ounces; suet pudding, eight ounces; Friday—bread, six ounces; potatoes, eight ounces; Tuesday, Thursday, and Saturday—bread, six ounces; soup, half a pint. Supper—bread, six ounces; gruel, one pint. It is stated that the mortality among short-term prisoners in this gaol is very large on account of insufficient food, and that hence an inquiry is necessary.

DR. SPEAR.

We are glad to be informed that Dr. Spear, Inspector under the Local Government Board, has almost entirely recovered from the effects of the dissection-wound he inflicted on himself in the course of his investigations into the woolsorters' disease at Bradford. For nearly a fortnight, his life hung in the balance; but, thanks to the skill and care of Dr. Greenfield and healthy vital powers, Dr. Spear was enabled to leave St. George's Hospital, where he chose to be treated, and is now completing his recovery in the North, where he was medical officer of health for South Shields, before he was brought to London by his appointment under the Local Government Board.

THE OPHTHALMOLOGICAL SOCIETY.

A correspondent writes:—I was glad to see Mr. Solomon's letter on the Ophthalmological Society in your columns last week. I have reason to believe that it is bearing fruit. It ought to be added, however, that his motion was lost by *one* vote, his opponents being chiefly young men. Ten voted for the resolution, and eleven against. I believe only four country members were present at the meeting.

THE CASE OF DR. O'LEARY.

A special meeting of the Midland Medical Society was held on Monday, on a requisition, to discuss the case of Dr. O'Leary, who has been committed for manslaughter for alleged neglect of a parish patient; and, further, to consider what steps, if any, should be taken to remedy the law at present affecting such cases. There was a very large attendance, and the following resolution was moved by Mr. Lawson Tait, seconded by Dr. Carter, and unanimously approved: "That this meeting, having in view the fact that upon the evidence derived from *post mortem* examinations, and upon the opinion given upon the appearances noted in them, the reputation, the liberty, and even the life of the subject may and often does depend, is of opinion that the utmost care should be taken that such examination should be properly made; and, to secure this, they recommend that in all examinations for medico-legal purposes at least two qualified practitioners should be officially engaged." Further resolutions, embodying the foregoing resolution in a petition to be presented to the Home Secretary, and deferring the discussion of the case of Dr. O'Leary until it had been heard at Warwick, was also adopted.

WOOLSORTERS' DISEASE.

A woolsorter named Chad[illegible] Dixon has died at Leicester, after a few hours' illness, from the effects of blood-poisoning, arising, it is supposed, from having inhaled germs whilst sorting Persian wool. The medical officers who attended the man have certified that death was due to the woolsorters' disease. It is stated that this is the first death officially certified to have arisen from this cause.

THE SALOP AND MONTGOMERY COUNTY ASYLUM.

In reporting on the condition of the Salop and Montgomery County Asylum, which at the close of last year, contained 527 lunatics, Dr. Arthur Strange, its Medical Superintendent, deplores the practice of sending insane persons to workhouses, instead of forwarding them at once to the special hospitals provided for them, where all the appliances for appropriate treatment exist. To this practice, and to the detention of lunatics in workhouses until they have become unmanageable and hopelessly insane, he is disposed to attribute a decline in the rate of recovery in the asylum over which he presides. The recent murder of an inmate of the City of London Union by a young Russian named Saleswhal, who was undoubtedly insane when he committed the deed, is a painful practical illustration of the impropriety of the practice to which Dr. Strange calls attention.

DIARRHŒA IN LONDON.

The deaths in London from diarrhœa, which had been but 21 and 32 in the two preceding weeks, rose, under the influence of the higher temperature, to 64 last week, but were 9 below the corrected average number in the corresponding week of the last ten years. These 64 deaths from diarrhœa included 48 of infants under one year of age, and 9 of children between one and five years. The rate of mortality from this cause was greatest in North and East London. Four deaths were referred to simple cholera or choleraic diarrhœa, including 3 of young children and one of an adult.

THE COTTAGE HOSPITAL FOR WOMEN, WALHAM GREEN.

It is proposed to open a cottage hospital for women in the western district of the metropolis. The plan has already met with distinguished patronage, and preliminary steps have been taken. The sketch which accompanies the prospectus represents seventeen cottages and a chapel ranged round a garden; the whole occupying an area of three acres. The hospital will afford "complete isolation" to each patient, *i.e.*, each woman will have a room to herself. There will be only four patients in each cottage, and the whole will be constructed in such a manner that any cottage may be closed without affecting the others. The special objects which the promoters have in view are as follows: 1. To furnish a school for training the highest class of nurses, whose services may be available in the middle and upper ranks of society, as well as for district and parochial purposes in town and country; 2. To afford clinical instruction in obstetrics to medical men; 3. The safe delivery in the hospital of women whose homes are unfit; 4. To facilitate the delivery of the deserving poor at their own homes, if fit; 5. The treatment of diseases peculiar to women.—It is hoped that the income derived from the nurses, the pupils, and the paying patients, will make the institution entirely self-supporting. The committee do not, therefore, ask for annual subscriptions, but they solicit donations to the amount of £20,000 to meet the initial expenses. As a means of raising this large sum, debentures have been issued of £50 and £100 each, secured in the freehold, bearing interest at 3 per cent., and carrying with them the privileges of governors; so that the return which the debenture-holders may expect for their money is estimated as equivalent to 6 per cent. This scheme is ingeniously devised, and there are features about it which will probably recommend it to the public; yet we venture to think that the medical profession will look upon it with some misgiving. It is questionable whether there is any advantage in bringing together lying-in-women even in a cottage. As we lately showed, the risks of maternity hospitals are so numerous and so subtle that, unless there is the most watchful supervision and management, women had far better remain in their own homes. With regard to the paying patients, we should be glad to know what scale of charges is to be adopted and what class of patients are to be received. The Hospital for Women in Soho Square is by many considered to have done great injury to general practitioners. The opening of a somewhat similar hospital in Walham Green is probably regarded with anything but favour by the medical men of the neighbourhood. We should like to call the special attention of the committee to this point, in order that their arrangements may be so carefully guarded as to avoid all just cause of complaint.

A CURIOUS MISTAKE.

POLITICAL prepossessions have led to a curious misrepresentation on the part of some of the French daily papers, such as the *Moniteur Universel* and the *Rappel*, with reference to Sir John Rose Cormack. It seems that as Dr. Forbes, the minister of the Protestant church in the Rue d'Aguesseau, was about to leave Paris after a ministry of twenty-one years, and had also been the promoter and friend of many works of Christian usefulness in that city, his congregation wished to mark their deep sense of the manner in which he had discharged his functions by giving him a testimonial. An influential committee was consequently formed, of which Lord Lyons, the British Ambassador in Paris, was chairman, and Sir John Rose Cormack honorary treasurer. The latter gentleman, who had known Dr. Forbes intimately during his stay in Paris, and thoroughly appreciates his character and work, interested himself greatly in obtaining subscriptions, with the result of collecting sufficient funds to present Dr. Forbes with a purse of five hundred sovereigns and a handsome clock. This ceremonial was accordingly gone through on June 30th, when the French journals above-mentioned somehow took the impression that the gentleman to whom the presentation was made was *Mr.* Forbes, one of the Jesuits just expelled from the Rue de Sèvres; and improved the occasion in true political partisan spirit by pointing out, what we believe will be new to most Englishmen, that while Sir John Rose Cormack, whom they also credited with bestowing the whole gift, could present *Mr.* Forbes with so splendid an offering, numbers of their joint compatriots were dying of hunger in the streets of London—both assertions being equally in accordance with fact.

HOW SMALL-POX IS SPREAD.

THE following distressing story, recorded in a recent report of Dr. McCombie, the Medical Superintendent of the Deptford Small-pox Hospital, possesses elements of interest of widely different kinds. It appears from Dr. McCombie's statement that a cook residing in a house at Lower Clapton, after four days' illness, during which time she had followed her employment, but with great difficulty, was proceeding on foot, on the forenoon of June 9th, to consult a surgeon, when she was met by a friend who, perceiving she was seriously ill, advised her to go to a hospital. They at once set out for Guy's Hospital, travelling by train from Lower Clapton to Hackney Road, and thence by omnibus, which took them over London Bridge to Guy's Hospital, which they reached about 11 A.M. The woman remained in the out-patient room till 4.45 P.M., when she was admitted into the wards. On the following day, she was removed to the Deptford Hospital under a certificate from the District Medical Officer of St. Olave's Union that she was suffering from hæmorrhagic small-pox, and died within fourteen hours of admission. Dr. McCombie learnt that there were the usual number of passengers in the train and omnibus, and that in the out-patient room at Guy's there were about two hundred persons. The distance travelled was over four miles, and in both conveyances the woman sat next the door. It is difficult to measure the amount of mischief which the woman may have in this way occasioned during her last day of life. The number of people exposed to infection from her must, under the circumstances, have been very large, and it is impossible to expect that all of them shall have escaped contracting small-pox. The journey in the train, the ride in the omnibus, the weary and long wait in the out-patient room at the hospital, were all fraught with peril, not only to herself, but to many (even hundreds of) others. The incident should warn those who move about this great metropolis of the dangers to which they are daily and momentarily exposed through no fault or action of their own; and it should teach them the importance of protecting themselves against such danger by thorough vaccination. How a woman suffering from hæmorrhagic small-pox should not have been recognised as suffering from that disorder during her journey, and especially at the hospital, is a point upon which a little light might usefully be thrown. We are afraid that in this respect the case is no isolated one; and though legal provision is made for the prevention of mischief arising from the public exposure of infected persons, the ignorance in which the woman acted would, of course, have been sufficient, had she survived, to shield her from the penalties of the Sanitary Act. Altogether the affair is a shocking and lamentable one; and not the least unsatisfactory part of it is the fact that the woman had to wait in bodily and mental anguish nearly six hours in the out-patient room at one of our largest and best manned hospitals before she could be attended to. A more striking instance of the need for reform in the administration of the out-patient department of our metropolitan hospitals could not possibly be wanted.

THE CONTAGIOUS DISEASES ACTS.

THE following members will form the Select Committee of the House of Commons to inquire into the operation of the Contagious Diseases Acts: Mr. Cavendish Bentinck, Mr. Stansfeld, Colonel Alexander, Sir Harcourt Johnstone, Viscount Crichton, Mr. Burt, Mr. O'Shaughnessy, Mr. Osborn Morgan, Mr. Brassey, Mr. Cobbold, and five other members to be added by the Committee of Selection. Mr. Puleston will oppose the motion. Mr. Cavendish Bentinck will move to leave out the name of Mr. Brassey and to insert that of Mr. Puleston.

WARNING TO TRAVELLERS.

A COMMUNICATION which we have received from a traveller describes a severe outbreak of typhoid fever in Switzerland, to be traced, it is stated, as most of such outbreaks are traced, to impure drinking water. This frequent cause of disease to travellers will, in the end, scare away travellers to a considerable extent from Continental travels, unless the local authorities of the principal towns of summer-resort on the Continent manifest a more earnest determination to purify the air, soil, and water, and especially to provide a perfectly pure and undeniable source of drinking water, which is rarely to be found at present in any Continental town or village. Sir Henry Thompson, adverting to this abundant source of danger to travellers, recently recommended that every traveller should carry with him a filter and a teapot, by way of practically abolishing by personal care some of the danger of impure water by securing that it should be very thoroughly boiled before being used. Dr. Hermann Weber, whose experience of foreign resorts is perhaps greater than that of any other English authority, has published a similar warning to travellers, and has recommended them to use Apollinaris water whenever it is to be obtained as an undeniably pure drinking water, which would secure them from these dangers; and he has stated that he has known, in more than one instance, when members of the same travelling party have been careful to adopt this precaution, while others have neglected it, that those who adopted such precautions have been saved from typhoid fever, which attacked other members of the party. In the meanwhile, some such precaution for obtaining drinking water of absolute and guaranteed purity must recommend itself as a necessary means of safety. Recent analyses by chemical authorities, of which some of the results are before us, have shown that the water contained in the syphons which are introduced at foreign *restaurants* is not more reliable than the ordinary water-supply; indeed, a table before us, to which, perhaps, we shall subsequently have to refer, indicates that, in one great foreign city at least, the water in the syphons is very much more impure than even the ordinary city drinking water, being in some cases little better than diluted sewage-water. It appears that the manufacturers of these aërated waters in foreign syphons are by no means very careful from what kind of surface-wells they draw their supply, or how they purify their water; and on the whole, the danger of drinking the aërated water of syphons is, unless the quality be definitely ascertained, greater even than that of drinking the ordinary impure water. It is quite time that foreign authorities should turn more serious attention to this subject. The evidence of the carriage of typhoid poison by contaminated water, overwhelming as the demonstration has been in this country, is by no means sufficiently appreciated abroad; indeed, the subject has been so imperfectly treated, that some foreign authorities profess absolute ignor-

ance of facts which may now be taken as among the best established of modern times. It is well, until they have become more enlightened, that travellers should regard drinking water with precaution, and should be satisfied in some way or other that the table-water they drink is of absolute purity; and such assurance is best obtained by confining themselves when travelling to the use of a natural mineral water, suitable for table purposes and of undoubted pure origin.

SUFFERERS FROM THE GAS EXPLOSION.

THERE were about five-and-twenty persons injured by the explosion in the neighbourhood of Tottenham Court Road, on Monday evening last, who sought treatment at the Middlesex Hospital. Of these the greater number (16) were suffering from contusions caused by falling materials, or from falls into the holes produced by the explosions in the streets; all these had their wounds dressed, and have been treated as out-patients. One man, Alfred Davis, a workman employed upon the works, was killed at once by the explosion. William Burr, aged 30, was found to have a compound fracture of the leg, necessitating amputation. The operation was performed by Mr. Lawson, but the patient never rallied from the collapse produced by the accident, and died within a few hours. Seven other patients were received into the accident ward of the hospital, of whom one, a Pole, who was suffering from collapse, has since so far recovered as to be able to leave on Wednesday evening. Six still remain under treatment, amongst whom are two females, Emma Bryant, aged 20, and Caroline Coward, aged 55. The former has severe wounds of the scalp and side of the face, a compound fracture of the left tibia and fibula, and scald of the right arm. She was for forty-eight hours unconscious, but, although still in a precarious condition, is now progressing favourably. The latter female has contusions of the ankle, chin, etc. Both these patients, and a schoolmaster named G. Field, aged 33, who has wounds of his face, and severe contusions of the left leg, are under the care of Mr. Hulke. At No. 1, in Brodrip Ward, is a man named Trite, aged 45, who has a compound comminuted fracture of the right tibia and fibula just above the ankle joint, a simple fracture of the right ulna in the upper third, with severe blood-tumours and ecchymosis about this and the other arm, and a large lacerated and contused wound extending from the right orbit (outer angle) for about 4½ inches backwards above the ear, the large flap from which was torn downwards, exposing the temporal aponeurosis and the malar bone. He also has other small wounds about the scalp. In No. 24 Brodrip Ward is Samuel Scholk, aged 62, who has concussion and an incised wound of the scalp. He is doing well. At No. 26, in the same ward, is a man, named Richard Wedlake, aged 28, who has concussion with shock and scalp wound. This patient is also doing well. All these latter patients are under the care of Mr. Henry Morris.

INTRA-UTERINE SMALL-POX.

A CASE recently reported by M. Depaul to the French Academy of Medicine, relative to small-pox in a fœtus of five months, whose mother had had discrete small-pox three months before abortion, has brought to light a still more interesting case, which was communicated to the Academy at its last meeting by M. L. Labbé, in the name of M. Vidal of Grasse. On May 23rd, 1871, when an epidemic of hæmorrhagic small-pox was raging with great fury in the neighbourhood, Dr. Vidal was called to a primipara who had been pregnant about six months and a half. The woman had just given birth to a perfectly formed and living child, which died some hours after its birth, and which was covered with small-pox pustules of apparently the seventh or eighth day of eruption. They were larger than the pustules of ordinary small-pox, but they were so perfectly umbilicated that they could not be ascribed to pemphigus or any other disease than small-pox. The mother had not had small-pox, but had, in fact, attended to her duties in perfect health from the commencement of her pregnancy to the time of the birth. On examination several days after her delivery, she was found to have neither fever, nor vomiting, nor lumbago, nor any other symptom that could possibly be ascribed to variolous infection. The father and mother had both robust constitutions, had never had syphilis, and presented no signs of it later on. But the father had suffered from semiconfluent small-pox in the early part of December 1870; and, from the appearances at birth and information obtained, the child had been conceived at the end of November or the beginning of December of that year. The mother had been vaccinated in her childhood, and her health had not suffered during or after her husband's illness. The case is certainly a very remarkable one; and, if other cases could be found to corroborate it, might have a very important significance.

GUY'S HOSPITAL.

THE small committee nominated by the Board of Governors of Guy's Hospital is pursuing inquiries into the means best calculated to restore harmony to that much perturbed community. We hope they will be able to arrive at satisfactory conclusions. We cannot, however, profess to entertain at present a very great belief in their success, inasmuch as, from what we hear, they are not entirely possessed of the best means of obtaining that harmony, as no members of the medical staff are on the committee. It is quite clear that any attempt to carry the dragooning system which Mr. Lushington has attempted to introduce must fail, and that the best wishers of the hospital must see the necessity of bringing the governors and the medical staff into complete harmony. There need be, and could be, little or no difficulty in this, if such a committee were fairly constituted, so as to adequately represent the leading members of the medical staff. It may be possible to arrive at a conclusion without such an admixture; but the guarantee of such a successful result would be much greater if the staff were fully represented on this committee.

SCOTLAND.

NURSING ARRANGEMENTS IN THE BARONY POOR-HOUSE, GLASGOW.

IT is satisfactory to note that the Barony Parochial Board have determined to centralise the hospital wards of the Poor-house in the western portion of the building; and, with a view of improving the nursing arrangements, they have secured the services of a lady-superintendent from one of the London hospitals to conduct the nursing in accordance with the most approved Nightingale system. She will be assisted by paid nurses, instead of by inmates of the house as had been the case formerly.

THE COLQUHOUN BEQUEST FOR INCURABLES.

THE annual meeting of the above bequest was held on June 28th, when the yearly accounts were submitted and approved. From these it appears that there was a balance in hand of £230, and that the revenue of the year ending in May was £866. Of this sum, £759 was distributed during the year to one hundred and twenty-three persons, leaving a balance on hand for distribution of £294. The list of recipients is at present full, and a great number of applicants are waiting their turn for admission. During the past year, legacies of £150 have been left to augment the capital funds of the trust.

GREENOCK ARTICULATION SCHOOL.

THE second annual examination of the pupils belonging to this institution took place on June 29th, in the presence of a large number of those interested in the teaching of deaf mutes to speak. This articulation class was established about two years ago by Professor Bell, inventor of the telephone, and was the first and only class of the kind established in a public school in this country. It is accommodated in the Greenock Academy, where the deaf scholars mix freely with the others. As yet, the class is altogether composed of girls, several of them having lost speech and hearing from the effects of illness in childhood. The examination was most comprehensive, and a most favourable opportunity was given for witnessing the method of instruction and testing the system on its merits. The progress made by the pupils was most gratifying and encouraging, and the feeling was very generally expressed that the class was proving a great success and was meeting a want in the educational system of the country. The class has been under the im-

mediate instruction of Mr. T. H. Jones, of Boston University, where a proper course of training is given to fit persons for the position of teachers of the system. In the United States, several public and private institutions have been established on the same principle within the last few years, and their success is stated to have been of the most satisfactory character.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending June 26th, it appears that the death-rate in the eight principal towns was 20.5 per 1,000 of estimated population. This rate is 0.1 below that for the previous week. The lowest mortality was recorded in Greenock—viz., 13.1 per 1,000; and the highest in Perth—viz., 27.3, and in Paisley 27.6 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.8 per 1,000—slightly lower than for last week. There have been fewer deaths from whooping-cough, but an increase in the number from affections of the bowel. The death of a male, aged 26, was registered in Edinburgh under hydrophobia. Acute diseases of the chest caused 79 deaths, being 9 less than the number recorded during the previous week. The mean temperature was 57.4°, exactly the same as that of the week immediately preceding, and 2.3° above that of the corresponding week of the previous year.

THE LORD RECTORSHIP OF GLASGOW UNIVERSITY.

SINCE the withdrawal of Mr. Tennyson from the candidature for this office, steps have been taken to obtain another candidate; and it is now announced by the Conservative and Independent Clubs that Mr. Ruskin has consented to be nominated for the Lord Rectorship; and that, if elected, he will deliver the usual address. The Liberal nominee is Mr. John Bright.

A SOUTH-SIDE INFIRMARY FOR GLASGOW.

WE understand that the late Mr. W. S. Dixon has left £10,000 to be equally divided between the Royal and Western Infirmaries of Glasgow; but, in the event of an infirmary being built within a given time on the south side of the city, in or near the burghs of Crosshill and Govanhill, the lands of which almost entirely belonged to him, the whole of that sum is to be given to it. Some years ago a movement was set on foot for building a South-side Infirmary, but, as there was great depression in trade at that time, it was thought advisable to delay proceedings. It seems now probable that Mr. Dixon's large and handsome bequest may lead to a revival of the movement, so as to secure the gift.

UNIVERSITY OF EDINBURGH: BOTANICAL CLASS-ROOM.

SOME time ago, attention was directed to the fact that the lecture-room of the botanical class is so inadequate for the large class now attending, that the Professor of Botany has had to divide his class in two, and consequently to lecture twice every morning. Plans have been prepared for a new class-room, and submitted to Government; if approved, there will be a grant for the purpose required. The new class-room proposed will be seated for six hundred students, while the old class-room will be altered so as to be used as a practical and histological class-room.

HEALTH OF EDINBURGH AND GLASGOW.

THE mortality in Edinburgh last week was 22 per 1000. Of eight deaths due to zymotic diseases, seven occurred in the old town, and were due to measles and whooping-cough. No death from fever of any kind was registered. In Glasgow, the mortality was 20 per 1000.

EXTENSION OF THE BROOMHILL HOME FOR INCURABLES.

AT a meeting held at this institution on the 3rd instant, a scheme for enlarging the building, so as to meet the demands made upon it, was laid before nearly one hundred trades' delegates, who had been invited by Miss Clugston, and resolutions were passed commending the project to the working classes, and calling on them to co-operate in its realisation. It is proposed to add a couple of wings to the existing home, at a cost of about £7,000, and also to establish eight cottage homes, four for males and four for females, at a cost of £40,000. In this appeal of hers to the working classes for assistance, Miss Clugston aims at the endowment of the Home as well as its extension.

THE GIBSON HOSPITAL, ST. ANDREW'S.

THE trustees of the Gibson Hospital Bequest have appointed a Committee to consider the accommodation and arrangements that should be made in the erection of a hospital for the aged, sick, and infirm poor of the City of St. Andrew's and parishes of St. Andrew's and St. Leonard's. This scheme has been in abeyance for some years. The trustees are empowered for this purpose to make use of the lands and estates of Duloch, Sunnybank, etc., which were bequeathed by the late Mr. Wm. Gibson for that object.

IRELAND.

THE Cashel Town Commissioners have passed a resolution requesting their members to introduce a Bill into Parliament to throw open all Irish Poor-law medical appointments to public competition, in order to secure in each case the most competent attendant for the sick poor.

DR. LYDEN, medical officer of Castlebar Dispensary District, reports that he vaccinated about 145 children during the past six months, but that a large number still remain unvaccinated in the district. This he justly considers a serious matter, and recommends that all defaulters be compelled to comply with the provisions of the Vaccination Act.

HYDROPHOBIA.

TWO deaths within the one week have recently taken place at Donaghadee, in the county Down. One was a child aged 7, and the other a man aged 42 years, both being bitten by the same animal on May 16th last.

THE KILLARNEY DISTRICT ASYLUM.

DR. OSCAR WOODS of the Killarney District Asylum calls attention to a method of dealing with the insane in his district which is, perhaps, strictly Irish, but cannot be said to be altogether reasonable. Most of the patients committed to his care are sent to the asylum as dangerous criminal lunatics, the facts being that many of them are perfectly harmless, and that none of them have been convicted of any crime. This hyperbolical procedure has arisen out of the custom of arresting alleged insane persons on the information of their friends, and so transmitting them to the asylum through the police-courts, instead of simply sending them there at once, on an ordinary certificate and order of admission. As Dr. Woods points out, the intention of the Act of Parliament clearly is that those only should be arrested who have committed some indictable offence. Under the present system, the stigma of crime attaches to a large number of persons who are innocent of everything but insanity.

THE MEDICAL CHARITIES (IRELAND) BILL.

WE regret to observe that, owing to the unexpected opposition to this Bill, it has been withdrawn. The Bill, which was drafted by the Irish Medical Association, and introduced into Parliament by Mr. Meldon, M.P., contained suggestions for several much needed modifications of the existing law, especially as regards dispensary medical relief.

NEW SANITARY BY-LAWS FOR DUBLIN.

THE Corporation of Dublin have, at the suggestion of their Public Health Committee, adopted a revised code of sanitary by-laws. The principal change authorised by the new by-laws is that, in future, house-refuse shall be removed every month instead of every three months as heretofore. The Lord Mayor, in strongly insisting that the term of a month for the removal of filth festering in the backyards of houses should be adhered to, said that he had been through some of the tenement houses of Dublin within the last few days, and he confessed he had been appalled at their condition. The scenes of filth he witnessed

had been beyond description, and had made him determined, as far as he could, to do something by way of remedy. He did not believe that any by-laws or prosecutions could be of much effect until the houses were destroyed altogether; but it really made one wonder how human beings existed at all in such hideous filth.

CLINICAL INSTRUCTION IN FEVER.

THE King and Queen's College of Physicians in Ireland, having recently made a by-law that "On and after January 1st, 1881, every candidate for the license in Medicine of this College shall be required to produce evidence that he has, for not less than three months, studied fever in a recognised clinical hospital, containing fever wards, and recorded, from daily personal observation, at least five cases of fever, to the satisfaction of the attending clinical physician, as attested by his signature", has now officially recognised Cork Street Fever Hospital as a clinical hospital for the study of fever.

CLINICAL INSTRUCTION IN OPHTHALMIC SURGERY.

TO Trinity College, Dublin, belongs the credit of being the first of the licensing bodies to practically recognise the necessity of a surgeon possessing some knowledge of ophthalmic surgery, by requiring a three months' attendance in the wards of an ophthalmic hospital from each candidate for its degree of Bachelor of Surgery. In May last, the course was laid down as follows: three months' clinical instruction in ophthalmic surgery, and a systematic course of lectures delivered twice a week. The following additional proviso has now been added by the University Council:— "Certificates in ophthalmic surgery will not be accepted from any hospital that does not maintain permanently fourteen beds for ophthalmic cases only."

FEVER IN IRELAND.

WE have been informed by the Secretaries of the Marlborough Relief Committee that they have ascertained by local inquiry that famine-fever has not appeared in Foxford or any other portion of the Swinford district. Some cases of typhus exist there, and typhus and simple fever are somewhat more prevalent than usual; but there is no famine-fever. Although the people are poor, they are not starving; and the cases of typhus seem to be principally among those who have sufficient food-supplies.

EXTERN MEDICAL EXAMINERS IN THE UNIVERSITY OF DUBLIN.

THE Council of the University of Dublin have recently adopted the following order:—"That the Professors of the School of Physic shall furnish to the Provost and Senior Fellows, before the 10th of December in each year, a list of twelve names of persons considered by them qualified to act as Extern Examiners in the following subjects: (*a*) Medical Pathology, three names; (*b*) Therapeutics, three names; (*c*) Ophthalmic Surgery, three names; (*d*) Midwifery, three names." This is substituted for the former order of the Board and Council, whereby a list of eighteen names—three names in each of six subjects—was furnished. Extern examiners are now to be appointed in four subjects only—one examiner in each—instead of in six subjects as previously; the subjects which are omitted from the list being Botany and Materia Medica, Physics and Chemistry, Descriptive Anatomy, and Clinical Medicine. Therapeutics and Midwifery are new subjects. As a rule, but not without exceptions, the first name of the three returned by the professors in each subject is selected by the Board as the extern examiner.

DUBLIN CONVALESCENT HOME.

THE recent fresh outbreak of small-pox in Dublin has stimulated the sanitary authorities to make some efforts—at any rate on paper—to cope with the disease. The Secretary of the Public Health Committee of the Corporation has submitted a report on the prevalence of the disease in the city, and the Guardians of the North Dublin Union, who have no accommodation within their own union for small-pox patients, have appointed a subcommittee to inquire into the necessity of establishing a small-pox hospital and convalescent home. It may be remembered that last year, when small-pox was very prevalent in Dublin, a committee was formed with the object of establishing a convalescent home in the neighbourhood of the city for persons recovering from infectious diseases. Owing to the small amount of pecuniary support the committee received, their efforts proved abortive; the sum of £1,145, then available, being quite inadequate to lease premises or land for the proposed home. Accordingly, at a public meeting of the subscribers to the fund, held on June 23rd, 1879, it was resolved to call upon the Public Health Committee of the Corporation, acting as the Urban Sanitary Authority, in co-operation with the sanitary authorities of the suburban districts, to establish a convalescent home in accordance with the powers given these authorities under Section 155 of the Public Health (Ireland) Act, and it was further resolved that a sum of £1000 should be contributed out of the funds collected by the Convalescent Home Committee to aid the sanitary authorities in the establishment of such a home, as also provided by the Public Health Act. The Corporation, however, declined to build, or to undertake the administration of, a convalescent home, but intimated their willingness to contribute liberally towards such an institution if established. The severity of the epidemic having meanwhile diminished, the money lay in the bank, and nothing further was done. The report of the Secretary of the Public Health Committee above referred to having recommended *inter alia* the establishment of a convalescent home as a means of checking the disease, which has now broken out afresh, brought the subject again under notice. Accordingly, the Public Health Committee requested the Honorary Secretaries of the Convalescent Home Committee to summons a meeting of the Committee to consider the propriety of devoting the means at present available to establish a convalescent home. The North Dublin Board of Guardians also sent a deputation to the meeting, which was held last Saturday at the Mansion House. It was shown at the meeting that the Corporation of Dublin, as a sanitary authority, and the Guardians of the North Union and the Guardians of the South Union, as the sanitary authorities, had power to contribute a sum annually towards the maintenance and support of a convalescent home; and there can be no doubt that these bodies have shown great remissness in not exerting their powers, in this and other legitimate ways, to stem the progress of the disease in Dublin and its vicinity. Finally, it was resolved "that the honorary secretaries do communicate with the Corporation of Dublin and the other urban and suburban sanitary authorities in its vicinity to ascertain what annual sum they would be willing to contribute towards a convalescent home when erected, and to contract for the reception of patients from their respective localities". If the answers prove satisfactory, the committee trust to be able to procure some suitable accommodation for this much-needed institution.

THE OUTBREAK OF FEVER IN THE WEST OF IRELAND.

IN addition to the cases of fever which have occurred at Ballaghadereen, there are others at Ballycastle, Charlestown, and Swinford. These are essentially typhus fever; but it is stated that the medical officer of Swinford Dispensary District has at present two cases of fever under his care near Ballyhunis which possess all the symptoms of relapsing or famine fever—viz., vomiting, diarrhœa, extreme prostration, with pinched anxious look, thready pulse, and no eruption. But, as these symptoms are not peculiar to relapsing fever, and as the critical perspiration, jaundice, miliary vesicles, and recurrence of the fever appear to be absent, there are no grounds for the statement. The number of cases of typhus in Swinford Workhouse is forty-six, only two of which occurred in the town, the remainder being brought from Charlestown and other parts of the union. Last week, two deaths from typhus took place in the hospital; but the mortality appears to be slight. So great is the panic among the residents, that it is almost impossible to get the sick brought to hospital, or, when dead, to place them in coffins. The old board of guardians have been dismissed, and paid ones placed in their stead; but, before the latter were appointed, the only means of conveying the sick to the hospital was an open cart, in which the unfortunate patients were jolted and shaken while being conveyed to their destination. But within the last week or so an old

ambulance-waggon belonging to the workhouse has been repaired, and is ready for use when required. Although forty-six fever patients are in the hospital, yet there is sufficient accommodation for half as many more. Nearly all the schools in the vicinity have been closed to prevent the infection being conveyed by the children in attendance. The fever seems to be decreasing in and about Charlestown, each case as it occurs being sent without delay to hospital; but it appears to be spreading in the parts outside the town.

THE SPECIAL COMMISSIONER FOR INVESTIGATING THE OUTBREAK OF FEVER IN IRELAND.

SOME doubt continues to exist regarding the nature of the epidemic of fever reported to have recently broken out in some of the distressed districts of Ireland. It appears to be most probable that they are of the nature of typhus; but, in order to come to a final decision, Dr. Nixon, Physician to the Mater Misericordiæ Hospital in Dublin, has been appointed special commissioner, and despatched to the affected localities. Dr. Nixon's special qualifications for such an inquiry induce us to look forward to his report with no ordinary interest, believing, as we do, with Mr. Forster, that no evidence has yet been adduced to show that Ireland is on the eve of an outbreak of that formidable famine fever which often follows in the wake of starvation and misery.

THE NOTIFICATION OF INFECTIOUS DISEASES.

THE Honorary Secretary of the Dublin Branch of the Association having brought a resolution, adopted at the annual meeting of the Branch, in favour of the notification of infectious diseases, before the King and Queen's College of Physicians and the Royal College of Surgeons in Ireland, with a request that the Colleges would aid and co-operate with the Council of the Branch in carrying such a system into effect, the matter was referred by the College of Physicians to a specially appointed Committee, and by the Council of the College of Surgeons to its Parliamentary Committee to examine and report upon. Much attention has been given by both the Colleges and the Committees to the subject; there being considerable difference of opinion amongst both bodies as to the result of the system, if adopted, on the public and on the profession; and as to the details necessary in carrying out the scheme. Dr. Duffey, the Honorary Secretary of the Dublin Branch, has received an official communication from the Registrar of the College of Physicians, stating that the College approve the principle of compulsory notification of infective diseases, provided the duty of notifying is imposed only on the head of the family or owner of the house in which the disease occurs; and also the principle of registration of infective diseases; and that the College will be glad to assist and co-operate in obtaining the necessary parliamentary powers for securing the advantages that would, in their opinion, result from the attainment of an efficient system of notification and registration based on the lines indicated. The report of the Committee, on which the resolution of the College, as contained in the foregoing communication, was based, is an important document. One suggestion contained in it is, we believe, a novel one, and likely, if adopted, to remove several present objections to the working of the scheme. It is suggested that, in addition to the compulsory notification by the head of the family or owner of the house to the sanitary authority of the existence of infectious disease in his house, on the intimation of such fact to him by the medical attendant, the latter should also register the disease with the local registrar o births and deaths; and that for each such registration only he should receive an adequate fee. By this plan, the medical man would not be brought into direct contact with the sanitary authorities (which is much objected to by some), and an efficient system of registration of disease by means of already existing machinery might be secured; while at the same time both the notification and registration could be made to act as checks upon each other. The Parliamentary Committee of the Royal College of Surgeons have also, we believe, reported in favour of the principle of the compulsory notification of infectious diseases; but no official resolution of the College has as yet been received by the Honorary Secretary of the Branch.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SESSION, 1880.

Wednesday, July 7th, 1880.

DR. ACLAND, President, took the chair at 2 P.M.

New Member.—Dr. John T. Banks was introduced as the representative of the Queen's University in Ireland, elected in the room of the late Sir Dominic Corrigan.

President's Address.—The PRESIDENT then delivered the following address.

The pressure of educational questions which await your decision has made it necessary to summon the Council to this, its thirtieth session. Several important documents, having reference both to the general and to the professional education of the medical student, demand the attention of the Council. It is unnecessary for me to speak of them at length, so that I will only relate briefly what they are, and in what form they will come before you.

I. In 1877 the Council, not being fully satisfied with the progress which was being made in the general education of those preparing for the medical profession, passed the following resolutions:—

a. "That a letter be addressed to each of the examining boards whose certificate is accepted as a test of preliminary education by this Council, directing attention to the complaints which have been made by several of the licensing bodies with regard to the insufficiency of the general education of many of the candidates presenting themselves for their examinations.

b. "That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the registrar of the General Medical Council.

c. "That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination, as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject."

In compliance with these instructions, the Executive Committee obtained the required information, and the General Council on July 17, 1879, further directed that the several branch Councils in England, Scotland, and Ireland should inquire into the complaints which were made from time to time by the medical licensing bodies concerning the insufficiency in general education of those who came up for professional education and examination.

This was a subject which had attracted the serious attention of the Council in the first years of its existence, and had formed the basis of many of its earliest recommendations. There is no reason for doubting that improvement has taken place in the secondary schools to which the class of medical students resort. But inasmuch as great laxity must certainly exist in some examining board or boards, the Council thought it well to recommend that the professional examiners should ascertain, in the case of students who showed decided ignorance in general education, from what boards they had received their certificates of proficiency prior to commencing their medical studies.

The answers which the several licensing bodies throughout the kingdom have sent, and the reports which the branch Councils of England, Scotland, and Ireland have made upon them, are now laid before the Council.

Upon these documents, which have already been unofficially circulated for the convenience of the Council, several notices of motion have been framed. More than one of these notices directly open up the question, on which so much discussion has been raised of late years, of what are the subjects which should be included in preliminary examinations; and, therefore, what should be taught in the schools—as, for instance, physics, geology, zoology, and other subjects. And the further and really more important question is asked—how they are taught, and what is the standard of examination? The Executive Committee reports, concerning seventy-two examining boards which the Council recognises as giving certificates of proficiency in general education, that they satisfy "the requirements of the Council with great uniformity." They conform, that is to say with respect to the subjects of examination, but how far they are uniform in respect to the answers

which may be expected, the Committee have at present no means of judging.

It will be observed that members of the Council are of opinion that notwithstanding the great progress which is known to have been made in the means of educating students, and partly in consequence of it, the extent and quality of the general education given to them needs re-consideration. It will be proposed, therefore, by Dr. Storrar, that the whole subject be referred to a Committee. Meanwhile, it may be well to observe at once in favour of this course, that since the time when the Council first laid down the general arrangements which it would recommend, in respect both of general education and examination, not only has the subject of general education, as conducted in the higher schools, been reported upon by three royal commissions—viz., by Lord Clarendon's in 1864, Lord Taunton's in 1868, and the Duke of Devonshire's in 1874—but that, without doubt, great improvements have taken place in secondary schools and in the school books which are used in them.

But still questions of great difficulty remained unanswered; for instance, it is still a matter of debate in the old universities whether Greek shall be a compulsory subject for the Bachelor of Arts degrees and whether those who have degrees in Natural Science shall have had the same general education as other graduates. And it must be admitted that scientific men are by no means agreed on these points. When this Council has reconsidered its own requirements, the schools will, without doubt, know how to meet them. Meanwhile, motions will be brought before you, both by Professor Haughton and Dr. Leet, to the effect that Greek be made compulsory on all medical students, so that the amount and character of linguistic studies and examinations, as well as the extent of scientific subjects, proposed for students prior to their professional studies, is again raised.

And I must not fail to mention that, whereas on July 17th, 1879, the Council passed, in regard to the subject of Elementary Mechanics, the following resolution:

That the subject of "Elementary Mechanics of Solids and Fluids—meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics"—be no longer recommended by the Council as an optional subject of preliminary education, but be recommended as one of the subjects "without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered", it being understood that the examination in this branch of knowledge may be passed either as preliminary or as first professional; and that it be referred to the Executive Committee to amend to this effect Subsection 6 of Section 4, and Subsection 1 of Section 23, of the edition for 1879 of the Council's standing Recommendations.

The Executive Committee, after discussions thereon at three successive meetings, came, on March 18, 1880, to the following conclusion:—

"That the Executive Committee, having fully considered this resolution in all its bearings, finds that there are such difficulties connected with carrying it into effect, that it deems it right to refer it back to the General Council for reconsideration."

II. The subject of professional studies and examinations will again be specifically brought before the Council. Memorials were laid before you last year, suggesting that certain special modes of study should be made compulsory in respect of ophthalmology and gynecology. You directed that the memorials should be forwarded to all licensing bodies for their observations. The report from the several bodies will be laid before you, with a report thereon from a Committee specially appointed by the Council, consisting of Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, Mr. Simon, and Mr. Teale.

A further communication of a similar kind on the subject of mental diseases, forwarded on August 4, 1879, from the Medico-Psychological Association, will be laid before you. The question will thus be re-opened whether it is possible with advantage to the solid acquirements of the student to add more details to those already required in the four years of professional study—or whether more years are, as in some other countries, to be demanded.

It remains only as my privilege to add, that which the Council will be pleased to hear, that no discussions on Parliamentary Bills need this year distract them from their appointed and congenial work of superintending the studies and examinations that bear on the profession of medicine, and of conferring with the great institutions of the nation that undertake the duty of conducting them. Last year there were three Bills before Parliament dealing with these and other subjects. The Government had thought it well to refer these Bills to a Committee of the House of Commons for report, as a means of affording to those who desire to support any particular views on them to express their opinions. The Committee were unable to report either last year, or this year before the dissolution of Parliament. No Bills of this kind are at present in either House, and the Committee is accordingly not re-appointed. On the 27th of May the Vice-President of the Privy Council, in reply to a question put to him, stated that during the coming recess the whole question would be considered by the Government. Meanwhile the Council are steadily pursuing the work which Parliament assigned to them, and on which they have been so long engaged. This increases every year in interest and importance. It increases in interest with the rapid advance of purely scientific biological knowledge, and its relations to the prevention and the treatment of disease. It increases in importance, because this very progress—this mass of daily advancing knowledge—makes us all feel the accumulated force of the pregnant words of our old Greek master, Πεῖρα σφαλερή, κρίσις χαλεπή. They only who take a superficial view of the present condition of the science and of the practice of medicine think it a light task to say what portions of each are necessary for our younger students—how they should be taught, and how tested. Probably there is no medical institution that is not ready to say that in these days it has learnt much—perhaps not one will aver, it has not something yet to learn. We too, whether sent hither by a University or Corporation, or by the Crown, feel each year the benefit and necessity of that interchange of thought and that united action for the common work of our profession and of the nation for which the Council was called into existence.

Committees.—On the motion of Dr. HUMPHRY, the Business Committee was appointed, comprising Dr. Andrew Wood, Dr. Aquilla Smith, Dr. Leet, Dr. Haldane, and Dr. Pyle. The Finance Committee was also appointed, consisting of Dr. Quain, Dr. Pitman, Dr. Aquilla Smith, and Dr. Scott Orr.

Mental Disease as a subject of Examination.—The following communication from the Medico-Psychological Association on the subject of mental diseases was read:

"County Asylum, Hanwell, Middlesex, August 4th, 1879.

"Gentlemen,—At the annual general meeting of the Medico-Psychological Association held on July 30th, 1879, under the Presidency of Dr. Lush, M.P., the following resolution was passed unanimously: 'That this Association petition the General Medical Council to have mental diseases made a subject of examination for all degrees and licences to practise medicine in the United Kingdom.' I beg to submit this resolution to the General Medical Council as the petition of the Medico-Psychological Association, and to express the hope that the Council will give their favourable consideration thereto.—I have the honour to be, gentlemen, your obedient servant,

"HENRY RAYNER, M.D., Hon. Gen. Sec."

Dr. QUAIN said the Council could merely submit the recommendation to the examining bodies. He moved that the resolution be entered on the minutes, and that a copy be sent to the examining bodies.

Mr. TURNER seconded the resolution.

The Reverend Dr. HAUGHTON said this proposal had been before the University of Dublin four or five times, and they had never yet seen any reason to adopt it.

Sir WILLIAM GULL objected to the communication being sent to the licensing bodies, because the Council by so doing would intimate that the licensing bodies should act upon it.

Dr. QUAIN wished it to be sent as an expression of the opinion of the Psychological Association to the various licensing bodies, who would then be perfectly free to act. The fact of its being sent by the Council would not imply that it must be adopted.

Dr. AQUILLA SMITH thought that it would be giving a sanction to the recommendation which the Council were not prepared or disposed to give.

The Reverend Dr. HAUGHTON said the proper way would be for the psychologists to ask the licensing bodies to examine in psychology; and then, when a certain number of bodies adopted the practice, they could come to the Council. It would be establishing a very dangerous precedent to send such a resolution, bearing with it a *quasi*-sanction on the part of the Council.

Dr. PITMAN said the Psychological Association had already memorialised the College of Physicians upon the subject.

Dr. ANDREW WOOD was quite sure that to load a four years' curriculum any further with any special subjects was merely to make all parts of it unsatisfactory. The proper time to study such a subject was after a man had obtained his licence or degree. He would then have time, his ideas would be matured, and he would be in a much better condition to enter upon a very difficult subject. It would be better to reply that the Council had received the communication, but did not deem it expedient for the present to make mental diseases a subject of examination for all degrees and licenses to practise medicine.

Dr. BANKS said that the question had engaged the attention of the Senate of the Queen's University in Ireland, who were not prepared to grant the prayer of the memorial unless the period of study were extended.

Dr. ROLLESTON said it was impossible to introduce this subject into the curriculum of examination for ordinary practitioners.

Mr. SIMON said that every student who came under examination in the College of Physicians was liable to be asked questions on insanity, he hoped, therefore, that, in all courses of medical teaching, a certain knowledge of insanity would be provided for.

Dr. ANDREW WOOD moved, as an amendment, "That the letters of the Medico-Psychological Association be received and entered on the minutes; that the Council acknowledge the communication from the Medico-Psychological Association, and, in reply, state that mental diseases are already generally made part of the regular course of instruction in medicine, and that they do not deem it expedient at present to ask the licensing bodies to have mental diseases made the subject of separate examination for all degrees and licences to practise medicine in the United Kingdom."

Sir WILLIAM GULL seconded the amendment. It was a mistake to suppose that mental diseases, as far as they were known, were not subjects of practical medicine. At the present moment, it would be absurd to take up the course of mental diseases apart from bodily affections. Mental disorders went with bodily affections, but still there were mental disorders, the cause of which could not be discovered, and the conditions of which were known no more than of the condition of the pure intellect. People must not go away with the idea that the Council stood in the way of mental disease being taught as far as it was known; it was taught as far as it was known in the schools. They could not send all their men to Hanwell or Bethlehem, but a good deal was done in that way, and had been done for years. They were not at all indifferent to the teaching of mental diseases as far as they were known, but they could not go into medico-psychological questions.

Dr. HUMPHRY suggested that the Association should be informed that mental diseases already formed part of the subjects of examination in licensing bodies, but that the Council declined to make any recommendation on the subject.

Mr. TURNER said the Council had no power to compel the various licensing bodies to take up the question; but still it was a mere matter of common courtesy that, being appealed to as the representative body of the profession by the Medico-Psychological Association, they should let the various medical authorities know that such an appeal had been made to them. On those grounds, he supported Dr. Quain's motion.

Dr. QUAIN having briefly replied, the amendment was put and carried, and, on being put as a substantive motion, was agreed to.

Army Returns.—A statement of the degrees, diplomas, and licences of the candidates for commissions in the medical department of the army who presented themselves for examination on December 8th, 1879, and February 9th, 1880, was put in. The following is a summary of the numbers.

	Dec. 8, 1879.	Feb. 9, 1880.
Found physically unfit	1	1
Failed to appear at the examinations ...	0	0
Rejected	2	6
Retired	0	1
Successful	72	35
Total number of candidates ...	75	43

Dr. HUMPHRY congratulated the Council on the report. The fact that in the December examination only two were rejected showed, at any rate, that the examinations in the several bodies had very considerably altered and improved; and the Medical Council might consider that its recommendations had not been altogether ineffectual.

The Rev. Dr. HAUGHTON thought that the Council ought not to take too much comfort from this statement. The fact was, the army was badly in want of surgeons, and was glad to take anyone it could get.

Sir JAMES PAGET said nothing could be more lamentable than to find in bygone years the intense ignorance of men who went to pass examinations to qualify them for practice. A great improvement had, however, been made; and, in reply to Dr. Haughton's remark, he would say that the alteration of the warrant had nothing whatever to do with the passing of large numbers. The standard was the same; the examiners themselves had hardly changed; the examinations were up to the old standard.

On the motion of Dr. HUMPHRY, seconded by Mr. TURNER, the returns were ordered to be entered on the minutes.

Dr. STORRAR inquired whether any corresponding returns had been received for the navy.

Dr. ANDREW WOOD said they had not.

Results of Examinations.—A table showing results of professional examinations for degrees, diplomas, and licences granted in 1879 by the bodies named in Schedule A of the Medical Act was presented.

Dr. HUMPHRY moved and Dr. AQUILLA SMITH seconded the reception of the table.

Dr. ANDREW WOOD pointed out that there was a return from the University of Oxford "in preventive medicine and public health", and from the King and Queen's College of Physicians in Ireland of "licence in nurse-tending". Neither of those subjects came within Schedule A. There was also "licence in dental surgery" in the Royal College of Surgeons of Edinburgh. The insertion of those subjects was evidently a mistake. He moved that the table, amended by the striking out of those subjects, should be entered on the minutes.

Dr. PETTIGREW seconded the amendment, which was agreed to.

Mr. SIMON moved:

"That the table be understood to refer only to such degrees, diplomas, and licences as are qualifications under the Medical Act."

Dr. QUAIN seconded the motion.

Rev. Dr. HAUGHTON moved as an amendment:

"That the heading of the table run thus: 'Table showing results of professional examinations for degrees, diplomas, and licenses, granted as qualifications in 1879, and named in schedule (A) of the Medical Act.'"

Mr. MACNAMARA seconded the amendment, which on being put to the Council was lost; and Mr. Simon's motion was carried.

Preliminary Examinations.—Dr. HUMPHRY brought up the following report from the Executive Committee:

"The Executive Committee report to the General Council that, in accordance with the desire of the Branch Council for England, expressed in its resolution of January 29th, 1880, they have obtained detailed information respecting the nature and scope of each of the preliminary examinations recognised by the Council. This information, analysed and tabulated, is presented to the Council. The Committee call attention to the fact that one of the results of the information obtained is to show that the regulations of the several examining bodies are generally in accordance with the recommendations of the Council."—He moved that it be received and entered on the minutes.

Dr. ANDREW WOOD seconded the motion, which was agreed to.

Preliminary Education.—The following resolution was passed by the General Council on July 17th, 1879:

"That the answers from the medical licensing bodies to a letter sent to them by the Executive Committee in regard to the preliminary education and examination of medical students, adjourned from the last meeting of the General Council, be referred to the Branch Councils in each division of the kingdom, for report thereon to the Council at its next meeting, in order to a full consideration of the subject at that time. Reports had been sent in from the Branch Councils, and on the motion of Dr. ANDREW WOOD, seconded by Dr. HUMPHRY, they were ordered to be entered on the minutes.

A communication from the Royal College of Surgeons in Ireland, in regard to preliminary education and examination of medical students, was read. It contained the following resolution of the Council of the College:

"That the regulations of the General Medical Council respecting the passing by students of 'the preliminary examination' prior to attendance on lectures be adopted by the Council of this College, and that exceptions to this rule be referred to the Branch Council for Ireland."

Dr. ANDREW WOOD moved:

"That this most satisfactory communication from the Royal College of Surgeons of Ireland be received and entered on the minutes.

Mr. SIMON seconded the motion, which was carried.

Dr. STORRAR gave a historical sketch of the proceedings of the Council with reference to preliminary education.

A discussion followed, in which several members took part, and the debate was adjourned.

Thursday, July 8th.

The Medical Council reassembled at two o'clock on Thursday, when the adjourned discussion on Dr Storrar's motion on preliminary education was resumed. After considerable discussion of the general subject, an amendment was moved by Mr. Teale to refer the various notices of motion to a committee for the purpose of being put in such form as to be more readily discussed by the Council. This amendment was accepted by Dr. Storrar; and, on being put to the Council, was agreed to. Some other business having been transacted, the Council adjourned.

DONATION.—The Company of Mercers have awarded the sum of one hundred guineas in aid of the funds of University College Hospital.

AT a Convocation of Durham University on the 22nd June, Dr. Pyle of Sunderland was elected a member of the Senate of the University.

PARLIAMENTARY BILLS COMMITTEE: THE GOVERNMENT VACCINATION BILL.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held on Friday last at the offices of the Association, 161A, Strand, Mr. ERNEST HART in the chair. There were present Lord Randolph Churchill, M.P., Dr. Farquharson, M.P., Dr. Quain, Dr. Ord, Dr. Holman (Reigate); Messrs. Nelson Hardy, Rogers-Harrison; Surgeon Myers, Dr. Fancourt Barnes, etc.

The minutes of the last meeting (June 13th) having been read and confirmed, the CHAIRMAN proceeded to state the results of the carrying out of the resolutions passed at that meeting. The first was a resolution "That Mr. Sclater-Booth be asked to receive a deputation on the subject of animal vaccination". Mr. Sclater-Booth had received that deputation, and the result had been published in a report printed in the JOURNAL, and would be appended to the minutes of that meeting. Briefly, it was that Mr. Booth did not at that time see his way clear for carrying out that object; but since that time the deputation had borne good fruit, for Dr. Cameron, in lieu of bringing forward his Bill, brought forward resolutions identical with the representations made to Mr. Booth; and Mr. Dodson, the present President of the Local Government Board, had, on behalf of the Government, accepted them; so he (the Chairman) might say that the result of their conference and deputation had been extremely satisfactory, inasmuch as the course they recommended on this important matter was that which the Government had adopted.

Lord RANDOLPH CHURCHILL said he would take the opportunity of asking, whether it was proposed to issue this animal lymph to all applicants, or only to medical men on whom they could thoroughly rely, as he was informed that pure animal lymph in an infant was capable of producing a severe kind of sore; he therefore wished to know whether it was proposed to supply it all over the country indiscriminately.

The CHAIRMAN stated that the result of their conference on the subject was, that caution was necessary in the first instance in getting pure lymph, and when that was obtained, there was no risk or fear from troublesome results; and this had been confirmed by experience in many thousands of cases, especially in Belgium; he was of opinion that there was no more danger than with humanised lymph. Further, on this subject, he had to report that the whole matter was in the hands of the executive officers of the Local Government Board, who were engaged in a *bonâ fide* arrangement to supply it to those public vaccinators who asked for it.

In reply to a question as to whether cows were frequently found who furnished this vaccine matter, the CHAIRMAN stated that original stocks had been found from time to time, and maintained by vaccination from calf to calf.

As to the deputation on the "Coroners' Bill", the CHAIRMAN reported that the deputation, consisting of the late Dr. Alfred Swain Taylor, Mr. Sibley, Mr. Rogers, and himself, had had an interview with the Home Secretary, and made representations to him.

As to the medical officers of the navy, he (the CHAIRMAN) had had an extensive correspondence with the medical officers of the navy of various ranks, and prepared a scheme of improved pay, rank, and promotion, on which they were pretty generally agreed; and, whilst engaged in doing so, he had had an interview by request with the Naval Lord of the Admiralty, who stated that their lordships were very anxious to do something in the matter; he had been asked to forward a draft copy of the scheme to the Board, and a departmental committee had been at once appointed, which included the Naval Medical Director, the Naval Lord of the Admiralty, a representative of the Treasury, and others; and they were preparing a report which was not yet completed, as the financial arrangements were not finished; but the main features had been agreed upon, and there was reason to anticipate that they would not widely differ from the scheme which he had prepared and submitted as Chairman of the Committee. It would be out probably in about three weeks.

They now came to the special purpose for which they had met that day, viz., as to the Bill which had been introduced by Mr. Dodson and Mr. Hibberd to amend the Vaccination Act. It was a very short Bill, and everyone present knew the purport of it; it was practically to limit the penalties for non-vaccination to a full penalty on one occasion of £1, or two penalties of smaller amount; it had at once aroused a great deal of opposition throughout the country as well as in the medical profession. With regard to the medical profession, he (the Chairman) had received a large number of letters expressive of the strongest indignation, and he had found several boards of guardians taking the same view and opposition against it. The leading medical corporations bore testimony themselves against it. It appeared to have been the result of Mr. Taylor's and Mr. Hopwood's observations on the occasion of Dr. Cameron's motion, and it was alleged to represent the view of Mr. Gladstone on the subject. Lord R. Churchill, who was present, had signified his intention of opposing the Bill, as had Sir Trevor Lawrence and Mr. Baring.

Lord RANDOLPH CHURCHILL stated he had done so in the House of Commons, in consequence of his former connection with the question.

The CHAIRMAN stated that Dr. Lyons had expressed his intention of opposing it; and they would have had other members of Parliament at this meeting but for the morning sitting in the House, which required whole their attendance. He had prepared a rather detailed report on the subject, for the reason that it would be very undesirable that it should be said that the Committee had entered on the discussion without fully considering the political aspect of the question. They had been told more than once that this action on the part of the Government was not taken out of any distrust of vaccination, nor in respect to its medical aspects, but politically to rid the country of what were called vaccination martyrdoms. It was not necessary to detain the Committee, as they had in their hands copies of this report, which had been circulated prior to this meeting.

Dr. FARQUHARSON, M.P.: There is only one point, whether it would not be as well to give more information about the position of vaccination in Scotland? Scotland is alleged to have got on well without compulsory clauses, and I think they (the Government) are going to make a great point of that.

The CHAIRMAN stated that they followed it up much more closely in Ireland; the Scotch law stood on a quite different basis. It seemed to him that the present state of the law was very satisfactory in this country, and that it would be extremely undesirable to disturb it; it was now left to the local boards of guardians and to the magistrates how far they should continue the prosecution, and it was most unfortunate that any change should be introduced.

Dr. QUAIN and Dr. FARQUHARSON moved that the Chairman be requested to prepare a supplementary report on the Vaccination Act of Scotland, which he agreed to do.

Mr. NELSON HARDY said he thought the line upon which they seemed to be pretty well agreed was, that they were against any alteration in the English law. The first suggestion on the draft report was that some kind of compromise should be come to.

The CHAIRMAN said there were two courses: to meet the Bill by an absolutely uncompromising opposition, or by showing, if any changes are to be made, in what direction they should be made. It was agreed that it was very undesirable they should have repeated prosecutions, as it tended to bring the law into disrepute, and encouraged a kind of martyrdom. His suggestion was that, if any modification was necessary, which he did not think, it should be by giving legal effect to the suggestions of the Poor-law circular to the Evesham guardians.

Dr. FARQUHARSON, M.P., thought it was very desirable they should assume an uncompromising attitude.

The first resolution, "That the Chairman's report be received and adopted by this Committee", after omitting the words from "suggestions" in the last paragraph to "if they think fit", was proposed by Dr. QUAIN, seconded by Dr. FARQUHARSON, and carried *nem. con.*

As to their course of action, the CHAIRMAN said their usual course of action had been to ask the President of the Local Government Board or the Prime Minister to receive a deputation, which he no doubt would be perfectly willing to do, and he thought that was the right action to take in the present instance, and expressed a hope that Lord Randolph Churchill, and other Parliamentary friends, would accompany them.

The following resolution was proposed by Mr. ROGERS-HARRISON, seconded by Dr. HART VINEN, and carried: "That Mr. Gladstone or the President of the Local Government Board be requested to receive a deputation from the Committee, for the purpose of submitting to him the facts and arguments contained in the Chairman's report, and of pointing out to him the evil results that will arise from the passing of the Government Bill or the abolition of multiple penalties under the Vaccination Act."

Dr. ORD moved, and Dr. HOLMAN (Reigate) seconded, the third resolution: "That the report be circulated amongst members of Parliament and others interested in the subject, and that petitions be prepared in accordance therewith."

The CHAIRMAN said that they would circulate copies of the report which had been adopted among members of Parliament and boards of guardians. It was further resolved to prepare a form of petition, and that such petition, with signatures attached, should be

presented to the House of Commons, and that copies should be sent to the Committee of Council, and also to the Councils of the local Branches, to ask them to obtain a number of local signatures for this object.

THE VACCINATION BILL.

On Monday an influential deputation representing various unions and parishes of the metropolis, and consisting of Earl Powis, General Sir William Codrington, Mr. Thomas Lewis, Mr. George Berry, Sir Rutherford Alcock, Mr. Hugh H. Seymour (chairman), Dr. Brewer, Mr. Reginald Yorke, M.P., and Mr. Thomas Worlock (of St. George's, Hanover Square), the Rev. C. Derby Reade (Kensington), Mr. John Fisher (Chelsea), Mr. James Barringer (chairman, Poplar), Mr. James Dawburn (chairman, Islington), Mr. Alfred Lefone (chairman, St. Olave's), Dr. Iliff (St. Saviour's), Dr. Felce (Paddington), and Dr. G. B. Longstaff (Wandsworth and Clapham Union) had an interview with the Right Hon. G. J. Dodson, president of the Local Government Board, to lay before him their views on the Government Vaccination Bill. The passing of this Bill they regarded with the greatest alarm, as it would, they urged, open the way to the purchase by any person of immunity for an evasion of the compulsory laws regulating the vaccination of children by the payment of a penalty of 20s.; and inasmuch as the protection of the whole population against such a disastrous disease as small-pox was of the highest importance, the deputation, composed of delegates from different parishes, urged upon Mr. Dodson the inexpediency of altering the present law.—Having heard the remarks of various members of the deputation, Mr. Dodson said, Sir Rutherford Alcock seems pretty well to have appreciated what is my object in regard to this Bill. It is not in the least degree to diminish or decrease vaccination; it is just the contrary. In my point of view it is to promote it. My Bill aims at indirect compulsion, but not direct compulsion. You propose a continuance of the penalty; but as long as the penalty is paid a child may remain unvaccinated. You do not secure the vaccination by the imposition of the penalty. In a certain number of cases the penalty is very valuable; it induces thousands of persons who would otherwise reject the theory of vaccination to have their children vaccinated. People may have an objection, but they would rather be vaccinated than incur the penalty of being brought up before a magistrate, and so on. Then comes the case of a certain number of conscientious people. I wish to speak of them with all respect; they are those who have a strong objection to vaccination; and there is one case present to my mind now where a man has been fined forty times and still the child remains unvaccinated, and there might be many others who had been brought up twenty times and fined, and the probability is that you may have those individuals up over and over again, and the chances are that the thing will go on, because there are persons who are determined not to do it; and I am told that the fines are actually paid for them by some associations. The consequence is that the penalty does not fall upon them, and they have the satisfaction of carrying out their view; and it may be that in some cases it is for the love of notoriety. The question is, whether it would not be better that there should be a limit to these things? That is the question, and it becomes a question of expediency. We do not differ on the medical or the legal point; it is only a question of expediency.—Sir R. Alcock considered that imprisonment should be resorted to where any number of fines were ready to be paid by associations.—Mr. Dodson: The effect of the Bill before the House will be that parents will be liable, first of all, to a penalty of 20s. under clause 29 for not taking the child; there the full penalty is inflicted in the first instance, and there would be two penalties and costs, which would not be by any means easy. There would be no inducement to negligent people to disobey the law. It would compel reasonably obstinate people to obey the law, but it would put a stop to those cases of excessive penalties which, I think, rather tend to disparage the law, and encourage resistance to it. I do not think the Government are making concessions to any extent, for they impose penalties.—Mr. Brewer: Are you not bound to protect the lives of the children against the disobedient parents?—Mr. Dodson: If you carry that further, then you must go further, and have direct compulsion.—A member of the deputation said: That is what we want. Mr. Dodson: I am not prepared to say that a policeman should take a child from its mother's arms, and hand it over to a doctor.—Mr. Brewer: No, no; but the doctor might visit the child.

An extraordinary meeting of the Fellows of the Royal College of Physicians of London was held on Friday, the 2nd inst. After the transaction of the usual business, the subject of the Vaccination Acts Amendment Bill was discussed, and the following resolution was passed unanimously:

"1. That the College, having considered the Vaccination Acts Amendment Bill now before Parliament, are of opinion that such a measure would, if it became law, be certain to encourage the spread of small-pox, to the great detriment of the community; and the College respectfully suggests to the Government the necessity of reconsideration on that important matter.

"2. That it be referred to the Council to prepare petitions to both Houses of Parliament in accordance with the principle contained in the resolution just adopted; and that the necessary steps be taken for representing the view of the College by deputation to the First Lord of the Treasury."

At the annual meeting of the Poor-law Medical Officers' Association, held on July 1st, attention was particularly directed to the Vaccination Amendment Bill now before the House of Commons, and great regret was expressed that it was proposed to rescind accumulative penalties in case of non-compliance with the Vaccination Act, and to limit it to a single fine, which fine will probably be paid by the Anti-Vaccination Society. It was stated that this Association feels that the success of such Bill would lead to the most disastrous results to the community at large, who, under the present system, where the operation is properly carried out, are fully protected from the ravages of small-pox.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The annual meeting of the Council of the College took place on Thursday last, July 8th. The minutes of the last meeting were read and confirmed. The reports from the Board and Court of Examiners and from the several Committees were received; and also the signatures to the by-laws of members recently elected to be Fellows. The President submitted his annual report on the affairs of the College. Messrs. Coleman and Winterbottom were appointed Examiners in Dental Surgery, in place of Messrs. Rogers and Barrett, resigned. Professor Gerald F. Yeo was appointed Lecturer on Physiology. Dr. E. Haward of Harley Street was made a Fellow by election. The various Committees for the ensuing year were appointed. It was resolved to petition Parliament, in conjunction with the College of Physicians, against the Vaccination Amendment Bill. Mr. Erichsen was appointed President of the College; Mr. Erasmus Wilson, Senior Vice-President; and Mr. Spencer Wells, Junior Vice-President. Professor Lister, and Messrs. Cadge, Bryant, and Smith, the recently elected Members of Council, took their seats for the first time.

THE CAMBRIDGE MEETING.

The preparations for the annual meeting at Cambridge are actively proceeding, having been taken up in good spirit by the University and the town, as well as by the medical profession; and the Colleges open their doors with their usual hospitality. The subjects of discussion in the several sections have been well selected, and numerous contributions of interest have been promised. Several foreigners of distinction have already accepted invitations, and there is every promise of an interesting and successful meeting. It was feared at one time that the lateness of the time fixed—the second week in August—would prevent the attendance of the London members; and there is no doubt that in the conflict of attractions the genial will in some instances prove victorious; but the combination of science with her many allurements will enable Alma Mater to hold her own, and will draw a good proportion of our metropolitan brethren, as is apparent from the names of those who are announced to take part in the proceedings.

The numbers at the annual dinner in the Hall of Trinity College must be limited. Members who wish to secure tickets beforehand may do so by sending a cheque for a guinea to Mr. A. P. Humphry, the Honorary Secretary to the Reception Committee.

HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES.

We learn with much satisfaction that the Local Government Board has instructed one of its most experienced and careful inspectors, Dr. Thorne Thorne, to make inquiry throughout the country as to the use and influence of hospitals for infectious diseases. This is an inquiry which has been long and pressingly wanted for a great variety of reasons. Sanitary authorities are being daily urged by the Local Government Board to provide hospital accommodation for infectious cases, but if the authority ever arrives at the stage of favourably regarding the question, the help and advice which it needs for setting to work in the proper way fail it, and it has to go on with its imperfect lights to perpetuate the same mistakes as other places. The consequences of these

continued blunderings have proved to be of a very serious kind, and have militated very greatly against the further provision of infectious hospitals in the country. Abundant experience teaches that from a properly administered fever hospital no danger to the neighbourhood need be apprehended, whilst infectious cases scattered over a district are of course so many *foci* of contagion. The annual reports which we receive from places where such hospitals exist afford conclusive testimony of their utility in checking the spread of epidemics, which must otherwise, in addition to much suffering and mortality, have imposed heavy burdens on the rates. In gathering up local experiences on this subject, and in striving to learn from them what to copy and what to avoid in the provision and maintenance of a fever hospital, the Local Government Board are doing a most useful and necessary work. Dr. Thorne Thorne's report, when presented, will doubtless vie both in interest and ability with those by Mr. Netten Radcliffe, on the means adopted in various parts of the kingdom for the removal of excreta, and by Dr. Ballard on effluvium-nuisances arising in connection with various branches of industry. Inquiries such as these are the legitimate function of the medical inspectorate of the State, and we could wish that many a work of a similar nature, which pressingly needs to be done, could be put in hand without delay. One great point to be brought out in Dr. Thorne Thorne's inquiry will be the reason why, where infectious hospitals have been provided, they are not more generally used. A striking instance of this kind has recently been observed at Todmorden. Here there is a hospital which was set up on account of small-pox in 1874, and as to which Dr. Thorne Thorne had said that "so far as its internal arrangements went, its cleanliness, and its attractiveness, it was really so nice that he did not see how it could be made much better as a place for the isolation of infectious disease. Yet, although in the years 1877-8 there were 48 deaths from scarlet fever (representing about 500 cases) in the district, not a single case was admitted into the hospital. The medical officers of health admitted that practically no effort had been made to get cases in, though it cannot be doubted that in a place like Todmorden there must be many cases of infectious disease to which section 124 of the Public Health Act, empowering compulsory removal to hospital, would apply. The reason for thus allowing one of the most powerful weapons against infection to rust in the armoury will doubtless be fully dealt with in Dr. Thorne Thorne's report, which will be awaited with extreme interest by all sections of the profession.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-EIGHTH ANNUAL MEETING.

THE Forty-Eighth Annual Meeting of the British Medical Association will be held at Cambridge, on Tuesday, Wednesday, Thursday, and Friday, August 10th, 11th, 12th, and 13th, 1880.

President: DENIS C. O'CONNOR, A.B., M.D., Professor of Medicine in Queen's College, Cork.

President-elect: G. M. HUMPHRY, M.D., F.R.C.S., F.R.S., Professor of Anatomy in the University of Cambridge; Senior Surgeon to Addenbrooke's Hospital.

An Address in Medicine will be delivered by J. B. BRADBURY, M.D., F.R.C.P., Physician to Addenbrooke's Hospital; Linacre Lecturer in Physic.

An Address in Surgery will be delivered by TIMOTHY HOLMES, M.A., F.R.C.S., Surgeon to St. George's Hospital.

An Address in Physiology will be delivered by MICHAEL FOSTER, M.D., Hon. M.A., F.R.S., Prælector in Physiology in Trinity College, Cambridge.

The business of the Association will be transacted in Eight Sections.

SECTION A.: MEDICINE.—*President:* George Edward Paget, M.D., D.C.L., F.R.S., Cambridge. *Vice-Presidents:* George Johnson, M.D., F.R.S., London; P. W. Latham, M.A., M.D., Cambridge. *Secretaries:* W. B. Cheadle, M.A., M.D., 2, Hyde Park Place, London, W.; D. B. Lees, M.A., M.D., 2, Thurloe Houses, Thurloe Square, London, S.W.

SECTION B.: SURGERY.—*President:* William S. Savory, M.B., F.R.S., London. *Vice-Presidents:* William Cadge, F.R.C.S., Norwich; John Wood, F.R.C.S., F.R.S., London. *Secretaries:* John Chiene, F.R.C.S.Ed., F.R.S.Edin., 21, Ainslie Place, Edinburgh; George E. Wherry, M.B., M.C., F.R.C.S., 63, Trumpington Street, Cambridge.

SECTION C.: OBSTETRIC MEDICINE.—*President:* W. S. Playfair, M.D., London. *Vice-Presidents:* H. Macnaughton Jones, M.D., Cork; Henry Gervis, M.D., London. *Secretaries:* R. N. Ingle, M.D., F.R.C.S., 21, Regent Street, Cambridge; C. E. Underhill, M.D., 8, Coates Crescent, Edinburgh.

SECTION D.: PUBLIC MEDICINE.—*President:* Henry W. Acland, M.D., LL.D., F.R.S., Oxford. *Vice-Presidents:* Arthur Ransome, M.A., M.D., Manchester; Thomas Pridgin Teale, M.A., F.R.C.S., Leeds. *Secretaries:* William Armistead, M.B., St. Mary's Villa, Station Road, Cambridge; Thos. J. Walker, M.D., 18, Westgate, Peterborough.

SECTION E.: PSYCHOLOGY.—*President:* J. Crichton Browne, M.D., LL.D., F.R.S., London. *Vice-Presidents:* G. F. Blandford, M.D., London; P. M. Deas, M.B., Macclesfield. *Secretaries:* G. M. Bacon, Hon. M.A., M.D., Lunatic Asylum, Fulbourn, Cambridge; Henry Sutherland, M.A., M.D., 6, Richmond Terrace, Whitehall, S.W.

SECTION F.: PHYSIOLOGY.—*President:* William Rutherford, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Arthur Gamgee, M.D., F.R.S., Manchester; Robert McDonnell, M.D., F.R.S., Dublin. *Secretaries:* W. H. Gaskell, M.A., M.D., Grantchester, Cambridge; William Stirling, D.Sc., M.B., Marischal College, Aberdeen.

SECTION G.: PATHOLOGY.—*President:* Sir James Paget, Bart., D.C.L., LL.D., F.R.S. *Vice-Presidents:* Samuel Wilks, M.D., F.R.S.; W. Howship Dickinson, M.D. *Secretaries:* W. S. Greenfield, M.D., 15, Palace Road, Albert Embankment; Charles Creighton, M.A., M.D., Anatomical Museum, Cambridge.

SECTION H.: OPHTHALMOLOGY.—*President:* William Bowman, F.R.C.S., F.R.S., London. *Vice-Presidents:* Henry Power, F.R.C.S., London; Henry R. Swanzy, M.B., Dublin. *Secretaries:* W. A. Brailey, M.A., M.D., 38, King's Road, Brownswood Park, London, N.; David Little, M.D., 21, St. John Street, Manchester.

A Subsection of Otology will be formed, of which Mr. W. B. Dalby, F.R.C.S., of London, will be Chairman, and Dr. James Patterson Cassells of Newton Terrace, Sauchiehall Street, Glasgow, honorary secretary.

Treasurer: R. M. Fawcett, M.D., 3, Scrope Terrace, Cambridge.

Honorary Local Secretaries: Bushell Anningson, M.A., M.D. (Hon. Medical Secretary), Walt-ham-sal, Barton Road, Cambridge; A. P. Humphry, Esq., M.A. (Hon. Reception Secretary), Corpus Buildings, Cambridge.

Letters relating to the strictly medical work (Sections, Museums, etc.) of the meeting should be addressed to Dr. Anningson; other letters to Mr. A. P. Humphry.

TUESDAY, AUGUST 10TH, 1880.

2 P.M. Meeting of Committee of Council at the Guildhall.
2.30 P.M. Meeting of the Council of 1879-80 at the Guildhall.
4 P.M. Short service, with sermon by the Bishop of Ely in King's College Chapel.
8 P.M. General Meeting in the Senate House. President's Address; Annual Report of Council and other business.
1. P.M. Reception in the Hall of Caius College (close to the Senate House).

WEDNESDAY, AUGUST 11TH.

9.30 A.M.—Meeting of Council of 1880-81 at the Guildhall.
11 A.M.—Second General Meeting in the Senate House. Address in Medicine.
12.30 P.M. Conferring Honorary Degrees in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
9 P.M.—Soirée in the Fitzwilliam Museum and grounds of Peterhouse by the Reception Committee.

THURSDAY, AUGUST 12TH.

9.30 A.M.—Meeting of the Committee of Council at the Guildhall.
10 A.M.—Third General Meeting in the Senate House. Reports of Committees.
11 A.M.—Address in Surgery in the Senate House.
2 to 5 P.M. Sectional Meetings in the New Museums and Lecture Rooms.
6 for 6.30 P.M.—Public Dinner in the Hall of Trinity College.

FRIDAY, AUGUST 13TH.

10 A.M. Address in Physiology in the Senate House.
11 A.M.—Sectional Meetings in the New Museums and Lecture Rooms.
1.30 P.M.—Concluding General Meeting in the Senate House. Reports of Committees and other business.
3 P.M.—Garden party in the grounds of King's College by the President.
9 P.M.—Conversazione in St. John's College and grounds.
[illegible] Garden Party [illegible]

The following subjects have been arranged for discussion in the various Sections.

1. Medicine.—On Hysterical Anæsthesia, opened by Dr. Bristowe; and on Asthma, introduced by Dr. Andrew Clark.

2. Surgery.—On the Treatment of Wounds, by Professor Lister; and on Stricture of the Urethra, by Sir Henry Thompson.

3. Obstetric Medicine.—On Uterine Hæmostatics, by Dr. Atthill; and on the Removal of Uterine Tumours by Abdominal Section, by Mr. Spencer Wells.

4. Public Medicine.—On the General Working of the Public Health Administration in Great Britain and Ireland, opened by Dr. Alfred

Carpenter and Dr. Francis T. Bond; and on Diseases communicable to Man from Diseased Animals when used as Food, by Mr. Francis Vacher and Mr. Edmund J. Syson.

5. Psychology.—On the Influence of Alcohol on the Causation of Insanity.

6. Physiology.—The evidence derived from Clinical Observations and Physiological Experiments as to the seat of the formation of Urea in the Body, by Professor Gamgee, F.R.S.; and on Sleep and Hypnotism, by Professor W. Preyer of Jena.

7. Pathology.—The Influence of Injuries and Morbid Conditions of the Nervous System on Nutrition, by Mr. Jonathan Hutchinson; and on Micro-organisms, their relation to Disease, opened by Professor Lister.

8. Ophthalmology.—Some points relating to the Perception of Colours, by Professor Donders; and the Nature of Glaucoma.

Subsection of Otology.—The following questions will be discussed, viz.: The Therapeutic Value of Electricity in Ear-Diseases; and the Comparative Value of the various Mechanical Aids to Hearing, with special regard to the several kinds of Artificial Drumheads, and to those Instruments which assist Deafness by conducting or transmitting Sound, either directly or indirectly, to the Organ of Hearing.

Annual Museums.

The Pathological Collection will be in the Anatomical Museum.

Honorary Secretary to the Pathological Collection: C. Creighton, M.D., Anatomical Museum, Cambridge.

The Exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetics, and Sanitary Appliances, will be in connection with the Reception Room in the Guildhall.

Honorary Secretary: G. Wallis, Esq., Corpus Buildings, Cambridge.

Honorary Secretary to the Sanitary Collection: W. Armistead, M.B., Station Road, Cambridge.

Excursions.

On Saturday, August 14th, there will be excursions to Ely, Peterborough, and Audley End.

Honorary Secretary to the Excursion Committee: G. Wallis, Esq., Corpus Buildings, Cambridge.

Annual Dinner.

The number of persons that can be accommodated in the Hall of Trinity College is limited to 350. Tickets for the annual dinner will be reserved for members who make application, accompanied by payment of one guinea, to A. P. Humphry, Esq., Corpus Buildings, Cambridge.

Accommodation in Cambridge.

A list of lodgings in Cambridge, giving the prices at which they will be obtainable at the time of the meeting of the Association, will shortly be published for the assistance of those members who desire to bespeak rooms. Owing to unavoidable absence from Cambridge, the Honorary Reception Secretary is at present unable personally to undertake the engagement of lodgings.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

The annual meeting will be held at Forres, in Charleson's Hotel, on Wednesday, July 14th, at twelve o'clock; Dr. Aitken (Inverness), President, in the Chair. Luncheon at 2.15 P.M.

The Secretary requests all members intending to read papers or to be present, to favour him with an intimation.

J. W. Norris Mackay, M.D., *Honorary Secretary.*

WEST SOMERSET BRANCH.

The annual meeting of this Branch will be held at the Squirrel Hotel, Wellington, on Thursday, July 22nd, at 3 P.M., under the Presidency of J. Meredith, Esq., M.D.

Dinner at half-past five o'clock punctually.

Members who may wish to read papers, or make any communications to the meeting, are requested to send notice to the undersigned.

W. M. Kelly, M.D., *Honorary Secretary.*

Taunton, June 21st, 1880.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

The annual general meeting of this Branch will be held at 198, Union Street, Aberdeen, on Saturday, the 24th instant, at 1.30 P.M.

Hospital visit at 11.30 A.M.

Dinner with the North of Scotland Medical Association, at the Palace Hotel, Union Bridge, at 3 o'clock P.M. Tickets, exclusive of wine during dinner, 5s.

J. Urquhart, *Honorary Secretary.*

YORKSHIRE BRANCH: ANNUAL MEETING.

The annual meeting of this Branch was held at Bradford, on June 16th; P. E. Miall, Esq., President, in the chair.

President's Address.—The President addressed the members to the following effect. After some remarks on the attitude of literature to medicine, opinions of Whewell, Carlyle, Sir W. Hamilton, and Lord Houghton adverse to medicine were considered. This led to remarks on medical sectarianism, venesection, and the use of alcohol. The degree of certainty attained by medicine was considered by showing the hypothetical nature of science in general in the early stages, and the comparatively safe position of much of medicine and physiology. The prophecy of Descartes, that great intellectual movements were likely to be evolved out of the medical sciences, was shown to have been fulfilled; and the attempt to separate physiology from medicine was considered at least premature. The history of medicine showed that it was, from the time of Hippocrates, a potent protest against superstition and hasty theorising, not only itself on a safe basis, but able to contribute much to general scientific thought and method. Its probable influence on Aristotle was traced, and afterwards on the Saracens and the culture of the middle ages. From the renaissance, the steady progress of medicine was regarded by the author as one of the main factors of human progress.

Report.—The report of the Council was read by the Secretary *pro tem.* It alluded in feeling terms to the death of Dr. Procter, the Secretary, and to the activity, energy, and ability he displayed in furthering the interests of the Branch; and also to the death of Dr. Heaton, who was most active in all its meetings. During the last year, three meetings had been held; the annual one at Sheffield; one at York, in conjunction with the Hull and East Riding Branch; and one at Wakefield. The resolutions passed by the Metropolitan Counties Branch, and submitted by the Committee of Council to the various Branches, had been sent to the members. The answers received were largely in their favour. The number of members of the Branch was 276.

On the motion of Dr. Leeson, seconded by Dr. Eastwood, the report was adopted.

Officers and Council.—On the motion of Mr. S. C. Hirst, seconded by Dr. Tibbits, the following gentlemen were elected as Council, and representatives to the General Council for 1880-81. *President:* P. E. Miall, Esq. *President-Elect:* A. Ball, Esq. *Branch Council:* York: Alfred Ball, Esq.; W. D. Husband, Esq.; W. Matterson, M.D.; S. W. North, Esq.; George Shann, M.D. Halifax: T. M. Dolan, Esq. Leeds: T. C. Allbutt, M.D.; J. E. Eddison, M.D.; T. R. Jessop, Esq.; T. P. Teale, Esq.; T. Scattergood, Esq.; C. G. Wheelhouse, Esq. Harrogate: A. S. Myrtle, M.D. Huddersfield: S. Knaggs, Esq. Rotherham: J. Hardwicke, Esq. Sheffield: M. Martin De Bartolomé, M.D.; H. F. Banham, M.B.; W. F. Favell, Esq.; Arthur Jackson, Esq.; J. H. Keeling, M.D. Bradford: W. Burnie, M.D.; D. Goyder, M.D.; R. H. Meade, Esq. Scarborough: J. W. Teale, Esq. Wakefield: S. Holdsworth, M.D. *Representatives in the General Council:* T. C. Allbutt, M.D.; J. E. Eddison, M.D.; W. F. Favell, Esq.; S. Holdsworth, M.D.; Arthur Jackson, Esq.; J. H. Keeling, M.D.; W. Matterson, M.D.; R. H. Meade, Esq.; G. Shann, M.D.; T. P. Teale, Esq.; C. G. Wheelhouse, Esq. *Secretary and Treasurer:* Arthur Jackson, Esq.

Papers.—The following were read:

1. Dr. Rabagliati: Note on the Management of the Pedicle in Ovariotomy.
2. Mr. R. H. Meade: Remarks on Cancerous Infiltration of the Skin.
3. Dr. J. F. Little: Cases of Rheumatoid Arthritis.
4. Dr. E. H. Jacob: Forms of Transient Hemiplegia.
5. Mr. T. M. Dolan: Ophthalmia in Workhouse Schools.

Dinner.—After the meeting, the members dined together at the Victoria Hotel.

MIDLAND BRANCH: ANNUAL MEETING.

The annual meeting of this Branch was held at the General Hospital, Nottingham, on Thursday, June 24th, under the presidency of T. Wright, M.D.

New Members.—The following new members were elected: Eugene J. O'Mullane, Esq., Nottingham; G. Bury Wray, Esq., Annesley; Forbes R. Mutch, Esq., Nottingham; E. D. Marriott, Esq., Notting-

ham; C. E. Bentley, Esq., Kirton, Lincolnshire. Dr. Moore was elected a member of the Branch.

Representatives in the General Council.—The following members were elected: E. Seaton, M.D., and J. White, Esq., for Nottinghamshire; W. Webb, M.D., and J. W. Baker, Esq., for Derbyshire; T. W. Benfield, Esq., and C. H. Marriott, M.D., for Leicestershire; E. Morris, M.D., and T. Sympson, F.R.C.S., for Lincolnshire.

Branch Council.—The following were elected; T. Elliott, M.D., and J. Thompson, Esq., for Nottinghamshire; E. Gaylor, Esq., and A. H. Dolman, Esq., for Derbyshire; G. C. Franklin, F.R.C.S., and F. H. Hodges, Esq., for Leicestershire; W. Newman, M.D., and W. J. Pilcher, F.R.C.S., for Lincolnshire.

The Local Secretaries were reappointed.

President-elect.—Dr. Buck, Physician to the Leicester Infirmary, was unanimously appointed President-elect

Papers.—The following papers were read.

1. Dr. Goodhart, Assistant-Physician to Guy's Hospital, read an interesting paper on the Rheumatic Diathesis in Children.

2. Dr. Newman exhibited a man from whom he had removed three inches of bone for Syphilitic Disease of the Olecranon and Shaft of the Ulna.

3. Mr. Legge read a paper on the results of one thousand cases of Midwifery.

4. Dr. Elder made remarks on a case of Uterine Flexion simulating Ulceration of the Stomach, and on the use of Chian Turpentine in Uterine Cancer. A discussion followed on the benefit stated to be obtained by the use of this drug, nearly all those present who had prescribed it stating that its administration had been followed by no relief.

5. Dr. Marshall read notes of cases of Amputation at the Hip-joint by Furneaux Jordan's method, and exhibited several very successful cases at the Children's Hospital.

Previously to the meeting, the members were entertained at luncheon by the President, Dr. Wright.

EAST YORK AND NORTH LINCOLN BRANCH: ANNUAL MEETING.

THE twenty-fourth annual meeting of this Branch was held in the Infirmary, Hull, on May 26th; the President, T. M. EVANS, Esq., in the chair.

President's Address.—After the ordinary business of the Branch had been transacted, the PRESIDENT read his address. It dealt with the following topics: 1. Antiseptic Surgery; 2. Anæsthetics; 3. The use of the Forceps in Labour; 4. The relation of Croup and Diphtheria; 5. Compulsory Registration of Infectious Diseases; 6. Animal Vaccination; 7. Hospital Out-patient Reform.

Communications.—The following communications were read.

1. Dr. Eastwood (Darlington) read a paper on the Diagnosis of General Paralysis of the Insane.

2. Dr. Frank Nicholson read a paper on the Changes associated with the Granular Kidney.

3. Mr. R. H. B. Nicholson showed a girl on whom he had performed Osteotomy for Double Genu Valgum, five months ago. The deformity was completely removed.

4. Mr. Nicholson also read the notes of a case in which he had removed the Cervix Uteri for Malignant Papilloma. The *écraseur* and curved scissors were used. The wound had nearly healed, and the condition of the patient had greatly improved.

5. Dr. Lunn showed a man on whom he had operated for Dislocation of the Astragalus. The astragalus was removed, and the patient could now walk a long distance easily.

6. Mr. Craven exhibited some Surgical Instruments, and made some remarks.

7. Mr. Sherburn showed a very large Uterine Fibroid Tumour which he had removed, and read the notes of the case.

Dinner.—In the evening, the members dined together at the Victoria Hotel.

GLASGOW AND WEST OF SCOTLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the Glasgow and West of Scotland Branch of the Association was held on Thursday, June 24th, in the Faculty Hall, St. Vincent Street; Professor W. T. GAIRDNER presiding.

Address of retiring President.—Dr. GAIRDNER said that, before retiring from the presidency into that repose which was more genial to his nature, he begged to thank the members of the Branch for the cordiality with which he had been supported, and the courtesy with which he had been treated on all occasions. So far as he was aware, the business of the Branch had been conducted in an admirable and satisfactory manner by the two Secretaries; and, although the membership was not quite so numerous as it was last year, yet this was due to accidental causes, and there could be no doubt whatever that the Branch was really a very flourishing institution, and comprised a very large number—though, perhaps, not so many as it might do—of the town and country practitioners of the West of Scotland. He felt peculiar pleasure in thinking that on his retirement the office of President was to be filled by one of their most honoured and respected country practitioners, Dr. Bruce Goff of Bothwell, in whose favour he had to vacate the chair. He had no doubt that during his presidency many new views would be started and discussed, and the usefulness of the Branch would be increased.—Dr. GOFF then took the chair.

Report of Council.—Dr. COATS, the Secretary, submitted the report, wherein it was stated that at present the members of the Branch numbered 139, as compared with 146 at last meeting. This slight diminution, it was stated, was due apparently to the unusual number of removals and deaths, while no special effort, such as had been previously made, had been made during the past year to increase the membership.

The report was adopted, as was also the financial statement submitted by Dr. Lyon, which showed a balance of £32 6s. 4½d. in the hands of the Treasurer.

President-Elect: Officers of Council.—On the motion of Dr. FERGUS, seconded by Professor GAIRDNER, Dr. Yellowlees was voted President-Elect. Dr. Sneddon (Beith), Dr. Christie (Hillhead), Dr. Munro (Kilmarnock), and Dr. Thomas (Glasgow), were appointed members of Council in room of those retiring; and Dr. Joseph Coats and Dr. Lyon were reappointed Secretaries. Dr. Gairdner, Dr. Cassells, Dr. Macleod, Dr. Macewen, Dr. Hugh Miller, and Dr. Fergus were appointed to represent the Branch in the General Council of the parent Association.

President's Address.—The newly elected President, Dr. GOFF, delivered his address. It dealt principally with the subject of the want of a proper *esprit de corps* in the medical profession. Dr. Goff pointed out that the true way for gentlemen of the medical profession to gain public respect was to show that they respected themselves, and were desirous of upholding the dignity of the profession. They should all strive to be as careful of the reputation of their professional brethren as of their own. Words could not be found strong enough to stigmatise the conduct of a man who sought to establish a reputation at the expense of another's. It was specially mean and contemptible for older members of the profession to treat juniors with superciliousness, or to say regarding them anything that might possibly damage their chances of advancement. Dr. Goff made mention of a few of the most frequent causes of dispute among the medical fraternity, and he advised his brethren to make themselves thoroughly acquainted with the laws of their profession. In a medico-ethical code that had been published, there were rules laid down, the following of which would be a sure preventive of many of the differences that arose amongst fellow-practitioners. The Association of which they were all members could exercise a considerable influence in the direction of accomplishing the object desired. He strongly urged the appointment of a Medico-ethical Committee, whose advice could be sought with regard to laws that might be considered obscure, and to whom might be referred with advantage the thousand and one differences that were continually cropping up among the members. There were various matters of which such a committee might take cognisance, and, amongst others, that of remuneration for medical services. Fees were sometimes tendered that were degrading, and there was not another profession that gave more gratuitous services. It was desirable that a minimum scale of fees should be drawn up for the guidance of the profession, in order that a fair remuneration might be secured for servics rendered. He thought more attention should be paid in the future to the ethics of the profession.

On the motion of Dr. CALDWELL (Shotts), seconded by Dr. STEWART (Greenock), a vote of thanks was accorded Dr. Goff for his address.

Medico-Ethical Committee.—The reappointment of a committee on medico-legal fees was agreed to; and, on the motion of Dr. MACLEOD (Kilmarnock), it was resolved, in accordance with Dr. Goff's suggestion, that the Council be authorised to form a Medico-ethical Committee.

Visit to the Infirmaries.—At the close of the meeting, the members of the Branch visited the Royal and Western Infirmaries, where a number of interesting demonstrations were witnessed.

SOUTH-WESTERN BRANCH: ANNUAL MEETING.

THE annual meeting for 1880 was held at Plymouth on June 18th. The President-elect, Dr. CLAY, provided a steamer, in which he received the members, hospitably entertained them at luncheon, and took them for an excursion up the river Tamar. The business of the meeting was

conducted in the great hall of Cothele, which had been placed at the disposal of the members by the Dowager Countess of Mount-Edgcumbe. In the unavoidable absence of the President, Mr. Cumming (Exeter), the chair was taken by Dr. THOMPSON (Bideford), who briefly introduced Dr. Clay.

Next General Meeting.—Redruth was fixed upon as the place in which to hold the annual meeting of 1881.

Officers and Council.—The following were elected, *President-elect:* R. S. Hudson, M.D. (Redruth). *Honorary Secretary:* S. Rees Philipps, M.D. (Exeter). *Council:* Dr. H. Harris (Redruth); Mr. J. Mudge (Hayle); Mr. J. Kempthorne (Callington); Mr. G. Kerswill (Looe); Mr. G. Mitchell (Redruth); Mr. J. Woodman (Exeter). *Representatives in the General Council:* Mr. J. Elliot (Kingsbridge); Dr. Gervis (Ashburton); Mr. J. Gould (Ashburton); Dr. H. Harris (Redruth); Dr. R. H. Hughes (Plymouth); Mr. J. Pollard (Torquay); Dr. J. Thompson (Bideford). *Representative on the Parliamentary Bills Committee:* Dr. Rees Philipps (Exeter).

Communications.—Dr. J. Thompson (Bideford), and Mr. W. Square (Plymouth), communicated interesting cases, and exhibited illustrative photographs.

The Vaccination Bill.—On the motion of Mr. J. WOODMAN (Exeter), it was unanimously resolved to send a petition to Parliament opposing the new Government Vaccination Bill.

Medical Education.—The resolutions on medical education, passed by the Metropolitan Counties Branch (copies of which resolutions had been circulated amongst the members), were then discussed. There was a considerable difference of opinion shown, and the discussion was adjourned.

The members paid a rapid visit to various parts of what is the most interesting old house in the West of England, and then returned by steamer to Plymouth, where a practical demonstration of the application of the Poroplastic Jacket in cases of Angular Curvature of the Spine was given by Mr. Wolferstan (Plymouth) for Mr. W. P. Swain (Devonport).

Dinner.—The members dined together at the Duke of Cornwall Hotel; the President, Dr. Clay, in the chair.

BATH AND BRISTOL BRANCH: ANNUAL MEETING.

THE annual meeting of the Branch was held at the Mineral Water Hospital, Bath, on July 1st. J. BEDDOE, M.D., President, took the Chair.

New Member.—R. Roxburgh, M.B., of Weston-super-Mare, was duly elected a member of the Association and of the Branch.

New President.—Dr. BEDDOE made a few remarks, and resigned the Chair to ALEXANDER WAUGH, Esq., who read his address.

Mr. PRICHARD moved, and Mr. MASON seconded, a vote of thanks to Mr. Waugh for his able and interesting address.

Report of the Council.—Mr. FOWLER read the following report.

"Your Council regrets that this year the report of the condition of the Branch is not so satisfactory as it has been on many former occasions. The losses by death have been very heavy, and many well-known and respected names will be missed from the list, and several very familiar voices will no longer be heard in our meetings. On the other hand, we have enrolled fourteen new members; so that, notwithstanding all losses from removal and other causes, the Branch still retains two hundred and seven members, or only three less than at our last annual meeting.

"Among those who have died, Crosby Leonard will be regretted most sincerely by a large section of the medical profession in this neighbourhood. As Bristol Secretary to the Branch from 1853 to 1860, and as President in 1871, his genial presence and generous hospitality will be long remembered. As Surgeon to the Bristol Royal Infirmary, to the Bristol Rifle Volunteers, and to the City Bridewell, his urbanity, skill, and devotion have seldom been excelled.

"Robert N. Stone was one of the early members of the Branch, and had long been on the Branch Council. He occupied the chair in 1868, and seldom missed attending any meeting of the Branch. He was from the commencement of the Volunteer movement an active member and surgeon of the Bath battalion.

"R. F. George was also President in 1844, having been one of the original founders of this Branch. He was for many years on the Bath Council, and Surgeon to the Bath Mineral Water Hospital, but retired some years ago into private life, though he still maintained his interest in the profession.

"G. W. Callender, F.R.S., whose untimely death occurred last autumn on his return from the United States, still retained his interest in his native city, Bristol, and was a member of this Branch, though his success was achieved in the more extended sphere of a metropolitan practice and connection with St. Bartholomew's Hospital.

"Dr. Gourlay of Weston-super-Mare had established a reputation as a most skilful physician, and had reached an eminent local position, when he was cut off in the prime of life.

"To Dr. Nash of Box, Dr. Bradshawe of Weston-super-Mare, Mr. W. E. Day of Bristol, and Dr. Fitzgerald of Twerton, we must refer as fellow-workers and members whose loss we greatly regret.

"Another name, however, must not be omitted, though not of one who has been recently among us, but one whom disease removed from our circle some time ago in the youth of his fame and usefulness—Dr. William Budd—of whom our colleague Mr. W. M. Clarke has read, and published in the JOURNAL, an able and well-merited memoir.

"Fifteen papers were read during the season, and many interesting cases were exhibited, and several discussions of great importance took place.

"The balance-sheet is not very satisfactory, as it shows a balance of only £1 19s. 4d. at the close of last year; but, notwithstanding this, your Council considers it desirable that the donation to the British Medical Benevolent Fund should not be discontinued.

"The Council regrets that Mr. E. L. Board, who has been Bristol Secretary for nine years, persists in his determination to resign his office.

"The following gentlemen have been reported by the Secretaries as elected members of the Branch Councils:—For Bath—E. Skeate, Esq.; J. K. Spender, M.D.; T. Cole, M.D.; H. Hensley, M.D.; T. G. Stockwell, Esq. For Bristol—J. G. Davey, M.D.; F. Brittan, M.D.; C. H. Collins, Esq.; W. M. Clarke, Esq.

"Your Council recommends that all meetings of the Branch should in future be held on a Thursday as heretofore, it having been found very inconvenient to arrange for their being held on a Wednesday."

Mr. D. DAVIES moved, and Dr. BRABAZON seconded, "That the report and balance-sheet now read be adopted".

Mr. ROSSITER moved, and Mr. COLLINS seconded, an amendment: "That the claims of the Weston-super-Mare members should not be overlooked, as Wednesday was more convenient to them."

The amendment was lost, and the original motion carried.

President-elect.—Dr. HENSLEY moved, and Dr. SWAYNE seconded, "That D. Davies, Esq., be President-elect". Carried unanimously.

Vote of Thanks.—Mr. PRICHARD moved, and Dr. SPENDER seconded, a very cordial vote of thanks to Dr. Beddoe for his able conduct in the chair during the past year.

Votes of thanks to the Council and Secretaries then followed.

Bristol Secretary.—Dr. DAVIES proposed, Dr. BURDER seconded, and it was resolved, "That E. Markham Skerritt, M.D., be Secretary for Bristol".

Dinner.—A large party afterwards dined together at the Grand Pump-Room Hotel. In the course of the evening, the members subscribed £3 to the Medical Benevolent Fund.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE second annual meeting of this District was held at the Forest Hotel, Chingford, on June 17th; JOHN WOOD, Esq., President of the Branch, in the chair.

A Report of the work of the past year was read by the Secretary and adopted.

The Secretary.—The CHAIRMAN then announced that Dr. Grant requested to be excused from being nominated for the office of Honorary Secretary for another year, and called upon any gentleman to propose a successor. Dr. Daly proposed that Mr. Frederick Wallace of Hackney be appointed; that was seconded by Dr. Mackenzie, and unanimously agreed to. The Chairman then proposed a cordial vote of thanks to the retiring Secretary. That proposal was unanimously agreed to, and was acknowledged by Dr. Grant.

Papers.—The following were read:

1. Dr. STEPHEN MACKENZIE read a paper on Some of the Conditions liable to be mistaken for Acute Glossitis; detailing cases of salivary calculus, acute ranula, inflammation and suppuration of the submaxillary fascia, and lastly herpetic inflammation of the tongue.

2. Dr. HERMAN read a paper on Congestive Dysmenorrhœa. Having considered the various classifications, the symptoms, and pathology of the disease, he entered upon the subject of treatment, recommending local depletion, moderate purgatives, and salines. Instead of complete rest, Dr. Herman advised moderate action.

3. Mr. TREVOR FOWLER of Epping read a paper on a Case of Triplets. One of the children was a male, another a female, and the third had the generative organs and rectum imperfectly developed.

The CHAIRMAN conveyed to the readers the thanks of the members.

A Vote of Thanks having been passed to the Chairman, the members adjourned.

Dinner.—Subsequently, twenty-three members and visitors dined together.

CORRESPONDENCE.

LYING-IN HOSPITALS.

SIR,—In the leading article on Lying-in Hospitals which appeared in the last number of the JOURNAL, the following sentence occurs: "Lying-in hospitals are on their trial"; and, "if the medical officers in charge are not able to reduce the mortality, to retain them any longer would be not only an abuse of charity, but a dereliction of duty". I do not at all object to the spirit in which the article is written; but I wish to point out that, if the verdict is to be based solely on the percentage of deaths in a lying-in hospital, a most erroneous decision will be arrived at, and one which will, I believe, entail the greatest injury on the really poor.

And, first, it is necessary to decide what is the actual rate of mortality likely to occur during the puerperal period in ordinary practice. I believe it to be greatly underrated. Dr. McClintock shows it to be about 1 in 100 (*vide* BRITISH MEDICAL JOURNAL for August 18th, 1878); and in an editorial article in the JOURNAL of May 24th, 1879, on "The Mortality in Lying-in Hospitals", the following passage occurs: "That the latter figures (1 in 100) represent the actual death-rate is placed beyond all doubt by the deaths in 10,818 labours, the statistics of which were collected by Dr. McClintock from sources above suspicion; they are as follows. Dr. Campbell of Paris, out of 1,500 patients attended in private practice, lost 13. Sir J. Simpson lost 4 out of 180; Dr. Matthews Duncan 8 in 736. Out of 1,000 consecutive patients in private practice, Dr. McClintock lost 12. Dr. Uvedale West had 23 deaths in 3,100 cases of private practice. Dr. T. Hamilton, in country private practice, had 7 deaths out of 402 cases. Dr. C. Egan reported 8 deaths in 400 cases among Europeans in British Kaffraria. Dr. W. T. Greene, in private practice among the lower, middle, and labouring-classes in a London suburb, had 12 deaths among 1,500 labours. Dr. George Jones reported 16 deaths out of 2,000 consecutive midwifery cases. The result of these figures is that nine accoucheurs reported 103 deaths in 10,818 labours in private practice, being a death-rate of 1 in 105, as nearly as possible."

This coincides very closely with my own experience. I have been engaged in midwifery practice for nearly thirty years, and I find that in my private practice the mortality has been just 1 in 100; and yet the deaths from any form of puerperal fever have been very few, and not less than four years intervened in each instance between the cases—consequently, I could not have carried infection from case to case.

If the mortality in Queen Charlotte's Hospital has been only 1 in 450 cases, it must not be looked on as anything but exceptional. In this hospital we have from time to time had a remarkable immunity from deaths. Three hundred deliveries have before now occurred consecutively without one death occurring, but the average remained unaltered for the year.

But, assuming 1 in 100 to be about the average death-rate in private practice, it will be replied that in the Rotunda Hospital the average has always been much higher. This is perfectly true; but the class of cases admitted into this hospital renders a comparison with private practice absolutely impossible. Admission to its wards is perfectly free. No woman in labour, no matter how hopeless her state, is ever refused admission, except she be suffering from an infectious disease. At the present moment, there is in the wards a woman who had had several fits of convulsions before admission, and who on this account was sent in; and another, who sought admission on account of most alarming hæmorrhage. Recently, a patient was admitted who was perfectly comatose, and who died in a short time without ever regaining consciousness. A large number of our patients are the victims of seduction, who, thrown friendless on the world, find an asylum here. The mortality among these is very large. If I desire to make the returns from this hospital read well, I have only to refuse admission to all unmarried women; all cases of deformity, of which not a few are sent to be delivered here from all parts of the country; all cases in which hæmorrhage, convulsions, etc., have occurred; and the mortality of this hospital would compare favourably with that of any practitioner who attends women of the very poor classes. If the death-rate occurring in a lying-in hospital is to be made the basis on which to found an estimate of its value, its statistics must be compiled with the greatest care. This I have attempted to do in some of the reports of this hospital which I have published. The following is from my last report.

Total number of deliveries, 1,179; total number of deaths, 15.

Class I. Deaths directly traceable to the nature of the labour, six cases.

Class II. Deaths resulting from or supervening on disease contracted before admission into hospital, four cases.

Class III. Deaths occurring in patients suffering from mental distress, three cases.

Class IV. Deaths not traceable to any predisposing cause, two cases.

I am, sir, LOMBE ATTHILL, M.D.,
July 5th, 1880. Master of the Rotunda Hospital.

SIR,—Your interesting article on this subject in your issue of the 3rd inst. calls for some acknowledgment in reply as to its general fairness, and also for some remarks to show that at all events in the oldest Lying-in Hospital in London (the British) we have not to contend with a committee which is antagonistic to schemes of reform.

As I am away for my holiday, I write on my own responsibility, without any communication with my colleagues.

I must contend that, properly administered, a lying-in hospital need not be such a hot-bed of mischief as is generally supposed. The cases admitted into such hospitals are not to be put side by side statistically with cases attended at private houses, or even in the very poorest lodgings—for all such cases are taken just as they come, as it were, but cases in lying-in hospitals are not only picked cases, but picked bad ones. If we hear of any case that has presented unusual difficulties in any previous labour, or of any primipara who is likely to have any abnormality in her labour, we try to get her into the hospital to watch the case and help us in our instruction of the midwives; also should any practitioner meet with any special difficulty in his practice among the poor, it not unfrequently happens that he sends it to a lying-in hospital. It therefore arises that there is a natural presumption in favour of a mortality above the average in lying-in hospitals as compared with all cases taken as they come outside.

It therefore stands to reason that when in a lying-in hospital the mortality is perhaps none in about 400 or 500 cases (150 being in-patients), or one, that one being of some disease that was wholly unconnected with the puerperal state, or one wherein the puerperal condition only hastened the already impending death—then such lying-in hospitals may be said to be doing a good work in the community, and helping to show that without them and the experience which their practice affords, a State would be withholding a means of benefiting the people. Since Dr. Edis and I have been attached to the British Lying-in Hospital, though we have not escaped one or two serious outbreaks of puerperal mischief, yet on the whole our result has been good—(1) because we have our wards fumigated and disinfected after three relays of patients have passed through them; (2) because our matron, who delivers all natural cases, has a strict sense of honour in carrying out our requirements, and knowing well when help is required, does not presume on her "experience"; (3) because we insist on firm *post partum* contraction of the utems and syringing with carbolic acid on the least deviation of the lochia from perfect normality; and (4) because our governing committee have, through confidence in their medical officers and trusting to their knowledge of their work, and being willing that their hospital should be well administered never refuse us anything in reason that we may suggest to them for the good of the patients committed to our charge. Having worked on thus amicably for eleven years, we trust we may continue to show that it is possible for lying-in hospitals to be productive of great good, and not to be the great unmixed evil that so many in the present day would try to prove them to be.—Yours faithfully,

HEYWOOD SMITH.

P.S.—I quite endorse what is evidently your idea that the inefficiency of Lying-in Hospitals is generally due to the lack of absolute confidence in, and entire deference to, the wishes of the medical staff on the part of the lay governors.

Westward Ho! Devonshire, July 6, 1880.

THE INOCULABILITY OF CHARBON.

SIR,—In the [illegible] of June 19th was a short notice of the experiments of MM. Arloing, Cornevin, and Thomas, on the "Inoculability of Charbon", as communicated to the Academy of Sciences. The disease which they have been investigating is described in the note as "symptomatic charbon", whereas it should rather have been called "external charbon" (charbon externe). My object in calling attention to this point is to avoid, as far as possible, the confusion which is entering into the nomenclature of these diseases, owing to the

different names used in Germany, and France, and England, and the still greater diversity of application of the same names. Anthrax is properly the synonym of charbon; and both these names should, strictly speaking, be confined to the external form, synonymous with our "malignant pustule", or "malignant carbuncle". To the fact that Cohn renamed the "bacteridium" of Davaine, *Bacillus Anthracis*, is due the very common application of the name anthrax to the generalised as distinguished from the local affection. It is a pity that we cannot devise some less objectionable names, but it is probably too late to do so.

To return to the experiments. They should read thus: MM. Arloing, Cornevin, and Thomas were investigating a form of "charbon externe", which is identical with the disease known in England as "quarter evil", or "black quarter", as is evident from the description which they give. This they distinguish from *mal de rate*, or "splenic fever", which is generalised symptomatic anthrax, often without any localised external lesion.

May I also add that the results of these experiments have been anticipated by my own experiments on the same disease, made last year, some of which I described in my lectures at the University of London, and have been published in the journal of the Royal Agricultural Society. Some further observations on the microscopic organism concerned in the disease await publication. The experiments of MM. Arloing, Cornevin, and Thomas were apparently almost identical in method, and, so far as can be judged from the details which they have yet published, in results also, with my own, and confirm the complete separation of this disease from true charbon or anthrax, and from the *adénie malin* of French writers.—With apologies for occupying so much of your space, yours faithfully,

Brown Institute. W. S. GREENFIELD, M.D.

WARNING TO TRAVELLERS.

SIR,—As Meiringen, near Brienz, is a favourite summer resort with many English travellers, I hasten to inform you that at the present moment typhoid fever is still raging there, and has been raging there for some time in a virulent form. The authorities have converted the school house into a fever hospital, and three medical men have come over from Berne to assist the medical men of Meiringen. The outbreak of fever has been traced to impure drinking water.

This communication may be all the more necessary, as I find that not only the people at Meiringen, but also inhabitants of the neighbourhood, try, for obvious reasons, to conceal the true state of things. Please communicate the above to the daily papers.—I am, sir, your obedient servant, A TRAVELLER.

Lucern, July 6th, 1880.

THORACENTESIS, DRAINAGE, AND ANTISEPTICS.

SIR,—I had not the good fortune to hear the discussion on paracentesis and drainage of suppurating cavities within the chest, which took place at the Royal Medical and Chirurgical Society on June 8, but should like to offer a few remarks on this subject. The question of incising a basic cavity in the lung presented itself to me three years ago in the case of a little boy 13 years old, under my care at Victoria Park Hospital. The boy had a dull airless patch at the base of his right lung. When laid on the bed, with his head low, a violent paroxysm of cough came on, with a copious discharge of yellow fetid pus, mixed often with blood; and after the completion of this performance, loud gurglings were heard on listening over the hitherto airless base of the right lung. The sounds seemed deep, and not superficial, and for this reason I was averse to any operation. The house physician, Mr. Bark, took care to invert the lad every morning, and by attention to this the cavity was by degrees emptied so completely that contraction of the chest-wall took place, the gurgling sounds were no longer heard, and the boy left the hospital to all appearance well. He subsequently had a temporary relapse, in consequence of a bad cold, caught from bathing. Shortly before my patient was admitted, Mr. Bark told me of a similar case that had been under Dr. Andrew, which resulted in a complete recovery. It appears to me, therefore, worth while to try in a young patient how far we can empty a basic collection of pus by changing the position before proceeding to incise the chest.

With regard to the practical observations of the President, Mr. Erichsen, as to paracentesis and drainage, I am sure from what I have observed of the progress made in cases where the thorax has been incised that the very first thing is efficient drainage. If drainage be complete, washing out is not necessary, and the risks attending upon this business, which, from what I have heard, are by no means imaginary, are avoided. Eighteen months ago I saw a case of empyema of the right side of the chest with Mr. Bullock, of Isleworth, and we decided at once to incise the chest, and put in a short tube, after having once aspirated the chest on January 18th. On February 4th, Mr. Alderton gave chloroform, and Mr. Bullock made a free incision of the fifth right interspace, posterior to the axillary line. There was no hæmorrhage; a short tube of the form used by obstetricians was pushed in on a probe, and as on removal of the probe the tube bulged at its extremity, there was no fear of its being forced out. There was no washing out of the chest; the discharge only once threatened to become fetid, and made us consider the question of a second opening, and on March 12 the tube was withdrawn, after which a steady recovery followed. The lung expanded well; there was no deformity of chest, and two months ago I saw the young man riding on a bicycle in perfect health.

In the case just related every practical detail was carried on, always under a carbolic spray, and the amount of carbolised gauze consumed was enormous. From experience of this, and another case a short time previously, I do believe most firmly in the value of the antiseptic method, and would say, never meddle with a chest-wound unless a carbolic spray surrounds it.

Only lately I had been considering whether some less dangerous instrument than the scalpel could be contrived for opening the way for the thoracic tube. I have never seen serious bleeding, but have had a case come to my knowledge in which the very skilful surgeon who operated told me that there was such free bleeding as to necessitate plugging the wound. Very recently, in the case of a child at the West London Hospital with a fistulous opening, leading to an empyema, my surgical colleague, Mr. Swinford Edwards, adopted the plan of forcing open the fistulous tract by forceps, and then with ease a tube was inserted.—Obediently yours, JOHN C. THOROWGOOD.

Welbeck Street, W., June 19th, 1880.

SUGGESTIONS RESPECTING A MEDICAL AND SURGICAL BED-DRESS.

SIR,—The requirements of medical and surgical practice often necessitate the change of body-clothes, under circumstances which render it all important that the patient should be moved or disturbed as little as possible. It may be necessary to avoid fatigue, alteration of posture, or some allied condition; and in such cases the form of bed-dress suggested may prove of service. The idea has been carried out by Mr. Goode of 50, Praed Street, Paddington, and he has in stock samples for inspection.

The original principle suggested by me was to substitute buttons along the front and back and down the seams of the sleeves, in lieu of the usual plan of placing buttons at the top in front and at the wrist-bands only. By the above method the dress, or any part of it, can be readily opened for purposes of inspection, auscultation, the application of poultices, remedies, etc., without disturbing or raising the patient. If need be, the dress can be practically divided into two halves, for removal or reapplication with the least possible difficulty. Various modifications of the ordinary long-cloth material can be employed—such as long-cloth lined with flannel, or flannel substituted for the long-cloth; or any part can be lined with mackintosh to meet the requirements of medical or surgical practice. Mr. Goode is prepared to apply such alterations as any individual practitioner may wish to the original principle.

Should bed-sores threaten, the buttons can be altered and placed at the sides instead of at the front and back; or, if preferred, removed altogether, and tapes or elastic substituted.—I am, etc.,

H. CRIPPS LAWRENCE, L.R.C.P.Lond., etc.

THE STATE OF THE HEART IN DEATH FROM CHLOROFORM.

SIR,—It must have occurred to readers of the reports of the deaths from chloroform, that only one thickness of lint and only a small quantity of chloroform are required to send a man in search of a 'fatty heart', which to do him justice he generally finds to the juries' satisfaction. Men should try the Scotch method, and use four thicknesses of towel, and let the heart and pulse alone, both before and at the time of administration, and regard only the breathing and the colour of the face, which they can easily do by keeping the towels quite away from the face, by looping it under the chin of the patient when it stands away at right angles to the face. By this method I have given it hundreds of times under all conditions of heart and lung disease: in extreme old age—one a case of 97 years—in extreme youth, in pregnancy at term, to a man whose normal pulse (?) was 28 per minute in health (?) and without the shadow of an accident. There is no condition whatever under which I have as yet hesitated to give it. If people

will go on filtering pure heavy chloroform vapour into a patient's lungs through one thickness of lint after having depressed him by auscultation and pulse-feeling, then they will always require that miserable subterfuge, the 'fatty heart' or the 'large flabby heart'. I have never put a patient under the influence of chloroform in less than ten minutes yet, oftener it is nearer half an hour before they go off; but with the 'lint filter' the pure vapour does it in less than five minutes very often, and with what percentage of results our medical and even lay press bears only too solemn a testimony.—I am, yours, ANGLO-SCOT.

London, June 22, 1880.

HYDROPHOBIA.

SIR,—The number of cases of hydrophobia reported from time to time in your and other medical journals induces me to ask the gentlemen under whose care they were to send me a short account of them, as I am at present engaged in some investigations on this fearful malady, which appears to have increased in a most alarming degree within the past few years.—I am, Sir, yours, etc.,

THOS. C. SHINKWIN,
Author of *Lectures on Hydrophobia, its History, Pathology, and Treatment.*

North Mall House, Cork, June 26th, 1880.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—July 6th.

The "Plank Bed".—Mr. PEEL, in reply to Mr. P. A. Taylor, stated that in 1863 a Select Committee of the House of Lords reported that the use of plank beds similar to the Guards' beds in military prisons, should be resorted to in short sentences. In the Prison Act, 1865, there was an enactment to the following effect: "A convicted criminal prisoner may be required to sleep on a plank bed without mattress during such times as may be required by the rules of the prison." The fact of the plank bed having been almost universal since that time might be supposed to indicate that it answered its purpose. In 1878 the Home Secretary gave orders that in the case of women and young prisoners there should be a pillow and a mattress "other than a wooden one". The rule was laid on the table in 1878, and was to the effect that a convicted criminal prisoner should during the whole of his sentence when it did not exceed a month, or during one month when the sentence exceeded that period, should be required to sleep on a plank bed. A prisoner was allowed to earn a remission of that requirement after the first month, but he was liable to have it reimposed for idleness, inattention to instructions, and misconduct.

Saturday, July 3rd.

The Poisoning at Welbeck.—Mr. MAPPIN: I wish to ask the Secretary of State for the Home Department if his attention has been called to the alleged wholesale poisoning at Welbeck, Nottinghamshire, where several deaths have occurred, and it is said sixty persons have been ill; and if he will send a Government official to inquire into the whole affair, as the adjourned inquest has been held, and the deputy coroner expressed an opinion very much in opposition to the medical evidence produced. —Mr. A. PEEL, in reply, said: The local medical officer of health has been in communication with the Local Government Board, who has to do with such matters, and the Local Government Board, if they think it necessary, will send down a gentleman specially to make inquiries into the subject. I may say that an inquest is now pending, and that the medical officers are examining the intestines of the unfortunate victims of this lamentable occurrence. I shall be able to give further information on the subject when I have seen the President of the Local Government Board, but I have little doubt that if an inquiry should be necessary there will be no difficulty in sending down a gentleman to make a special inquiry.

THE Worshipful Company of Goldsmiths have granted a second donation of fifty pounds (£50) to the Association for the Oral Instruction of the Deaf and Dumb, 11, Fitzroy Square, W.

THE STATISTICAL SOCIETY OF IRELAND.—Dr. Mapother, the late President of the Royal College of Surgeons in Ireland, has been elected President of the Statistical Society of Ireland. With the exception of Sir John Lentaigne, C.B., who does not practise, Dr. Mapother is the first member of the profession who has been honoured by being placed in the presidential chair of this important Society.

MILITARY AND NAVAL MEDICAL SERVICES.

THE promotion of Deputy Surgeon-General Sir A. D. Home, K.C.B., V.C., to the rank of Surgeon-General, will not remove him from his present station (Madras), as the appointment he has been recently holding there is one belonging to the Surgeon-General's rank.

ORDERS have been despatched to Deputy Surgeon-General W. A. Mackinnon, C.B., now serving as Principal Medical Officer at Hong Kong, to proceed from that station and to take over the duties of Principal Medical Officer at Malta, in anticipation of his promotion to the rank of Surgeon-General. The appointment at Malta has been vacant since the retirement of Surgeon-General Godfrey Watt, which took place several months ago.

THE LATE SURGEON-MAJOR SHEPHERD.

A MEMORIAL brass has just been placed on the wall of the Royal Victoria Hospital Chapel at Netley, in memory of the late Surgeon-Major Shepherd, A.M.D., who, it may be remembered, was riding away with a fair chance of escaping from the field of slaughter at Isandhlwane, when seeing a man wounded by his side he dismounted to help him, but was shortly afterwards assegaied. The brass has the following inscription upon it: "In memory of Peter Shepherd, M.B., University of Aberdeen, Surgeon-Major Her Majesty's Army; born at Leochel Cushnie, Aberdeenshire, 25th August 1841; who sacrificed his own life at the battle of Isandhlwane, Zululand, 22nd January 1879, in the endeavour to save the life of a wounded comrade. Erected by his brother officers and friends." The brass, which is large and handsome, supported on a thick slab of black enamelled slate, is erected side by side with a tablet commemorative of the late Dr. Halyburton Ross of the 39th Regiment, placed in the chapel "as a mark of affection" by the officers, non-commissioned officers, and men of the 39th Regiment. The committee that arranged the Shepherd Memorial for the Netley Chapel have also placed a marble tablet to his memory in the parish church of his native place in Aberdeenshire, and have founded a "Shepherd Gold Medal" to be competed for annually as a surgical prize in the University of Aberdeen.

MEDICAL SERVICE IN THE NAVY.

The United Service Gazette of last week refers to two instances of the present mode of treatment of medical officers in the navy, which are certainly not calculated to lessen the existing disfavour into which that service has fallen, or to lessen its unpopularity in the medical schools. In one instance, it appears that the captain of a ship in a Home port has taken upon himself to prohibit a junior medical officer from discharging his ordinary duties, and to order the Fleet officer to take alternate days with the senior surgeon. The junior medical officer in question is not only a fully qualified medical man, but one who passed into the service first of nineteen. Such a mode of marking official displeasure is properly described as a parody on discipline, and a great insult to the medical officer in question.

THE NAVAL MEDICAL SERVICE

SIR,—I should wish, with your permission, to bring to the notice of [illegible] who [illegible] at the [illegible] examination, which has [illegible] widely advertised, [illegible] as one of [illegible] which has [illegible] to be conducted, I suppose, [illegible] the guidance of candidates, but it will [illegible] add greatly to their comfort and sense of self-respect, should they be so fortunate as [illegible] the [illegible] service.

"Nothing [illegible] as [illegible] of men," writes Thomas Carlyle on the [illegible] of the [illegible] what the nature of this new [illegible] which they are invited to pass, I will proceed to explain. It will appear, those of your readers who have learned, from recent debates in Parliament on the flogging question, that the same powers who have condemned it, on the score of its degrading nature, have invented a moral punishment for officers, ten times more degrading, and calculated to obliterate every trace of manly self-dependence. In future, a secret report is to be made annually upon all officers by the captain, in a tabulated form, the questions being of the most inquisitorial nature, including the state of their pecuniary affairs; their tastes, whether gentlemanly or otherwise; their habits, whether objectionable or not; their tempers, soberness, and chastity; their professional capabilities; the [illegible] to be determined by the captain, and a variety of other questions similarly offensive, but of too exhaustive a nature for insertion in the form of a letter. This document, so un-English in its character and details, has aroused the wrath of the professional press, and is now receiving, at their hands, the treatment it deserves; but in the pages of the JOURNAL it is more likely to attract the attention of those for whom the information is intended; and as this notice [illegible] as well they should have an opportunity of forming [illegible] upon all the [illegible] advantages held out to them, as well as the one so prominently brought to their notice, but at the same time so flagrantly disregarded by the Admiralty, as the privilege they are told they are to possess, "the choice of cabins according to relative rank."—I am, etc., CRUX.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRATION OF INFECTIOUS DISEASES.

SIR,—The letter of your correspondent signed "One sufferer out of many", which appeared in your issue of the 3rd inst., is, for several reasons, open to serious objection. It is exaggerated in style, and its tone is evidently marked with that prejudice which springs from professional jealousy, making it lack that calmness which the consideration of so important a subject demands. He seeks to bring into discredit the useful work of the sanitary official, and thus to call in question the wisdom of the legislation, which made obligatory such appointments. Instead of endeavouring to find some way of reconciling the difficulties of the situation of which he complains he contents himself with generally disparaging the work and trying to lower the professional status of the officer of health. Surely to do this without further proof than that he advances, and, furthermore, to do it under a *nom de plume*, is a course deserving of just rebuke; seeing that so small a number of large sea-side watering places have compulsory powers of registration in force, it is by no means difficult to perceive or to discover at whom these imputations of unprofessional conduct are levelled. But this, sir, is more a matter which concerns you, in your editorial capacity, and not an affair for my interference; it is, however, not apparent to any unbiassed reader, that the officer in question has exceeded in any way his duty, or has been actuated by any more unworthy motive than his zealous desire for its efficient discharge, in accordance with the expectations of those who appointed him. Having had two years experience of the operation of compulsory registration, I am satisfied that, under certain conditions, it is likely to produce most salutary and satisfactory results. This I believe to be generally acknowledged in our district, where, happily, and for a very obvious reason, no hitch of any kind has occurred. Certain it is that, in an outbreak of typhus fever, we have been able to trace each case, and to demonstrate how large a part direct intercommunication plays in the spread of such cases. We have been able, by the vigilant efforts of an able health-officer, to use such measures of precaution from removal, isolation, and disinfection, as prevented the epidemic assuming much more serious proportions. Surely your correspondent cannot doubt that it is proper that sanitary authorities, whose duty it is to deal with the conditions on which the origin and spread of infectious fevers mainly depend, should also be armed with the means of their discovery and control. Surely he cannot doubt that it is safer and more orderly that a special work of this kind should be entrusted to a special and responsible staff, rather than to the voluntary and irresponsible efforts of an ordinary medical attendant, whose influence, as it can only be of a moral character, is, through negligence or ignorance, too frequently disregarded. Is it not more desirable to know the locality, nature, and extent of such visitations from an organised system, such as compulsory registration alone affords, than to rely for such knowledge upon the records of mortality furnished by the Registrar of deaths? Is not the latter course one which forcibly reminds us of the operation of locking the stable-door after the steed has been stolen? To some extent, however, I sympathise with your correspondent in the large sea-side watering-place, I mean in disapproving of the tenure of health appointments by private practitioners; and had he confined his observations to a condemnation of such a combination of duties, I could heartily have agreed with him. I hold with another correspondent on this subject, who, two or three weeks ago, described it as "unfair and unjust" because giving him (the officer of health) "an advantage that places him at once out of the way of ordinary competition". When a sufficient salary is given to allow of services being exclusively devoted to sanitary work, none of these objections of unfair rivalry are felt, and nothing but harmony and co operation between the officer of health and the general practitioner need exist. Hitherto this has been clearly demonstrated in our town. Since the recent elevation of our officer of health, Mr. Spear, to a post under the Local Government Board, and the severance of the combination of districts, which under him existed, we have been obliged (for financial reasons) to appoint a general practitioner. What the result of this change may be, I forbear to predict. We may conclude, however, both from reason and experience, that a real grievance exists, and the remedy is not far to seek. It lies in the reform of our sanitary laws. The direction which this reform should take is clear: 1. In the prohibition of health-officers undertaking private practice: 2. In the formation of combined areas, when not sufficiently large and populous, to ensure sufficient work and remuneration for men of ability. It is unfortunate that when officers of health were first appointed these provisions were not enacted. The consequence has been the creation of a number of vested interests, the abolition of which will create much dissatisfaction. Nevertheless, I feel I am right in asserting that, were these amendments to become law, the country from a sanitary point of view would be greatly benefited, and what is indeed of slighter moment, the interest of the medical profession, as a whole, certainly not deteriorated.—I am, sir, yours truly,

Jarrow, July 5th, 1880. ROBERT HUNTLEY.

TRANSPOSITION OF THE VISCERA.—We read, in the *Moniteur du Calvados*, that a complete inversion of the thoracic and abdominal organs was discovered in a *post mortem* examination of the body of a young girl aged 17, under the care of Dr. Denis Dumont, principal surgeon to the Hôtel-Dieu Hospital at Caen. The whole of the viscera, although of perfectly normal form and structure, had undergone so thorough a displacement, that those of the right side were lodged in the left, and *vice versâ*. The left lung presented three lobes, whilst the right lung had only two. The heart was situated on the right side, and the arch of the aorta was directed to the same side. The liver occupied the left hypochondrium; the stomach and the spleen had taken its place in the right hypochondrium. Finally, the intestinal mass had undergone an analogous transposition. The relations of the organs to each other were perfectly retained, so that this arrangement in no way detracted from the perfectness of their functions. It was a well marked example of that monstrosity known as splanchnic inversion, of which several cases, both in the living and in the dead subject, have been recorded in medical literature.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 1st, 1880.

Carnall, Edward, Fowey, Cornwall.
Sellers, William, Radcliffe, Manchester.
Scarth, Isaac, Longsight, Manchester.

In the list published at page 995 of the last volume of the JOURNAL, "Ersohn, William R.", should be "Erson, William R."

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDEE UNION—Medical Officer for Collon Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on 15th instant.

BALLYMAHON UNION—Medical Officer for Ballymore Dispensary District. Salary, £100 per annum, with £20 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 19th instant.

*BELGRAVE HOSPITAL FOR CHILDREN Surgeon. Applications, with testimonials, to the Honorary Secretary on or before July 24th.

BRISTOL GENERAL HOSPITAL—Physician's Assistant. Salary, £50 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary on or before July 12th.

*CARLISLE DISPENSARY Junior House-Surgeon. Salary, £90, with apartments, coals, gas, and attendance. Applications, with qualifications and testimonials, to the Secretary.

ENNISTYMON UNION—Medical Officer for Ennistymon Dispensary District Salary, £100 per annum, with £20 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 10th July.

*EVELINA HOSPITAL FOR SICK CHILDREN—Registrar and Chloroformist. Salary, £30 per annum, with an additional £20 if held for twelve months. Applications, with testimonials, not later than July 27th.

HARTLEPOOL FRIENDLY SOCIETIES' MEDICAL ASSOCIATION—Medical Officer. Salary, £150 per annum, with 10s. 6d. for each midwifery case, house, coal, gas, etc. Applications, with testimonials, not later than July 14th.

HERTFORD BRITISH HOSPITAL, Neuilly, Paris—Resident Clinical Assistant. Salary, 100 francs per month. Applications, with testimonials, on or before July 20th.

*HERTFORD GENERAL INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before July 28th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST—Resident Clinical Assistant. Applications, with testimonials, on or before July 10th.

*KENT AND CANTERBURY HOSPITAL—Assistant House-Surgeon and Dispenser. Salary, £50 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary, on or before July 23rd.

KILMACTHOMAS UNION—Medical Officer for Kilmacthomas Dispensary District. Salary, £100 per annum, with £20 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 13th instant.

*NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications, with testimonials, to the Secretary on or before July 21st.

NEWCASTLE-IN-EMLYN UNION—Medical Officer for the Kenarth District and Workhouse. Salary, £183 15s. 6d. per annum.

NEWPORT (Monmouthshire) ODD FELLOWS MEDICAL AID ASSOCIATION—Assistant Medical Officer. Salary, £130 per annum. Applications to the Secretary, with testimonials, not later than July 14th.

NORTH STAFFORDSHIRE INFIRMARY—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications, with testimonials, not later than July 27th.

*OWENS COLLEGE, MANCHESTER.—Lectureship in Practical Surgery. Applications, with testimonials, not later than July 20th.

*PLYMOUTH PUBLIC DISPENSARY—Honorary Surgeon. Applications, with testimonials, etc., to the Secretary, on or before July 12th.

*ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, St. George's Circus, S.E.—Qualified Clinical Assistant. Applications to the Secretary not later than July 12th.

ROSCOMMON COUNTY INFIRMARY—Apothecary who will act as Registrar at a salary of £30 per annum, with first-class rations and apartments; or if the offices are separated, apothecary will receive £30 yearly, and will not be required to reside in the institution. Election on the 31st instant.

SKIBBEREEN UNION—Medical Officer for Union Hall Dispensary District. Salary, £120 per annum, with £20 yearly as Medical Officer of Health, Registration and vaccination fees. Election on the 16th instant.

WILLITON UNION, Somerset—Medical Officer for the Porlock District. Salary, £50 per annum. Applications, with testimonials, before July 12th.

YOUGHAL UNION—Medical Officer for Ardmore Dispensary District. Salary, £120 per annum, with £24 yearly as Medical Officer of Health, registration and vaccination fees. Election on 12th instant.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BAKER, James B., appointed Assistant Surgical Officer to Charing Cross Hospital, *vice* W. J. Clarke L.S.A., appointed Assistant Medical Officer.

BOND, J. W., M.B., appointed Resident Medical Officer to University College Hospital, vice G. C. Henderson, M.B.

CHESTER, William J., L.S.A., appointed Assistant Medical Officer to Charing Cross Hospital, vice Hewitt, whose term of office had expired.

COLLINS, John Churton, M.R.C.S., appointed Resident Medical Officer to Charing Cross Hospital, vice Percy, whose term of office had expired.

FOX, Frances, M.R.C.S., appointed Dental Surgeon to the Infant Orphan Asylum, Wanstead, and to the Royal Hospital for Incurables, Putney, vice S. J. Fancy, M.R.C.S., resigned.

HEWITSON, Wm. A., M.R.C.S., appointed Assistant-Surgeon to the Gateshead Dispensary, vice F. Potts, M.R.C.S., resigned.

REEVE, G. S., M.D., appointed Ophthalmic and Aural Surgeon to the General Hospital, Toronto, Canada.

SHARLAND, Frank, M.R.C.S., appointed Assistant Medical Officer to the Wonford House Hospital for the Insane, Exeter.

STEARNS, S. A. K., M.D., appointed Assistant Medical Officer to the East Riding Lunatic Asylum, vice Henry Godfrey James, L.R.C.P.Ed., deceased.

VEITCH, Archibald, M.B., appointed Assistant House-Surgeon to the Cumberland Infirmary.

WALKER, William, L.S.A., appointed Resident Obstetrical Officer to Charing Cross Hospital, vice J. C. Culling, M.R.C.S., appointed Resident Medical Officer.

WATSON, Frank Spencer, M.R.C.S., appointed Resident Surgical Officer to Charing Cross Hospital, vice Turton, whose term of office had expired.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

PARSONS.—On July 6th, at 13, Whitworth Road, South Norwood, the wife of H. Franklin Parsons, M.D., of H.M.'s Local Government Board—a daughter.

MARRIAGES.

HERAPATH—LANE.—On Thursday, the 24th instant, at St. Mary's, Tyndall's Park, Clifton, by the Rev. W. F. Bryant, M.A., assisted by the Rev. J. Kerry, Charles Kynaston Herapath, Surgeon, 11, Brunswick Square, Bristol, only son of the late W. B. Herapath, M.D., F.R.S., to Emily Kate, only daughter of Frederick Lane, Esq., of Lawrenny, Leigh Road, Clifton.

HEWITT—MAUDE.—On June 30th, at the Wesleyan Chapel, Mansfield, by the Rev. C. W. L. Christien, assisted by the Rev. T. W. Johnstone, John Wilson Hamill, M.D., of Higher Broughton, Manchester, to Fanny Isabel, eldest daughter of James Maude, The Woodlands, Mansfield.

THE METEOROLOGICAL SOCIETY.—The last ordinary meeting of this society for the present session was held on Wednesday, June 16th, at the Institution of Civil Engineers, Mr. G. J. Symons, F.R.S., President, in the chair. A paper on "Ozone in Nature, its Relations, Sources, and Influences, etc., from Fifteen Years Observations Ashore and Afloat, under all Conditions of Climate," by Dr. J. Mulvany, R.N., was read. The author said that the meteorological elements with which ozone is most intimately associated are such as occasion high vapour-tension, and a high degree of saturation; therefore it is promoted by wind passing over a large aqueous expanse and by heat producing rapid evaporation. Hence heat, if humid, is no bar to atmospheric ozonisation, but no definite relation exists in the atmosphere between heat, *per se*, and ozone. Its relation to humidity was more definite and direct, but subject to many exceptions. In consequence of this relation it most abounds where its chemical qualities render it most useful. It appears to be formed in the upper strata, and to be carried downwards by rain-drops. The spherules of water which constitute dew, and have their origin in radiation and condensation, have a similar office. Ozone does not appear to diffuse readily downwards, so that when the lower strata are robbed of ozone by jungle, etc., a considerable difference in the condition of ozone close to and at 170 feet above the surface may exist. The author was of opinion that no disease can be clearly traced to ozone as met with in the atmosphere. Other papers read were, 2. "The Average Height of the Barometer in London", by Mr. Henry Storks Eaton; 3. "Note on a Waterspout observed at Morant Cays, Jamaica, March 23rd, 1880", by Lieut. Alfred Carpenter, R.N. 4. "Account of a Balloon Ascent from Lewes in a Whirlwind, on March 23rd, 1880", by Capts. James Templer and H. Elsdale; 5. Results of Meteorological Observations made at Stanley, Falkland Islands, 1875-77", by Mr. W. Marriot; 6. "A New Thermograph", by W. D. Bowkett; 7. "The Winter Climate of Davos", by Dr. C. T. Williams, M.D. Among the high altitude sanitaria of Europe, Davos at present enjoys the greatest reputation, partly on account of its easy accessibility, and partly on account of certain peculiarities of position and shelter. The valley of Davos lies in the canton of the Grisons, between the valleys of the Lower Rhine and the Upper Engadine. The valley runs from N.N.W. to S.S.E. for about ten miles in length, with an average breadth of about a third of a mile, being for the most part of this extent a plain gently sloping towards the north, and varying in elevation from 5,400 to 4,500 feet. Davos Platz is 5,105 feet above the sea level. The author discusses the observations made during the four winters of 1876-7 to 1879-80. The peculiar effects of Davos winter climate seem to depend on, 1. The rarefaction of the atmosphere; 2. Its dryness; 3. The absence of strong currents, owing partly to shelter, and partly to the uniform layer of snow spread around; and 4. The large percentage of the *direct* solar rays reaching the locality owing to rarefaction of the air, and also the considerable amount of heat reflected from the extensive snow plain in front of the villages of Davos Platz.

PUBLIC HEALTH.—During last week, being the twenty-sixth week of this year, 3,248 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. The annual death-rate was 22 in Edinburgh, 20 in Glasgow, and 34 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth 12, Bradford 14, Wolverhampton 14, Nottingham 15, Plymouth 15, Leeds 16, Sheffield 17, Bristol 17, Newcastle-upon-Tyne 18, Brighton 18, Birmingham 18, London 19, Manchester 19, Hull 20, Salford 21, Leicester 23, Sunderland 24, Norwich 25, Liverpool 26, and the highest rate 30 in Oldham. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 0.7 and 1.2 in Wolverhampton and Portsmouth, to 7.3 in Salford and 9.7 in Norwich. Scarlet fever showed the largest proportional fatality in Salford, Norwich, Sheffield, and Bristol; measles in Sunderland, Leicester, and Salford; and whooping-cough in Liverpool. In London, 1,300 deaths were registered, which were 80 below the average, and gave an annual death-rate of 18.5 per 1,000. The 1,300 deaths included 13 from small-pox, 37 from measles, 45 from scarlet fever, 9 from diphtheria, 44 from whooping-cough, 15 from different forms of fever, and 64 from diarrhœa—being altogether 227 zymotic deaths, which were 37 below the average, and were equal to an annual rate of 3.2 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 230, 198, and 176 in the three preceding weeks, were 177 last week, and were within one of the corrected weekly average; 90 were referred to bronchitis, and 64 to pneumonia. Different forms of violence caused 60 deaths; 44 were the result of negligence or accident, including 13 from fractures and contusions, 2 from burns and scalds, 17 from drowning, 2 from poison, and 6 of infants under one year of age from suffocation. No fewer than 14 cases of suicide were registered, the weekly average being but 7.—At Greenwich, the mean temperature of the air was 62.3°, and 0.6° above the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 12.1 miles per hour, which was 1.6 above the average in the corresponding week of sixteen years. Rain fell on three days of the week, to the aggregate amount of 1.01 inches. The duration of registered bright sunshine in the week was equal to 37 per cent. of its possible duration. The recorded amount of ozone considerably exceeded the average on Friday and Saturday.

CONCERT AT ST. BARTHOLOMEW'S HOSPITAL.—On the evening of Friday, July 2nd, a concert was given in the Great Hall of St. Bartholomew's Hospital. The performers, with one exception, were all students of the hospital or members of its junior staff. Mr. Womack, Mr. Shadwell, and Mr. Roper, sang solos with great effect; and Dr. Samuel West was heartily applauded for his performance of Taubert's well-known and beautiful song, "In distant lands." Messrs. Wolfenden, Casson, and the brothers Rushworth, played instrumental solos. The concert concluded with Romberg's "Grand Toy Symphony," which afforded great pleasure and amusement to the large audience that filled the Hall. The orchestra was most ably conducted by Dr. Champneys.

DR. BATEMAN, of Norwich, has been elected a corresponding member of the Psychological Society of St. Petersburg.

ANTHROPOLOGICAL NOTES.—THE *Bulletins de la Société d'Anthropologie de Paris*, tome 2, fasc. 4, 1879, contain an important paper by M. Paul Broca: "Etude des Variations craniometriques, et de leur Influence sur les moyennes." To this is appended a series of the means, variations, etc., of the cranial measurement of heads belonging to all countries and various periods. Dr. G. Le Bon gives an interesting report of his examination of the curious collection of skulls of celebrated men, now in the possession of the Paris Museum of Natural History, which is believed to include those of Boileau, Descartes, and Gall. The mean cranial capacity for the forty-two skulls, when compared with that of forty-two skulls of modern educated Parisians, was in excess of the difference between the latter and an equal number of negroes.—M. G. Lagneau, in presenting to the Society the mortality tables for Belgium, drawn up by Dr. Janssens for 1878, makes reference to the predominance of phthisis in male subjects in France since 1865-66, females having before that period supplied the larger number of deaths from pulmonary tuberculosis.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M. Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M. University College, 2 P.M.—King's College, 1.30 P.M. London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M. Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M. National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 11 A.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M. Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M. Royal London Ophthalmic, 11 A.M. Royal Westminster Ophthalmic, 1.30 P.M. St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 1.30; Ear and Throat, Tu., 2; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 2; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate on that behalf with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice taken of their communications, should authenticate them with their names—not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS.

CHRONIC METRITIS.

SIR, I have at present under my care a lady suffering from chronic metritis, which, though not painful, prevents her much enjoyment in life, rendering the least fatigue impossible, a sitting posture for some time, the legs having a tendency to take on a flexed position. Perhaps some of your numerous readers who have had experience of similar cases would kindly mention their treatment they have found most successful. Yours truly, A MEMBER.

A RARE FORM OF UTERINE HEMORRHAGE.

SIR.—Mr. Gorst is a courageous man to publish his case of the above (*vide* last week's JOURNAL), as the treatment in the earlier stages illustrates so admirably what *not* to do in such a case. "A good sized artery was seen distinctly pulsating at the lower edge of the posterior lip of the os, and the vessel was distinctly seen plugged with a clot." *This I noticed when I had only a finger.* That seems to me to be mistake number one. Then, why were the plugs so frequently removed? The diagnosis being so clear, surely it would have been better surgery to apply firm and continuous pressure by an antiseptic plug sufficiently long to allow permanent blocking of the bleeding vessel. I have had cases of wound of the palmar arch where continuous pressure, *uninterfered with*, has carried them on to uninterrupted recovery; and yet we not unfrequently see cases recorded where, from too frequent changes of dressing, the consequent hæmorrhage has been so persistent as to lead to vessels in the forearm or arm being ligatured.—Yours, etc.,

Cardiff, July 3rd, 1880. A. F. SHEEN, M.D.

MEDICAL EXAMINATIONS.

SIR, Obsequious spirits are not wanting who affect to regard a court of metropolitan examiners, chosen from a self-elected handful, as the only body who are competent to test the claims of aspirants for a license to practise physic; and who allege that provincial surgeons are incapable of displaying the erudition common to the offspring of London grinders. One of the London examining boards rejects a considerable sprinkling of candidates by expecting them to decipher [illegible] to test the [illegible] dry leaves—without attempting to test the redeeming qualifications of the bewildered student. This sham ordeal is redundant, and must eventually share the fate of those corporations which are no longer needed. Examiners ought to be elected from the ordinary members of the profession—outside all corporate combinations. General practitioners who have the reputation of being familiar with the branches of knowledge allotted to them, should alone be recognised as legitimate examiners. Popular election, expressed by the voice of the profession, will form a perfect safeguard against the favouritism said to be sometimes practised by council men. Should a candidate feel himself unfairly probed at the examination board, he ought to be able to appeal to a disinterested tribunal, and not to the men who are supposed to have done the wrong. It may be argued that we have not men outside the charmed circle to act as examiners. To this notion I demur, never having seen grounds for believing that the London profession possess a monopoly of wisdom; and contend that medical men can be found in Leeds and Glasgow, equal to the paid staff of monopolists who figure at the London and Dublin boards; and know one examining professor, who has during a long lifetime only attended two or three cases of midwifery, and yet feels himself qualified to conduct a practical examination on the obstetric art. Future medical legislation will be stale and retrograding, which does not assign to provincial practitioners seats at our examination boards. In Canada, the council is elected by a general medical constituency, and the examination board is chosen on similar principles. It will be gratifying to see the English corporations agreeing to a system of reciprocal registration in this country and the colonies. Under such a change we may hope to see the diversified curricula which flood the profession with scientific incapables abolished. The late Mr. Wakley once said that the "London Apothecaries' Company had its birth in dishonour and would die in disgrace." The Act of 1815 became law on the last day of the Parliamentary session when most of the members had left the House. Soon after this trading society was armed with power over the whole of the medical profession in England and Wales, their arrogance became intolerable. Insulting circulars were freely posted to graduates and licentiates of Scotch and Irish colleges, practising in England, ordering them to relinquish practice, under threats of legal proceedings being taken against them. I have known graduates and licentiates of the Edinburgh and Glasgow colleges, fined and imprisoned for refusing to supplement their honourable qualification with the Company's renowned certificate to practise. The Apothecaries' Act is still unrepealed, and, notwithstanding the passive professions of the Company, a *mandamus* will oblige the Society to institute proceedings against men practising as apothecaries in England *minus* the noble certificate of the "Blackfriars" drug establishment. The pioneers of the forthcoming Bill will do well to guard against a repetition of the above obstruction from the worshipful Society. As a specimen of the powers which the Society may again assume, I may state, that the writer was twice prosecuted by the Company, and heavily fined, whilst holding a Scotch diploma; and further threatened, until he passed the Hall examination, and discharged a debt due to the sheriff's officer.

Combinations of Scotch and Irish licentiates memorialised both Houses of Parliament upon the injustice of such proceedings which led to the Act of 1858, which is supposed to constitute a legal qualification for all kinds of practice South of the Tweed.

Esculapius will [illegible] kindly insert this letter and credit the same to

Bridlington, July 5th. A. ALLISON, M.D.

WE have read the correspondence between Mr. Sheehy and Mr. James Davison, forwarded to us, and we regret that [illegible] by Mr. Davison. On the face of the correspondence, we should say Mr. Davison is entirely in the wrong, and certainly his letters are expressed in language which is by no means suitable to the occasion.

M.D. EXAMINATIONS.

SIR.—Would either [illegible] kindly inform me [illegible] in last week's JOURNAL, [illegible] examinations in Pathology and Mental Diseases for the above degree; also the books they would recommend to be read? I [illegible] examination.—Apologising for the trouble I am giving, I am, Sir, yours obediently, MEDICUS.

THE SANITARY BUREAU OF JAPAN.

SIR.—Although [illegible] of the Central Sanitary Bureau of Japan [illegible] the liberality of the Japanese Government in granting licences for 58,658 different kinds [illegible] It is a matter for surprise to me that [illegible] the general, that the manufacturers [illegible] licensed were [illegible] ing the inventors, and the Government by licence fees and stamps. This liberality [illegible] ment have [illegible] after payment of duty, the [illegible] foreign manufacture. In many cases, medicines of the highest purity have been [illegible] Japan [illegible] Sanitary Bureau [illegible] Sanitary Bureau [illegible] Secretary of Foreign Affairs.—Yours obediently, JOHN HARLEY.

[illegible]

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

TREATMENT OF PHTHISICAL COUGH.

SIR,—I would be very much obliged to any member of the Association who would suggest to me a suitable treatment for a phthisical cough, when morphia, opium, hyoscyamus, cannabis Indica, in various combinations, have been tried, but with little success in moderating the cough, which is of a very severe nature. Strapping the chest has also failed. The case is a very chronic one; the symptoms, unless the cough, are very mild. It is but right to say that morphia with acid has proved most effectual, but it soon does away with all the patient's appetite.—Yours, etc.,

PHTHISIS.

TACKLES AND DRAGS.

SIR,—Will you do me the favour to inform me, through the JOURNAL, what is the most approved form of tackle or drag for rescuing helpless persons from the water, while in the act of bathing, such persons being of course naked, and having, therefore, nothing to which hooks or other similar contrivances can be attached? Has the Royal Humane Society any such apparatus? Where could it be had? And what is the cost? A bather gets out of his depth, and becomes exhausted, or is seized with cramp and rendered helpless; how can he be best rescued from his imminent danger by means of mechanical appliances? I shall be greatly obliged by full answers.—I am, sir, faithfully yours,

J. FARRAR.

Morecambe, June 19th, 1880.

*** We forwarded this query to the Secretary of the Royal Humane Society, who has kindly replied as follows.

"Royal Humane Society, Offices, 4, Trafalgar Square, W.C., June 22nd, 1880.

"SIR. I have the pleasure of sending you a description of the life-saving apparatus required by the writer of the enclosed letter.

"The ordinary pole drag for bathers has blunt flukes, and is better adapted than the other where there are no clothes to catch by.

"We have our drags made by Mr. Dunham of Whitefriars Docks. Life-buoys and hand-lines for rescuing skaters are made by Messrs. Birt of Dock Street, London Docks.—Yours faithfully,

J. W. HOME, Secretary.

"The pole drag is made of light, but strong, iron, and fixed with a socket to a pole sixteen feet long. These drags are supplied to all the Society's stations, and are used to drag for and reach to any person who may have become immersed; they are very useful. The rope drag is made somewhat like a boat's anchor, of strong iron, with hooks at the end of each arm, and a long rope at both ends, so as to readily pull it in either direction. This drag is used for water that is too deep for the pole drag. The cork life-buoy is a circle of cork covered with canvas, and surrounded at the edge with cords to hang down, and which may be easily clutched by anyone in the water, and usually a long line is also attached to it, so as to pull in anyone to whom it may have been thrown."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—If the "Member" from Cardiff, in kindly sending corrections for the College of Surgeons *Calendar*, had added his name, he would have enabled the Secretary to thank him for those corrections.

VACCINATION AND MARKS.

SIR,—Your correspondent "G. P." has noticed an important objection of some moment, and "A Provincial Surgeon" has recently made some remarks also upon it in the JOURNAL. The subject is worthy of some decided views and scientific explanation; for whether one or two marks are of equal value with four, depends mainly upon (as I view it) the mode of vaccination. Doubtless this question has exercised the brain of many public vaccinators and medical men for and against for years, and few have ventured to combat the question of plurality of marks. The present site for vaccination is objected to by many parents, particularly in females, for obvious reasons, that it might disfigure the arm and be taken for other diseases. I have often known the present site to be most inconvenient. The little clothes of children are not made wide enough generally, and it is a difficult place to make applications to on that account. With regard to the number of marks and the statements of Marson, they were probably correct when made. All persons believe so. But are the imperfect methods and observance of vaccination, indifferent as many may have been whether their children were vaccinated or not, or from what source, to be taken as of any value now? Were the vaccinations of those children from whom those statistics were tabulated all done by medical men or skilled vaccinators? Are we able to decide that the real vaccine vesicle was produced? I doubt it. Suppose I make a mark four inches long, and insert sufficient lymph, so that the whole linear vesicle rises. Do you believe that one mark will be of no more value as a preventive measure than four puny insertions in distinct places on the arm? I put this in this manner for distinct explanation, because the assumption and advocacy of a certain number of marks, however small, providing they secure a vesicle, is pointed out as the acme of the preventive measures designed to fulfil the requirements of the Local Government Board. Now if one, two, three, four marks are so important, four more would be still more important; and if the former confers great immunity, twenty would confer greater. I believe, from long observation, that two good scratches, one inch long, well charged with lymph, will produce such a congeries of vesicles as will be as powerful and preventive as any four punctures; and further, the marks will occupy more area and show more distinct formation, and there can be no shadow of a doubt in my mind of the immunity conferred. Marson's statistics are obsolete for our present results. Again, are not marks delusive occasionally, and often due to postvaccinal inflammatory consequences? Many are purely of this character, and are not of the benign and true vaccine vesicle, but are designated vaccine marks nevertheless. Further, if the germ-theory be of any value, it must be taken into consideration. Dr. Beale pointed out the existence of "particles" in vaccine lymph; Chauveau and Burdon Sanderson also described them; Braidwood and Vacher confirmed their accuracy. The particulate nature of contagion is generally accepted as proven. It is presumably organic. This organic particle, if inserted into a susceptible individual, reproduces itself in a marvellous manner. Thus the vaccine virus is set forth as an exemplum of the contagium vivum and the model of other morbific processes having like reproductory powers in the living system. Then if a single germ be so active in its reproductory power, what must a number of germs be, inserted in one or two linear scratches one inch long. I am led to believe from this reasoning that one or two (although I have always adopted the latter) good marks will confer the immunity desired, and as a vaccinator of many thousands who have passed through a small pox epidemic of some magnitude, never yet knew a case to die or be marked of any consequence, I believe that the opinions advocated as to the plurality of marks cannot hold, and that two scratches one inch long, which I have invariably adopted with and find the best as a preventive measure with one, four punctures separately arranged, could hold more of the vaccine germs or particles which we desire to insert in the system.

I am, etc.,

A PUBLIC VACCINATOR.

TEETOTAL PATIENTS.

SIR,—I think the following case may be of use to some of my professional brethren. On the night of the 6th ultimo, I was requested to attend a lady some little distance out. I arrived about twelve o'clock, and found my patient in the second stage of natural labour. I stayed with her a short time, and then, at her request, I went down-stairs to the drawing-room, where I found the husband; he kindly asked me if I would have a bottle of "zoedone" or a cup of coffee. I said as I had never tasted zoedone, I preferred coffee; he informed me that they were all rigid "teetotallers", they never kept intoxicating drinks in the house. After drinking my coffee, I went up to see how my patient was getting on; and found the head descending very nicely, and in about an hour the child was born. Immediately after its birth, almost before I could separate it, my patient began to flood most violently. I applied pressure, cold, gave ergot, in fact did all that was usual: she became restless, insensible, cold extremities and blanched face, pulse almost imperceptible. I asked for brandy, and, to my great sorrow, was informed they had not a drop in the house. I immediately requested the husband to send the groom off to the nearest house or inn for some, which was about a mile and a quarter. After an hour or so, he returned with what he called two gills—about six ounces. I complained of the smallness of the quantity he brought; he said that was all he was requested to bring. My patient still flooding and insensible, I gave by a teaspoonful at a time all the brandy; and as I luckily had about an ounce of aromatic spirit of ammonia in my obstetric bag, which I had given her before the brandy arrived, helped to keep her alive. She rallied after taking the brandy; and, the hæmorrhage ceasing, I left her. Calling upon her as early as I could in the morning, I found my patient going on very well, and she made a rapid recovery.

My advice is, that if any of my medical friends are asked to attend such cases, always to be provided with a stimulant of some sort, or see that a bottle of brandy is kept in the bedroom.—I am, yours obediently,

M.D.

A CIRCULAR.

THE following circular has been forwarded to us. "Mr. Buller, Member of the Roya College of Surgeons of England, St. Columb Major. Mr. Buller having been solicited to practise at Wadebridge, has opened a surgery at Mr. Julian's, Molesworth Street, where he may be consulted every day from 10 to 12 o'clock. For the exclusive benefit of the labouring classes, Mr. Buller, will give advice and medicine at his surgery on the payment of two shillings each time."

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. J. C. Baring, London; Dr. G. A. Blumer, Philadelphia; Messrs. Street Brothers, London; Dr. C. Holman, Reigate; Messrs. Emil Oppert, and Co., London; Mr. G. Eastes, London; Mr. G. S. Middleton, Glasgow; Dr. Lyons, London; Dr. J. Rogers, London; Mr. R. S. Fowler, Bath; Mr. E. M. Knapp, Bristol; Dr. Lyon Playfair, London; Our Edinburgh Correspondent; Our Paris Correspondent; Our Glasgow Correspondent; Dr. A. Samelson, Manchester; Mr. J. W. Poulter, London; Mr. D. H. Gabb, Hastings; Messrs. Tomlinson and Slaney, Mansfield; Our Dublin Correspondent; Dr. Robert Sinclair, Dundee; Dr. Robert Lee, London; Dr. Fairlie Clarke, Southborough; Mr. C. E. Grover, London; Dr. A. Wood, Edinburgh; Mr. W. Perrin Brown, Bradford; Dr. A. Sheen, Cardiff; Dr. Worthington, Sidcup; Mr. T. W. Barron, Durham; Mr. J. E. Burton, Liverpool; Mr. A. W. Parker, Bootle; Dr. A. Ogston, Aberdeen; Dr. A. Macpherson, Haslingden; Mr. J. W. Oswald, London; Mr. Sheehy, London; Mr. W. J. Tyson, Folkestone; Dr. A. Grant, London; Mr. A. Doran, London; Dr. Burchell, London; Mr. Malcolm Morris, London; Mr. J. Wickham Barnes, London; Dr. Fitzpatrick, London; Mr. M. H. Smith, Durham; Dr. W. Whitelaw, Kirkintilloch; Mr. Simeon Snell, Sheffield; Dr. Edwyn Andrew, Shrewsbury; Dr. W. A. Brailey, London; Mr. J. B. Kerswill, St. Germain's; Dr. R. E. Huntley, Jarrow; Mr. E. Nock, London; Dr. Crichton Browne, London; Dr. A. Allison, Bridlington; Mr. C. E. Steele, Liverpool; Mr. H. L. Calder, Burntisland; Dr. Saundby, Birmingham; Mr. T. Holmes, London; Mr. G. D. Brown, London; Mr. G. Wilson, Yoxall; Mr. A. Cooper, London; Mr. W. H. Bennett, London; Messrs. Allen and Hanburys, London; Mr. J. Ruxton, Stratford-on-Avon; F.R.C.S.I., Dublin.

BOOKS, ETC., RECEIVED.

Obstetrics and Gynæcology. Edited by A. Martin; translated and edited, with additions, by Fancourt Barnes, M.D., M.R.C.P. London: H. K. Lewis.

Transactions of the American Gynecological Society. Vol. iv. Boston: Houghton, Mifflin, and Co.

Retrospect of Medicine. Edited by A. Braithwaite, M.D., and James Braithwaite, M.D. London: Simpkin, Marshall, and Co.

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SUPPLEMENTAL REPORT

TO THE

PARLIAMENTARY BILLS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION

ON THE

COMPULSORY CLAUSES IN THE VACCINATION LAWS OF THE OTHER PARTS OF THE UNITED KINGDOM BESIDES ENGLAND AND WALES.

BY ERNEST HART,
Chairman of the Committee.

Cumulative Penalties sanctioned by the Scotch, Irish, and Manx Laws.—In a report dated the 24th ultimo, which I have had the honour of submitting to the Parliamentary Bills Committee on the subject of the proposal made in the Government Bill now before Parliament to abolish cumulative penalties for non-compliance with the vaccination law, I purposely drew my arguments as to the inexpediency of such a proposal from the experience of England only, because it is only to that part of the kingdom that Mr. Dodson's Bill refers. It has been contended, however, as an argument in favour of the Government, that Scotland and Ireland have no continuing penalties, and have got on very well without them. At the request of the Committee, I have put together facts which I think will be amply sufficient to show that such a supposition is an entirely erroneous one. Both in the Scotch and Irish laws there exist clauses providing for proceedings being taken against defaulters until the law is complied with; and a similar provision is in force in the Isle of Man, under the provisions of the insular Vaccination Act of 1878. It will be my aim in what follows to set out the provisions of these Acts which relate to the compulsory performance of vaccination, in such a way as to show that the principle that we are striving to uphold—viz., that the offence of non-compliance is not purged until after the vaccination of the child—has been amply recognised and acted upon in each of the three kingdoms.

I.—SCOTLAND.

The Scotch Compulsory Vaccination Law.—Only one Act has been passed on the subject of vaccination for Scotland, and I may say at once that the reports both of the Board of Supervision and of the Scotch Registrar-General show the Act to have worked with exceptional success. How far this has arisen from the system pursued I am unable to say; but the fact remains, that in Scotland the very large proportion of the cases get vaccinated, and the number of defaulters is extremely small. The pestilence of antivaccination agitation does not seem to have affected Scotland, and I have discovered no traces of any such organised system of opposition to vaccination as we unfortunately have to meet in England. That so excellent results as the Registrar-General records should have been achieved in Scotland with a minimum of compulsion, reflects great credit upon the nation; and we could wish that such ready compliance were observed in England. It is a great mistake, however, to suppose that repeated prosecutions for non-vaccination may not be enforced in Scotland. To attempt to argue from the experience of that country in favour of the limitation of penalties is, therefore, completely fallacious.

Compulsory vaccination in Scotland dates only from the year 1863. In 1860, when small-pox was very prevalent in Scotland, Dr. Alexander Wood published a pamphlet entitled *Small-pox as it was, is, and ought to be*, in which he urged some legislative measure to render vaccination compulsory in Scotland. Subsequently, the Royal College of Physicians of Edinburgh appointed a Committee to consider the question; and they drew up a report, which was transmitted to the Lord Advocate. This had no apparent effect; but in 1863 the Town Council of Edinburgh were so alarmed at the prevalence of small-pox that they called a meeting, attended by delegates from their own body, by the Presidents of the College of Physicians and College of Surgeons, and by the managers of the three parochial districts into which Edinburgh is divided. The result of this consultation was that the town clerk and the officer of health were requested to prepare the heads of a Bill dealing with the subject. These heads were afterwards sent to the Lord Advocate, and were the foundation of he Bill which received the assent of Parliament in that year.*

The Vaccination (Scotland) Act of 1863.—The Bill, as originally introduced by the Lord Advocate, was almost an exact copy of Lord Lyttleton's English Act of 1853; but it created a good deal of opposition, chiefly among medical men. The College of Physicians took the matter up, and Dr. Alexander Wood and the late Dr. Burt were sent up to London to see the Lord Advocate on the subject. They did not succeed in getting him at first to adopt their views; but, after a subsequent interview with Sir George Grey, who was then Home Secretary, effect was given to a certain extent to the views of the College of Physicians, and the Bill, as amended, became law on the 28th July, 1863 (26 and 27 Vict., cap. cviii). There are essential differences between this Act and the English Acts. In the first place, no public vaccinators, in our English sense of the word, are appointed, and gratuitous vaccination for all comers is not offered, as in England. In this respect, I feel bound to express my concurrence with the views of the late Dr. Seaton, who, before the Select Committee of 1871, described the Scotch Act as "rather a hard one" (Q. 5445). The only persons for whom gratuitous vaccination is afforded are paupers and the recalcitrants to be afterwards described. Thus, the poor who are not actual paupers must pay to have their children vaccinated; and, of course, unless they pay a fair fee, the medical practitioners do not go to them. Constant allusions are made in the reports of local registrars to the Registrar-General of Scotland of the difficulty which arises from this circumstance; and in the large towns, such as Glasgow and Edinburgh, the disadvantage would be very serious indeed were it not for the benevolence of public institutions.

Method of Procedure under Scotch Act.—On the registration of the birth of every child, the registrar gives the parent a notice of the requirement of vaccination (Section 11 of the Act); and within six months† of the birth the parent is bound to cause the child to be vaccinated, and to deliver a certificate (which the medical practitioner will give him) to the registrar within three days of the date of the certificate (Section 8). In every case where a certificate of successful vaccination, or of postponement (Section 9), or of insusceptibility (Section 10), has not been received by the registrar, he is to intimate such failure to the parent; and if, after that, a certificate be not sent to the registrar within ten days from the despatch of such notice, the parent forfeits a sum of twenty shillings, and a further sum of a shilling to the registrar. Failing the payment of either of these sums, the parent is liable to be imprisoned for a period not exceeding ten days (Section 17). Every half-year, the registrar is to transmit to the local inspector of the poor a list of the names and addresses of such persons as have failed to transmit a certificate of vaccination; and, on the receipt of this list, the inspector is to lay it before the parochial board (corresponding to our English guardians of the poor), who will thereupon issue an order to their appointed vaccinator to vaccinate the persons named in the list. Notice in writing of such order is to be given to the persons in default; and, in pursuance of the order, the vaccinator is required to vaccinate the persons named therein, or any of them, at any time not less than ten nor more than twenty days afterwards, unless the children have previously been vaccinated (Section 18).

Penalties for Non-Compliance with the Act.—If any parent refuse to allow the vaccinator to perform the operation, "he shall, *for every such offence*, be liable to a penalty not exceeding twenty shillings, and, failing payment, to be imprisoned for any period not exceeding ten days" (Section 18). Section 25 specifies the manner in which penalties may be recovered under the Act, and empowers the sheriff, upon proof of the offence, to convict the offender, and, upon such conviction, to adjudge him to pay the penalty incurred, as well as expenses, "and to grant warrant for imprisoning the offender until such penalty and expenses shall be paid; provided always that such warrant shall specify the amount of such penalty and expenses, and shall also specify a period at the expiration of which the party shall be discharged, notwithstanding such penalty or expenses shall not have been paid, and shall in no case exceed two months". A law that regards two months' imprisonment as a reasonable penalty for non-compliance with the requirement of vaccination, hardly affords a good argument for those who object to the maintenance of the system of compulsion. Section 26 of the Act carries on the same idea of prosecution till the offence is purged. It provides that it shall be competent to raise such proceedings for enforc-

* See Dr. Alexander Wood's evidence before the Select Committee of the House of Commons on the Vaccination Act of 1867, pages 249 and 250 of Blue Book No. 246 of session 1871.

† In any reconsideration of the law, it would seem worthy of consideration whether this period is not too long for the large towns. In Glasgow, for example, the presence of a multitude of unvaccinated children of six months of age would constitute a very serious danger if small-pox should break out there. I understand this point has often been urged by local registrars; and I quite think that it would be well, for the larger towns at least, to lower the limit of age to three months, as in England.

ing any penalties incurred in contravention of the Act *at any time* during which the person against whom such proceedings are taken is in default; and Section 27 contains an important provision (not included either in the English or Irish Acts), that the Board of Supervision may themselves enforce vaccination if a parochial board fail to do it (a clause analogous to Section 299 of our English Public Health Act).

Continuing Penalties contemplated by Scotch Act and by Board of Supervision.—I desire to draw particular attention to the words which I have placed in italics in my quotation from Section 18 of the Act. If they mean anything, the words "for every such offence" evidently mean that continuing penalties are contemplated by the Act. They would hardly have been used if a single refusal to have a child vaccinated, and a single penalty, were regarded as sufficient to exonerate the person from further prosecution; and this view is upheld by the language of a circular issued by the Board of Supervision on March 31st, 1879, with regard to vaccination defaulters. It is to be noted that there is, in the Scotch Act, no such definition of child (*i.e.*, a person under the age of fourteen years) as exists in Section 31 of the English Act, but it would seem clear, from the circular of the Board of Supervision, that it is intended that the English definition should be observed. In a circular addressed, on March 14th, 1879, by the Registrar-General of Scotland, to the local registrars after communications with the Board of Supervision respecting the defaulters under the Scotch Vaccination Act, attention was drawn to the "considerable variety of practice which prevails in filling up the half-yearly list of defaulters." Whilst some registrars embraced the names of all defaulters since January 1st, 1864 (when the Act came into operation), others merely inserted the names of those who had failed to transmit certificates when they first became due under the provisions of the Statute, thus practically confining each list to a period of six months, and never repeating the name of a defaulter after he had been once reported. The Registrar-General accordingly gave instructions for the next half-yearly list of the registrars to include the names of all defaulters in the district since January 1st, 1864, specifying how this should be done, and saying that he would consider what uniform course ought henceforth to be followed in the matter. The Board of Supervision, in forwarding a copy of this circular to the local inspectors of the poor, said, "When the list of defaulters is received by you, it will be your duty to make all necessary inquiries regarding the persons named in the list, and to call an early meeting of the parochial board, with the view of their carefully revising the list, and giving such instructions as may be requisite. . . . You will observe that this is probably the last occasion on which the names of the whole number of defaulters since 1864 will be sent to the parochial board" [meaning, doubtless, that the children over fourteen years of age that had escaped vaccination ever since their birth in the year 1864, would, after 1878, be absolved from further proceedings]; "and it is important that the parochial board and its officers should carefully revise this list, so as to bring the number of defaulters on the Registrar's books within the narrowest possible limits, and thereby diminish their labours for the future."

I hardly see how this (when considered in connection with the terms of Section 18 of the Act) can be regarded in any other light than that the Board of Supervision expect that every defaulter is to be brought up again and again in each half-yearly return, and the proceedings required by the law gone through each time with regard to the case, until the vaccination has been effected. It may be quite true that no second proceedings have been required to be taken; but clearly they are permissible under the terms of the Act, and are regarded as permissible by the Scotch central authorities. The latter have been so fortunate as not to meet with the organised system of opposition that their English colleagues have had to combat, and, therefore, there has been no occasion for any more definite expression of their views than is contained in the circular I have quoted; but I think it is clear that they do contemplate repeated prosecutions in cases where such may prove to be necessary.

Success of the Act.—The Scotch Act has undoubtedly been a conspicuous success. To say nothing of the marked decrease of small-pox which has accompanied it, authorities on the subject (including the late Dr. Seaton) agree that it has worked remarkably well. The system is not one that could be adopted in England, with its much larger aggregations of population, and where the leaving of the independent poor to their own devices in procuring the vaccination of their children would undoubtedly result in their getting the worst kind of vaccination instead of the best, as at present. Of course, the sparseness of the population in Scotland would have made stational vaccination very difficult; but it is, I think, a mistake to limit free vaccination to actual paupers, and to defaulters. I do not feel called upon now to discuss this question at any length, but may point out that, under the Scotch Public Health Act, an endeavour has been made to meet the difficulty by giving to *sanitary authorities* the power to offer vaccination at the public expense. I have already expressed, in my former report, the opinion that sanitary authorities ought to have the control of vaccination, as an important department of their work in preventive medicine. Dr. Russell of Glasgow, in a recent very able report,* has strongly pointed to the need for the change which I have advocated. More than a quarter of a large number of persons living in Glasgow who had been given up by the vaccination authorities as undiscoverable, were successfully followed up and discovered by Dr. Russell's inspectors, who "found themselves among their ordinary clients, and in the streets and closes to which their ordinary work led them." The moral of this is too obvious to need comment.

Vaccination by Sanitary Authorities.—In a minute issued by the Board of Supervision on December 7th, 1876,† when the recent epidemic of small-pox had commenced, the attention of local sanitary authorities was directed to the fact that, by the fifty-seventh section of the Scotch Public Health Act of 1867, "the local authority are authorised to defray the cost of vaccinating all such persons as to them may seem expedient, other than paupers, or the children of paupers, or defaulters under Section 18 of the Vaccination Act. The obligation to vaccinate paupers, children of paupers, and defaulters, rests upon the parochial board; but that board cannot legally defray out of the poor-rates the cost of vaccinating any other persons. The local authority, under the Public Health Act, however, are empowered to defray, out of the assessment levied in terms of that Act, the cost of vaccinating all persons except those whom the parochial board are bound to vaccinate, to whom it may seem expedient to the local authority to apply the provisions of the enactment referred to." The Board made a series of recommendations, based upon those offered in 1871 by Dr. Husband, the Superintendent of the Central Vaccine Institution for Scotland, amongst which was one that "the unvaccinated should be searched for, especially among the unsettled and migratory portion of the population, among whom chiefly the disease is likely to appear in the first instance. All this shows clearly the evils of two authorities working over the same field, and is a strong argument in favour of the transfer to sanitary authorities of the whole of the duties, for the prevention of small-pox."‡ It shows, also, the anxiety of the Board of Supervision to secure the vaccination of the entire population by the exercise of every possible means which the law allows.

Effect of the Compulsory Clauses of the Act.—Leaving this, and the other equally interesting question of the merits of the Scotch system of fining a man for refusal rather than for neglect, I proceed to consider the effect of the compulsory clauses of the Act. It would appear, both from Dr. Alexander Wood's evidence before the Select Committee in 1871, and from other sources, that there has been hardly any serious opposition to vaccination in Scotland. Dr. Wood stated (Q. 4379), that there was "scarcely any irritation of the population against the Vaccination Act"; that the number of persons unvaccinated was very few; and that it was the opinion of those in authority that there would not be an unvaccinated child in Scotland if there were the means of overtaking the migratory population (Q. 4399). Asked by Mr. Peter Taylor (Q. 4493), whether the "only objection which you have had to overcome on the part of the people has been a sort of *vis inertiæ*, apathy, and carelessness", Dr. Wood answered: "I think it arises more from carelessness than from any disapproval of vaccination. In

* During Dr. Alexander Wood's examination before the Select Committee of 1871, the following [illegible] was put to him by Dr. Lyon Playfair: "Q. 4[illegible] Do you know of any case in which a penalty has been exacted under the Scotch Act?" "I do not." "Q. 4[illegible] In the operation of the Scotch Act much more effective in procuring vaccination than the English Act?" "I think so. It is not nearly so hard [illegible] to get a conviction for resisting vaccination as to be fined for the neglect of it." See also Dr. Wood's answers to the questions of Mr. Cavendish (4452-4461), which lead to the same conclusion.

† See BRITISH MEDICAL JOURNAL, vol. ii, 1879, page 877.

‡ Thirty-second Annual Report of the Board of Supervision, App. A, p. 14.

§ On this question, Mr. Sheriff Spens, who has taken much interest in the subject of sanitary legislation, writes as follows, in his work on the *Sanitary System of Scotland*, under the heading "Evasion of Vaccination Act." "In all districts, but in mining districts more especially, there is constant flitting from one locality into another. The result of this not unfrequently is, that children under six months of age are removed from one registration district to another without the registrar knowing where they have gone to. This may lead either to unintentional or wilful evasion of the Vaccination Act. Possibly it should be made a provision of the Vaccination Act that all parents leaving a registration district, with children unvaccinated under six months old, should be liable, under a penalty, to report their leaving the district, and the place to which they were going, to the registrar of the district they were leaving, who would then acquaint the registrar of the district to which they were going. If such provision were made, it should be a part of the sanitary inspector's duty to see to its enforcement; while, if no such provision be adopted, he should be instructed to keep a watch over the young infants brought into his district, and see that they have been vaccinated—a thing easily done by simply looking at the arms of the children."

fact, I find the greatest anxiety on the part of parents in all ranks of life to have their children vaccinated." This would appear, indeed, to be self-evident from the figures given in successive reports of the Board of Supervision. It would be both tedious and unnecessary to give the actual figures as to defaulters which appear in the successive reports of that Board. The number of such defaulters has been always very small, and it will be sufficient to give the figures for the three most recent years for which returns have been published. In the three years ended June 30th, 1877, 1878, and 1879, there were 5,166, 5,179, and 10,333* defaulters respectively reported by the registrar to the parochial board under Section 18 of the Act. The number of persons vaccinated under the terms of the eighteenth section of the Act (*i.e.*, by the vaccinators going to the homes of the parents under the orders of the parochial board) was 1,951, 1,090, and 1,791 respectively; and, out of these cases, only 34 prosecutions had to be instituted. The number of vaccinations performed by the appointed vaccinators bears a quite insignificant proportion to the births. Thus, though there is an average of about 44,000 births per year in Scotland, only 3,306, 3,235, and 3,337 persons were officially vaccinated by the vaccinator during the three years ended June 30th, 1877-8-9; and, of these, 2,361, 2,044, and 1,468 were persons not in receipt of parochial relief.

These results show sufficiently well the excellent way in which the Scotch Vaccination Act is working. Fortunately, no proposal is being made to modify its stringency, as is the case with the English law; and it cannot be doubted that, were any such attempt made, it would be attended with disastrous results. The wholesome fear which is now felt for the law would soon give place to neglect and carelessness, and the consequence would be a vast aggregation of arrears on which small-pox would spend its full force in the fashion that it was accustomed to spend it in Scotland a generation ago.

II.—Ireland.

Progress of Legislation.—Before vaccination was made compulsory in Ireland, the neglect of infantile vaccination in that country had been extreme. At the time that the Epidemiological Society made its report in 1853, 79 per cent. of the small-pox mortality in Ireland occurred in children under five years of age, and although there had been, under the Acts immediately to be referred to, an increase since then in the number of vaccinations performed, this had not been sufficient to reduce the proportion of small-pox deaths under five years of age below 75 per cent. up to the time when the Compulsory Act of 1863 came into operation. The English Vaccination Act of 1840 (3 and 4 Vict., c. 29), directing the appointment of public vaccinators by Poor-law guardians, had applied also to Ireland. It seems, however, to have been virtually a dead letter, and was in effect repealed by an Act of 1851 (14 and 15 Vict., c. 68), under which the medical officer of every district was required to vaccinate all persons coming to him for that purpose. By a subsequent Act (21 and 22 Vict., c. 64), it was provided that the committee of management of every dispensary district should divide such dispensary districts into as many vaccination districts as they deemed proper, and should appoint vaccination stations. It was not, however, until 1863 (the year that vaccination was made compulsory in Scotland), that a compulsory law for Ireland was also passed. Under the Act of 1863 (26 and 27 Vict., c. 52), which is still in force, every child born after January 1st, 1864, was to be brought, within six calendar months of birth, for vaccination by the medical officer of the dispensary district, unless vaccinated previously by some other medical practitioner (Section 1).† At the registration of every birth, the registrar was to give a notice of the requirement of vaccination; and if, after such notice, the parent "shall not cause such child to be vaccinated.....without any reasonable excuse for such failure or omission, then such father or mother, or person having the care, nurture, or custody of such child as aforesaid, so offending, shall forfeit a sum not exceeding ten shillings" (Section 8). Section 13 enabled the guardians to direct proceedings for the purpose of enforcing obedience to the Act; "and such proceedings on account of neglect to have a child vaccinated may be taken at any time during the continuance of the neglect."‡ By another Act passed in 1868 (31 and 32 Vict., c. 87), it was provided that public vaccination was not to be considered as of the nature of parochial relief, alms, or charitable allowance.

Repeated Penalties Sanctioned by Parliament for Ireland.—No further "vaccination" legislation was made for Ireland until last year, but a very important alteration was made with regard to the particular subject of penalties now under our consideration, by the Public Health (Ireland) Act of 1874 (37 and 38 Vict., c. 93). It is a curious specimen of the haphazard method of our existing legislation, that a clause affecting very importantly the vaccination laws of the country should have strayed into a Public Health Act, containing nothing whatever else about vaccination, which is indeed a matter not coming within the cognizance of the authorities who have to work the Act. Section 58, however, of this Act of 1874 virtually repeated the exact wording of Section 31 of our English Vaccination Act of 1867, in providing that, upon information given by a registrar or officer appointed by the guardians to enforce the Vaccination Acts, a justice might order a child under the age of fourteen years to be vaccinated within a given time, and in imposing penalties on the parent for omission to comply with such order. It is under Section 31 of the Act of 1867, as detailed in my previous report, that repeated proceedings can be taken against the parent; and Section 58 of the Irish Act of 1874, therefore, introduced into Ireland the principle of cumulative penalties for neglect of vaccination. The Act of 1874 was repealed by the Consolidated Public Health Act of 1878, but this particular clause was reproduced in Section 147 of the new Act.

The Vaccination (Ireland) Act of 1879.—Meanwhile, the attention of the Irish Medical Association had been drawn to the inefficiency, in certain of its aspects, of the Act of 1863; and, so long ago as February 1877, the Association addressed Sir Michael Hicks-Beach, the then Irish Secretary, on the unsatisfactory state of the law. Two draft Bills were prepared by the Council of the Association, and were presented to the Government, accompanied by a series of observations most carefully drawn up by Dr. Speedy.* In 1879, the Government introduced a Bill dealing with the subject, and this, with alterations made through the exertions of Mr. Meldon and Mr. Mitchell Henry, was passed into law last session as the Vaccination Amendment (Ireland) Act, 1879 (43 and 44 Vict., ch. 70). By Section 2 of this Act, the maximum limit of age at which vaccination becomes compulsory was altered from six months (as prescribed by Section 1 of the Act of 1863) to three months, and provision was made for the cases of children born elsewhere than in Ireland, but brought into it after the passing of the Act without being vaccinated. It will be observed that the law of Ireland is, as regards the limit of age, more stringent than that of England, where the parents of children living in districts where public vaccination is appointed at intervals of more than three months do not become liable until the opportunity of public vaccination has been afforded to them. Section 7 enacts that, when any parent or other person having the custody of a child fails to produce such child when required so to do by any summons under the Vaccination Acts, such parent or other person shall be liable, on summary conviction, to a penalty not exceeding twenty shillings. Every parent or person having the custody of a child who neglects to take such child or cause it to be taken to be vaccinated, or after vaccination to be inspected, and does not render a reasonable excuse for his neglect, is guilty of an offence, and is liable to be proceeded against in a summary manner, and, upon conviction, to pay a penalty not exceeding twenty shillings.

By Section 10, the guardians of any union in Ireland may direct proceedings to be instituted for the purpose of enforcing obedience to the Acts, "and such proceedings, on account of neglect to have a child vaccinated, may be taken at any time during the continuance of the neglect". Other sections of interest are No. 5, which provides that the vaccinator is to give a certificate of successful vaccination to the parent (apparently contemplating that this shall be permanently kept by him), and to send a duplicate of it to the registrar; and No. 10, which enacts that the registrar is to transmit to the dispensary medical officer, at least once a month, a return of all births and deaths of infants under twelve months of age which have been registered in the district of the dispensary medical officer to whom the return is sent.†

Law of Ireland as to Penalties.—It will be observed that this particular Act does not materially alter the procedure as regards prosecutions which was laid down in the Act of 1863. The law of Ireland as regards penalties seems to me, therefore, to be, that any parent who, after the notice of requirement has been sent to him by the registrar, neglects to have his child vaccinated within the statutory period, is guilty of an offence for which he may be proceeded against and fined twenty shillings (Section 8 of Act of 1863, and Section 7 of Act of 1879). This offence is complete at the end of three months, and only one penalty can be inflicted on account of it.‡ But, under Section 147 of the Public Health Act of 1878, an order for the vaccination of a child under fourteen years age may be made by a justice of the peace, if he think fit, upon the application of the registrar, and such order may be renewed or repeated, again and again, as often as may be necessary, until the

* This exceptionally large figure is doubtless owing to the issue of the circular of the Registrar-General already referred to.

† Vaccination is now (under the Act of 1879) made compulsory in Ireland within three months of birth (see *postea*).

‡ This section has now been repealed by Section 10 of the Act of 1879.

* See British Medical Journal, vol. i, 1879, page 751.

† As to the use to be made of these lists, see the circulars of the Local Government Board of the 20th August, 1878, and 14th January, 1879, subsequently referred to.

‡ See the case of Pilcher *v.* Stafford, referred to in my previous report.

vaccination of the child is effected. I have already given Lord Chief Justice Cockburn's decision upon this point in the case of Allen *v.* Worthy. I would add, as showing that this clause of the Act of 1878 must be regarded in Ireland as sanctioning repeated prosecutions, that in the BRITISH MEDICAL JOURNAL for January 10th, 1880 (p. 63), is the report of the case of a man at Limerick who was fined for the fifth time for refusing to have his child vaccinated. The proceedings against this man can only have been legally taken under Section 147 of the Act of 1878.

General Assent of the Irish Nation to Vaccination.—Notwithstanding the defects of the Act of 1863, it seems to have worked extremely well. This may be partly accounted for by the general assent of the population to vaccination, very little opposition to the performance of the operation being experienced. The late Sir Dominic Corrigan, M.D., in his evidence before the Select Committee of 1871, said (Q, 4002) that in Ireland "the people are most favourably disposed to vaccination". Asked (Q. 4003) whether "there is any agitation against vaccination, or any large number of people who object to vaccination being carried out", he replied "No; the feeling of the whole country is in favour of it". Mr. Meldon, M.P., speaking in the House of Commons on the occasion of the second reading of the Bill of last year, stated that "it was a fact that all the antivaccination leaguers in England, however much they had tried, had never been able to stir up the slightest feeling in Ireland against vaccination". He said that he knew no one in Ireland against the Bill, "for in that country the popular feeling was decidedly in favour of vaccination; and he did not think they would be able to get one person in Ireland to corroborate any of the statements" made by Mr. Hopwood, in his usual reckless fashion, against vaccination. Mr. Mitchell Henry "could not support the second reading of the Bill without congratulating the country that there was no prejudice in Ireland against vaccination". "To his own certain knowledge, in the western part of Ireland, the people had flocked in hundreds of thousands from all parts to be revaccinated. Their enthusiasm for the operation was extraordinary. The epidemic in the West of Ireland had been stamped out, he believed, entirely by the enthusiasm of the people in favour of vaccination."*

Defects of the Irish Act: Action of the Poor-law Commissioners.—Whilst making all due allowance, however, for the enthusiasm of the people, it cannot be doubted that a large share of the successful result has been due to the energy of the Irish Poor-law Commissioners. Had these gentlemen been content, like their English colleagues, to let the law drift on without taking any steps to insure its effectual working, the manifold defects of the Act would have proved fatal to its success. But by the issue of circulars and the exercise of supervision, the Commissioners succeeded in getting the Act very energetically administered. The Irish Act of 1863 (which, it must be remembered, is still the "principal" Vaccination Act for Ireland, only a few of its sections having been repealed), is virtually the same as the English Act of 1853, supplemented by the Act of 1861, which gave powers to guardians to prosecute. It is open, therefore, to the same objections as I have already pointed out in my previous report, as attaching to the Act of 1853. Whilst it imposes upon all parents the obligation of having their children vaccinated, it does not specifically impose upon any authority the duty of seeing that this obligation is complied with. The guardians are empowered, indeed, to take proceedings, but no more. The Act makes provision in a very imperfect way for a registration of vaccination by providing that the registrar shall keep "a register of the persons of whose successful vaccination a certificate shall have been transmitted to him" (Section 7); but it makes no provision for systematically reporting defaulters, as in England and Scotland. The Irish Poor-law Commissioners have clearly recognised the mischief thence arising in permitting of escape from the requirements of the law. Commenting on the number of cases which of necessity evaded the administrative machinery appointed by the Act, they observed, in their Annual Report for 1870: "To prevent the addition of successive cases year by year to the fuel thus provided for small-pox.....affords a powerful motive to use every effort to render the vaccination of all liable to the Compulsory Vaccination Act as complete as possible." Further, when in some parts of Ireland the magistrates were inclined to deal with the offenders brought before them by imposing penalties that were nothing more than nominal, the Commissioners thought it their duty to make a representation on the subject to the Lord Lieutenant, who thereupon sent out a circular to the magistrates throughout Ireland, calling their attention to the extremely small penalties, sometimes not exceeding a penny, occasionally inflicted by the magistrates at petty sessions on defaulting parents prosecuted by the Irish boards of guardians, whereby the people were led, he said, to believe that the authorities were indifferent to the enforcement of the law. The circular contained the following passage: "I am directed by his Excellency to draw your particular attention to this subject, as the Government attach great importance to the necessity of the statute being fully enforced, and that every means should be taken to oblige people to take advantage of the legislative enactments as to vaccination gratuitously provided for the protection of young people."*

Returns of Defaulters to Boards of Guardians.—With the view of surmounting the difficulty (to which I have just referred) arising from the absence of any periodical list of defaulters, the Local Government Board for Ireland (who had meanwhile succeeded the old Poor-law Commissioners) required, by Paragraph XI of the twenty-first article of their Rules and Regulations for the management of dispensary districts, that the medical officer should forward to the board of guardians, on June 30th and December 31st in each year, a report containing the names of all children registered as born in the district who were over six months of age and who did not appear to be vaccinated. This return was introduced by the Local Government Board "to enable the board of guardians to exercise a more effectual control in regard to the provisions of the Compulsory Vaccination Act, by taking proceedings against any person responsible for having a child vaccinated who shall be found to have wilfully neglected to do so". In circulars dated August 20th, 1878, and January 14th, 1879,† the Local Government Board drew attention to this requirement, and asked for a summary of the particulars in the returns, and of the results of the relieving officers, inquiries (which they suggested should be made) in the cases of default with a view to the necessary steps being taken to obtain, or, when required, to compel, compliance with the provisions of the Vaccination Acts The Board added: "Each case of default should be closely and systematically followed up until the child has been vaccinated, or the non-performance of vaccination has been satisfactorily accounted for;" with the further addition, in their second circular, that "the clerk of the union should report on the subject every week to the board of guardians. By regular and systematic proceedings in this way, the board of guardians will be kept duly informed of what is going on, and readily enabled to see that the law is obeyed in their union." Only one return in response to this circular has as yet been published. It shows that, out of a total of 16,489 "defaulters" returned in the whole of Ireland for the half-year ended June 30th, 1878, 11,230 were found vaccinated, 2,341 had left or could not be found, 1,148 were unfit, and 2,918 were still unvaccinated (which would represent about 4 per cent. of the births: a very low percentage, in view of all the circumstances).

Conclusions.—I think, therefore, that from the experience of Ireland, as well as that from Scotland, we may learn the unwisdom of a Government sale of indulgences from vaccination. The efficiency of vaccination is sustained in both of those countries by the knowledge that there is a power behind that will compel, when other means for securing obedience to the law have failed. That this power has not needed to be called into requisition to any great extent in either of those countries is no argument at all against pulling down the buttress of our English law. In Scotland and Ireland, obedience to the law is ready and willing. In England it would be the same, but for the mischievous agitation and widely spread misstatements of the Antivaccination League. To abolish the power of compelling a citizen to do his duty to his children, to the State, and to his neighbours, when other means have failed, is virtually to invite a man to neglect his legal obligations and to set the law at defiance. The principle of cumulative penalties has been amply recognised in successive Public Health Acts as punishment for the perpetuation of nuisances in no respect worse than an unvaccinated child; and it is a principle that has been, as regards vaccination, affirmed and reaffirmed by the Legislature on many occasions. The adoption of the Government proposal would, therefore, be fraught with great danger to the health of communities and to the public welfare.

III.—ISLE OF MAN.

Small-Pox Epidemic of 1877.—I deem it important, in conclusion, to refer briefly to the Manx law on the subject of vaccination, with the view of showing how universally the need is felt for penalties of sufficient stringency to secure the due enforcement of that operation. In 1877, there was no system of compulsory vaccination in the Isle of Man. A case of small-pox was imported from Manchester to Douglas, and was sent to the hospital. The wife of the patient was allowed to attend him, and, despite all endeavours, went into the town on several occasions. The disease spread very rapidly, especially in the filthy purlieus of the old town, until, between July 8th, 1877, and March 11th, 1878, no less than 257 cases occurred. The epidemic caused such panic that a sanitary

* See a special report of this debate in the BRITISH MEDICAL JOURNAL for April 12th, 1879, p. 571.

* See the evidence of the late Dr. Seaton on page 303 of the Report of Select Committee of 1871.

† Seventh Annual Report of the Local Government Board of Ireland, pp. 103 and 105.

commission was appointed by the Lieutenant-Governor to decide, amongst other things, whether vaccination ought not to be made compulsory in the island. In the report of this commission, the decided opinion was expressed that this should be done. Facts brought to the notice of the commissioners seemed to them to "point plainly in this direction, and are only confirmatory of the experience of medical men in England and elsewhere. The deaths from small-pox during the present epidemic here have been only 7 per cent. among the vaccinated patients, whereas among the unvaccinated there have been more than 40 per cent.; while it may be mentioned that there has not been a single case among those brought under the notice of the house-surgeon [of the hospital] where a revaccinated person has been attacked."

The Manx Vaccination Act of 1878.—Acting upon this report, the Lieutenant-Governor (Mr. H. B. Loch, C.B.) had no difficulty in procuring the passing by the House of Keys of an Act of Tynwald making vaccination compulsory within three months of birth. The method of procedure seems to be modelled upon the English Act, and need not therefore be particularly described. A notice of the requirement of vaccination is given to each parent, public vaccinators are appointed at fees per case to perform vaccination gratuitously at least every three months, and in other respects the English Act is closely followed. Section 19 of the Act is similar to Section 27 of the English Act of 1867, in imposing a penalty of a pound on persons who neglect to take their children for vaccination; and Section 21 of the Act reproduces Section 31 of the English Act, under which repeated proceedings may be taken.* The Manx Legislature, has, therefore affirmed the principle which it is now desired to upset in England. I should not wish to make too much of this; but, in a small community like the Isle of Man, where local and class prejudices must necessarily be much more potent in their influence on the Legislature than in England, I think this acceptance of the principle of repeated penalties is not without its significance.†

The experience, therefore, not only of England, but of Scotland, Ireland, and the Isle of Man, is quite opposed to the view that the Government are now taking; and I sincerely hope that they may see fit to reconsider what cannot but be considered as a hasty and rash proposal.

* See the case of Alfred Worthy, referred to in my previous report.

† It is interesting in another connection to note that, under the Manx Vaccination Act, a beginning has been made with regard to the registration of disease in the Island. Section 25 of the Act provides that "it shall be the duty of any householder in whose house any person shall be infected with small-pox, and of every medical practitioner who shall professionally attend any person infected with small-pox, as soon as may be to give notice at the nearest police station of such person being so infected. Any person acting in contravention of this section shall be liable, on conviction, to a penalty not exceeding five pounds.

PUBLIC HEALTH.—During last week, being the twenty-seventh week of this year, 3,296 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. The annual death-rate was 19 in Edinburgh, 23 in Glasgow, and 31 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Hull 10, Birmingham 13, Brighton 15, Bristol 15, Portsmouth 16, Leeds 17, Wolverhampton 17, Nottingham 18, Newcastle-upon-Tyne 19, London 19, Leicester 19, Sheffield 19, Plymouth 20, Bradford 20, Manchester 21, Salford 24, Sunderland 24, Liverpool 25, Oldham 29, and the highest rate 30 in Norwich. The annual death-rate from the seven principal zymotic diseases averaged 3.6 per 1,000 in the twenty towns, and ranged from 1.4 and 1.9 in Wolverhampton and Brighton, to 5.9 and 7.9 in Salford and Norwich. In London, 1,326 deaths were registered, which were 81 below the average, and gave an annual death-rate of 18.9 per 1,000. The 1,326 deaths included 4 from small-pox, 37 from measles, 62 from scarlet fever, 9 from diphtheria, 30 from whooping-cough, 16 from different forms of fever, and 93 from diarrhœa—being altogether 251 zymotic deaths, which were 49 below the average, and were equal to an annual rate of 3.6 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 198, 176, and 177 in the three preceding weeks, were 171 last week, and were slightly below the corrected weekly average; 99 were referred to bronchitis, and 51 to pneumonia. The death of a male, aged sixty-one years, in Greenwich, was referred to "effusion of blood oa the brain, sunstroke". Different forms of violence caused 52 deaths; 43 were the result of negligence or accident, including 23 from fractures and contusions, one from burns and scalds, 7 from drowning, 2 from poison, and 5 of infants under one year of age from suffocation. Five cases of suicide were registered. —At Greenwich, the mean temperature of the air was 59.0°, and 3.0° below the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 12.8 miles per hour, which was 2.8 above the average.

THE TREATMENT OF ASTHMA.

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III.

NOT unfrequently the treatment of the paroxysms is of necessity limited to the exigencies of the moment: its sole aim, at the time, being the safe and speedy relief of the distressing symptoms. Although constantly attempted, this object has hitherto not been obtained, notwithstanding the long and tedious trials of all the means which theory and empiricism suggested for the purpose. The belief has consequently spread that unknown peculiarities—caprices—of the disease are responsible for the failure of the treatment. But a glance at the subject will show that the want of success is really due to the indiscriminate application of remedies, of which each possesses a different physiological action. It will be readily conceded that chloroform and coffee, opium and stramonium, morphia and atropia, nitre paper and emetics, tobacco and hot brandy-and-water, etc.—all side by side extolled as valuable remedial agents—are not so closely allied as regards their physiological actions as to be convertible; and if they are intended to break "the bronchial spasm"—which, I was amazed to learn, resists even chloroform (Thorowgood, Lettsomian Lectures, etc., 1879, page 72)—they require, each of them, special circumstances favourable for the production of that effect. But no such indications exist. The very idea of their existence is inconsistent with the prevalent theory of the disease. According to this, paroxysmal dyspnœa, accompanied by sibilation, denotes bronchial spasm, whatever else may be present at the time; and so significant are these symptoms, that attention to them permits to read off, as it were, the disease at a distance (Hyde Salter, *Lancet*, vol. i, 1870, page 147). The immediate consequence of this doctrine is that, in the choice of remedies—if choice there be—"no guide is known except"—the saddest of instructors—"the former experience of the patient" (Salter, *op. cit.*, page 183); hence a practice of which the following case is an apt illustration. "For 340 nights out of 365, the patient had to sit up, struggling for breath; and the effects of ordinary remedies may be thus briefly given: burning nitre-paper, useless, or worse than useless; tobacco or stramonium, smoked *ad nauseam*, slight benefit; chloroform inhalation, transient relief; nitrite of amyl, tried repeatedly and carefully, entirely useless; phosphorus, arsenic, iodide of potassium, no benefit whatever" (Thorowgood, *op. cit.*, p. 71). Such blind groping after remedies, in the presence of urgent symptoms, must needs defeat its own object. There can be no relief, safe and speedy—that is the lesson taught by failure—unless the remedies adopted are such as counteract or remove the proximate causes of the dyspnœa; and their selection depends in each case on the considerate appreciation of the surrounding circumstances.

It is not my present intention to enumerate all the measures that, in case of emergency, may be taken for the relief of a dyspnœal seizure. I propose merely to trace the indications for the purely medicinal treatment of those forms of asthma which are distinguished by the frequency of their occurrence and by the severity of the symptoms.

Foremost amongst them is œdema of the lungs, as it occurs in the obese and the cachectic, and in those suffering from valvular lesions of the heart, from gout, and from renal disease (uræmic asthma). It is invariably the result of a temporary failure of the left ventricle, while the right is still able to act;* and develops itself, either in the midst of apparently perfect health with the suddenness of a fainting fit, or as a rapid exacerbation of an existing cardiac derangement. To understand its pathology, it is well to remember that the constitutional and local causes just mentioned tend to impair the nutrition of the cardiac muscles to an extent varying from the cloudy swelling of the individual fibre, to its brown atrophy or fatty degeneration. The heart, notwithstanding these changes, continues, in ordinary circumstances, to perform its function in accordance with the requirements of the organism, and without painful perception by the patient. It is only when an increased demand is made upon its energy, and on the accession of an irritation, that the organ manifests its inherent weakness, by its inability to meet the one and to resist the other, even if both are so slight as to be powerless to cause disturbance in a healthy person. Œdema is thus readily produced by imperfect ventilation of the lungs, as it arises from the rapid extension of bronchitis, from embolism of a large branch of the pulmonary artery

* C. Mayer, *Bemerkungen zu Experimente'le Pathologie des Lungenœdems*. *Sitzungsber. der Akad. der W[illegible]*. Wien, Band lxxvii. Abth. iii; Welch, *Path. des Lungenœdems*. [illegible] Band 72. Heft 2 and 3.

and from extensive meteorismus. The reason is, that the blood, abnormally rich in carbonic acid, irritates the centres of respiration and circulation, and that, finally, while the right ventricle is able to empty part of its contents into the pulmonary artery, which possesses no tonus, the left is incapable of doing so, on account of the increased tension of the systemic vessels.

In these circumstances, the subcutaneous injection of one-sixth of a grain of morphia acts, indeed, like a charm. As soon as the morphia is absorbed, which requires a longer time than in health, the painful oppression at the chest and the hacking cough disappear; the noisy and frequent respiration becomes quiet and slower; the cyanosis of the face and lips gives way to a flush; the cold and clammy skin becomes warm and moist; the contracted artery widens and fills; the heart regains its previous force and rhythm, and with them return its impulse, its sounds, and its murmurs, while the consequences of its temporary failure as regards the lungs subside more or less completely. There is, subsequently, neither languor nor drowsiness, even in those who at other times are very susceptible to the influence of narcotics. Morphia merely counteracts the effect of the abnormal quantity of carbonic acid in the blood, and, with the attainment of that object, its influence is exhausted, as shown by the following cases.

Mrs. H., aged 42, tall, stout, has for several years been subject to cough and to attacks of dyspnœa. In the foggy weather of November 1879, she was seized with smarting of the eyes; a great deal of sneezing, and running from the nose; an eruption of the upper lip; sore-throat; harsh and painful cough, with scanty expectoration, and much dyspnœa; all the symptoms which, if they occur in summer, are supposed to form a special disease called hay-asthma. On Saturday, November 15th, she went to Eastbourne to get rid of her "cold," but, on arrival, all the symptoms, especially the dyspnœa, became much worse, and on Monday she had to return home. I saw her on November 17th, 1879, at 7 P.M., and noted the following. She sat in bed; she was cyanotic; there was great dyspnœa; she complained of pain across the chest and at the insertion of the diaphragm; there was a painful cough, with scanty expectoration; the extremities were cold. Pulse was very small, rapid, and almost countless; respiration noisy, frequent; there was a loud laryngeal noise. The chest-wall was raised; the sterno-mastoids were firmly contracted; the thyroid lying beneath the manubrium; the tongue was clean. On the right, front and back, the percussion-note was flat; there was very feeble respiration above, and moist rhomchi at the base. On the left, front and back, better resonance, dry, and loud rhonchi from apex to base. The impulse of the heart was not felt; its area was enlarged to the left; sounds very feeble. Injection of morphia hydrochlorate, gr. ⅙. In ten minutes, perspiration commenced; the breath was easier, respiration deeper and slower, and the pain diminished. The laryngeal noise disappeared, the resonance of the right side improved, and inspiration was feebly heard; on the left, respiration returned, and the rhonchi became moist; the rhonchi at bases persisted; pulse improved; cardiac sounds distinctly heard. The patient was perspiring much when I left. November 18th. She passed a tolerably good night, but had no sleep. The cough was troublesome; the expectoration became more copious, and consisted of black mucous substance mixed with soot. A rational treatment of her bronchitis was now adopted, and she recovered by the end of the week.

Mr. L., aged 62, tall, stout, for twenty years subject to gout, had signs of dilatation of the left ventricle, and of degeneration of the cardiac muscles. In December 1878, he had an attack of gout in the left toe; subsequently, other joints were affected, and at last both lower extremities swelled. Bronchitis then followed, complicated by attacks of asthma. His friends noticed that he had frequent fainting fits; his face suddenly turned blue, the heart seemed to stop, and cold perspiration appeared on the forehead. On December 10th, 1878, when I saw him, he had great dyspnœa, with loud wheezing and troublesome cough. He felt exhausted from the many sleepless nights through which he had passed. Respiration rather frequent. The large and roomy thorax was generally deficient in resonance, and, on auscultation, there were loud, sonorous, and sibilant rhonchi from apex to base. No cardiac impulse was seen or felt. The action of the heart was rapid, its sounds impure. The pulse was empty; there was considerable anasarca; the urine was scanty, but not albuminous; the tongue was thickly coated; great tympanitis; constipation. At 5 P.M., injection of hydrochlorate of morphia gr. ⅙. [illegible] relief. He was ordered pil. hydrarg. gr. x. There was much improvement the next morning; the patient [illegible]; he had no dyspnœa; the cough was less troublesome; and he had slept several hours. His bowels had copiously acted. He had a light breakfast, which he enjoyed. The expectoration consisted of a few pellets of black mucus. The thorax was much clearer. The pulse was felt at the wrist; it was frequent and intermittent. Now that the pressing symptoms of the moment had been successfully combated, a deliberate treatment was adopted, by which the patient greatly benefited.

In all cases of that kind, the subcutaneous injection of morphia is preferable to the internal administration of opium; for, in the first place, the action of opium is not quite identical with that of its alkaloid; and, in the second, the absorption by the gastric mucous membrane is, owing to the stasis in the systemic vessels, slow and imperfect; so that, to obtain rapidly the desired effect, a very large dose would be required, of which the consequences would be still felt when the indication for the use of the drug had passed off. If, nevertheless, opium has to be administered internally, it should be given in a moderately large dose, and should be combined, to facilitate its absorption, with stimulants, as ether or aromatic spirit of ammonia.

But I must not omit to add that the subcutaneous injection of morphia is an operation with the performance of which neither the patient nor his friends may be entrusted. It is an operation, useful only in special circumstances, satisfying the imperative demands of the moment, but incapable of producing more than a transient benefit. Its thoughtless repetition with each recurrent attack not only not relieves—unless the dose be considerably increased—but aggravates the disease. A craving for morphia is readily established, but not easily eradicated.

To the use of stimulants in these cases the same objection applies as to that of opium. Their action, even in large doses, is comparatively slow; and, though they temporarily restore the activity of the heart, they do not remove so rapidly and so fully as morphia the peripheral obstacle—viz., the increased arterial tension. Dr. Thorowgood recommends large doses of caffein—four grains in a cup of coffee (*loc. cit.*, p. 72). This preparation is, I presume, indicated if it be desired to produce copious diuresis, so as to diminish the volume of the blood; but, on account of the peculiar rigidity of the cardiac muscles which large doses of caffein are apt to produce, that remedy should be cautiously used.

The distressing form of dyspnœa which arises from extensive meteorismus requires for its relief the removal of the fermenting substances, either by emetics, if they are as yet in the stomach, or by enemata, if they are retained in the descending colon or rectum. If the removal be impracticable, the fermentation may be arrested by small (five-grain) doses of chloral-hydrate, or by about two drachms of the creasote mixture (*P. B.*), both of which—the former with the addition of a little mucilage—are given in some aromatic water. After one or two doses of these mixtures, the intense symptoms soon subside.

In cases of obstruction of the air-passages by plugs of mucus, the means of relief vary according to the position of the latter. Emetics are indicated if the block exist in the peripheral portions of the lungs; and, as they are employed only on account of the mechanical compression of the chest in the act of vomiting, preference is therefore to be given to those remedies which produce the least amount of depression. Hence the sulphate of copper or of zinc is preferable to antimony or ipecacuanha. I have frequently made subcutaneous injections of apomorphin—from one-twelfth to one-tenth of a grain—and I have found them best answer the purpose.

Vomiting, *i.e.*, compression of the chest, has little influence on the plugs of the larger bronchi. Hyde Salter correctly observed that, in the cases in which ipecacuanha afforded relief, this occurred before vomiting took place; and he truly remarked that ipecacuanha acted as a depressant—not, as he imagined, by relaxing the bronchial spasm, but by producing serous exudation around the tough pellets of mucus. The same effect, however, may be obtained in a less circuitous route, and with less general disturbance. The "antispasmodic fumes," which have been empirically recommended, owe their virtue to the presence of ammonia, and to that of picolin, of pyridin, of lutidin and collidin, as they are evolved in the combustion of nitre-paper, of stramonium, of tobacco, and of the various patent "smoking mixtures." Ammonia and the members of the picolin series produce, when inhaled, intense hyperæmia, as may be seen in the buccal, pharyngeal, and larnygeal mucous membranes of habitual smokers; and the exudation accompanying the hyperæmia tends to soften and to detach the obstructing mucus. Germain Sée has introduced for the purpose iodide of ethyl, of which from six to ten drops inhaled greatly increase the bronchial secretion. Its effect is transient, but unquestionably curative in cases of chronic bronchitis; whereas the fumes of stramonium and of similar drugs, especially if often repeated, aggravate the disease by the intense and lasting congestion which they produce.

The liquid extract of quebracho* has of late been largely employed in the treatment of asthma. As yet, there is no indication for its use, except the presence of dyspnœa. A teaspoonful, repeated, if necessary, at intervals of ten minutes, certainly relieves, as I have observed, the

* Messrs. Corbyn and Co. prepare the extract according to the formula of Penzoldt.

dyspnœa of phthisis, of pneumonia, of pleurisy, of emphysema, and of valvular lesions. It has failed of its effect, so far as I have seen, only in two cases of aortic disease; in the one, the patient had been for years accustomed to inhale nitrite of amyl almost every two hours; in the other, there was complication with marked attacks of stenokardia. The active principle of quebracho appears to be a gum-resin; but as to its mode of action nothing is known. I have frequently noticed that, after the administration of the drug, there is slight flush of the face, perspiration, and occasionally drowsiness; but there are no objective signs on the part of the heart and of the lungs sufficient to account for the relief.

AMPUTATION FOR RAPIDLY GROWING MALIGNANT SUBPERIOSTEAL TUMOUR OF THE FEMUR.

By T. HOLMES, F.R.C.S.,
Surgeon to St. George's Hospital.

WHILST the very successful and striking course of lectures is still fresh in our memory, with which Mr. Butlin began the "Erasmus Wilson" series of pathology at the College of Surgeons, I think a record of the following case may be useful, as an encouragement to perform amputation early in cases of presumed cancer of the bones. I will not go into the distinction which it is Mr. Butlin's object (along with most of the pathologists of the present day) to establish between sarcoma and carcinoma. It is clear enough that the tumours of bone which he classes as sarcomatous are usually intensely malignant; and those of the femur perhaps more so than those which grow from the bones of the leg or foot. The lists of tumours of the femur which Mr. Butlin produced, and which are published in the BRITISH MEDICAL JOURNAL for June 19th and July 3rd, comprise twenty-one cases of subperiosteal and seventeen of central tumour. In only one of the former class and three of the latter is anything like definite recovery indicated; and in all but one of these the lapse of time is insufficient even to render unlikely the relapse of the disease—nine, fourteen, and sixteen months being the latest dates after the operation at which the patient was known to be well. In the exceptional case, a young woman was known to be well, after amputation on account of a central myeloid tumour, three years after the operation. Mr. Butlin again lays stress on the difference in malignity between subperiosteal and central tumours—the central sarcomata being, as he says, far less malignant than the subperiosteal. In the present instance, the subperiosteal nature of the tumour is distinctly asserted, and this again renders the case the more worthy of record. I am sorry that I cannot produce more accurate notes of the microscopic examination of the tumour. I have a strong impression that Dr. Lightfoot showed some microscopic drawings of the structure of the tumour; but he did not insert them in the case-book of the Chesham Cottage Hospital, from which the following notes are extracted. I am not entirely without hope, however, that the publication of these papers may attract the attention of the gentleman who examined the tumour, and that he may still have copies of the drawings in his possession. I think I may say that they corresponded in all particulars to the usual appearances of what used to be called medullary cancer; and that the course of the disease, as well as the examination of the tumour, left no doubt in the mind of any of those who saw the case that it was one in which either the patient's life would soon terminate, or cancer would soon be disseminated throughout the body; and the early swelling of the inguinal glands on both sides rendered the latter event the more probable. In many respects, therefore, the case was an unpromising one; but, in the one important particular, of the early period at which the operation was performed, it was eminently favourable. For there was clear and positive evidence that no tumour whatever existed four months before the amputation; and we must recollect that this is far from being the case in those instances (by far the greater number) in which the date of the disease is given from the vague statements of the patient. The note, "four months from the time when the patient first noticed the tumour", is far from showing that no tumour existed four months previously. Another matter which is worth thinking of, in connection with this case, is, whether the common doctrine is correct, that, in malignant tumour of the femur, the amputation should be performed through the hip-joint. I must say, for my own part, that I have long been of the opinion that, provided the limb is removed at a considerable distance from the tumour, amputation is not rendered less effectual because a portion of the femur is left; whilst every one must allow that amputation at the hip-joint is a much more dangerous operation than amputation three inches lower. I am the more anxious that this case should be published in the JOURNAL, because I believe that it is far from being an isolated one. My own impression is, that if we could follow all the cases in which recovery takes place after amputation, we should find enough to encourage us to take a less gloomy view of cancer of the bones; and, above all, enough to make us more eager in pressing the necessity of early amputation. I heartily agree with the Erasmus Wilson Professor that there is no "sufficient ground to doubt that, if the primary tumour be early enough removed, generalisation by the blood and affection of the glands may be prevented".

Rapidly growing Malignant Subperiosteal Tumour of the Femur, in which Amputation was performed below the Hip, eight years since, and the Patient is still in good health.—The patient was a young man—Jos. L. Howard, aged 23—who consulted me on May 7th, 1872, with the following history. Three months previously he had consulted Mr. Churchill of Chesham, on account of pain in the right knee, aggravated by movement. He knew of no reason for it, and there was no irregularity of any kind to be made out by careful examination. He had never had syphilis. Afterwards, it seemed that his great-grandmother and great-great-grandmother had died of tumours; but at the time there was nothing to indicate any history of cancer. The affection was believed to be rheumatic, and nothing more was heard of the man for a month, when he came again, and then a "bean-like swelling" appeared in connection with the upper part of the inner condyle of the femur. This soon began to grow. He complained of racking pain at night, and the inguinal glands on both sides became enlarged and hard. Four days before I saw him, pulsation had been noticed in the mass, which by that time was of the size of half an orange. I gave it as my opinion that the tumour was cancerous, but recommended that the case should be watched a little.

From this time till June 5th the tumour progressed steadily, and now had doubled in size. The pulsation, however, became less distinct. He was seen by Sir James Paget, who took the same view of the case.

On June 7th, he entered the Cottage Hospital at Chesham, where the limb was amputated by Dr. Lightfoot, Mr. Churchill's assistant—the femur being divided about two and a half inches below the trochanter.

I have still Dr. Lightfoot's notes before me, but I cannot supply any drawings of the microscopic examination, though I am under the impression that Dr. Lightfoot had some; for that talented and promising young surgeon unfortunately took service with the Dutch in the Acheen war, and died of dysentery. The following is the account of the tumour, which I believe was supplied to him by some pathologist of eminence in Edinburgh, to whom he sent the specimen. "The tumour was found to be almost entirely isolated from the soft parts—as shown by the naked eye and microscopical appearances—and its growing tendency confined to the inner surface of the thigh. Section proved its medullary character: soft and pultaceous, with loose bony spicula. The medullary or encephaloid substance was most manifest in the outer or cortical part of the growth. Here, too, bony spicula traversed the diseased mass. Careful examination of the bone, on section, inclines one to imagine the tumour to have been of intraperiosteal origin; or at any rate to have sprung from the outer layer of the hard bone instead of from its inner structure—that its origin, in fact, was peripheral, not central. Under the microscope, cancer-cells were typically represented; but the neighbouring soft parts only gave cancerous appearances at one spot. The bone, where divided in the amputation, appeared perfectly healthy."

There is no need to add anything further to the notes of the case, except to say that the man rapidly recovered from the operation, and has been in perfect health ever since. He married not long after his recovery, and is the father of a family. He had been at work, ever since a few months after the operation, at his trade, that of a carpenter, till a short time since, when he took to lighter work, because he fonnd that his artificial leg irritated the stump and made the inguinal glands swell. He is now free from even this slight inconvenience.

ON THE PERCUSSION-NOTE OF EMPHYSEMA.

By REGINALD E. THOMPSON, M.D., F.R.C.P.,
Senior Assistant-Physician to the Hospital for Consumption and Diseases of the Chest at Brompton, etc.

IF there be one pulmonary disease more than any other which all practitioners of medicine, from the advanced professor down to the merest tyro, would consider to be easily diagnosed at a cursory glance and by simple percussion of the chest, that disease would, by common consent, probably be emphysema; but, notwithstanding the confidence generally exhibited as regards the diagnosis of this disease, it is a condition often mistaken, certainly not so easy to diagnose as is generally supposed; and, when we come to examine the authoritative treatises relating to the physical signs of pulmonary disease, there will be found to be a strange discordance on some very essential points regarding the sounds elicited by percussion from the emphysematous lung.

My position as pathologist to a hospital for pulmonary diseases

enables me to form some opinion of the knowledge shown by clinical students and others in the detection of pulmonary disease by physical signs; and, from the errors that are made, I have every opportunity of watching how the signs which are generally accepted as indicating special conditions of the lung can be depended on for the purpose of diagnosis. Now, my experience is this, that there is no disease which is more frequently detected and established with greater confidence than emphysema, and yet none which more frequently falsifies the diagnosis.

There are certainly two conditions which are liable to be mistaken for emphysema: the one is acute tuberculosis; the other fibroid thickening of the lung of old standing, with adherent pleura and expanded bronchial tubes—all three diseases agreeing in these points, that the patients are subject to attacks of dyspnœa, that the percussion-note is what is generally termed hyperresonant, that the respiratory murmur is more or less inaudible, and that the chest is fixed.

It may be useful to examine the accounts which are given by different authors as regards the physical signs of emphysema.

If we turn to Laennec's treatise on *Auscultation*, we find the signs of emphysema laid down distinctly, and the percussion-note is described as being very clear ("un son très clair"); but no further description is given, and the same word is used to describe the sound given out by the percussion of a pneumothorax ("un son plus clair que le côté sain"); and he goes on to say that, in this latter case, "la percussion seule et par elle-même ne donne dans se cas aucun renseignement constant". The deduction to be made from the description here given of the percussion-notes in emphysema and pneumothorax is, that they are identical in quality, although the two conditions are so different.

If we turn to Watson's description of emphysema, we find that percussion yields an unnaturally clear and resonant sound; and Walshe says that the percussion-sound in this disease is greatly clearer than natural, and he never found the parietal distension sufficient to deaden the sound: a statement which indicates that Walshe considered it possible that distension might deaden the sound, if carried sufficiently far.

The first note of hesitation appears to have been struck by Niemeyer, and in his *Text-Book of Practical Medicine* is the following passage. "Percussion forms an almost certain basis for diagnosis where emphysema is of considerable extent. However, we must not expect the sound to be unusually loud or full in all cases, as, if the resistance of the thoracic wall be augmented, even though the vital capacity of the lungs be increased, no very active vibrations, capable of producing any very loud or full resonance, can take place."

When I turn to Dr. Gee's work on *Auscultation*, and examine his account of the physical signs of emphysema, still more difficulty would appear to accompany the diagnosis. Speaking of emphysema in the first edition of his work, Dr. Gee says: "The percussion-note tends to fall in pitch; that is to say, to become tympanitic. The muffling mostly remains unchanged, or is even increased, although sometimes the note becomes clear in places." No explanation is given for the great diversity of signs given in this sentence; nor do I see why notes that fall in pitch therefore become tympanitic. For a definition of the sense in which this word "tympanitic" is used, it may be well to look back at page 68 in the same volume, where it will be found that "tympanitic is defined to be the lowest and longest of all percussion-sounds; it is afforded by a tympanitic belly". Now I confess that I had thought that the pitch of a percussion-note derived from percussing a tympanitic belly varied according to the distension, in the same way that the note of a drum is altered by the tension of the parchment.

On referring to the treatise of Flint on *Percussion*—a work which appears to me to be the most complete manual on the subject hitherto published—I find the subject discussed with more distinctness. "The resonance over the upper and middle region of the chest on both sides is vesiculo-tympanitic; that is, the intensity of the resonance is abnormally increased; the quality is a combination of the vesicular and tympanitic, and the pitch is more or less raised." Now we have here an additional nicety for the distinction of the percussion-note in emphysema—namely, elevation of pitch; a point of great importance, and for which, with many other niceties as regards pitch of notes, we have to thank Flint. This elevation of pitch depends upon the increased tension of the inflated cysts of the lung, and it is by this quality in the percussion-note that we are enabled to detect the extent to which emphysema affects a lung.

The conditions of emphysema which must be taken into account as affecting an alteration of sounds from the normal standard of the pulmonary percussion-note are these:

The diminution of elasticity of the lung-tissue;
The consequent increased inflation of the air-sacs;
The enlargement of the thoracic cavity;
The dilatation (more or less) of the bronchial tubes.

That the percussion-note of a healthy lung becomes higher in pitch as the lung expands, may be readily shown by percussing the chest of a well-made broad-chested individual during deep inspiration. As the chest expands, the percussion-note becomes higher. This is, I believe, allowed on all hands: the sound becomes more intense because of the increased capacity of the thorax. When a membrane loses its elasticity, regular vibrations are prevented; and this especially happens, as Niemeyer observes, when the lung becomes a cluster of inflated cysts: the tension of the alveolar walls tends to muffle the vibrations. But we have also to deal with a sounding-box, which is increased in size by the expansion of the thoracic sides and the depression of the diaphragm. We must, therefore, expect the intensity of the sounds to be increased.

Inasmuch as the emphysematous condition of the air-sacs is generally exaggerated at the peripheral surface, and the dilatation of the bronchial tubes, where it coexists, is a deep-seated condition, we should expect that superficial percussion would elicit the percussion-note of the periphery, and deep percussion the note of hyperresonance due to the dilated tubes and increased capacity of the thorax.

We have here the clue to the difference of opinion which I have shown to prevail among different authoritative writers on the percussion-note of emphysema; and I may, perhaps, venture to put forward the result of my experience on the matter.

In the first place, I fully allow that rough deep percussion elicits a note which is termed hyperresonant, but which I should prefer to define as of increased intensity. The noise of the percussion-note is greater than natural; but the vibrations are not prolonged and free, but rather, on the contrary, muffled in proportion to the distension of the air-sacs and inelasticity of the tissue. On this account, also, the pitch of the note even to deep percussion is raised; and this becomes the more evident when we come to compare the upper lobe, which is usually the most emphysematous portion of the lung, with the lower portion, which is generally the least affected. In percussing the base of a lung thus affected, in cases where the heart is displaced and the diaphragm depressed, the percussion-note is most intense here, although the emphysema is less in degree than in the upper lobe, while the pitch is considerably lower; and I am of opinion, consequently, that the extent of emphysema is to be measured rather by the pitch of the percussion-note than by the intensity of its sound.

But, in the second place, I submit that superficial light percussion elicits a very peculiar sound, which belongs solely to distended lung; and this sound becomes more evident when care is taken to percuss in the intercostal fossæ, with the finger placed in the groove between the ribs. If this be done, and percussion made lightly with one finger, then the note which is elicited from an emphysematous lung will be found to be high-pitched, of short duration, of a peculiar muffled or stopped quality—the "bandbox" sound of Biermer.

The note is not the same if the finger be placed on a rib over the emphysematous portion of the lung. It will be found to be fuller, of longer duration, and a little lower in pitch, as compared with the note derived from the percussion of the intercostal fossa. In neither case is the note, strictly speaking, dull or solid; that quality of note is given, although it is dull in a very slight degree, by the percussion of a lung distended in consequence of the copious deposit of miliary tubercle. The distinction between the two conditions is often very difficult; but I believe it can only be made by the most careful attention to the different qualities of note arising from a number of distended cysts, and those cysts occupied by solid matter.

In some cases, when percussion is made over the root of the lung, the percussion-note becomes more intense, more resonant, and lower in tone, which is due to the resonance of the large bronchus. The point I wish to bring forward is this, that the peculiar characteristic note of emphysema is not brought out solely by deep percussion, but that it must be supplemented by light superficial percussion to obtain the peculiar muffled high-pitched note, which is proportionate to the degree of emphysema, and will help to distinguish this form of pulmonary disease from acute tuberculosis with distension of the lung, which is always a very difficult condition to diagnose; and from a fibroid condition, which is more easy to establish, although not infrequently confounded with emphysema. There is, perhaps, no condition of pulmonary disease more difficult to establish than the presence of tubercle, even when it occurs as a copious crop disseminated throughout the lungs, in consequence of the distended condition of the air-sacs which so often accompanies the deposit; and, unless the greatest care is shown in eliciting the characteristic notes of percussion, which help to distinguish the two conditions—conditions so widely different as regards prognosis—a confusion may result, and the auscultator may conclude, to his cost, that he has to deal with a comparatively non-dangerous and chronic pulmonary disease, instead of with that which is most rapidly fatal.

OBSTETRIC MEMORANDA.

LABOUR COMPLICATED BY OVARIAN DISEASE AND CONTRACTED PELVIS.

I THINK the accompanying account, from notes taken at the time, of a case which occurred in my practice last winter, will be of interest in connection with the case reported by Dr. Atthill in the JOURNAL of July 3rd.

Mrs. F., aged 32, was taken in labour on Monday, December 8th. When seen, she appeared to be in a healthy and well-nourished condition, and gave the following history. She had had two children, both being delivered with great difficulty; the youngest child being three years old. Eighteen months ago she noticed a swelling in her abdomen, for which she consulted several surgeons, all of whom told her she was suffering from ovarian disease. She continued increasing in size, and an operation was advised; but in the meantime she became pregnant. On an abdominal examination, the child was found to be almost entirely on the left side, its feet and head being distinctly traceable. The right side was occupied by a large tumour, evidently containing fluid. A vaginal examination shewed the pelvis to be generally contracted, and the head presenting at the brim. Below and behind the head was a soft fluctuating tumour, evidently connected with the tumour in the abdomen.

Her pains being very slight I left, promising to see her the next day. She continued much in the same state until the evening of Wednesday, the 10th, when I was again sent for. I then found the pains stronger, and the os dilating. About three hours after, her state was as follows. The head was firmly wedged in the brim of the pelvis, not moving in the slightest with the pains, which were very strong. Between the head and the rectum was pushed down a portion of the ovarian cyst, which was very tense, and about the size of an orange. As this appeared (at any rate partly) to prevent the progress of the head, I tapped it with a small trocar and cannula. About two quarts of brown fluid (containing cholestearin) were drawn off, the abdomen became much smaller, and the cyst could no longer be felt in the vagina. I then delivered her with long forceps, with considerable difficulty, of a child weighing thirteen pounds. She had no flooding, and, beyond having paralysis of her bladder for a few days, made a good recovery.

On December 20th, ten days after delivery, she passed *per vaginam* a complete thick-walled ruptured cyst, having attached to its outer surface about two inches of a small pedicle.

On January 5th, she was able to attend to her household duties, with no abdominal fulness, and no uterine or other enlargement, since which date she has continued perfectly well.

St. Germans, Cornwall. J. BEDFORD KERSWILL, M.R.C.P. Ed.

SURGICAL MEMORANDA.

SAYRE'S PLASTIC JACKETS.

THE papers by Mr. Furneaux Jordan and Mr. Davy, recently published in the JOURNAL, and that of Dr. Miller, which appeared some months ago, are evidence of the favour with which my method of applying the plaster-of-Paris jacket in Pott's disease, without suspension of the patient, is viewed by the profession. Mr. Davy has, in the hammock, hit upon an ingenious contrivance, by which the jacket can be applied in the recumbent posture with a continuous bandage, and Mr. Jordan has elaborated my method, and devised an excellent bandage for fixing the cervical vertebræ; but I must protest against any proceeding (as generally applicable) which would render it impossible or difficult to apply the jacket in the bed-room of a cottage, or in any other place where the general practitioner finds his patient. The steps described by me in the JOURNAL of March 1st, 1879, I find universally applicable; and for diseases of the cervical and upper dorsal vertebræ, I adopt the same plan, with the addition of a steel support attached to the jacket to carry the weight of the head. That the jackets are comfortable and efficient, may be inferred from the fact that I removed one the other day from a stout female adult, the subject of Pott's disease, with large psoas abscess, who had worn it for twelve months, and who was so comfortable that she was with difficulty persuaded to have it removed even then; she now, in her new jacket, walks about as though she were perfectly sound. I feel confident that, in cases of adult females, with large hips and small waists, it would be impossible to make an efficient jacket with a bandage with only three broad tails, as recommended by Mr. Jordan; in such cases I frequently have to split even the narrow bandages which I use. Mr. Jordan's plan of extension in the horizontal posture, although far preferable to suspension, is, I believe, quite uncalled for, in any but very exceptional cases—cases with which I have not yet met in the course of my practice. No doubt practitioners will find it convenient to vary the details of the proceedings required to apply a plaster jacket in the recumbent posture, and many will prefer the excellent method of changing the many-tailed bandage suggested by Dr. Miller, of Dundee, to that which I usually practise; but any variation which is less simple than my method, is, I believe, a deviation in the wrong direction. The object to be attained being always the application of a rigid casing to the spine, which shall fix the vertebræ in the most favourable position for cure, and that by the most simple and efficient method.

THOMAS JAMES WALKER, Peterborough.

REMOVAL OF STEEL OR IRON FROM THE EYE.

IN connection with the employment of the magnet for the removal of pieces of steel or iron from the interior of the eye, just now coming into vogue, the following quotation from a work, published in 1745, of a case in which similar application was made, may prove of some interest. It is from *Observations of Medicine and Surgery*, by S. Miches, M.D. (vol. i, page 114). The work consists of essays abridged from the *Philosophical Transactions*, and I am indebted to our indefatigable clinical assistant, Mr. Kilham, for drawing my attention to it.

"There was one in Salisbury who had a piece of iron or steel stuck in the iris of the eye. The person was in very great pain and came to me. I endeavoured to push the iron out with a small spatula, but could not; and then applied a loadstone to it, and immediately it jumped out."

SIMEON SNELL,
Ophthalmic Surgeon to the Sheffield General Infirmary.

CLINICAL MEMORANDA.

THE DIAGNOSIS OF ROTHELN.

IN connection with the discussion on this subject, I wish to call attention to a paper of mine on Rötheln, in the current number of the *Edinburgh Medical Journal*. In this paper, which is founded on a study of most of the writings I could find on the subject, and on cases which have at times occurred in my own practice, I have endeavoured to show clearly the diagnostic points which distinguish rötheln from both measles and scarlatina. These are briefly as follows. 1. The temperature rarely rises above 101° or 102°. 2. The eruption generally appears at once all over the body. 3. Rötheln affords no protection against either measles or scarlatina, and *vice versâ*. Mr. Brenchley (*Lancet*, 1870) mentions a case where an attack of rötheln was succeeded by genuine scarlatina, just as the patient was convalescing from the former disease. 4. Rötheln propagates itself, and never gives rise to either measles or scarlatina. 5. The patches of eruption in rötheln are raised above the surrounding skin, especially towards the centre, where the colour is deeper. 6. The desquamation is in fine branny scales, and commences at the centre of an eruptive patch, gradually extending to the circumference. 7. The patches of eruption are larger and brighter in severe cases than in mild ones. 8. The tongue is more or less dirty at first, then becomes strawberry-like, and, finally, smooth.

I will only further refer those interested in the subject to the above-mentioned paper, where I have discussed, at greater length, the symptoms and treatment of the disease, the distinct nature of which was recognised in Germany as long ago as 1812.

W. DOUGLAS HEMMING, F.R.C.S.Ed., Bournemouth.

THE ANATOMICAL INSTITUTE AT ST. PETERSBURG.—We take the following details respecting the institute of practical anatomy attached to the University of St. Petersburg from *L'Invalide Russe*. The institute attained its twenty-fifth year of scholastic existence in 1880, having been founded in 1855, and placed under the direction of Professor Gruber. During the course of the twenty-five years of its existence, the anatomical institute has seen 6,265 second course students and several third course students study their practical anatomy there; 202 private students have also attended the institute, as well as students in military surgery, others preparing to take their doctor's degree, and health officers; making 10,251 visitors in all. The number of subjects brought to the institution amounts to 20,338, out of which number 13,985 were dissected at the institution itself; the rest were given to the other chairs of the academy, as well as to the students in the higher clinical classes, for exercises in practical surgery. During this period, Professor Gruber and his pupils have published 422 *brochures* on anatomy, of which 391 were from the pen of the professor himself. The museum, founded by Professor Gruber, contains six thousand specimens of different skeletons useful for scientific study and the teaching of anatomy.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SESSION, 1880.

Wednesday, July 7th, 1880.

Preliminary Education.—Dr. STORRAR said that, at the last meeting of the Council, the subject of preliminary education was crowded out by the number of subjects which were brought before them. The Government did not contemplate any medical legislation at present. What he now proposed was, not to deal with the question of professional examinations, but to confine his remarks to the preliminary examination, which was dealt with by those letters which were returned from the several medical bodies, and were reported upon in the course of the last winter by the several Branch Councils. He would confine himself to the third resolution passed by the General Council. This resolution was as follows: "That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination, as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject." In 1859, he moved for the appointment of a committee on preliminary education, and he thought he might almost say that that was the golden age of opinion of the Council upon the subject of preliminary education. There was then a strong sense of the imperfection of medical education, and a strong conviction that that defect was due to a defect in preliminary education, young men passing into the schools utterly unprepared to profit by the education of their medical teachers. There were two ideas to be kept present to their minds with regard to preliminary education; the one was, to make sure that there were certain subjects which young men passing through the study of medicine should know beforehand; and the other—not the least important—that young men entering the study of medicine should have their minds so disciplined, that they might be competent to engage in the difficult studies of the profession with advantage. Then the question arose, what was the kind of examination which it was desirable that a medical student should have? It was felt that there ought to be no special preparation for the study of medicine; that the proper preliminary preparation should be that preparation common to all educated professions. In 1859, the Council resolved that "no person should enter the medical profession who had not received preliminary education, such as was equal to that required, at least, by the national educational bodies"; those bodies being understood to be the universities. The great idea present to the mind of the Council at the time was, that they should fall back entirely on national educational bodies. There were, in England, the Oxford local examinations, the Cambridge local examinations, and the matriculation examination of the University of London. But Dr. Christison and Dr. Stokes said that there were no corresponding examinations in Scotland and Ireland, and, therefore, they must find some means to meet the wishes of the Council. That was the origin of the medical licensing bodies conducting a system of examination in arts. The Council also recommended that the scheme of examination should be, as nearly as practicable, similar to that of the national educational bodies above specified. On May 28th, a letter from the King and Queen's College of Physicians in Ireland stated: "They consider that the mere opinion, or rather recommendation, of the General Medical Council, as to what should be required in education and examination, will be of no avail to insure competent education and efficient examination in the present circumstances of the numerous qualifying licensing bodies in the United Kingdom." In 1866, it was agreed by the Council that the Committee on General Education be instructed to take into consideration, and report upon, the "examinations in general education at present conducted by the various national educational and other bodies recognised by the General Medical Council"; and a report was brought up, containing no mention of examinations conducted by arts examiners, or by special boards of examination in arts. In 1868, a proposal was made by Dr. Fleming, that boards of preliminary examination should be established under the Branch Councils. The English Branch Council objected to it, as did also the Irish Branch Council, and the matter dropped. On July 10th, 1869, it was moved by Dr. Bennett, and seconded by himself (Dr. Storrar), that, "Inasmuch as there are now, in England national educational examining bodies on subjects of preliminary education, which are readily available by students throughout the kingdom, and whose certificates are in all respects deserving the confidence of the Council, the time has arrived when special preliminary examinations in general knowledge, instituted by the English medical corporations, should cease to be recognised." An amendment was moved by Dr. Andrew Wood, seconded by Mr. Hargrave, "That the Council considers it would be desirable that, in any new amendment of the Medical Act, a clause should be inserted, enabling the General Council, or Branch Council of any part of the kingdom, to establish a board or boards for the examination of students." The amendment was negatived, and the motion was withdrawn, by permission of the Council. It was then moved by Mr. Cæsar Hawkins, and seconded by Dr. Acland, "That the attention of the several medical corporations be drawn to the recommendations and opinions issued by the Medical Council, namely, that the examinations in general education should be left entirely to the examining boards of the national educational bodies recognised by the Medical Council, and that their opinion be asked, whether the time has not now arrived when these recommendations should be carried into effect." That was agreed to, but he had not been able to find that it had produced any results. At a subsequent session, it was moved by Dr. Quain, "That it is desirable that the examination in general education should be left to the universities, and such other bodies engaged in general education and examination, as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies for the purpose of carrying out this object." To that, an amendment was moved by Sir Dominic Corrigan, and seconded by Dr. Andrew Wood, "That it is desirable that the examination in general education be left to the universities, and such other bodies engaged in general education and examination, as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject." That was carried; an amendment moved by himself, and seconded by Dr. Rolleston—"That it is desirable that the examination in general education be left to the arts faculties of the universities, and such other bodies engaged in general education and examination, as may from time to time be approved by the Council"—being negatived. This being the state of affairs, and the matter being apparently in a worse condition than it was twenty years ago, he had determined to take the matter up himself, and again bring the question before the Council. He had looked over the list of preliminary examinations in arts, before commencing medical study, passed by medical students in the three kingdoms from 1869, and he found that the whole number of examinations passed by students under the national educational bodies, amounted to 252; and by students under the licensing bodies, or under the control of the licensing bodies, 699; making up a total of 951. He said it with great grief in the presence of Sir James Paget, who, he knew, took great interest in this question, that the position the College of Surgeons of London took with regard to this matter was a grievous one. In their reply to the communication from the Council, they stated that they "proposed to defer their consideration of the question until it shall have been determined by the several medical authorities whether or not it is expedient to hold a special examination in general education, under the scheme for an examining board, agreed to by those authorities." The College of Surgeons was using its best efforts to bring about a conjoint board, and therefore thought it was needless to enter into this question until they saw their way to the formation of this board. The fact was the College of Surgeons of England, instead of at once adopting the examination of the College of Preceptors for senior students, retained the College of Preceptors to conduct the examination, but kept to themselves the privilege of drawing a line where it should stop; and he held that that line had been drawn at an improper place. All the universities, with the exception of Durham, limited their recognition of arts students to the arts faculties of the universities. With regard to Durham, they instituted a special examination for medical students; and he remembered the investigation, which took place at a very early period, when Dr. Embleton, who then represented the University of Durham, was heartily ashamed of his own university. Those examinations were inspected by Dr. Paget and himself, and the terms of their report was that it was a very poor affair. There were only twenty-three students who got the certificate from the medical examination of the University of Durham in 1879—possibly they were too many; but he wished honestly to place before the Council the state of their knowledge at the present moment with regard to the university upon this matter. The College of Physicians had given up the examination fifteen years ago. The Apothecaries' Hall was the only remaining body, and they said they were not disposed to change for the present; that they had always conducted their examinations through a board of examiners—men who were graduates in arts of Oxford and Cambridge; and, therefore, to that extent, they followed the instructions of the Council. In Scot-

land, out of five hundred and seventeen students on the register for 1879, the total number of young men who passed the examinations of the national educational bodies was twenty-seven. Therefore, four hundred and ninety passed either the special medical examinations of the universities, or the special arts examinations of the corporations. He criticised the system of examination by *remanets*, adopted in Scotland, as one of the most detestable things from his point of view. It had never been countenanced in England, and was always found fraught with abuse, because it encouraged a system of cramming. The Glasgow Faculty having presented a report, the English Branch Council called special attention to the following passages therefrom. "In the university there is an intimate connection between the examining body and the medical school. The university examination, if properly conducted, necessarily acts in the way of directly reducing numerically the university students." "The extramural schools in Scotland are to a great extent the rivals of the university schools." "But it would tend to the disintegration of the extra-academic medical schools to make it imperative on their students to pass their arts examinations under the auspices of the universities." Those passages seemed to suggest the idea that there was a sort of enmity between the medical corporations and the universities, and something like it between university and university. In Ireland, the Council was never able to elicit information with reference to the Queen's University, and with regard to that university he could not trust his own figures. It was stated that two hundred and fifty passed the examinations of the national bodies and two hundred and thirty-two passed the examinations of the licensing bodies. This included the matriculation of the Queen's University; and the question arose: Was the matriculation in arts of the Queen's University a preliminary examination? He found in the minutes a notice, furnished by Dr. Leet, who was officially appointed to inspect the examinations, to the effect that the university "still permits students to enter upon their medical studies without passing an examination in arts". Having contrasted the present condition of the preliminary examinations with what was in the mind of the Council in 1859, he would ask if they were satisfied? He would state his own impression: they began in the age of gold; they were at the present moment in the age of lead. The preliminary examinations were not creditable. If he were asked whether he thought that good had been done by the Council and by the several qualifying bodies since 1859, he would say most unhesitatingly they had done great good. He knew, from men whose experience bridged over the great space between 1858 and the present time, that young men came to the study of medicine in a far higher condition of preparation, and also that they became much more proficient in their profession. He acknowledged that much had been done; but had all been done that could be done or ought to have been done? To this he emphatically answered, No. His object in bringing the matter forward was, to have these preliminary examinations conducted by the national educational bodies; he wanted to have an end put to *remanets;* and also to consult the Council as to whether it was not possible to interpose between the existing preliminary and professional examinations an examination in the sciences, so as to clear the ground for entering upon professional study. He moved:

"That the recommendations of the General Council on preliminary education and examination be referred to a committtee, to consider and report as soon as possible whether any, and, if any, what changes may with advantage be made in them."

Sir WILLIAM GULL said there was only one point in Dr. Storrar's preliminary remarks with which he did not agree. Dr. Storrar said the men's minds should be duly trained. He (Sir William Gull) said they should be sure they had got minds at all to begin with, for that was really the point. If the profession were to advance as the public had a right to expect, they should have a better material to begin with. Many years ago, in giving evidence before a mixed Committee of the Houses of Lords and Commons on National Education, he stated, regarding his own profession, that there should be such an examination as would of necessity cut off 33 per cent. of the candidates. Could they get sufficiently able and intellectual men to enter the profession in such numbers as to supply the public with practitioners? He felt sure they could. He believed that as soon as any profession was raised to a higher intellectual distinction, more men would come into it; and the better the way in which the men were selected from the beginning, the less failures they would have as the examinations proceeded. He entirely agreed with Dr. Storrar that it was of the last importance that the Council should direct its attention to the preliminary education and examination of men; and it would be well to refer the subject to some committee to consider how the examinations should be conducted. The men should be generally examined up to about sixteen or seventeen, and for the next two years they should be occupied in similar or preliminary studies prior to medicine. Their large hospitals should thus be made more and more centres of surgical and medical work; and men should not enter a hospital and then for two years, probably, never study or learn anything connected with a hospital. The whole question was much wider than it looked. For the last two or three years, there had been many questions raised as to whether Oxford or Cambridge should found medical schools; and, for his own part, he thought the universities would be doing a great public service to the community if they would undertake a good deal more of the general and preliminary education of the country, and leave the hospitals to teach the more technical forms of their profession. Their profession must be largely technical, but it must be based upon scientific training to begin with. They must begin with a better educational basis; then a better preliminary and general training; then a better clinical training; and this they ought to ask for. They were not at present prepared to go the whole way, but they were prepared to show to young men who were being brought up for the profession the proper way to fit themselves for it. He was very glad to second Dr. Storrar's motion.

Mr. MACNAMARA had listened with great interest to the instructive address by Dr. Storrar. He collected from it that Dr. Storrar's historical facts all point in one direction—namely, that this matter had been referred to committees on previous occasions, and nothing had come out of it, and now it was proposed to do the same again. He (Mr. Macnamara) considered it far more important that they should take the whole question of preliminary education, and discuss it fully and freely in the Council, for they would eventually save time by so doing.

The Rev. Dr. HAUGHTON said his idea was that the Council should lay down certain broad principles with reference to this question, and then refer the whole matter to a committee to consider the details.

Mr. TEALE thought they might get good from a committee if its functions were very narrow, simply to consider the question and formulate a series of propositions for the consideration of the Council.

On the motion of Dr. BANKS, the debate was adjourned.

Thursday, July 8th, 1880.

Dr. ACLAND, President, took the chair at 2 P.M.

Ophthalmology and Midwifery.—Memorials from ophthalmic surgeons in London, and from the Obstetrical Society, with the reports of the licensing bodies thereon, were read; and also the following report of the Committee appointed by the Medical Council in July 1879.

"The Committee appointed on July 17th, 1879, having considered the answers that have been received from licensing bodies in reference to the memorials from ophthalmic surgeons, and from the Obstetrical Society, report as follows. Answers have been received from all the licensing bodies, except from the Universities of Cambridge, Durham, and Queen's in Ireland. Of the last-named three bodies, each has been three times written to, but none has hitherto sent an answer. With reference to ophthalmology, the opinion of the bodies is almost unanimous that, under the present arrangements of their respective examinations, the subject of ophthalmology receives its fair share of attention, and that it would not be desirable, either to require attendance on a special course of lectures on ophthalmology as part of the curriculum for a medical student, or to make ophthalmic surgery a distinct subject of examination (separate from surgery) at the pass examination for a licence to practise. The Committee see no reason to dissent from that opinion of the licensing bodies, and they accordingly do not advise the Council to recommend that a special course of study of ophthalmology, or a distinct examination in that subject, should be required. With reference to the subject of midwifery, there is considerable difference in the requirements by the different licensing bodies as to the extent of study; some requiring as many as a hundred lectures, and others fifty or fewer; and some requiring as many as twenty cases of labour to be attended, while others do not require more than six. Seeing that the Council have not hitherto deemed it expedient to specify in their *Recommendations* the exact quantity of study to be certified in any particular subject, the Committee do not advise the Council to follow an exceptional course with regard to midwifery. With reference both to ophthalmology and to obstetric medicine, it appears to the Committee that, if the Council should hereafter have to reconsider the conditions of the medical curriculum as a whole, part of such reconsideration must of course consist in the Council's satisfying itself that each of the several branches of practical study will receive its due share of attention from every candidate who proposes to present himself for examination; and the Committee can at present only suggest that, whenever the time for such general reconsideration may come, it will be well for the Council to refer again to the two memorials which are now reported on.—G. M. HUMPHRY, *Chairman.*"

Dr. ANDREW WOOD moved, and Dr. HUMPHRY seconded: "That

the foregoing memorials from ophthalmic surgeons and the Obstetrical Society, together with the report thereon by the Committee, be received and entered on the minutes."

The Rev. Dr. HAUGHTON objected to the Council dealing with the two subjects on the same footing. He proposed that the important subject of midwifery should be at once considered by the Council, and that Dr. Humphry's motion should apply only to ophthalmology.

The further consideration of the question was adjourned.

Preliminary Education.—The debate on this subject was resumed.

Dr. BANKS defended the Queen's University of Ireland from the charge of having neglected this question, and compared the requirements of the Council with those of the University. The great difficulty in Ireland had been the deficiency in the middle-class schools, but that would no doubt be remedied to some extent by the measure on intermediate education passed by the late Government. The Queen's University had fulfilled its mission to the utmost of its ability, and endeavoured to raise the standard of general and medical education. No doubt brighter days were coming, and better prepared candidates would be sent up for the matriculation examination. The army returns showed, by the small number of rejections, the stringency of the university examinations.

Dr. SCOTT ORR believed that the examinations conducted by the Faculty of Physicians and Surgeons at Glasgow were entirely in conformity with the recommendations of the Council.

Dr. PYLE said the University of Durham had loyally carried out the regulations of the Council. A few years ago it was ordered that a special examination for medical students should be held; but no doubt, if the Council came to the conclusion that there should be a general preliminary examination held by the universities, the special examination for students in medicine would be discontinued. The Durham University was an educational body, as well as an examining one, and the fact that residence was required kept students away. To take degrees in arts required two years' residence at Durham itself, in a similar manner to Oxford and Cambridge; and the examination was equal to that of either of those universities.

Mr. TURNER regretted very much that the discussion had wandered into so many side issues, but Dr. Storrar was to blame for it. He had on this occasion given a very excellent retrospect, which was not, however, a particularly fortunate one with respect to the essential part of the motion, namely, as to what the Council was to do at the present time. Dr. Storrar began by telling them that, when the Council first entered into this question of preliminary education, then was the age of gold; but, as it went on forming committees to consider the whole matter, it degenerated from the age of gold to the age of lead. If they had deteriorated so very much since the age of gold to which Dr. Storrar referred, perhaps the influence of this Committee would be of such a character that the next age would be the age of pitch. On the part of the Scotch Universities, he was compelled to reply to the charges which Dr. Storrar had insinuated against them. He did not offer a definite motion, producing certain specific cases in which the Scotch Universities had not acted up to the proper standard; but he compiled a certain table of statistics and trusted to certain statements made by the Glasgow Faculty for the grounds of his opinion. He had evidently not taken proper pains to make himself acquainted with the practice of the Scotch Universities in the matter of preliminary examination. If the universities did not do their duty, let it be tabled in the form of a specific motion, and then a reply could be made to it. He wished to direct the attention of the Council to the mode in which the Scotch Universities conducted their examinations. In the first place, the examination which they conducted was not preliminary merely to degrees in medicine, but it was preliminary to degrees in medicine and science. At the present time, there was not in any Scotch University a preliminary entrance examination in the arts faculty; but the Universities of Edinburgh and Glasgow had arranged to bring into operation, in the course of the next winter, such an entrance examination. The examination board for conducting this examination for graduates in medicine and science was founded under regulations, made in 1858, by the Scotch University Commissioners. It consisted of the professors in the Faculty of Arts, conjoined with certain other examiners appointed by the University Board. Dr. Storrar had referred to a motion which he had brought forward: "That it is desirable that the examination in general education be left to the arts faculties of the universities, and such other bodies engaged in the general regulation of examinations, as may from time to time be approved by this Council." The examination preliminary to the study and graduation in medicine and science in the Scotch Universities was in precise conformity with this recommendation. It was an examination left to the arts faculties of the universities—that is to say, it was conducted by the professors of the Faculty of Arts and by examiners appointed to examine for degrees in arts by the University Court.

Mr. SIMON: It is the same in all the Universities.

Mr. TURNER said, it was the same in Glasgow, Aberdeen, and Edinburgh. There were no members of the medical faculty who took any active part whatsoever in that examination. There were four examiners appointed by the University Court: one being the Professor of Classics in the College of Science, two others being advocates at the Scotch bar, while the fourth was a professor of modern languages. The papers were usually submitted to the professors of the faculty of arts likewise. The medical faculty did not see the papers, although he, as Dean of the Faculty of Medicine, and as chairman of the board, *ex officio*, saw them. The answers to the papers were examined by four non-professorial examiners, and when each had examined his own set of papers, they met together, he being in the chair. They read out the results of the examination, and he recorded those results in a book kept for the purpose, and issued the certificates, passing or plucking the respective candidates. The only part which the medical faculty took in the examination was that which he took as chairman of the board. Another question raised by Dr. Storrar was the question of *remanets*. He would take, as an illustration of what he had to say, the Universities of London, Cambridge, and Oxford. One of the examinations of the University of Oxford accepted by the medical council, was the responsion examination. They accepted the Oxford examination as far as it went, but it did not go far enough for their purpose, and therefore they required any candidates to pass an examination in certain subjects. They dealt in a similar manner with the University of Cambridge. The matriculation examination of the University of London did not cover all that they required. For instance, Greek was not an essential subject of study, neither was logic. The Edinburgh University required for the doctorship of medicine that a candidate must pass in Greek, and either in Logic or in Moral Philosophy, so that if the matriculation student at the University of London came to them, they accepted his matriculation certificate for all the subjects covered by it comparable with their own subjects, but required him to pass in Greek and Logic. It would be very improper on the part of the University of Edinburgh to discredit the examination of its sister universities. They must trust something to the manner in which Oxford, Cambridge, and London conducted their examinations.

Dr. STORRAR: Do you accept the examination in Arts conducted by the licensing bodies.

Mr. TURNER: As far as they go. They accepted what the Medical Council sanctioned, and nothing more. If those bodies did not conduct a proper examination, then the Scotch universities were not to blame for it; it was a matter for the Medical Council; and if the Council was not satisfied with the examination conducted by those bodies, it was for them to say they were not to be recognised. There was, however, in connection with this whole subject, an element which had been somewhat left out of consideration. The medical student was far too little thought of in many of these discussions. If the Council laid down a peremptory rule that no one examining body was to accept the preliminary examination of another examining body, they would be harassing the medical student throughout a large part of his career; they would keep him constantly going at his preliminary education, and that was a condition of things which would be eminently destructive of anything like proper professional advancement. He thought that an examining body, accepting, so far as it was in accordance with its requirements, the examinations of other bodies which had been sanctioned by the Medical Council, was acting upon a perfectly proper principle. He would proceed to the real gist of Dr. Storrar's motion. There were four courses open for the consideration of the Council with reference to this matter. The first was to remit the subject to a special committee, without any conditions as to the time at which it should report. The second was to remit it to such committee, with the instruction that it should report to the Council on Saturday next. The third was to consider the whole matter in Council; and the fourth to consider it in committee of the whole Council. To the first course he had a decided objection; but to the second, namely, that it should be remitted to a special committee to report on Saturday next, that was to say, to give the Council a certain indication as to the direction in which their discussion should be taken, he saw no objection whatever. He still, however, was of opinion that the Council was perfectly right to go into the matter without the report of the committee. As Dr. Storrar had shown, there had been reports of committee after committee. The Council were in a position to deal with the matter at once, either considering it in Council or in committee of the whole Council. The time had arrived when the whole question of preliminary education should be considered, and they might make improvements in it. His experience as an examiner was, that the preparation of students for examination bore a precise ratio to the standard of examination. They must not raise the standard too high, because their decision was to affect the

entire body of the profession. The standard should be one which would suit the average student, and they should endeavour to determine, as far as they could, what might be expected from an average man in the matter of preliminary examination. He also thought the subjects of examination might be increased. He had drawn up a table of what seemed to be such requirements as they might fairly insist upon, and would, when the proper time arrived, indicate to the Council in what direction he thought they might add to the subjects of preliminary examination.

Mr. SIMON said they had got a little into confusion, owing to Dr. Storrar's resolution with reference to a committee being made consequent on the reports of the Branch Councils, when the proper way would have been to proceed to the consideration of those reports. The President had reminded them how, in 1877, the Council, not being fully satisfied with the progress made in general education, passed certain resolutions, and said that it was desirable that the examination in general education should be left to the universities. The Executive Committee had communicated with those bodies, and then the answers were referred to the Branch Councils for report. Those reports were before them; and he submitted that the proper course was to deal with those reports. If the proposal of reference to a new committee involved the reference of questions which had again and again been before the Council, he dissented from that proposal. But as regarded the question of referring to a committee new questions, such as the revision of the system of preliminary examinations, he was of opinion that that was a subject very well deserving the best consideration of the Council. The report of the Branch Council for England contained an expression of opinion, that they hoped the General Council would review their recommendations on preliminary education with the object of making them more complete, and, if possible, raising the standard required. To issue recommendations at the present moment seemed to him to be a waste of time. Proposals were made for the visitation of examinations. What hope could they have that they could enter upon large prospective undertakings of that kind with any advantage to the profession? He need hardly remind members of the Council that they were all, as it were, in office provisionally. The Council at present existed; but Parliament had decided that its constitution ought to be inquired into. They had been accused, and the accusation had been referred by Parliament to a Select Committee, which had not yet reported whether the constitution of the Council ought to be changed. That was a position in which they could not exercise influence. They must wait for any hope of being useful by prospective resolutions until questions of that sort were all settled. A report of a committee read at that Board had recounted how three of the bodies represented at that Council had been written to three times on behalf of the Medical Council, and that from none of those three bodies had an answer been received. For twenty years the Council had been recommending that preliminary examinations should be restricted to the bodies occupied with the general questions of national education, and yet special examinations were going on. He was prepared to move, that such examinations were not any longer considered satisfactory by the Council for the purposes of the Medical Act.

Dr. ANDREW WOOD said that Mr. Simon's speech was a proposal that the Council should abdicate its functions and declare itself incompetent. He was not prepared to follow Mr. Simon into such a slough of despond. One of the great obstructions to the progress of the reform and improvement, both in preliminary and professional education, had arisen from the constant agitation for reform from the medical profession; and he had no hesitation in stating that, if they had disregarded all and had gone on as they ought to have done, fulfilling their functions, it would have been better for them. They were summoned to consider preliminary education; they had upon the programme various motions with regard to it. He agreed with Mr. Simon that to refer this matter to a committee was futile. They had had committee after committee, and, as Dr. Storrar had said, they had been receding from the age of gold down to the age of lead. He, too, was a member of the Council in that golden age, and could follow Dr. Storrar through his gradation; but he could not admit that all was barren. An immense amount of uniformity had been attained. No student was allowed to commence his medical studies until he had passed a preliminary examination and been placed on the Students' Register. The recommendations of the Council with regard to professional education and examination had been very largely and, almost to a body, attended to. But, said Mr. Simon, the licensing bodies had declined upon the recommendation of the Council to part with their preliminary examinations. They declined still; they would not obey the recommendation in that respect. But the Council had its remedy. Let them bring the Edinburgh colleges before the Privy Council. If the Privy Council told those colleges that they were to be deprived of an inalienable right, which they had exercised long before the universities ever dreamt of preliminary examinations, then of course they would submit. The late Government accepted the suggestion that there should be a Select Committee appointed to investigate the whole matter. That Committee took a large body of important evidence. The Committee was still in existence; but the Government had said that at the present time they were not prepared to take any further steps in the matter. The Council had breathing time allowed to carry out such reforms as they thought necessary. It would be a suicidal policy to follow the course suggested; it would be saying to the Government that they were to believe all that had been said against the Council; to believe that the Council was effete, had done nothing, and its recommendations were disregarded. If the Council would show that they were resolved to go on with their proper functions, and to carry out such reforms as they thought necessary, it would be an example to the licensing bodies of the country to go and do likewise. If, on the other hand, the Council adopted a waiting policy, they would be throwing cold water upon the exertions which they were prepared to make in their separate bodies with regard to the progress of examination and education. He should vote, therefore, against Dr. Storrar's motion to refer this matter to a committee. The Council was perfectly in a condition to go on with the consideration of the matters prepared for it. It was necessary to say a word with reference to the examinations of his own college. One would have thought, from the way in which Dr. Storrar had spoken, that Scotland was a very benighted land, and required to come to England as a model of the way in which to educate its people. Education was far in advance in Scotland at a time when there was no education in England. The extra-academical schools, he believed, were of the greatest advantage to the universities. They always considered it part of their system to hold an examination in general education, and that at a time when many of the universities did not come up to their standard. The very fact that the universities of Scotland made the examination of the colleges co-ordinate with their own showed what they thought of the examination. If it were said that they kept up these examinations with a view to their own personal interest, he could only reply that they not only did not make anything by it, but it cost them money. They did it in the interest of the students, to accommodate many who came from a distance, and who, if they were to depend upon the university examinations, would be kept perhaps a year back in their studies; and the very fact of a large number coming to them at every examination showed that there was a need-be for keeping up these examinations. Their boards were appointed for the special purpose of examining in all the subjects in their preliminary curriculum. It might happen that the gentlemen appointed were Fellows of the colleges; and, if the colleges found competent men within their own walls, qualified to examine in Latin, Greek, French, and German, were they to be denied that right? Did they wish to discourage scholarship in the Fellows of the colleges? They ought rather to be glad that men did keep up their classical studies and were competent to examine. It might be said that such boards were liable to exercise undue leniency. He had a table which showed that, of 101 men examined in English, 82 passed and 19 were rejected; in Latin, 134 were examined, of whom 76 passed and 58 were rejected; in Arithmetic, 93 were examined, 52 passed, and 41 were rejected; in Algebra, 112 were examined, 69 passed, and 43 were rejected; in Euclid, 125 were examined, 99 passed, and 26 only were rejected; in Mechanics, 66 were examined, 40 passed, and 26 were rejected; in French, 87 were examined, 52 passed, and 35 were rejected. Then there was another question to consider: the objection made by Dr. Storrar as to *remanets*. What Dr. Storrar meant was this, that when a man had passed in Latin, Algebra, Greek, and so on, but had failed to pass in one or two other subjects, he should not be allowed to pass in those in which he had done well, but should come up for them all again. The Edinburgh Colleges did not act upon that principle; and he thought that their practice was a very fair and right one. He knew it was not consonant to English notions; but then the genius of England and of Scotland differed, and they in Scotland claimed for themselves the right to judge in some things. These *remanets* were not made in their interest, but in the interest of the students; and he had been particularly struck with this, that a young man who had been rejected in any one subject, when he came back, often passed a most capital examination. If the Council were still determined to denounce these examinations, they should send down their visitors; and if, after investigation, it was found that the examinations were inefficient, then would be the time to remove them from the list. It had been said, "We will refuse your certificates". He would defy the Council to do that; the law would never sanction such a thing. But why should the Council drive them away? They were acting upon mere hearsay—upon a prejudiced view of the question. He hoped that what he had said would convince the Council that the colleges were in earnest both in their anxious desire

to maintain the efficiency of their examinations and to comply, as far as they could within legal and proper ways, with the recommendations of the Council. He strongly advised the Council to pause before raising the standard of education to any considerable extent. They all desired that it might be raised; but the country had to be provided with practitioners, who worked in the country for perhaps £100, £200, or £300 a year; and he believed that, if they attempted to raise to any considerable degree the standard, they would starve the country of a reputable class of practitioners.

Mr. TEALE moved an amendment. He quite agreed with what had been said as to the undesirability of referring this question to a committee, and so adjourning it to another session. He also agreed with those who thought that some action ought to be taken. He did not at all agree with Mr. Simon in the idea, that, because there had been legislation anticipated, and because that had come to a standstill, they must throw up their hands and resign. Such a course would be absolutely suicidal. He was convinced that they ought to take action in this matter, because there was very great doubt as to when this subject would be taken up by the Government. It was very desirable to come to some definite conclusion on certain points connected with preliminary education. He proposed, "That a committee be appointed to draw up a series of propositions to be submitted to the Council, which shall embody the various motions on the programme in reference to preliminary examinations, and such other questions on the same subject as shall seem desirable to submit to the vote of the Council; this report to be brought up at the opening of the meeting on Friday, in order that a distinct vote may be passed upon them during the present session; and that the committee consist of the following members: Mr. Teale (Chairman), Dr. Humphry, Dr. Storrar, Dr. Andrew Wood, Mr. Turner, Dr. Leet, the Rev. Dr. Haughton, and Dr. Fergus."

Dr. ANDREW WOOD seconded the amendment.

The Rev. Dr. HAUGHTON agreed with what Dr. Wood said about the principle of *remanets*. It would be impossible to require a student to pass through all the subjects without establishing supplemental examinations or *remanets* for him. As to Mr. Teale's amendment, if the proposed committee was simply to arrange the subjects, that could just as well be done by the business committee.

Dr. ROLLESTON supported Dr. Storrar's motion. They would get much better results from a small committee than from one comprising all the members of the Council.

Dr. STORRAR was not averse to Mr. Teale's amendment; it was the best course they could adopt. His own resolution was simply drawn to put himself in order for the purpose of addressing the Council, and he was perfectly willing to adopt Mr. Teale's proposal.

Dr. A. SMITH did not approve of either the motion or the amendment. The readiest way of arriving at some useful result would be for the Council to resolve itself into a committee to take up the regulations as they already existed in preliminary education, and alter them where they were deficient.

Dr. STORRAR having briefly replied, the amendment was put and carried; and on being put as a substantive motion was agreed to.

Standing Orders.—A copy of revised Standing Orders was laid before the Council, and ordered to be adopted and appended to the Minutes.

Applications for Registration.—The following gentlemen, having applied for registration under Section 46 of the Medical Act (1858), were ordered to be registered accordingly: Mr. John Dwyer, surgeon in the public service prior to 1858; and Dr. William W. Ireland, Assistant-Surgeon in the East India Company's service prior to 1858.

Conviction of a Registered Medical Practitioner.—A certificate of the conviction of a registered medical practitioner, Mr. George Frederick Trotter, for feloniously killing and slaying Herbert Wagstaff, for which he was imprisoned and kept to hard labour for six calendar months, was read. The Council deliberated on this matter in private, and eventually resolved, that it did not see fit to erase the name of Mr. Trotter from the *Register*.

Friday, July 9th.

Dr. ACLAND, President, took the chair at 2 p.m.

Ophthalmology and Midwifery.—Dr. HUMPHRY moved, and Mr. TEALE seconded, the adoption of the report of the Committee on Ophthalmology and Midwifery.

The Rev. Dr. HAUGHTON moved, as an amendment:

"The General Medical Council, bearing in mind that the name of a medical practitioner may be (and often is) placed upon the *Medical Register* without any guarantee that such practitioner has received an adequate education in midwifery; and, further, that such practitioner may (and often is), shortly after registration, placed in charge of a regiment or of a ship, in a situation in which his ignorance of practical midwifery may endanger human lives, are of opinion that the following should be the minimum course of midwifery passed by a candidate before presenting himself for examination for the qualification of any of the medical authorities:—(*a*) A six months' course of lectures in midwifery; (*b*.) A six months' attendance on a maternity, including thirty cases personally attended."

With reference to ophthalmology, he had no objection to make to the report; but he thought it would be wrong to allow the arrangements of some of the licensing bodies, with regard to midwifery, to continue for another year. A young man, shortly after his name was put upon the *Register*, might be called upon to treat a difficult case of labour, involving great danger to two human lives. He did not attach much importance to the length of the course of lectures. To the second part of his resolution, however, he attached particular importance. This matter had been brought very strongly to his attention in consequence of his large connection with shipowners in Liverpool. He was constantly asked to supply South American, West Indian, China, and Japan steamers with competent surgeons; and he found that the rule amongst the shipowners was, to take a man with a surgical qualification. The want of knowledge of midwifery was often the cause of lamentable failure. A young surgeon, just appointed to a regiment or a ship, might find himself in circumstances where he could get no help in a dangerous case of delivery. His attention was called to this seventeen years ago, by one of the graduates of the University of Dublin, who had become a very distinguished man, and was now high in the army service. At that time, the curriculum in midwifery at the University consisted of a course of lectures, without any requirement of attendance on cases of labour. The young graduate had been placed in charge of drafts of regiments from Portsmouth to New Zealand, and three or four deliveries of soldiers' wives took place on board. In all the cases but one he had no trouble, because the other women of the regiment did the work. But a case of difficult labour occurred, which he felt himself quite incompetent to treat. He wrote to Dr. Haughton, entreating that the regulations of the University should be altered, so that no graduate should again be placed in such a position. The University immediately altered its regulations; and the proposal he now made embodied the changes. Thirty cases were absolutely necessary; and it took that number before a case of some difficulty would occur. In Ireland, the Poor-law Commissioners required a diploma in midwifery. The Medical Act of 1858 allowed any man who had obtained any licence in one of the three branches of the profession, to go on the *Register*. Future legislation should direct, that no one should be put on the *Register* unless he was fully qualified in all three.

Mr. MACNAMARA seconded the resolution. The College of Surgeons in Ireland for several years had had a distinct court of examiners in midwifery, and had given a qualification in midwifery to those who passed the examination. In addition to that, the pupil was not allowed to be examined until he brought forward evidence that he had been engaged in the study of midwifery in a lying-in hospital. Several years ago, he occupied the very honourable position of President of the Irish Medical Association, which, among other things, was founded for the protection of gentlemen who got into difficulties with the Poor-law Commissioners; and at least 95 per cent. of the cases in which those practitioners got into trouble, were cases in which midwifery was concerned. The College of Surgeons of Ireland, within the last year or two, had increased the number of the cases which must be attended to thirty. It might be objected that for a very large class it might not be possible to get a sufficient number of cases for each student to attend thirty; but it was not necessary that they should always go single-handed.

Dr. ANDREW WOOD did not think there was any difference among the members of the Council as to the importance of midwifery as a branch of medical study. As regarded the number of lectures and of labours to be attended, he thought those details should be left to the various bodies. There was a great difference in the practice in Edinburgh and in London, as to lectures. With regard to attendance on cases, there were upwards of 1,000 students in Edinburgh, among a population of 30,000; and a colony of Irish women would have to be imported before thirty labours could be attended by each student. A junior student might go with a senior to a case of midwifery; but it would not be delicate, proper, or safe, for two young students to take charge of a lying-in woman. The Council had always indicated that they thought it requisite that every practitioner should know midwifery; but he thought it should be left to the different bodies to name the particular courses, and the number of labours that ought to be attended.

Dr. AQUILLA SMITH agreed with Dr. Haughton that it was a mistake to put midwifery and ophthalmology on the same footing. Midwifery was more essential to a young man than any other department of the profession; and the very first case he might have to attend might be one of emergency, requiring prompt and immediate decision

The number of lectures was a matter of very little importance; but a guarantee of practical attendance on cases was of the highest importance. For many years the means of education in midwifery had been far advanced in Ireland, as compared with England. The Local Government Board in Ireland required, that every candidate for a Poor-law appointment should have a qualification in midwifery—either the licence of the College of Surgeons or the College of Physicians, or a certificate from a lying-in hospital. He thought it would be very wrong to send two students to attend a case together. At the maternity connected with Sir Patrick Dun's Hospital in Dublin, the practice was to send an experienced midwife with the student to his first case.

Mr. SIMON said that the Committee did not advise the Council to follow an exceptional course with regard to midwifery. In respect of surgery, physiology, and anatomy, they did not lay down exact rules as to the quantity to be done; they simply ruled that the subjects should be studied and examined in, leaving the details to the licensing bodies. To pass a quantitative rule with regard to midwifery would be to follow an entirely exceptional course.

Dr. BANKS could not support the portion of the amendment relating to the number of cases. It was inexpedient to make recommendations or lay down rules which could not be complied with.

The Rev. Dr. HAUGHTON said the great point upon which he laid stress was the practical instruction in midwifery. In drawing up his proposal, he had followed the regulations of the University of Dublin; but he would be quite content to leave the number of cases to the various institutions, adopting the following words: "A course of lectures in midwifery, and a course of instruction in practical midwifery." Mr. Simon had spoken of the amendment as suggesting an exceptional course; but the Council had already interfered with the examinations in anatomy and surgery, expressing a strong opinion that they should include dissection, and the performance of operations on the dead body.

Dr. HUMPHRY having replied,

The amendment was put and lost, only three hands being held up in its favour. The original motion was then carried.

Greek as a Compulsory Subject of Preliminary Examination.—Dr. LEET proposed: "That on and after the 1st day of January next (1881) Greek be included among the compulsory subjects of the preliminary examination for medical students." At the institution of the Court of Apothecaries' Hall in Ireland, a by-law was passed that no person should be admitted into the profession without having undergone an examination in Greek and Latin, and that by-law had continued in force to the present time. The corporation had from time to time added to the subjects of study those which had been suggested by the Medical Council. The Court was not disposed to lower its standard. Greek was a subject specially suitable for the study of medical men. It was almost impossible for students to understand the language of their professors without some knowledge of Greek; but beside that, it was of the utmost importance as a training for the intellect. The University of Cambridge had received a report from the masters of public schools and others, who were thoroughly acquainted with the subject of training; and Dr. Leet read extracts in favour of the study of Greek from the reports of the Head Master of Eton; Dr. Jex-Blake, Head Master of Rugby; Mr. Wilson, Principal of Clifton College; and the Head Master of Lancaster School. In 1866, the Council passed a resolution, that, after the year 1867, Greek should become one of the imperative subjects. That, however, had never been carried out. The Court of the Apothecaries' Hall had no desire to continue to hold these examinations, which were rather burdensome; but hitherto, in Ireland, there had been no public board which could do the work. Now, however, that an intermediate examination had been established, the Court would be happy to transfer its examinations to the public bodies, but they must insist on Greek.

Mr. MACNAMARA seconded the motion.

Dr. AQUILLA SMITH said, in teaching materia medica and botany, he had constantly to impress on the students the importance of an accurate knowledge of Greek, in order that they might understand the meaning of many technical words. He hoped that Greek would be made compulsory, and that the examination would not always be confined to one particular book.

Dr. STORRAR said he fought the battle of Greek at the Council as long as he could, but finally he gave it up. For three years, beginning in 1866, he had served on a Royal Commission of inquiry into education; and the conclusion at which the Commissioners arrived was that there was such a demand for what was styled modern education, that to insist upon both Latin and Greek, in the education of young men, was perfectly hopeless. There was scarcely one of the grammar schools of England now which had not a modern department attached to it—the education given there consisting of Latin, English (much developed as an element of education), modern languages, mathematics, and physics. He felt certain that, in a very short time, Greek would only be cultivated for its own sake; and that there would be a smaller number of dabblers in Greek, but just as many accomplished Greek scholars as at present. In the University of London, the Senate resolved to allow men to matriculate, taking German instead of Greek. This was allowed on two grounds. First, in such studies as science and medicine involved, German was held to be exceedingly important; and, secondly, there was a general persuasion that, without undervaluing Greek, German to a certain extent provided the same mental discipline as Greek. At Cambridge and Oxford, discussions were going on which had the same tendency, showing what the current of thought was. A large portion of our scientific language was derived from Greek; but, at the same time, a great many words had their origin in modern languages. The Council were dealing, not with university degrees, but with the minimum of information necessary for a general practitioner.

Mr. SIMON said that the Council should make up its mind as to the principles on which it would act. He would be one of the last to undervalue the immense obligations which modern literature owed to Greece, but the Council would go far beyond its competence if it said that no man should enter the profession unless he was acquainted with the Greek language. It was undoubtedly desirable that every man who entered the medical profession should be qualified to take his place with the best educated people in the country. But this social standard was one which the Council dare not apply strictly, because the requirements must be limited by the supply of men out of classes of society who had not a great deal of money at their disposal. But there was another standard that, he thought, ought to be applied very strictly, namely, what was the preparation indispensable for making four years the minimum of professional education. One of the chief difficulties of the class-room was that men were unable to understand the common language of the teachers. In anatomical lectures use was made of ordinary mathematical and Greek expressions which many of the students could not understand. The more a teacher employed common English the better for his class. Preliminary education ought to bring a man to the class-room in such a condition that four years would be sufficient for his learning his profession. He could not but feel that the gentlemen who advocated Greek were a little carried away by the enthusiasm of their own scholarship, and had forgotten what was possible with the class of persons who came to fill the ranks of their overworked and ill-paid profession.

Dr. ROLLESTON said modern sides had to be established in schools, because the parents who intended their boys to go into mercantile offices desired that they might be fitted out with something suited to modern life. England was a commercial country, and parents must see that their children were fitted for the life they would have to pursue. He could not vote for making Greek compulsory, but he would do nothing to discourage it. There were some schools in which Greek was actually prohibited, and others in which it had become obsolete, and the Council ought not to say to those schools: "Your pupils shall not be allowed to come into the medical profession if you do not change your system." In Germany, the Universities and Medical Faculties were in favour of retaining Greek, a reaction in its favour having set in. The opposition to it was just the Nemesis of the bad way in which the language had been taught.

Dr. FERGUS said Dr. Leet had omitted to quote the opinions of several gentlemen which rather told against his view. The Principal of Clifton College said that the educational value ascribed to Greek might be due to other subjects. Professor Huxley also did not regard a knowledge of Greek indispensable in a liberal education. There were departments of science that would exercise the thinking powers of a boy quite as much as Greek, and these would have a very direct bearing upon the science and art of medicine. He would endeavour to cultivate the mind by the teaching of natural science in all its departments, though he would still keep Greek optional.

The Rev. Dr. HAUGHTON supported the motion. From time immemorial, the Faculties of Law, Physic, and Divinity had stood side by side like the Three Graces, claiming equal rights; and this proposal to lower the high educational position of the medical profession by excluding Greek would be the first step towards placing the Faculty of Medicine on a lower footing than Law and Divinity. Even the rank and file of the profession of law in Ireland had not sunk so low as to abolish Greek, which was an essential part of the examination for admission as solicitors. He was well aware what a small amount of Greek was necessary to pass the preliminary examination, but that was the fault of the examination, for the standard could easily be raised. The candidates for the Roman Catholic priesthood lost no opportunity of cultivating Greek and Latin, and he believed no priest in that Church was ordained without a knowledge of Greek. Mr. Simon had mentioned that the student found a difficulty in understanding the mechanical terms

in the dissecting-room, but he would meet with ten Greek words for one mechanical term. Nothing was so distressing as trying to teach an uncultivated pupil who did not know Greek. He hoped that Greek would be preserved as a necessary requisite for the university graduates. If the Council, by their own suicidal hands, cast Jonah out of the ship in the hope that they would get safe to land, Jonah, at all events, would escape in this case, for Greek was able to take care of itself without the protection of the Medical Council.

Dr. BANKS supported the motion. By excluding Greek, he considered that the Council would commence a downward course. Mr. Simon had alluded to the social status of the profession, but he believed that the lack of classical knowledge was very often the reason why the medical practitioner could not take his place by the side of the clergyman and the barrister. So much was classical study fostered in Ireland, that in the lower branch of the legal profession there a bonus was held out to those who took an university degree, the course being shortened for them.

Dr. PETTIGREW said the question was not whether Greek should be abolished or excluded from the preliminary examination, but whether or not it should remain, as at present, an optional subject. He was quite willing to assign Greek a very high place in the training of the human mind; but he thought there were other subjects equally important. Some persons seemed to think that only classical men were highly educated; but many men wasted their time on classical subjects, not having a classical mind. The great object should be to cultivate a man's talents, in whatever direction they tended. He did not wish to exclude Greek from the preliminary examination, but his object simply was, to point out that the Council had wandered from the real point in dispute, which was, whether Greek should be made optional or compulsory.

Dr. HUMPHRY regarded the lack of a knowledge of Greek as a very great loss to an educated man; still, the Council must bend before the wind, which, to a certain extent, was excluding Greek as a compulsory subject. Dr. Leet had referred to what had taken place at Cambridge. Some months ago, a requisition was sent to the University, signed very largely by men of eminence, including schoolmasters, requesting that the University would take into consideration the question of retaining Greek among its compulsory subjects, and stating that, in consequence of its being compulsory, a large number of the best class of students were prevented from entering the University. A syndicate was appointed, of which he was a member, to consider the subject. A large number of schoolmasters were written to. Dr. Leet had quoted from one side of the answers received; but there were many schoolmasters who were in favour of not retaining Greek as a compulsory subject of examination. They said that in their schools a modern side had commenced, and was likely to increase. Some of them mentioned that the better class of boys were to be found on the classical side, but this was partly to be explained by the fact that the forcing power of university wealth had hitherto been applied almost exclusively to the maintenance of classics and mathematics; but the masters were of opinion that, if Greek were continued as compulsory, a great and increasing number of students would either be excluded from the universities, or would have to go through a course of study very much resembling cramming. The Syndicate, therefore felt compelled to report to the University in favour of Greek not being retained as a compulsory subject. This would apply even more forcibly to the medical profession, where a large number of boys from the modern side in the schools might be expected to join. His own feeling was that, in proportion as the area of the education demanded was extended, the knowledge would be shallow. What was required was, that the students should learn certain things well. Though Greek was the great charm of his own school life, he was reluctantly compelled to object to its being made compulsory.

Dr. ANDREW WOOD thought that one of the great evils of the education of the present day was, that young people were taught many things, but not much of anything. The Council was legislating for a minimum; and, if the barrier were made too difficult to be passed, a great evil would be inflicted upon the community. He had been an examiner in Greek for a number of years. The body which he represented had, as optional subjects, mechanics, French, Greek, and German. Last year, out of 148 men who came forward, 87 took French, 66 took mechanics, 9 took German, and only 6 took Greek; of these latter, 5 passed very well, but 1 was rejected. They were expected to translate an easy passage of English into Greek, and to give the derivations of Greek words used in English. It had been said that, when a man came to the study of medicine, he was obliged to become acquainted with a number of technical terms derived from Greek. Mr. Miller, who was a very good authority, had told him that in all schools students of English were taught the Greek roots of words derived from that language, and that those who were well grounded in those roots were better able to take up scientific terms than even accomplished scholars in Æschylus, Sophocles, or Xenophon. He would like to see all who entered the profession acquainted with Greek, but to make it compulsory would have a most injurious effect.

Sir W. GULL said it was not necessary to be a Greek scholar in order to become a general practitioner in medicine. He only needed Greek for his idle hours, as an amusement, not for the practice of his profession. Quite sufficient test of a man's fitness for the profession would be found in his knowledge of English and mathematics. A knowledge of technical words would not be obtained by acquaintance with classical Greek, but could be from a class-book. The object of the Council was to get into the profession suitable men, and to obtain a test by which the proper material should be discovered.

Sir JAMES PAGET said the question for the Council to decide was what was the smallest amount of knowledge with which a man should be allowed to enter upon the study of medicine. To say that he had not enough knowledge to enable him to begin to learn medicine until he was acquainted with Greek, was a somewhat startling statement. He had the profoundest respect for a knowledge of Greek, but only for that which could fairly be called knowledge, which would affect a man's whole mental character. It would be absurd to expect that every medical student could have such a knowledge. It might be said that only a smattering could be obtained of other subjects; but there was a great difference. A man might come to the study of medicine with a very elementary knowledge of mechanics or chemistry; but that elementary knowledge would almost of necessity grow with every step he took in his profession. In reading medical literature, no one could fail to see how often very bad English was disguised by a smattering of Greek—Greek words being used to express things which were very ill understood. He hoped that the Council would not declare that no man could be deemed fit to begin the study of medicine unless he had a knowledge of Greek.

The PRESIDENT said, when this subject was first discussed in 1866, he represented the University of Oxford. He consulted some of the most skilled scholars with whom he was acquainted; among others, Mr. Goldwin Smith and Dr. Temple, the then Head-Master of Rugby. The answer in each case was to the same effect; namely, that the great thing to do, in order to raise the social character of the profession, was to see that whatever they did they did thoroughly. It would lower the liberal character of the profession to require a mere minimum, which would be contemptible in the eyes of all scholars. To make Greek compulsory would be to reverse the whole policy of the Council.

The motion was put and lost, four voting in its favour, and seventeen against it.

Preliminary Examination.—The Rev. Dr. HAUGHTON proposed:

"The General Medical Council, being of opinion that the existing Preliminary Examination in Arts is unsatisfactory and insufficient, propose to replace it by the following examinations:—I. An examination, previous to registration, in the following subjects: (*a*) English; (*b*) Arithmetic; (*c*) Latin; (*d*) Elements of Chemistry; (*e*) Elements of Algebra. II. An examination, to be passed not later than at the end of the first year of professional study, in the following subjects: (*a*) Greek; (*b*) Elements of Mechanics. III. An examination, to be passed not later than at the end of the second year of professional study, in the following subjects: (*a*) French or German; (*b*) Elements of Hydrostatics and Optics."

He said he had long been satisfied that the preliminary Arts examination had been overloaded, and was becoming a farce. His proposal to make Greek compulsory differed somewhat from the motion which had just been lost. He agreed that a thorough acquaintance with Greek could not be expected at first; but at some subsequent stage a higher knowledge might be required. His first proposal was, that the preliminary Arts examination should be diminished in extent, in the hope of increasing the accuracy of the accomplishments of those who passed it. The resolution passed by the Council on the 19th of July last distinctly recognised the principle on which he had founded his second and third proposals. Although he had defended Greek, he thought, as a practical question, the Council had done quite right in throwing out the last motion; and perhaps they would also do right if they threw out Latin too; for he believed that all that was necessary for a young man, in order to learn his profession, was a sound and perfect knowledge of his own language and of the elements of mathematics.

Dr. LEET seconded the motion.

Dr. ROLLESTON objected to the motion on the ground of its multiplicity. He proposed as an amendment:

"That the triple examination proposed by Dr. Haughton is in principle inadmissible."

Mr. SIMON seconded the amendment, which, after a few words from Dr. PETTIGREW, was carried by a large majority. On being put as a substantive motion, it was agreed to.

Mr. TURNER proposed:

"That the Preliminary Examination be raised to the following minimum standard:—(*a*) English Language, including Literature, History, Grammar, and Composition. (*b*) One ancient language, either Latin or Greek. (*c*) One Modern Language, either French or German. (*d*) Elements of Mathematics, comprising (*α*) Arithmetic, including Vulgar and Decimal Fractions; (*β*) Algebra, including Simple Equations; (*γ*) Geometry, including the first three books of Euclid or the subjects thereof. (*e*) Elementary Mechanics of Solids and Fluids, it being understood that the examination in this branch may be passed either as preliminary or previous to the first Professional Examination."

He thought all candidates should have some knowledge of the history of their own country and of the principal writers and their works. With regard to the choice to be left to the students to select either Latin or Greek, he thought the result would be that 99 out of 100, or perhaps 999 out of 1000, would choose Latin; but in order to show that the Council did not discourage the study of Greek, it was advisable to allow the alternative. He regretted that few students chose German as one of the optional subjects, but there were great difficulties in the way of learning that language; but French was taught in almost all the schools of any standing, so that he thought the Council might very fairly say that a knowledge of one foreign language should be compulsory. In a very large number of schools, there were no facilities for learning mechanical philosophy, and therefore his motion gave the alternative to the candidate either to pass in it at the preliminary examination or previous to the first professional examination.

The debate was adjourned.

Saturday, July 10th.

Dr. ACLAND, President, took the chair at 1 p.m.

Education in Elementary Mechanics.—Dr. HUMPHRY said, that he was delegated by the Executive Committee to make an explanation with regard to the folllowing resolution passed by the Council, on July 17, 1879:

"That the subject of 'Elementary Mechanics of Solids and Fluids—meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics'—be no longer recommended by the Council as an optional subject of preliminary education, but be recommended as one of the subjects 'without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered,' it being understood that the examination in this branch of knowledge may be passed either as preliminary or as first professional; and that it be referred to the Executive Committee to amend to this effect Subsection 6 of Section 4, and Subsection 1 of Section 23, of the edition for 1879 of the Council's standing *Recommendations*."

The Executive Committee had found that the resolutions could not be carried into effect, and had resolved to refer it back to the General Council for reconsideration. An examination in elementary mechanics could not form part of the primary professional examination, as the subjects of this were already provided for in the *Recommendations;* and various examining bodies had enveloped their regulations accordingly. The subjects mentioned in the resolution were included in the very few, if any, of the preliminary examinations of the examining bodies; and none of these, he believed, required hydraulics, which, in fact, opened up a series of very difficult subjects. The Council should be very careful in making changes in the subjects of preliminary examinations; the great examining bodies could not be expected to make alterations always in accordance with the changes desired by the Medical Council. From his intercourse with the secretaries of local examinations, he was aware of the difficulty which they had in complying with the wishes of the Council; and the Council should be careful not to overstrain their compliance.

Mr. SIMON said that Dr. Humphry's remarks would have been in place last year. He did not approve of the course taken by the Executive Committee.

Preliminary Education.—On the motion of Mr. TURNER, seconded by Mr. SIMON, the Council resolved itself into a Committee of the whole Council for the consideration of Mr. Turner's motion on Preliminary Examination.

Mr. TURNER said that it had been objected that the compulsory requirement of modern languages would interfere with the degrees in Arts. His proposal, however, did not go so far as this, for, by the *Recommendations* of the Council, two degrees in Arts of the University were recognised. What was meant was, that modern language should form a compulsory part of the preliminary examination to be passed by those who were not graduates in Arts. He would not propose that the new regulations should be brought into operation at once; to do so would not be just to the candidates preparing for examination under the present regulations. He would take up the subjects separately. He moved:

"That an examination in English form a part of the preliminary examination."

Sir JAMES PAGET seconded the motion; which, after a few remarks from Dr. ROLLESTON and Dr. BANKS, was agreed to.

Dr. TURNER moved, and Dr. ROLLESTON seconded:

"That the examination in English embrace language, composition, and grammar; and that the General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate: (*a*) To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (*b*) To write a portion of an English author to dictation; (*c*) To explain the grammatical construction of one or two sentences; (*d*) To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature; and (*e*) To give the derivation and definition of a few English words in common use; also, (*f*) That a knowledge of two at least of the following subjects be required: English Literature, History, Modern Geography."

Dr. ANDREW WOOD moved as an amendment, and the Rev. Dr. HAUGHTON seconded:

"That the examination in the English language be such as is now provided for in the *Recommendations* of the Council, except that the last two lines of the footnote to p. 8 of the last edition of the *Recommendations* be in future omitted."*

Dr. ROLLESTON advocated a knowledge of English literature as a means of aiding members of the medical profession to hold their position in society.

Sir WILLIAM GULL said, that the practical point was to determine the minimum of knowledge that should be expected. The Council did not wish to exclude literature; but they should not insist on it.

Mr. TEALE objected to making changes in the present regulations without strong reasons.

Dr. HALDANE said that an elementary knowledge of English literature, and of history and geography, should be essential. He had met with candidates who did not know why the Calabar bean was so called, nor where Calabar was.

Sir JAMES PAGET said that, during the last fifteen years, more progress had been made in middle class education than during the previous half century. As regarded English literature, a certain range of it might be required; and something like the regulations of the University of London might be followed. The Council was bound to make use of improvements in education.

Mr. SIMON said that the proper course would be to make the examinations more strict, rather than to increase the range of subjects. He did not think that a man ought to be kept out of the medical profession because he did not know English literature.

After some remarks from Mr. TURNER, Sir W. GULL, Dr. A. WOOD, Dr. ROLLESTON, Sir J. PAGET, Dr. PITMAN, Dr. AQUILLA SMITH, Mr. MACNAMARA, and Dr. BANKS, the amendment was put to the vote and carried.

Mr. TURNER required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. For, 12: Mr. Bradford, Dr. Humphry, Dr. Storrar, Dr. Andrew Wood, Dr. Scott Orr, Dr. Aquilla Smith, Dr. Leet, Rev. Dr. Haughton, Dr. Quain, Sir William Gull, Mr. Simon, Dr. Hudson. Against, 8: Dr. Pitman, Sir James Paget, Dr. Rolleston, Dr. Pyle, Dr. Haldane, Mr. Turner, Dr. Pettigrew, Dr. Banks. Did not vote, 4: The President, Mr. Macnamara, Mr. Teale, Dr. Fergus.

The amendment, having been put as a substantive motion, was carried.

The Rev. Dr. HAUGHTON moved, and Mr. MACNAMARA seconded:

"That No. (2) of Clause 4 of the *Recommendations* be as follows:—(2) Either English history or modern geography."

Dr. ROLLESTON moved, as an amendment, and Mr. TURNER seconded:

"That No. (2) of Clause 4 of the *Recommendations* be as follows:—(2) One of the following subjects: English literature, or English history, or modern geography."

After discussion, the amendment was put to the vote and negatived.

Mr. TURNER required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. Against, 11: Dr. Humphry, Dr. Andrew Wood, Dr. Scott Orr, Dr. Aquilla Smith, Mr. Macnamara, Dr. Leet, Rev. Dr. Haughton, Dr. Quain, Sir William Gull, Mr. Simon, Dr. Hudson. For, 10: Dr. Pitman, Sir James Paget, Mr. Bradford,

* The words omitted are: "Provided always that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English."

Dr. Rolleston, Dr. Haldane, Mr. Turner, Dr. Pettigrew, Dr. Banks, Mr. Teale, Dr. Fergus. Did not vote, 2: The President, Dr. Storrar. Absent, 1: Dr. Pyle.

The original motion was then put to the vote and carried.

Mr. TURNER required that the names and numbers of those who voted for and against the motion, respectively, and of those who did not vote, be taken down. For, 15: Dr. Pitman, Sir James Paget, Mr. Bradford, Dr. Rolleston, Dr. Storrar, Dr. Haldane, Mr. Turner, Dr. Pettigrew, Mr. Macnamara, Dr. Leet, Rev. Dr. Haughton, Dr. Banks, Mr. Teale, Dr. Fergus, Dr. Hudson. Against, 6: Dr. Humphry, Dr. Andrew Wood, Dr. Scott Orr, Dr. Aquilla Smith, Sir William Gull, Mr. Simon. Did not vote, 2: The President, Dr. Quain. Absent, 1: Dr. Pyle.

On the motion of Dr. ANDREW WOOD, the Council resumed.

Report of the Finance Committee.—Dr. QUAIN moved, Dr. PITMAN seconded, and it was resolved: "That the report of the Finance Committee be received, adopted, and entered on the minutes." It was to the following effect.

"The Finance Committee beg to report that the income of the General and Branch Councils for the year 1879 (ending January 5th, 1880) has been £6,381 17s. 9d., an amount which exceeds the income of the year 1878 by £175 4s. 2d. The expenditure during the year 1879 has been £5,420 7s. 9d., which is less in amount than the expenditure of the preceding year by £902 7s. 7d. The Committee has therefore the satisfaction of reporting to the Council that, as the result of this increase of income and diminution of expenditure, the actual income has exceeded the expenditure by the sum of £961 10s.....Comparing the items of expenditure of the year 1879 with those of 1878, the items of increased expenditure amount altogether to the sum of £381 4s. 1d., consisting of £23 10s., the cost of improvements in the printing of the *Medical Register*, and of £92 2s. additional for house-expenses, due chiefly to the cost of painting and decorating the Council-room. The principal items of diminished expenditure are in the fees paid to members of the General Council, viz., £660 6s. 6d., and to the Executive Committee, £144 18s. There is also a decrease in the cost of printing to the amount of £175 13s. 1d. There is a decrease in the items of law-expenses, advertisements, etc., amounting to £151 2s. 6d. The average excess of expenditure over income during the last seven years is £131. On January 5th, 1880, there remained to the account of the Dental Fund a sum of £7,253 17s. 8d. of new 3 per cent. stock, and of £3,665 13s. 4d. in the Bank of England. The Treasurers have informed the Committee that, of this latter sum, £2,000 has since been invested in the purchase of £2,027 17s. 7d. new 3 per cent. stock. By request from the Committee, the Registrar has prepared a roughly approximate estimate of the probable future annual income and expenditure of the Dental Registration, which shows: Estimated income, £524; estimated expenditure, £1,279. This probable future excess of expenditure over income must, of course, be met by drafts on the invested capital."

Monday, July 12th.

Dr. ACLAND, President, took the chair at 2 p.m.

Preliminary Education.—On the motion of Mr. TURNER, the Council resolved itself into a Committee of the whole Council for the further consideration of the proposals regarding preliminary education.

The Committee resumed the debate on the proposal brought forward by Mr. Turner on Saturday.

The Rev. Dr. HAUGHTON moved, as an amendment:

"That, in the opinion of this Council, the English language is the only language absolutely necessary for the minimum Preliminary Arts Examination in Great Britain and Ireland."

He said, that he proposed this amendment in order to raise an important question, which ought to be decided before proceeding further. The Council was in danger of getting into difficulties unless some principle were agreed on. The questions really raised were, whether it was any part of the duty of the Council to legislate for the higher education of medical practitioners, or whether its duty was limited to regulating the preliminary and professional education and examination, so as to guarantee fitness for taking charge of ordinary cases of medical practice. If it were the duty of the Council to legislate for all branches of the profession, the curriculum of general education was too low; if merely for ordinary practitioners, it was too high. Of what use were Latin, Greek, French, and German for practitioners in the humbler positions of life? He had an opinion, that the regulating of the higher grades of the profession should be left to the universities. His amendment would, no doubt, excite the opposition of sentimental educationists. He urged a higher degree of culture in the languages to which he had referred, as a necessity for the higher classes of the profession; but not for the general practitioner. Hippocrates knew no language but Greek; Galen only knew Latin as a matter of necessity, because he resided in Rome. If Mr. Turner's proposal was carried, injustice would be done to a large body of candidates in Ireland, many of whom showed a very respectable knowledge of Greek and Latin. At the recent intermediate examination in Ireland, there were in all 3,218 candidates, of whom 1,209 offered Greek for examination; 2,120, Latin; 1,602, French; and 121 German. These candidates belonged to the class from which the medical profession was recruited. He did not think that any one was distinguished as a Latin scholar, who was not also a Greek scholar. If there was to be a real knowledge of Latin, there must also be a knowledge of Greek as well. He expressed the grounds of his dissent from the principal arguments made in favour of a knowledge of Latin being required—viz., that it formed a part of the English language; that many important medical works were written in Latin; and that Latin was necessary for the writing of prescriptions.

Dr. HALDANE seconded the amendment. He did not undervalue the advantages of a thorough acquaintance with Latin as an aid to the study of several languages; but, in regard to the preliminary examination, he did not consider it either necessary for mental training, or important in the professional career of a practitioner. At present, Latin was so badly taught in the schools, that it caused the rejection of many candidates at the preliminary examination; and of those who passed, many were unable at the end of four years of medical study to write a prescription grammatically. Fifty years ago Latin was much more used, and most of the professors in the University of Edinburgh were accomplished Latin scholars. But this was now changed. Medicine was then a learned profession; but it could now no longer be called so. When medical men entered into practice, they had neither the desire nor the time for the study of Latin.

After some remarks from Dr. ROLLESTON, Sir W. GULL, Dr. BANKS, and the Rev. Dr. HAUGHTON, the amendment was put to the vote, and lost. The original motion was carried.

Mr. TURNER moved, and Dr. ROLLESTON seconded:

"That candidates may select either Latin or Greek; and that the examination include translation from the original and grammar."

Dr. ANDREW WARD said, that it would be retrograde legislation not to make Latin imperative. If an imperfect knowledge of Latin were unimportant on the part of candidates, this should only make the Council more strict in its requirements. A knowledge of Latin was of use in regard to English; for one of the best exercises in English composition was translation from Latin into English. He moved as an amendment:

"That Latin, including translation from the original and grammar, be the ancient language which is to be rendered compulsory."

Dr. STORRAR seconded the amendment. He would be willing to allow Greek as an alternative optional subject with French and German. If the Council brought down the examinations to the level of imperfect examination, they might bring it lower still.

Dr. ROLLESTON thought that a candidate should be allowed to offer Greek instead of Latin if he preferred to do so.

Mr. SIMON thought there was much in favour of the Rev. Dr. Haughton's argument, that English was the only language really required for the preliminary examination. But if an ancient language were required, a choice between Latin and Greek should be allowed.

Mr. MACNAMARA said that, if the resolution passed, Greek as an optional subject would be swept away.

Dr. HUMPHRY said that, as time went on, the Council would no longer be able to insist on a knowledge of ancient languages as a basis of education.

Dr. QUAIN regarded Latin as an essential part of the education of a medical man.

Mr. TURNER having replied, the amendment was put to the vote and carried; 12 voting for, and 11 against it.

Dr. ANDREW WOOD required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. For, 12: Mr. Bradford, Dr. Storrar, Dr. Andrew Wood, Dr. Scott Orr, Dr. Pettigrew, Dr. Aquilla Smith, Mr. Macnamara, Dr. Leet, Rev. Dr. Haughton, Dr. Banks, Dr. Quain, Dr. Hudson. Against, 11: Dr. Pitman, Sir James Paget, Dr. Rolleston, Dr. Humphry, Dr. Pyle, Dr. Haldane, Mr. Turner, Sir William Gull, Mr. Simon, Mr. Teale, Dr. Fergus. Did not vote, 1: The President.

The amendment, having been then put to the vote as a substantive motion, was carried.

Mr. TURNER moved, and Dr. BANKS seconded:

"That an examination in one modern European language form a necessary part of the preliminary examination."

The motion was negatived.

Mr. TURNER required that the names and numbers of those who

voted for and against the motion, respectively, and of those who did not vote, be taken down. Against, 15: Sir James Paget, Mr. Bradford, Dr. Rolleston, Dr. Humphry, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Dr. Pettigrew, Dr. Aquilla Smith, Mr. Macnamara, Rev. Dr. Haughton, Sir William Gull, Mr. Teale, Dr. Hudson. For, 5: Dr. Pyle, Mr. Turner, Dr. Leet, Dr. Banks, Dr. Fergus. Did not vote, 3: The President, Dr. Quain, Mr. Simon. Absent, 1; Dr. Pitman.

It was moved by Mr. TURNER, seconded by Sir WILLIAM GULL, and agreed to:

"That an examination in the Elements of Mathematics form a necessary part of the preliminary examination."

Mr. TURNER moved, Sir WILLIAM GULL seconded, and it was agreed to:

"That the examination in Mathematics comprise (*a*) Arithmetic, including vulgar and decimal fractions."

Mr. TURNER moved, and Dr. HUMPHRY seconded:

"That the examination in Mathematics comprise (*b*) Algebra, including simple equations."

Dr. ROLLESTON moved as an amendment, and Dr. FERGUS seconded, the addition of "quadratic equations."

The amendment was negatived; and the further consideration of the original motion was deferred.

Tuesday, July 13th.

DR. ACLAND, President, took the chair at 2 P.M.

The Vaccination Bill.—Dr. ROLLESTON asked the President whether any communication or reference had been made to him by the Government on the subject of the Vaccination Bill.

To this question the PRESIDENT gave the following answer:—"So far as I know, no communication has been made to me *by the Government* on the subject of the Vaccination Bill. I say 'so far as I know' for this reason. A copy of the Bill was sent by the President of the Royal Society to me, as President of the Medical Council, but on what ground the President of the Royal Society sent it to me I do not know. Whether it was with instructions from the Government that the Bill should be forwarded by him to us, I cannot say. On receiving the document I thanked the President of the Royal Society for transmitting the Bill, but I was not in a position to add that the Medical Council should receive Medical Bills officially through the Royal Society, so as to take steps thereupon."

Preliminary Education.—On the motion of Mr. TURNER, the Council resolved itself into a Committee for the discussion of the proposals regarding preliminary education.

It was moved by Mr. TURNER, seconded by Dr. HUMPHRY, and agreed to:

"That the Examination in Mathematics comprise: (*b*) Algebra, including Simple Equations."

It was moved by Mr. TURNER, and seconded by Dr. HALDANE:

"That the Examination in Mathematics comprise: (*c*) Geometry, including the first three books of Euclid, or the subjects thereof."

Dr. ROLLESTON moved as an amendment, and the Rev. Dr. HAUGHTON seconded:

"That the Examination in Mathematics comprise: (*c*) Geometry, including the first four books of Euclid, or the subjects thereof."

The amendment was lost.

A further amendment was moved by Dr. HUMPHRY, and seconded by Dr. BANKS:

"That the Examination in Geometry comprise, as at present: (*c*) Geometry, the first two books of Euclid or the subjects thereof."

The amendment was put to the vote, and carried; and, having then become the substantive motion, was agreed to.

It was moved by Mr. TURNER, seconded by the Rev. Dr. HAUGHTON, and agreed to:

"That there be an Examination in the Elementary Mechanics of Solids and Fluids."

Mr. TURNER moved, and the Rev. Dr. HAUGHTON seconded:

"That it be understood that the Examination in Elementary Mechanics of Solids and Fluids may be passed either as preliminary, or before, or at the first professional examination, so that the passing of this examination is not to be regarded as necessary for registration."

Dr. PETTIGREW moved as an amendment, and Dr. AQUILLA SMITH seconded:

"That the subject of Elementary Mechanics of Solids and Fluids be made a compulsory subject *preliminary* to registration as a medical student."

The amendment was negatived.

Dr. PETTIGREW required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down.

Against, 17: Dr. Pitman, Mr. Bradford, Dr. Rolleston, Dr. Humphry, Dr. Pyle, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Mr. Turner, Mr. Macnamara, Dr. Leet, the Rev. Dr. Haughton, Dr. Banks, Dr. Quain, Sir William Gull, Mr. Teale, Dr. Hudson. For, 4: Dr. Scott-Orr, Dr. Aquilla Smith, Dr. Fergus, Dr. Pettigrew. Did not vote, 2: The President, Mr. Simon. Absent, 1: Sir James Paget.

The original motion, having been then put to the vote, was agreed to.

It was moved by Mr. TURNER, seconded by Dr. ANDREW WOOD, and agreed to:

"That the Examination in the Elementary Mechanics of Solids and Fluids comprise the Elements of Statics, Dynamics, and Hydrostatics."

Dr. FERGUS moved, and Dr. ROLLESTON seconded:

"That the following be the optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*, Dutch, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry."

Dr. FERGUS moved, and Dr. PYLE seconded:

"That *two* of the foregoing subjects be made compulsory."

Mr. TURNER moved as an amendment, and Dr. PETTIGREW seconded:

"That *one* of the foregoing subjects be made compulsory."

The amendment was carried; and, having been put to the vote as a substantive motion, was agreed to.

Mr. SIMON moved, and Dr. HUMPHRY seconded:

"That the following be added as a rider to the foregoing resolution respecting the optional subjects: 'Provided that, if the candidate have passed his examination in the Elementary Mechanics of Solids and Fluids, he shall be excused from examination in the optional subject.'"

The motion was negatived.

On the motion of Mr. TURNER, the Council resumed, and the resolutions passed by the Council in Committee in respect to preliminary examination were brought up.

Mr. TURNER moved:

"That the resolutions passed by the Council in Committee with regard to preliminary examination be adopted."

The further consideration of this motion was adjourned.

On Wednesday, the recommendations agreed to in Committee were considered in Council, and it was finally agreed that the list of subjects of preliminary education should stand as follows:—(1) English Language, including Grammar and Composition;* (2) English History; (3) Modern Geography; (4) Latin, including Translation from the original and Grammar; (5) Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof; (6) Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;† (7) One of the following Optional Subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other Modern Language; (*f*) Logic; (*g*) Botany; (*h*) Elementary Chemistry.

A motion by Mr. SIMON was agreed to:

"That it is desirable that intending candidates for the medical profession should, before they enter on the purely medical curriculum, have been instructed and examined in the rudiments of natural science—physical, chemical, and biological; and that, in proportion as this can be done, the present medical curriculum and present professional examinations should be lightened of all such matters."

A committee of five members, with power to add to their number, was appointed to communicate on the subject with the licensing bodies, and to report to the Council next session.

On Wednesday, the first part of the sitting was occupied with Dental business. Afterwards, Mr. Simon brought forward a proposal for withdrawing the recognition of the Council from the examinations in preliminary education, conducted by the medical corporations. After discussion, the motion was withdrawn.

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* The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate: 1. To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; 2. To write correctly from dictation; 3. To explain the grammatical construction of sentences; 4. To point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and, 5. To give the derivation and definition of English words in common use.

† This subject may be passed either as preliminary, or before, or at the first professional examination.

DR. W. HOFFMEISTER, public vaccinator of the Cowes (Isle of Wight) district, has received, for the third time in succession, the Government award for the efficient state of vaccination in his district.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

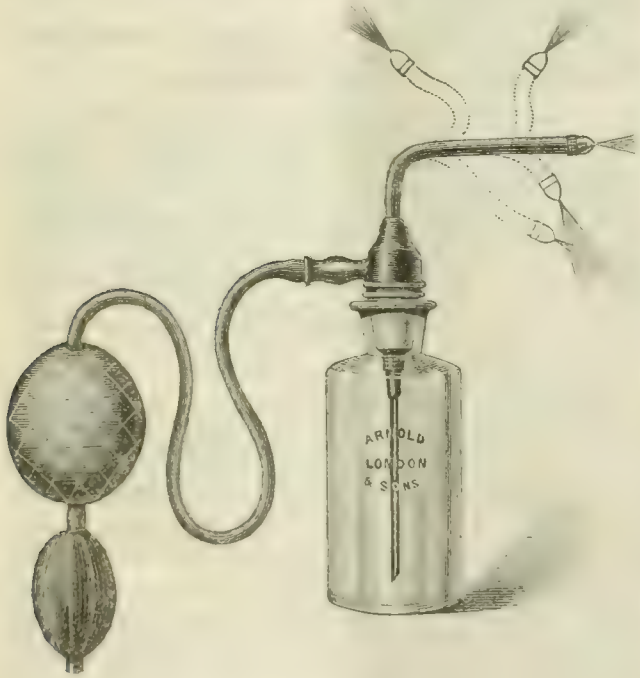
APPARATUS FOR THE TREATMENT OF DEFORMITIES OF THE LEGS IN RICKETY CHILDREN.

THE apparatus consists of a footpiece, into the middle of which is firmly fixed at right angles a splint, which is well padded on both sides and covered with flannel. To this splint the legs are bound on each side by a fine bandage, which can be more readily adapted and kept in position by the aid of cross supports which are firmly screwed to the back of the splint, and also padded. The apparatus may be worn in bed, during sleep, or when riding in a perambulator. It has been found effectual, after repeated trials, in restoring the normal contour of the bones in cases of external curvature, or rather cases in which the convexity of the curvature was to the outer side of the limb.

WILLIAM WEBB, M.D., F.R.C.S.Eng. and Edin.
Wirksworth, Derbyshire, March 1880.

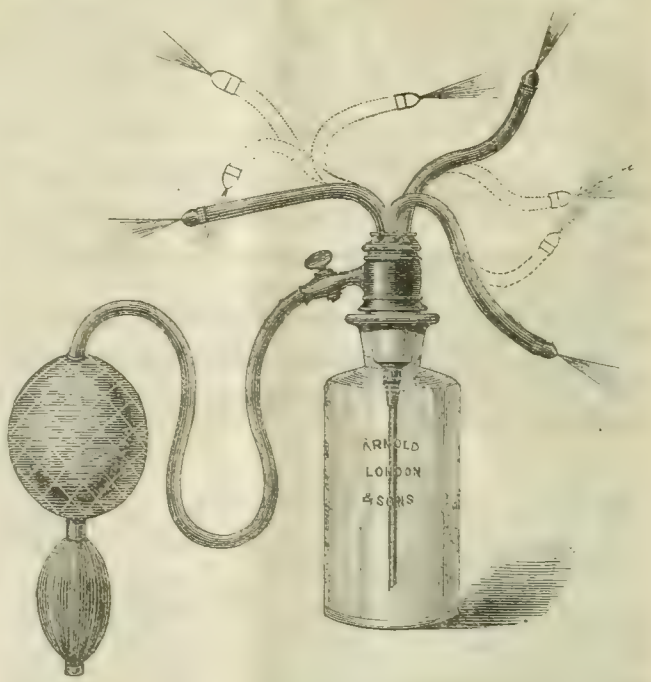
PATENT FLEXIBLE THROAT-SPRAY.

THE subjoined engraving shows an improved form of spray-producer, which, having a pliable tube, can be readily adjusted so as to give a spray for the nose, throat, or posterior nares. By this simple arrangement (which is patented) one instrument is made to answer the same purposes for which three distinct spray-producers were formerly necessary.



PATENT FLEXIBLE SPRAY-PRODUCER FOR DRESSING BY THE ANTISEPTIC TREATMENT, OR DISINFECTING.

THE spray-producer shown in the next engraving is fitted with three pliable tubes, so that any direction can be given to the atomised fluid. It can also be either concentrated or dispersed as required. The apparatus being fitted with a tap, the spray can be stopped at any moment. Messrs. Arnold and Sons of 35 and 36, West Smithfield, are the sole manufacturers of both these Patent Spray Producers.

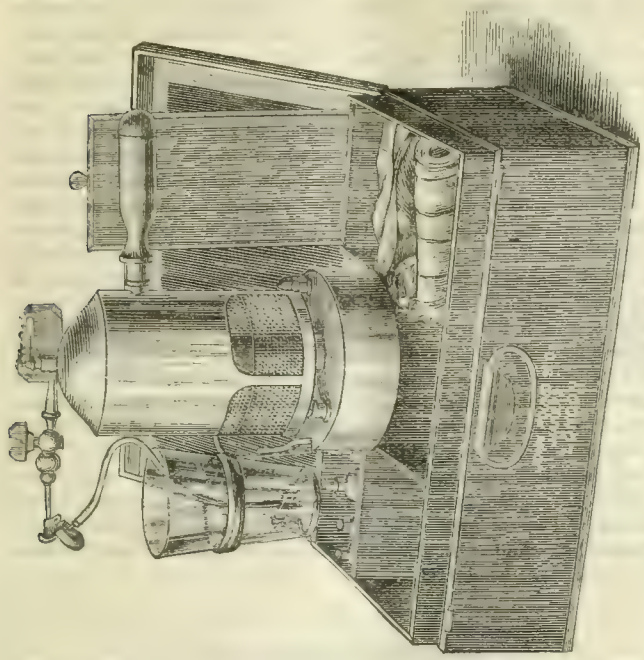


BAG FOR ANTISEPTIC DRESSINGS.

A SURGEONS' and general practitioners' bag for the practice of antiseptic surgery has been designed by Mr. O. D. Marriott of Sevenoaks. The accompanying illustration indicates the combination of a tin case and leather bag, so arranged that the former contains steam spray-apparatus and all material required for antiseptic practice, such as carbolic acid and carbolised gauze, which, in order to maintain its strength, requires an



air-tight enclosure. This case glides into a compartment of the bag, and is secured by straps, a false bottom forms the roof of this compartment, and the space above is available for instruments and dressing materials, which are not of a volatile character, such as boric lint, protective, etc. Its dimensions are 16 in. by 10 in., and greatest height 12 in. The cost of bag and tin case made by Messrs. Pound and Co.



of 81, Leadenhall Street, E.C. (where one can be seen) is £3 5s., and with a steam spray-producer of full size and other fittings, about £10 10s. The sprays found to be most complete are those of Mr. D. Marr of 27, Little Queen Street, and Messrs. Matthews of Carey Street, W.C. It may be mentioned that the bag has been submitted to Mr. Lister, and has met with his cordial approval.

THE LADIES' NEW SANITARY TOWEL (PATENTED.)

UNDER the above name, Messrs. Southall Bros. and Barclay of Birmingham have introduced to the profession and public, through the medium of ladies' outfitting establishments, what will undoubtedly prove a very great boon to all ladies, viz., a much improved substitute for the generally adopted napkin used during the catamenial period and in confinements. The old napkin, with its many obvious defects, may now be entirely discarded, and the new 'sanitary towel' adopted in its stead, with all the advantages to be derived from a more comfortable article, and one possessing all that can be desired from a sanitary point of view. This 'towel' is essentially a pad, and is made entirely of absorbent and antiseptic materials. Though impregnated with boracic acid, it is not irritating. A striking illustration of the absorbent power of the materials used may be obtained by taking a portion from the centre of a pad and placing it upon water. It almost immediately becomes saturated, and sinks; and the same absorbent power is possessed by the pad or towel as a whole. Contrasted with ordinary cotton-wool and gauze, treated in a similar manner, the result is very greatly in favour of the absorbent material, as ordinary cotton-wool and gauze continue to float indefinitely, and refuse to become more than slightly wetted on the surfaces in contact with the water.

After use, the 'towels' are simply burned. In addition to their absorbent and antiseptic powers they are of a downy softness, elastic in a high degree, and are very light, in striking contrast to the ordinary diaper, which is cumbrous, heavy, and hot, chafing the skin during its use. The towels are thus much more comfortable, and it is believed that some dangers to health which are now incurred from imprisoned germs of septic nature will be avoided by their use. For travelling and long voyages they are provided in packets of four and boxes of one dozen. The towels are to be bought at a cheap rate; they will no doubt be largely adopted.

BRITISH MEDICAL ASSOCIATION:

SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 17TH, 1880.

THE HISTORY OF OVARIOTOMY.

THE letter of Dr. Clay, which we publish among our correspondence this week, cannot be passed over without examination and comment. So far as we are editorially affected by Dr. Clay's complaint, we have only to remark that the article of the 19th of June was written by a gentleman who is a regular member of our editorial staff, in whom we have the fullest confidence, who cannot be suspected of any personal feeling against Dr. Clay, and who, we believe, was fully justified in his argument that, before Mr. Spencer Wells began to perform ovariotomy, Dr. Clay's success in the provinces had not succeeded in gaining for that operation the confidence of either metropolitan or provincial surgeons. The fact that Dr. Clay can possibly distort an historical question of this importance into a statement "calculated to do a serious injury" must excite astonishment, and we might very safely pass over the matter without other remark than to observe that the question under discussion is on eof confidence in the operation. But Dr. Clay almost compels us to reconsider his claims as the "Great Apostle of Ovariotomy in this country," and to inquire, as far as published records enable us to do so, what was the result of his teaching, and how far ovariotomy was generally recognised by professional opinion as a legitimate operation, before Mr. Spencer Wells's teaching and example influenced that opinion. It is obviously beside this issue for Dr. Clay to produce now, for publication, extracts from private letters written to him by Blundell or Simpson. Those letters cannot have influenced professional opinion, unless they were published at the time; and the fact remains that Blundell never did ovariotomy, nor did Simpson until about twelve years after his complimentary note to Dr. Clay, when the influence of Mr. Wells's work had been widely felt.

The early history of ovariotomy in Great Britain may, we apprehend, be very shortly stated. The first case was done in 1825 in Edinburgh by Lizars. In 1827, Dr. Granville operated twice in London unsuccessfully. In 1836, Jeaffreson of Framlingham performed the first successful ovariotomy in England. Two other cases were successful in the same year by King of Saxmundham and West of Tonbridge; and in 1838, Crisp of Harleston had a successful case. In 1839, Mr. West had another success. In 1840, the operation was completed for the first time in London by Mr. B. Phillips, but the patient died. Dr. Clay did not begin to operate till 1842, after the successful cases of Jeaffreson, King, Crisp, and West had become well known. In the same year—1842—Mr. Walne performed the first successful ovariotomy in London; and during the succeeding years up to 1846, while Dr. Clay was continuing his early operations in and near Manchester, Mr. Walne, Dr. F. Bird, and Mr. Lane were operating with at least equal success in London.

Perhaps we could hardly find a better test of the state of professional opinion about this time with regard to ovariotomy than is afforded in the *British and Foreign Medical Review* of 1843, edited by Sir John Forbes. The reviewer, after a critical analysis of Dr. Clay's work, thus sums up: "To our thinking, the facts need no comment. We earnestly hope that they will prevent the younger members of the profession from being dazzled by the *alleged* success of an operation which, though it may excite the astonishment of the vulgar, calls neither for

the knowledge of the anatomist nor the skill of the surgeon. In some continental universities, the candidate for the doctor's degree takes an oath, 'Nullius unquam hominis vitam ancipiti tentaturum experimento': a fundamental principle of medical morality, which we conceive is outraged whenever an operation so fearful in its nature, often so immediately fatal in its results, as gastrotomy, is performed for the removal of a disease, of the very existence of which the surgeon is not always sure; of the curability of which, by his interference, he must be in the highest degree uncertain."

In the next two or three years, very little was done; but in 1846 Mr. Cæsar Hawkins had the first successful case in any London hospital, and his lecture on the case still remains among his collected works as a classical model of clinical teaching, and a trustworthy guide to our present knowledge of the opinion of the profession at that time —less than thirty-five years ago. Mr. Hawkins did not repeat his effort, and his example was not followed in any metropolitan hospital for several years.

In 1850, Dr. Robert Lee's famous denunciation was read at the Royal Medical and Chirurgical Society, and an animated discussion was closed by Mr. Lawrence with the question: Whether attempts to treat diseased ovaries by surgical operation "can be encouraged and continued without danger to the character of the profession"? Can Dr. Clay, or any impartial critic, contend that professional opinion up to 1851 had recognised ovariotomy as a legitimate operation? There can be but one answer to this question. So far from being recognised as a legitimate operation, it was denounced as unjustifiable. Mr. Baker Brown, in 1850 and 1852, advocated the "production of an artificial oviduct", and excision of a portion of the cyst. His early practice of ovariotomy was most unfortunate; and it was not until 1862, after Mr. Wells's early cases revived the operation, that Baker Brown became successful, and an advocate of ovariotomy. Dr. Keith's view of the state of professional opinion at this time we alluded to in the article which forms the subject of Dr. Clay's complaint.

If further confirmation of the accuracy of our view be required, we would point to the opinions of Dr. West, as expressed in the first and second editions of his *Diseases of Women*, published in 1856 and 1858; with those in the third edition, published in 1864. The effect of Dr. Clay's work upon the mind of Dr. West led to expressions of distrust and disapproval; while the facts advanced by Mr. Wells led to candid acknowledgment of altered opinion.

This is not the first time that Dr. Clay has challenged criticism. In the *Lancet* of 1865 (March 11th, p. 271), Mr. Wells himself pointed out that, of the one hundred and eleven operations Dr. Clay announced he had performed, he had only published the details of twenty-seven. He argued that such "meagre unauthenticated reports were absolutely worthless to the scientific inquirer"; "that, for all purposes of comparison with the results of other operators, Dr. Clay can only be admitted as having operated on twenty-seven patients", his published cases of complete ovariotomy being only twenty-two"; and that he "takes credit for between eighty and ninety cases the details of which he has not published".

In his preface to the first volume of his work on *Diseases of the Ovaries*, published in 1864, Mr. Spencer Wells says: "Dr. Clay had steadily continued in the career which he began in 1842, but, his operations not being performed in a hospital before numerous professional witnesses, and no connected series of his cases being published, his example had but little influence." In the face of such repeated challenges, Dr. Clay remained silent; and in his letter, published to-day, he says he "never massed his cases, because they were all in private practice, and he was not justified to give names and residences". Mr. Wells and Dr. Keith have found no difficulty in "massing" their cases, or publishing them as a whole, by giving the name and residence, not of the patient, which would be clearly objectionable, but of the medical attendant—a course perfectly justifiable and far more satisfactory. Dr. Clay's argument here is, in our opinion, inconclusive; and when he says his "cases were published as they occurred", we must again ask for information when and where they were published. For, after the first twenty-two, our reading capacity being limited, we have not been able to find more than mere general statements as to four hundred cases, without the slightest guide as to the age or condition of the patients; where the operation was done; what other medical man witnessed it; what was the size or weight of the tumour removed; what were the peculiarities of the case; how the pedicle was treated; what was the result; and, if death, what was the cause of death? On any or all of these points, the publications of Mr. Wells and Dr. Keith afford full and satisfactory evidence; and it is here that their example has influenced professional opinion and practice, in a manner and to an extent which Dr. Clay, so far as we can judge impartially in the matter, and with an earnest desire to estimate the claims of all at their true worth, very largely failed to accomplish. His example was followed to a very limited extent either at home or abroad, whereas the work of Mr. Spencer Wells has been generally acknowledged as leading to the revival of ovariotomy. Olshausen, in his work, which is now a standard book in Germany, published in 1877, speaks of the work in the Samaritan Hospital in 1858, and Mr. Wells's papers in 1859, as the beginning of a new era in ovariotomy; and believes that his subsequent work has done more than that of any other to encourage and assist in its general progress. It would be easy to multiply such references as these; but our space is limited, and we will now only quote the words of Dr. West in the preface to his fourth edition, published last year. He says: "The arguments, which once seemed so cogent, against ovariotomy, have met an answer which admits of no reply, and which leaves room only for hearty congratulations to him who has been the answerer, and to all womankind, of whom he has been the benefactor."

BOTANY AND MEDICINE.

Dr. T. A. G. Balfour, in his valedictory address on resigning the office of President of the Botanical Society of Edinburgh, has applied himself to defend the position of that science with which the Society is concerned, as a branch of medical education, and has acquitted himself of his task with much ability and earnestness. Dr. Balfour is not only a botanist, but a practical physician; and he is, therefore, able to look at the subject which he discusses from two points of view, and to avail himself of all the arguments in favour of his thesis which are discernible from either of these. We may take it, therefore, that he has assembled together, in his address, all the valid reasons that can be adduced in favour of the retention of botany as a part of the medical curriculum. A glance at the address itself gives immediate assurance that these reasons are clearly and vigorously set forth, so that we cannot be wrong in concluding that we have here the very best word that can be said for botany as an element of medical education. We propose to examine that very best word, and to inquire whether Dr. Balfour has succeeded in making out his case: that medical students should be required to make themselves familiar with this department of natural science.

Dr. Balfour's first argument in support of the proposition that medical students ought to study botany, is founded on the intimate connection which subsists between the animal and vegetable worlds. Physiology, he says, is unquestionably an important part of a medical curriculum; but no man can be an accomplished physiologist who is ignorant of the functions of the vegetable kingdom. It was the custom of Goodsir in teaching to fix the anatomical truths which he was communicating in a firm, interesting, and philosophical manner, by the analogous structures revealed by comparative anatomy; and Professor Pettigrew could find no fitter introduction to his lectures on the circulation of the blood, than a consideration of the movements in tubes as exhibited in the vegetable world; and surely, says Dr. Balfour, no more certain method of conveying physiological truth, in an attractive and impressive manner, can be found than by taking a comprehensive survey of the functions of organic life.

The intimate connection between the animal and vegetable kingdoms, which is here insisted on, and the wisdom of taking a large view of their relations, will not be gainsaid. The continuity of the two kingdoms, and the identity of many of the functions performed in each, are becoming daily more and more apparent; but it does not exactly follow from this that the scientific study of the two ought to be associated as a preparation for medical practice. The assertion, that no man can be a truly accomplished physiologist who is not a botanist, is as untenable as the converse statement that no one can be an accomplished botanist who is not also a physiologist would be. A number of our most eminent botanists have been comparatively ignorant of animal physiology, and a majority of the most distinguished and productive physiologists of the day would not pretend to anything beyond the most elementary knowledge of botany; and it is only this elementary knowledge of botany that is really requisite for the study of physiology—a knowledge so elementary that it may be readily acquired in the physiological course, without any special pursuit of botanical studies. A technical and precise knowledge of botany would be of little or no assistance to a student of physiology; and unless, therefore, botany has independent claims to a place in the medical curriculum, it cannot be permitted to assume that place on the pretext that it is the indispensable hand-maid of physiology.

The second ground on which Dr. Balfour bases his defence of botany is to the effect that, as a large proportion of the substances of the materia medica are derived from the vegetable world, medical men are bound to know something of the characters and relations of the plants that yield them. "If anyone should say", he observes, "that we can easily prescribe rhubarb without knowing its botanical source, or that it belongs to the *Polygonaceæ*, then I answer that we can with equal facility prescribe Epsom salts without any knowledge of its being sulphate of magnesia; but, if the absence of the latter knowledge would imply an ignorance of chemistry which would exclude from the medical profession, on what ground can an equally gross ignorance of botany be tolerated?" We are afraid Dr. Balfour will find that, not only must a gross ignorance of botany be tolerated in the medical profession, but that a considerable ignorance of chemistry must also be put up with. If he pursued his examination of medical men in chemistry a little beyond the constitution of Epsom salts, he would discover that they are often utterly unacquainted with the formulæ and reactions of substances which they employ in practice with skill and precision. A thousand medical men prescribe strychnia for one who remembers the formula $C_{21}H_{22}N_2O_2$, and calomel is used with excellent effect daily by scores of practitioners who would be puzzled to describe the mode of preparation of mercurous chloride. It is, of course, desirable that an acquaintance with a certain number of chemical and botanical facts should be required of candidates at an examination in materia medica, but these facts may be acquired during the study of materia medica, and ought not to involve separate courses of study in the sciences from which they are primarily derived; for it seems certain that chemistry could not maintain its place as a branch of medical education, if it had no other connections with medical science and practice than those which it maintains through the materia medica. But the facts of chemistry and of botany, which are properly acquired for examination purposes, drop out of the mind soon afterwards, without any prejudice to professional sagacity and skill. A few prominent ones, like the constitution of Epsom salts and the characters of the Papaveraceæ, still perhaps cling to memory, but the vast majority fall from it like autumn leaves, not, however, without having made some permanent addition to the stem of knowledge. To insist on the retention of such facts, and to multiply indefinitely the number of them that must be acquired, would be but to impose upon the mind irksome and detrimental burdens, and would certainly not facilitate the application of it to the ordinary problems of medical practice.

To illustrate the necessity of botanical knowledge to the student and practitioner of medicine, Dr. Balfour relates a recent experience of his own. A lady and gentleman entered his consulting room a few months ago, bringing with them their little girl, and exhibiting great anxiety and alarm lest she had poisoned herself, as she had eaten one of some foreign seeds which had been given her to play with. They had brought with them a seed similar to the one she had eaten, and Dr. Balfour was at once enabled to relieve their minds, and to assure them that no injurious consequences would result, for in the seed brought he recognised the *Coix lachryma*. "Now supposing", says Dr. Balfour, "that the child had been taken to a practitioner knowing nothing of botany, she would doubtless have been subjected to the misery resulting from the administration of an active emetic, and the grief and painful surmises of her parents would have remained for some time unallayed." The natural corollary of the incident seems to be, not that medical students should learn botany, but that little girls should be disciplined to abstain from eating seeds of unknown properties; for, if medical men are to be prepared to deal in a prompt and decisive manner with all cases of the kind here described, they must study botany to an extent that has not been hitherto contemplated. Three months' attendance on lectures, even accompanied by diligent private study, will not enable them at once to recognise the seeds of *Coix lachryma*. Dr. Balfour evidently desires not merely that medical students should study botany, but that they should become accomplished botanists like himself. To do this, however, they would require to devote an amount of time and energy to the science that it would be disastrous to withdraw from their strictly medical work; and, on the whole, we prefer that naughty little girls should occasionally have emetics, and that their parents should suffer anxiety, which is not unlikely to result in corrective measures, rather than that medical men, in preparing for uncommon contingencies, should neglect to equip themselves adequately for their daily tasks.

Passing next to the province of pathology, Dr. Balfour adduces as his third argument in favour of botanical studies, the truth that, in tracing the history of some diseases, a knowledge of the lower forms of vegetation is of the utmost importance. The vibriones and bacteriæ, he remarks, have been shown by Lister's researches to be vegetable organisms; while Klein has proved that "pneumo-enteritis" in swine is due to a microphyte which is botanically specific. Then, Klebs and Tommasi-Crudeli have isolated the *Bacillus malariæ;* while in various skin-diseases it is unquestionable that low forms of vegetation are at work. In order to explore the relations of such organisms to disease, and to deal intelligently with the diseases which they induce, it is essential, he maintains, to understand their life-history, which can only be done by a person well cultured in phytology. But the exploration of such questions can only be undertaken by a few; and it would be surely inexpedient to compel all medical students to take up botany because, peradventure, one in a thousand may embark on this line of research; while, on the other hand, experience amply teaches that the diseases which are dependent upon vegetable organisms can be efficiently treated with no more knowledge of these organisms than can be conveniently obtained from botanists at second-hand, and without any abstruse personal investigations. Then, again, the knowledge which Dr. Balfour desiderates in this department is not to be secured in an ordinary course of botanical study, but only in the inner circle of cryptogamic botany, which can only be approached by a sacrifice of time and labour that ought not to be required of anyone but a specialist.

The fourth and last reason urged by Dr. Balfour for botanical study in medical education is, that it provides a delightful and healthful recreation, by which student and practitioner may alike relieve the tension of excessive labour and the routine of ordinary duty. That botanical pursuits do this, and that they have proved a solace and safeguard to many hard-working members of the medical profession, is quite true; but they are not less likely to do so still, if they no longer form an essential part of the work in the schools, and are inquired into by curious examiners. Art affords to many of our brethren a refreshing pastime; but it is not on that account proposed that a knowledge of its first principles should be tested at college and hall. Why, then, should botany be imposed on students simply because they may perchance find in it a pleasant refuge from over-work and worry in after years? Recreations

are, as a rule, spontaneously adopted, as the result of a natural impulse. Men turn to them of their own accord; and to place any pursuit in the category of compulsory studies is often a sure way to deprive it of its recreative character. Botany is all the more likely to be resorted to as a relief by medical practitioners, when it is no longer obligatory as a study on medical students.

No one will be found to deny that a knowledge of botany is of service to a medical man, or to disparage the advantages which the study of it confers upon the mind. But the real questions at issue are, whether a knowledge of botany is of such service as to warrant the large expenditure of time which is necessary to acquire it, and whether the mental discipline which is involved in the study of it may not be equally well obtained in other intellectual pursuits bearing more immediately upon modern medical work. To the medical man who has to deal with the microcosm, no knowledge of the macrocosm can come amiss. Such are the varieties and complexities of disease, that it is almost impossible to think of any species of learning that might not prove useful on occasion to a busy practitioner. An acquaintance with Chinese music or with astronomy might stand him in good stead now and again. But the duration of life and the strength of faculty put limits to the range of his acquirements, and out of the vast fields of skill and scholarship stretching around him he can only cultivate a few which tend towards his professional pathway, and which will yield a speedy and remunerative return to his labour. Had we to devise a perfect and comprehensive scheme of medical education, regardless altogether of expense and duration, we should certainly include botany in it. But what we have to do is to prepare a practical and feasible scheme which shall be economical and require only a few years for its accomplishment; and in such a scheme we fear it is now impossible to find a place for botany. The public are not yet prepared to reward medical services on so liberal a scale, as would insure the highest possible attainments acquired during a protracted curriculum in every ordinary practitioner. There must, therefore, be grades in the medical profession; and of those lower grades on whom the heat and burden of the day must fall, it would not be prudent to demand an acquaintance with plants that might involve an ignorance of animals. The enormous growth of medical knowledge in recent times has rendered necessary a readjustment of medical studies; for to adhere to the arrangement of these which was judicious a hundred years ago, would be to ignore much of what is of most practical utility at the present day. And in this readjustment, in which so many strictly professional specialities come to the front, botany must, we fear, be hustled out altogether; for as a science, in relation to medicine, it must yield to chemistry and comparative anatomy, and will have difficulty in holding its own with natural philosophy, meteorology, and electricity.

We do not anticipate nor desire any divorce of botany from medicine; they have been wedded too long in perfect amity and to their mutual benefit to think of separation now because of a temporary tiff. We hope and believe that botany will continue as heretofore to draw many of its most illustrious professors from the ranks of medicine, and that medicine will still owe to botany no small enlightenment and co-operative aid. But their compulsory union cannot be maintained any longer, at least as regards the education of the mass of medical practitioners. It may be proper for universities, whose degrees are more than mere licences to practise, and are supposed to imply some academic culture, still to insist on botanical studies; but these cannot be made an essential preliminary to the passage of the one great portal which is to guard the entrance to the profession.

We have the satisfaction of stating that the weekly impression of the British Medical Journal now numbers 9,750.

At the Hyde County Court, the Masters and Wardens of the Apothecaries' Society of the City of London have obtained a verdict for £20 against Mr. Lewis Smith, for having practised as a medical man at Hyde, though he does not possess the necessary qualifications.

The Metropolitan Hospital Sunday Fund now amounts to £30,500, and this is about £4,000 in excess of the sum collected last year.

Small-pox last week caused 58, measles 38, and typhoid fever 24 deaths in Paris.

At a general meeting of the members of University College, Sir Julian Goldsmid, Bart., has been elected treasurer in place of the Right Hon. G. J. Goschen, M.P., resigned.

We are glad to learn that the *crèche*, opened two or three years ago at Patricroft, has proved so successful, that it is proposed to erect a larger and more suitable building, where more infants can be received.

We regret much to hear of the death of the eminent *savant* and member of the French Senate, M. Paul Broca, which took place on Thursday, the 8th instant.

M. Charles Monod, Surgeon to the Paris hospitals, and Professeur Agrégé of the Faculty of Medicine, has been elected titular member of the Société de Chirurgie of Paris.

During the thirteen weeks ending Saturday, 3rd instant, the metropolitan death-rate averaged but 19.4 per 1,000, against 22.5 in the corresponding periods both of 1878 and 1879.

The French Association against the abuse of tobacco and alcoholic drinks has just awarded two silver medals and a prize of 200 *francs* to Dr. Jacquemart; a silver medal to Dr. Mora; two silver agents to Drs. Gallois, Revillout, Fache, and Mary; and a diploma of honorary membership to M. Jansen, surgeon in the Belgian army.

The fatal cases of scarlet fever in London, which had been 59, 57, and 45 in the three previous weeks, rose again last week to 62, and were 23 above the average; 25 occurred in South London, including 9 in Lambeth, 5 in Battersea, and 3 in Deptford. Six fatal cases of scarlet fever were also recorded in Islington, 3 in Chelsea, 3 in Marylebone, 5 in Mile End Old Town, and 3 in Bromley.

The *Silesian Gazette* announces that the Government of Oppeln has taken measures against the invasion of diphtheria, which is now prevalent in the Russian Governments of Pulkowa and Bessarabia, where it has assumed a contagious character, and, making its way to the west, threatens to invade the Prussian frontier. A sanitary commission has been instituted, for the purpose of considering what are the best measures to be taken to avert the dreaded danger.

TESTIMONIAL TO DR. NORMAN KERR.

An interesting ceremony took place in the rooms of the Medical Society of London on Wednesday, the 7th instant, the occasion being the presentation of a testimonial to our esteemed associate Dr. Norman Kerr. The testimonial consisted of portraits of Dr. Norman Kerr and his wife, and a carriage and set of harness. The address was read by the Rev. J. R. Diggle, in which full justice was done to the ability and devotion with which Dr. Norman Kerr has laboured in the work of social progress, and especially in the cause of temperance. A part of the address ran thus:

"As a temperance reformer, you have long occupied, alike by pen and speech, a foremost place. The literary and scientific attainments by which you are distinguished have invested your writings with authority, and arrayed your utterances with dignity and power. In you the temperance question, in its medical aspect, has found an eloquent exponent and a trusted historian. The profession to which you have the honour to belong has been largely influenced in favour of temperance by the intelligent definition, the cogent reasoning, and the earnest appeals which have characterised your advocacy. Many of the most eminent and gifted medical practitioners are now ranged amongst the truest friends of perfect sobriety. Science and temperance have thus happily conjoined. For the advancement of the temperance reformation, you have not insisted on personal abstinence alone. Whatever seemed adapted to promote it has commanded your thoughtful consideration. Indirect as well as direct methods have enrolled you as a leader and

defender. Movements like those for the establishment of coffee-taverns, to wean the people from intemperate habits, have especially secured your countenance and support. As a practitioner of medicine, you have combined in a high degree untiring zeal with eminent skill. The poor and lowly have experienced at your hands unfailing devotedness in their welfare, and invaluable kindly advice in their sicknesses and sorrows, earning for yourself the distinction of 'the beloved physician'. An address would be wanting in appropriateness without an allusion to the simplicity which adorns your character, and to the singleness of purpose which ennobles your life. You live not to yourself."

The ranks of the medical profession contain many men who have worked honourably, energetically, and successfully in the same direction as Dr. Kerr; but few have been able to advance so actively the cause which many have at heart; and certainly few men in general practice have been able to devote the time and the talents which Dr. Norman Kerr has brought to the service of humanity, to the advancement of temperance, and to the honour of his profession and the benefit of his country. The testimonial is one which derives additional importance from the great number of well-known names to be found in the list of subscribers. It is, however, only a just tribute to one of the most honourable and single-minded members of our profession, and one who has in a remarkable degree illustrated the best qualities which can adorn the professional life.

MIDLAND COUNTIES HOSPITAL FOR INCURABLE DISEASES.

A MEETING, convened by the mayor of Leamington in response to a requisition, was recently held, to consider the affairs of the Midland Counties Hospital for Incurable Diseases. The principal complaint was that, though it had been understood the institution was to be converted into a public one, what had been done was not satisfactory. The past management of the hospital was severely criticised, and a resolution was unanimously adopted, affirming that before fresh appeals were made for subscriptions it was necessary that a meeting of the subscribers should be held.

HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

IT is announced that the Duke of Westminster will lay the foundation stone of a new wing of the National Hospital for the Paralyzed and Epileptic, Queen-square, Bloomsbury, on Wednesday, the 21st inst., at three o'clock. The new wing will cost about £9,000, of which £6,300 has already been contributed.

LUNACY PROSECUTION.

MRS. MARY RUTTEY, of Northlands, Wandsworth, was summoned at Bow-street on the charge of receiving lunatics into her house without being licensed to do so. She was also charged with assaulting one of the inmates of the house, and with imprisoning her without authority. It was stated that, in consequence of information received, the Lunacy Commissioners deputed two medical gentlemen to visit the defendant's house, and they there found nine inmates, three of whom were clearly insane. There was no complaint made as to the ill-treatment of those persons. Several medical witnesses having been examined, the defendant was committed for trial on the first charge.

THE VICTORIA UNIVERSITY.

PRINCIPAL GREENWOOD, in speaking of the inauguration of this University, says, there remains to notice one most important respect in which the charter departs from the original proposals of the college: he refers to the section which, after giving power to grant all such degrees and distinctions as can be granted by any other University in the United Kingdom, adds the proviso, "That the University shall not grant degrees in medicine and surgery, unless and until authority in that behalf is given by our further charter or by Act of Parliament." This proviso was inserted in the charter by the authorities of the Privy Council, on the ground that it was undesirable to add to the number of bodies entitled to grant medical degrees at a time when the whole question of medical education and examination was under the consideration of Parliament. It was impossible not to admit the force of this consideration. At the same time Owens College, possessing a medical school so large and flourishing, and of which it is so justly proud, cannot but indulge the hope that the missing faculty will before long be added to the Victoria University. It will be seen that the proviso itself keeps in view the possibility that the powers now withheld may one day be given; and it may safely be anticipated that the representatives of Owens College will not fail to act on the instruction given by a resolution of the college court on the 7th of October last, "To take every step which may seem desirable for ultimately securing to the Victoria University the right of granting medical degrees conveying the same powers as those attaching to the medical degrees of the other Universities of the United Kingdom, which right the Court regards as one which should not be otherwise than temporarily dispensed with by the Victoria University."

DIARRHŒA IN LONDON.

THE deaths from diarrhœa in London, which had been 21, 32, and 64 in the three preceding weeks, rose last week to 93; they were 25 below the corrected average number in the corresponding week of the last ten years. These 93 deaths from diarrhœa included 74 of infants under one year of age, and 14 of children between one and five years. The rate of mortality from this cause was greatest in East and North London. Three deaths—namely, two of young children, and one of an adult—were referred to simple cholera or choleraic diarrhœa.

TRAINED NURSES IN WORKHOUSE INFIRMARIES.

NOTWITHSTANDING the vast amelioration of the condition of the sick poor in workhouses since Dr. Anstie, Mr. Ernest Hart, and Dr. Joseph Rogers undertook that crusade against the abuses of workhouse infirmaries which ended in the establishment of the Workhouse Infirmary Association and the passing of Gathorne Hardy's Act, there is still much room for improvement, especially, it is believed, in the nursing department. About twelve months ago, a number of ladies and gentlemen met at the house of the Marchioness of Lothian to hear a paper read on the necessity of providing trained nurses in the pauper infirmaries and asylums throughout the country. The paper pointed out the very great need there was for efficient superintendence of the internal arrangements of these institutions, and the difficulty in obtaining trained women to take charge of them. It was resolved to form an association to promote these objects, and a few days ago its first annual meeting was held at Kent House, Knightsbridge, by permission of Lady Ashburton. Her Royal Highness the Duchess of Teck, President of the Society, the Marchioness of Lothian, Lady Strangford, Lady Henry Scott, Lady Frederick Cavendish, the Countess Brownlow, the Hon. Mrs. Talbot, Miss Louisa Twining, the Hon. Mr. Hardcastle, Sir Charles Trevelyan, Mr. T. Hughes, Q.C., General Gardiner, General Cavanagh, Canon Erskine Clarke, Canon Spence, Mr. Bousfield, Dr. Goldie, Dr. Webster, Dr. W. E. Stevenson, and others, were present. A report by Miss Twining was read, which stated that many applications for situations had been received from nurses, but these asked such high salaries that it had been determined to train nurses who might accept places at lower payments. Their object was to have a thoroughly efficient head over every institution, and they had already secured this at the pauper infirmaries of St. George's-in-the-East, Shoreditch, Kensington, St. Giles, St. George's, Bloomsbury, and other parishes. Three ladies had promised to provide the means for maintaining as many nurses. Mr. J. G. Talbot, M.P., who presided, spoke of the change that had been made in these matters in the lifetime of a generation. Twenty years ago, the condition of our workhouses, he said, was not creditable to the country. It had been difficult to persuade those who had the management that anything better than pauper nurses were needed. He trusted to public opinion to remove all the abuses of workhouse management which still remained. Canon Erskine Clarke proposed a resolution that it was desirable that workhouse infirmaries should be in all respects fitted to receive sick inmates, and that a sufficient staff of trained nurses should be employed to insure their more efficient care and speedy cure. It was right, he said, to remove every aggravation of hardship in the work-

house test, and skilful efficient nursing was assuredly the removing of much hardship. He was the chairman of a large union, and he knew that the low class of nurses commonly levied blackmail on the friends of the inmates. Their unkindness made the patients miserable, and it was difficult for the managers, however watchful, to check such unkindness. General Gardiner seconded the resolution, and it was unanimously agreed to. Mr. Thomas Hughes, Q.C., moved: That, as the committee found difficulty in obtaining properly qualified nurses to meet the numerous applications they received from boards of guardians, it was desirable that the association should train nurse-probationers, and therefore it was necessary to form a fund for that purpose. A resolution was afterwards submitted by Canon Spence, declaring that the co-operation of private aid with the Poor-law machinery should be extended by all possible means in order to promote the objects of the association.

THE HOLLOWAY MURDER.

We are glad to be able to state that the Home Secretary, Sir William Harcourt, has, after taking into consideration the circumstances indicating mental aberration in the case of James Sweetland, felt warranted in advising Her Majesty to commute the capital sentence in this case to one of penal servitude for life. Dr. Orange of Broadmoor was deputed by the Home Secretary to examine the evidence, and to report his opinion on the state of mind of the man, and the probability that his degree of insanity affected his responsibility for the crime; and after carefully going into the case, and considering the judge's opinion and all the evidence before him, Sir William Harcourt has thought it right to take the above step. An examination of the convict by two medical experts will now follow, and no doubt this unhappy man will be forwarded to a lunatic asylum, for which alone he is fitted.

THE WELBECK POISONING CASES.

The Local Government Board have despatched Dr. Ballard, Inspector to the Board, to carry out a personal investigation on the spot concerning the still doubtful causes of the sudden and remarkable series of cases, some of them fatal, which are at present known as the Welbeck poisoning cases, but of which the character and causes are as yet undetermined.

THE CONSTITUENTS OF TOBACCO-SMOKE.

MM. G. Le Bon and G. Noel, in a recent note communicated to the Paris Académie des Sciences, assert that they have extracted from tobacco-smoke—1. Prussic acid; 2. An alkaloid, having an agreeable odour, but dangerous to breathe, and as poisonous as nicotine, since a dose of one-twentieth of a grain destroys animal life; 3. Aromatic principles, as yet undetermined, which contribute, with the above-mentioned alkaloid, to give to tobacco its characteristic odour. MM. Le Bon and Noel say that tobacco-smoke owes the toxic properties attributed hitherto solely to the nicotine contained in it, as much to the other substances they have discovered in it. The alkaloid pointed out seems to be identical with the compound known as collidine, of which the existence had already been noted in the course of distillation of several organic substances, but of which the toxic and physiological properties were overlooked. Collidine, however, plays a fundamental part in tobacco-smoke; and it is to its presence that certain kinds of tobacco, comparatively poor in nicotine, and yet very strong in smoking, owe their properties.

THE CONTAGIOUS DISEASES ACTS.

The Select Committee of the House of Commons appointed to inquire into the operation of the Contagious Diseases Acts consists of fifteen members. The ten members appointed by the Government are: Mr. Cavendish Bentinck, Mr. Stansfeld, Colonel Alexander, Sir Harcourt Johnstone, Viscount Crichton, Mr. Burt, Mr. O'Shaughnessy, Mr. Osborn Morgan, Mr. Brassey, and Mr. Cobbold. The following five names have been added by the Committee of Selection: General Burnaby, Sir H. Drummond Wolff, Hon. Colonel Digby, Mr. Ernest Noel, and Mr. William Fowler.

AN UNJUST VERDICT.

On the 28th ultimo, at 11 P.M., a man, who by his papers and passport was subsequently made out to be a Russian, was found by the police at the Russian Consulate, Broad Street, City. As nothing could be made of him, and he was considered to be ill, he was taken to St. Bartholomew's Hospital, where, on examination, it was decided that he had had recently a fit. Not being admitted, he was taken to the police station, and thence, on the recommendation of the divisional surgeon, was conveyed to the City of London Union Infirmary, in the Bow Road. He was seen the same night by the resident assistant surgeon, who directed his removal to the imbecile ward, etc. On the next morning, at 8 A.M., he was visited by the senior medical officer, Mr. Buncombe, who found him lying on the floor, muttering to himself in a language which was unintelligible. As there happened to be a Russo-Polish paralytic in the infirmary, Mr. Buncombe directed the ward attendant to bring him from his ward into the imbecile ward, so that he might talk to him in his own language, and possibly learn something of his history, etc. This was done. Some time afterwards, the medical officer again visited his patient, and, on inquiry, learnt from the paralytic that he could make nothing of the Russian, as he kept talking only gibberish. "Perhaps," said Mr. Buncombe, in reply, "if you stay a little longer, you may learn something yet." At neither visit had he exhibited any symptoms of violence. A short while after Mr. Buncombe's last visit, the paid attendant left the ward to get his dinner, leaving the lunatic alone with the paralytic and one other inmate. Suddenly, the lunatic sprang from the bed on which he was lying, and, seizing a chair, proceeded to strike at the other inmate, who, however, avoided his violence; he then turned the whole of his maniacal wrath on the unfortunate Pole, whose skull he battered in, scattering his brains in all directions. The noise and tumult caused thereby led to other persons entering the ward, when the maniac was separated from his victim, and secured. This, and other evidence of a similar character, having been brought before the jury, that body, after an inquiry which lasted several hours, brought in a special verdict, which they had reduced to writing, in which (*inter alia*) they said, "that the deceased man, Alfred Harris, met his death by violence at the hands of David Salowstral, and that the said David Salowstral was insane at the time he committed the act; that there had been very gross negligence on the part of Mr. Buncombe, the senior medical officer of the infirmary, in placing the deceased, defenceless as he was, in the same ward as a madman, without seeing that a proper attendant was constantly present; that, in the opinion of the jury, it was highly necessary that a proper attendant should be always on duty in the imbecile ward, etc." The deputy-coroner (to his credit, be it said) very properly objected to such a verdict being recorded, as he held that the jury had exceeded their duty—first, in giving their opinion of the mental condition of the homicide; and, secondly, in stating that which they had done respecting Mr. Buncombe, seeing that there was no evidence to show that that gentleman had been negligent in the performance of his duty; but, as the jury persisted in their views, he was reluctantly compelled to make out his order for committing Mr. Buncombe to take his trial for manslaughter. It will be thus seen that a highly respectable member of our profession, who has grown grey in the service of the City of London Union, and against whose intelligence, kind-heartedness, and general performance of his duties not a whisper has ever been heard before, is to be subjected to the indignity, and to the certain heavy expense, of defending himself from this cruelly unjust arraignment at the bar of the Old Bailey; whilst the attendant, who ought not to have left the man alone, is permitted to go off without comment of any kind. This case is another instance of the scant consideration and absolute injustice which our profession too frequently receives at the hands of the general public. Unfortunately, the unmerited misfortune which has befallen Mr. Buncombe might be the lot of any one among us, especially if engaged in the unthankful offices of the poor-law medical service; and, therefore, exposed to the stupidity frequently exhibited by an ignorant coroner's jury.

DEATH FROM CHLOROFORM.

An inquest was held this week, at the Blackburn infirmary, touching the death of William Burns. The deceased, who had been on the tramp for nine days without proper food, was found by a constable at Great Harwood, complaining of severe pain in the lower part of his body. He was sent to the infirmary, and an operation being necessary, was put under chloroform, but he died from "syncope of the heart". A verdict in accordance with the medical evidence was returned.

THE DIETARY IN COLDBATH FIELDS PRISON.

Captain F. B. Morley, chairman of the visiting committee of the Coldbath Fields Prison, writes to deny the statement that, on account of the numerous deaths which have recently occurred in the prison an inquiry into the management has become necessary. Captain Morley says that only two deaths have occurred since January last, one of which was from suicide; that the general health of the prisoners has been excellent; and that the prison, which is the largest in Europe, is admirably managed.

BUTTERCUP POISONING.

Mary Holder, aged five, gathered lately some buttercups in Newsham Park, Liverpool, and ate them, and on Saturday she died from irritant poisoning.

SMALL-POX IN LONDON.

The fatal cases of small-pox in London, which had been 14 and 13 in the two preceding weeks, declined last week to four, and were lower than in any week since the end of March. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 237 and 216 at the end of the two preceding weeks, further declined to 191 on Saturday last; only 17 new cases were admitted to these hospitals during last week, against numbers declining from 50 to 38 in the three preceding weeks.

THE SMOKE NUISANCE.

The Medical Officer of Health for Barton Urban District, Dr. Benjamin Carrington, in his fifth report on the health of the district, calls attention to the nuisance of smoke from mill-chimneys. He says that, owing to imperfect combustion, it is permitted to escape in much larger quantities than need be. The carbon, carbon dioxide, tarry matters, the acid compounds of sulphur and chlorine, and, there is reason to suspect, other deleterious vapours, enter into and contaminate the atmosphere. The consequence is, that Dr. Carrington finds that vegetation has suffered to a marked extent in late years. It is no longer possible to grow roses and other delicate flowers; and even the hardier fruit-trees seldom produce a fair crop.

METROPOLITAN WATER-SUPPLY.

Dr. Frankland reports, as the result of his analyses of the waters supplied to the metropolis during June, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity in a given volume of water supplied by each of the metropolitan water companies and by the Tottenham Local Board was: Colne Valley 1.4, Kent 1.5, Tottenham 1.6, New River 1.7, East London 2.5, Lambeth 2.6, Grand Junction 2.9, Southwark 3.0, Chelsea 3.1, and West Middlesex 3.1. As compared with the previous month, the water supplied during June by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies was of better quality; that delivered, however, by the Grand Junction and Lambeth Companies was slightly turbid. The water delivered by the East London Company, and drawn from the Lea, was slightly superior to the Thames water; while that delivered by the New River Company was of much better quality, and nearly equal to spring water. The deep-well waters, supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were of their usual excellent quality. The Colne Valley Company's water had been softened before delivery.

SCOTLAND.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS.

From the report of the Registrar-General for June, it appears that, during the month, there were registered, in the eight large Scotch towns, 2,284 deaths, of which 1,202 were of males, and 1,082 of females. This is less by 279 than the average of the same month during the previous ten years. The death-rates in the different towns were: Greenock, 16 per 1,000; Aberdeen, 19: Glasgow, Edinburgh, and Leith, 21; Dundee, 22; Perth, 27; and Paisley, 31. Forty-one per cent. of all the deaths were of children under five years of age: Aberdeen, with 31 per 1,000, being the lowest; and Dundee, with 45 per 1,000, being the highest. Zymotic diseases were fatal in 384 cases: of these, 102 deaths were due to whooping-cough; in Paisley, this disease contributed 12.7 of the total mortality. Fevers caused 50 deaths; and in Perth caused 11.9 of the entire mortality. Measles still caused a good many deaths: 96 were registered as due to it; while scarlet fever was credited with 37 deaths, and diphtheria with 14. Apoplexy and paralysis caused 126; hydrocephalus, 69; premature birth debility, 53; and cardiac diseases, 147 deaths. Phthisis pulmonalis caused 316 deaths, or 13.8 per cent. of the entire mortality; while inflammatory affections of the respiratory apparatus other than croup, phthisis, and whooping-cough, caused 405 deaths, equal to 17.7 per cent. of the whole. Seven of the deaths registered were of people over 90 years of age, one of them, a female, having attained to 104 years. The births of 3,946 children were registered; of whom, 2,033 were males, and 1,913 females. During the month, the mean barometric pressure was less by .002 inch; the mean temperature less by 0.6°; the mean humidity less by 2; the rain-depth less by 0.86 inch: and the wind-pressure greater by 0.41 lb. than the averages of the same month during the previous twenty-four years. The highest mean temperature was 57°, at Dundee; and the lowest, 53.8°, at Aberdeen, where there was also the greatest rainfall. East wind abounded most of the month, and the report states that this was probably due to the floating down of polar ice after its remarkable loosening.

REGISTRAR-GENERAL'S RETURNS.

From the returns of the Registrar-General, for the week ending July 3rd, it appears that the death-rate in the eight principal towns during the week was 20.9 per 1,000 of the estimated population. This rate is 0.4 above that for the previous week of the present year. The lowest mortality was recorded in Greenock—viz., 14.4 per 1,000; and the highest in Paisley—viz., 36.1 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.0 per 1,000, being an increase of 0.2 over the preceding week; but there was little change in the number of deaths from the different diseases. Acute diseases of the chest caused 91 deaths, being 12 more than the number recorded during the previous week. The mean temperature was 59.1°, being 1.7° above that of the week immediately preceding and 4.3° above that of the corresponding week of last year.

MR. DIXON'S BEQUESTS TO THE GLASGOW INFIRMARIES.

The bequests of £5,000 each to the Royal and Western Infirmaries of Glasgow, made by the late Mr. W. S. Dixon, will, it is understood, be paid to the above institutions next November (free of legacy duty), as, by the terms of his will, it was only in the case of an infirmary being in existence on the south side of the river at the time of his decease that it was to obtain the £10,000. No such new infirmary, or institution, being yet established, the clause becomes of necessity inoperative.

FORFARSHIRE MEDICAL ASSOCIATION.

The twenty-second annual meeting of the Forfarshire Medical Association was held on Thursday, July 8th, at Arbroath. Dr. J. S. Crichton presided. Dr. Key (Montrose) was elected President, and Dr. Johnstone (Fordoun) and Dr. Miller (Dundee) Vice-Presidents, for the ensuing year. Dr. Sinclair addressed the meeting on the Vaccination Acts Amendment Bill, and the meeting subsequently adopted a motion op-

posed to the measure. The President read a paper "On Coal-Gas Poisoning", and Dr. Miller read a paper "On the Hygiene of the Infectious Fevers". The meeting also agreed to a motion regarding the whole subject of medical fees, a report to be given in at the next annual meeting. Professor Simpson (Edinburgh) made a short communication on various instruments used in obstetrics. After the meeting, the members of the Association dined in the White Hart Hotel.

ROYAL MATERNITY HOSPITAL, EDINBURGH.

THE Medical Board of the Maternity Hospital, Edinburgh, have appointed Mr. James Limont, M.A., B.Sc., and Mr. L. Ralston Huxtable to be resident surgeons to the hospital, in place of Messrs. Thomas Caverhill, M.B., and Russell Elwood, M.B., whose term of office expires this month. Dr. J. Halliday Croom, at the same time, succeeds Dr. Keiller as medical officer on duty.

AYR NEW HOSPITAL.

THE work of erecting the new hospital at Ayr will be commenced immediately. The building will be two hundred and forty feet in length and one hundred and twenty in depth, with a central tower sixty-five feet in height. The building will be on a site a little beyond the Kyle Combination Poor-house.

IRELAND.

DR. CAMERON of Dublin has recently reported, that the water supplied to the Newcastle West Union, Limerick, is "sewage slightly diluted".

LIMERICK URBAN SANITARY BOARD.

DR. BARRY, Medical Superintendent Officer of Health, having recently applied to the Public Health Committee for authority to inspect the sanitary reports of the medical officers of health, and no action having been taken, the Committee received a communication from the Local Government Board, last week, in reference to the matter. The Board suggested that the requisite directions should at once be given, enabling Dr. Barry to have access to these reports, and all other official documents necessary for the due discharge of his duties. Dr. Barry has always performed the duties connected with the office he holds in an energetic and fearless manner; and therefore, it is stated, has incurred the animosity of various members of the Limerick Town Council, who, on several occasions, have been displeased with the reports furnished by him on the sanitary condition of Limerick; which may explain the hesitation to supply him with the documents in question—a periodical examination of which is indispensable to the duties imposed on him as Medical Superintendent Officer of Health.

THE OUTBREAK OF FEVER IN MAYO.

VARIOUS statements have recently been put forward as to the number of persons suffering from fever in Swinford Union, and the mortality occasioned by the outbreak; that these statements exaggerated the extent and virulence of the disease, is shown by a communication recently made by the Registrar-General for Ireland, who, with the means at his disposal, has analysed the returns for Swinford District for several years, and proved incontestably that there is nothing remarkable about the presence of fever in the union referred to, as it appears to be endemic. He has found that, in 1870, there were 24 deaths from fever; in 1871, 25; in 1872, 22; in 1873, 38; in 1874, 33; in 1875, 13; in 1876, 18; in 1877, 16; in 1878, 36; and in 1879, 48 deaths. In the first half of this year 22 deaths were recorded from fever, and in the first half of last year there were 23 deaths, or one death less this year. Also, for the first half of this year, the total deaths in Swinford Union were 508, while last year, during the same period, they were 585. Dr. Grimshaw finds also that the average death-rate of the Swinford Union has been as low as 14.8 per 1,000 for the past ten years; and he believes that these outbreaks of fever are quite common in Ireland, and refers to several places as Skibbereen, Donegal, etc.—where they have occurred, and where there has been no exceptional distress. We may add that the sanitary condition of Charlestown, Bellaghy, and other places in the Swinford Union is described as positively disgraceful; neglect, dirt, misery, and overcrowding abound; while the most ordinary rules of health and cleanliness appear to be disregarded.

THE HIGH DEATH-RATE OF DUBLIN.

FROM the weekly returns of births and deaths, issued by the Registrar-General for Ireland, it appears that, during the last month, the deaths in the Dublin Registration District represented an annual rate of mortality, for each week, of 37.5, 42.3, 39.2, and 32.6, respectively. For the week ending July 3rd, the death-rate was 33.5 per 1,000. The exceptionally high rate in the second week of June was owing to the registration, in that week only, of sixteen deaths which occurred during the two preceding months in a charitable institution. The King and Queen's College of Physicians, and the Council of the Royal College of Surgeons in Ireland, have both appointed committees to consider the high death-rate of the city. These committees have, we understand, been authorised to confer with each other, and report as soon as possible to their respective Colleges, with a view to further action by them in the matter. The College of Physicians' Committee consists of the President and Vice-President of the College, with Drs. Gordon, Hayden, Grimshaw (Registrar-General), and J. W. Moore. The Fellows appointed by the Council of the College of Surgeons are the President and Vice-President of the College, and Messrs. Barton, Jacob, Elliott, and Stoker.

THE DUBLIN ORTHOPAEDIC HOSPITAL.

HER EXCELLENCY the Countess Cowper, wife of the Lord-Lieutenant of Ireland, visited this hospital last week. An address was presented from the Committee, thanking Her Excellency for her visit to the hospital.

STEEVENS' HOSPITAL.

THE following sub-leader appeared in the Dublin *Freeman's Journal* of last Saturday.

"Steevens' Hospital is still the subject of correspondents writing to us. It will be remembered that, the two physicianships to the hospital becoming vacant, there were three candidates for them, one of whom had been for over ten years intimately connected with the institution and its school, and he was accordingly warmly recommended to the governors by the medical staff. This gentleman, who was a lecturer and teacher in the school, was, as everyone knows, passed over, the governors ignoring, without ostensible cause, the recommendation of the medical staff, and thus going straight against the opinion of the royal commission of 1856, which desired, for the benefit of the institution, that, as far as could be effected, the teachers in the school should be elected on the medical staff of the hospital according to the precedence of their appointments. It was predicted at the time by the *British Medical Journal* (vol. i, 1880, p. 454), that the hospital was likely to suffer by the action of the governors in declining to be guided by capable gentlemen giving a disinterested opinion. The withdrawal of the students, it was pointed out, would be injurious to the hospital, which, as a clinical hospital, would fail. The correspondence we have received on this matter illustrates that the forecast of the *British Medical Journal* was well grounded. It is pointed out that the action of the governors has resulted, either directly or indirectly, in the closing of the medical school, and the consequent withdrawal of the grants from a fine old charity, in the depriving of 200 women every year of the usual medical assistance when in childbirth, and in the resignation of the most eminent of the medical staff of the hospital. Our correspondents suggest the propriety and utility of a Governmental inquiry into the whole matter, including the method by which governors are constituted, and the appointments made by the management."

BELFAST HOSPITAL FOR SKIN-DISEASES.

THE annual meeting of the friends and supporters of this institution was held, on the 6th inst., at the hospital in Glenravel Street. The committee, in presenting their fifteenth annual report, state that, during the year, 1,097 patients were treated at the hospital, of which number 18 were admitted into the wards, being an increase of 125 on the preceding year. An epidemic of scabies, which occurred during the winter, caused

a good deal of expense, and the committee regret that their efforts have been greatly impeded by want of funds. By exercising great economy, the debt due to the treasurer has been reduced to £41. Although the hospital was constructed for twenty beds, it contains only four fully provided, but none are free, which is a great drawback. Many of the rooms, also, are entirely unfurnished, and the Turkish bath has not been used for some time for want of funds, a state of things not very creditable to the community at large, who derive so much benefit from an institution of the kind. The committee are anxious that there should be, at least, two beds, one male and the other female, for deserving cases, to be admitted by the medical officer, and suggest that a special fund be organised for this purpose; also, that a donation of ten guineas in one sum should constitute a life governor, who would be entitled to certain advantages in reference to the recommendation of patients for admission. The Rev. Canon MacIlwaine moved a vote of thanks to Dr. H. S. Purdon for his services as honorary physician, to whom the public owed a deep debt of gratitude for the success with which he had treated the cases under his care. The hospital was one of the most valuable institutions in the town, and he hoped it would receive more general support. The motion having been passed, the proceedings terminated.

FEVER IN IRELAND.

At the last meeting of the Council of the Marlborough Fund, Dr. Grimshaw, the Registrar-General, made a very satisfactory statement with respect to the reported existence of famine fever in the Swinford Union. He read statistical returns for the last ten years, which showed that there is nothing remarkable in the prevalence of fever in that district—that, in fact, it is endemic, and that in the first six months of this year there has been one death less from fever than in the first half of last year. The numbers were—last year, 23; this year, 22. In the second quarter of this year there have been altogether eight deaths from fever in a population of 53,000, and the total mortality is 77 less. In the first six months of last year the numbers were 585; in the first six months of this year 508. So much for the sensational reports which have been circulated, about a terrible outbreak of famine fever, which has given a powerful shock to many officials, and set the Local Government Board and its staff in commotion. Additional medical inspectors have been specially appointed to examine the condition of various districts of the West, and their reports as far as they have gone are reassuring.

VACCINATION ACTS AMENDMENT BILL.

The following form of petition is recommended to the attention of our members. The rules of the Post Office have been interpreted by the Post Office authorities to prohibit the publication and circulation in the Journal of a form of petition which might be signed and returned to the office signed, as has been done on one or two previous occasions. Under these circumstances, we are unable to carry out the resolution of the Parliamentary Bills Committee, sanctioned by the Committee of Council, authorising the publication of a form of petition as a loose page separately printed in the Journal. We would, however, ask the members of the Association to forward us letters authorising the addition of their signatures at foot to the subjoined form of petition; or, if they are willing to take the additional trouble, it would be advisable they should have a copy of the subjoined form written out, sign it on the same sheet, obtain the signatures of any of their neighbours and friends, and forward it without delay for presentation to Parliament by a local county or borough member. If our readers are willing to do this extensively, the effect of so large a number of individual petitions would be even greater than that of one petition signed by four or five thousand collectively. We must express a hope that each individual will consider it his duty to act personally in this matter; the obstacles interposed by the Post Office authorities preventing collective action, such as was taken on former occasions.

The following is the text of the petition recently signed by the President of the Council of the Association, and presented by Dr. Farquharson to the House of Commons.

To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.

The petition of the undersigned members of the British Medical Association humbly sheweth—

1. That your petitioners have viewed with extreme alarm and regret the Bill introduced into your honourable House by Her Majesty's Government, proposing to abolish repeated fines for non-compliance with the vaccination laws.

2. That your petitioners firmly believe that the passing of such a measure would tend very largely to hamper the working of the vaccination laws, which are admitted on all hands to be now working extremely well.

3. That the outcry against compulsory vaccination is mainly due to certain interested persons, who, by the dissemination of inflammatory literature and by the propagation of falsehoods and distorted statements, stir up opposition to vaccination on the part of ignorant and thoughtless people.

4. That the principle of compulsory vaccination has on many occasions received the express sanction and approval of your honourable House; and that a Select Committee of your number made in the session of 1871, after a most careful and exhaustive hearing and sifting of the evidence of antivaccinators, an unanimous report, that "it is the duty of the State to endeavour to secure the careful vaccination of the whole population".

5. That your petitioners firmly believe that this universal vaccination of the population will be rendered altogether impossible, if a parent be allowed to leave his child unvaccinated after the payment of the nominal fine or fines proposed by the Bill now under the consideration of your honourable House.

6. That your petitioners, whilst regarding it as beyond doubt inexpedient to excite opposition to the law by continued prosecutions of persons who do not intend to allow their children to be vaccinated, are strongly of opinion that the question, whether prosecutions in a particular case should or should not be suspended, cannot be decided in a general enactment by the Legislature.

7. That in such cases your petitioners believe local knowledge to be essential as to the particular individual, and the influence for evil which he is exercising in the district by the expression of his opinions about vaccination; and that, therefore, each case of non-compliance with the law must be dealt with on its merits by the local vaccination authority.

8. That the granting of an exemption from vaccination on payment of a certain sum (as is virtually proposed by the Bill now before your honourable House) cannot fail to add largely to the number of unvaccinated children in the country.

9. That the proposed Bill is opposed to the spirit of all the statutes relating to the public health, under which continuing penalties are imposed, for the perpetuation of nuisances in no respect worse than that of an unvaccinated child.

10. That the proposed Bill is, in the opinion of your petitioners, contrary to the general civil law: as under it a person may purchase, by the payment of a nominal sum, exemption from a national requirement otherwise binding upon him.

11. That your petitioners believe that professional and public opinion is opposed to any such relaxation of the duty of a parent to vaccinate his child, as the proposed Bill would permit; and that the number of persons who would be benefited by such relaxation would be extremely small, whilst it would remove an important protection from the community at large.

Your petitioners, therefore, pray that the proposal to limit the number of penalties which may be enforced for non-compliance with the vaccination laws may not receive the sanction of your honourable House, as your petitioners feel convinced that, if passed into law, it would very seriously hamper the operation of the Vaccination Acts, and leave the nation exposed to the horrors of widespread and fatal epidemics of small-pox.

And your petitioners, as in duty bound, will ever pray.

July, 1880.

The vestry of St. Mary Abbots, Kensington, have presented to the House the following petition under their Common Seal:—"That a Bill intituled 'A Bill to amend the Vaccination Acts' is now before your honourable House, the object of which is to remove the liability of a parent of a child to be convicted for neglecting to take, or cause to be taken, such child to be vaccinated, or for disobedience to any order directing such child to be vaccinated, if either: (*a*) He has been previously adjudged to pay the full penalty of twenty shillings for any of such offences with respect to such child; or (*b*) He has been previously twice adjudged to pay any penalty for any of such offences in respect of such child. That your petitioners are the nuisance authority

for the parish of St. Mary Abbotts, Kensington, in the county of Middlesex, and as such authority have had to take measures for checking the spread of epidemics of small-pox. That your petitioners are fully persuaded of the value of vaccination as a protective measure against small-pox. That your petitioners would view with alarm any relaxation of the provisions of the Vaccination Acts which were passed for the purpose, *inter alia*, of securing the vaccination of all children at a certain age. That your petitioners believe if the present Bill should become law, the result of it would be an ever increasing number of unvaccinated persons in the community—persons liable to small-pox, being unprotected. That such a state of things would favour the spread of small-pox, which would again become a common disease, as in pre-vaccination times, to the great danger of public health, and would seriously increase the difficulties your petitioners have experienced in their efforts to cope with epidemics of small-pox.—Your petitioners, therefore, humbly pray your honourable House that the Bill may not pass into law, and your petitioners will ever pray, &c."

The following is an extract from a report by Dr. Dudfield, the Medical Officer, on the above Bill.

"SMALL-POX.—In connection with the subject of small-pox, I feel it my duty to invite the attention of your vestry to a retrograde step proposed by the Government, and which, if carried into effect, will, I fear, be the cause of small-pox becoming a common disease in the future, as it was in the now distant past. It is a concession to the anti-vaccinationists in the form of a Bill, which proposes to enact that 'no parent of a child shall be liable to be convicted for neglecting to take, or to cause to be taken, such child to be vaccinated, if either: (*a*) 'He has been previously adjudged to pay the full penalty of twenty shillings for any such offences with respect to such child; or (*b*) He has been previously twice adjudged to pay any penalty for any of such offences in respect of such child.' Should this Bill become law, any parent who may object to vaccination will be enabled, at the cost of a few shillings, to escape the performance of what is by most reasonable persons regarded as a duty equally owing to society at large, and to his own offspring. Under the existing law, penalties are multiple *i.e.*, a parent may be fined again and again (*inter alia*) for neglecting to have his child vaccinated, and for disobeying the order of a magistrate requiring him to have his child vaccinated; and although the repeated infliction of penalties rendered necessary by contumacy, may seem to savour of 'persecution', experience proves that it is really the only means of securing the vaccination of the children of contumacious parents, and of those who would deny their children the protection of vaccination, were it not for fear of the consequences of defiance of the law. But should the Government Bill pass, anti-vaccinationists would soon have their way, for were the operation to cease to be *compulsory*, in the sense in which it is now compulsory, it would practically become *optional*, and thus, year by year, an ever increasing number of persons would exist in our midst, who, being themselves unprotected by vaccination, and, therefore, intensely liable to small-pox, would become the means in any future epidemic of spreading the disease indefinitely. The disease itself, moreover, instead of appearing from time to time in epidemic form, as it does now, would be always with us as in the pre-vaccination days. The Bill should be vigorously opposed, and I venture to submit that your vestry, as the nuisance authority in this great parish, might properly present a petition to Parliament deprecating any alteration in the law in the direction indicated in the Government measure."

INTERNATIONAL MEDICAL CONGRESS, 1881.

THE Executive Committee made their report to the General Committee of this Congress, which met at the College of Physicians on Tuesday afternoon. The officers of the Congress were proposed and nominated; the Sections were agreed upon; and the Treasurer, Mr. Bowman, announced that large subscriptions had already been received. It was agreed that the meeting of the Congress should be from the 3rd to the 9th of August, 1881. The President of the Council of the British Medical Association stated that the Committee of Council of that body had postponed their meeting to the following week. It was also announced that the Congress would meet in rooms granted for the purpose by the University of London, the Royal Society, and the other learned societies meeting in Burlington House; so that the Sections will be all practically under the same roof.

The following resolution, moved by Dr. Sieveking and seconded by Sir James Paget, was unanimously carried.

"That the General Committee of the International Medical Congress, having heard the statement of the President of the Council of the British Medical Association, are gratified to find that the Council of the British Medical Association are willing to postpone their annual meeting in 1881 till after the meeting of the International Medical Congress; and they express the conviction that the foreign visitors to the Congress will be glad to avail themselves of the opportunity of visiting the meeting of the British Medical Association."

The following lists of Committees and Officers have been forwarded to us.

Executive Committee.—Dr. Risdon Bennett, LL.D., F.R.S., President of the Royal College of Physicians, London (Chairman); Sir W. Jenner, Bart., M.D., K.C.B., D.C.L., F.R.S.; Sir James Paget, Bart., LL.D., D.C.L., F.R.S.; Sir William Gull, Bart., M.D., D.C.L., F.R.S.; Luther Holden, Esq.; Professor J. Lister, D.C.L., LL.D., F.R.S.; Dr. H. A. Pitman; W. Bowman, Esq., F.R.S.; Dr. Sieveking; Dr. Hermann Weber; Jonathan Hutchinson, Esq.; Dr. J. Matthews Duncan, LL.D., F.R.S.E.; Prescott Hewett, Esq., F.R.S.; Dr. Andrew Clark; A. O. Mackellar, Esq.; Dr. Sheppard; Dr. Pye-Smith; W. Mac Cormac, Esq.

Reception Committee.—Prescott Hewett, Esq., F.R.S. (Chairman); Sir Trevor Lawrence, Bart., M.P.; Sir Henry Thompson; Dr. Farquharson, M.P.; Dr. Lyons, M.P.; J. H. Puleston, Esq., M.P.; Dr. Philip Frank; Dr. A. Vintras; Dr. Lionel Beale, F.R.S; Dr. Andrew Clark; J. Cooper Forster, Esq.; Ernest Hart, Esq.; Dr. George Johnson, F.R.S.; John Marshall, Esq., F.R.S.; Dr. W. O. Priestley; Dr. Owen Rees, F.R.S. Secretaries.—Dr. Samuel West; Dr. Sharkey.

The following list of officers has been nominated:—President of the Congress: Sir James Paget, Bart., LL.D., D.C.L., F.R.S.; Vice-Presidents: Dr. Risdon Bennett, LL.D., F.R.S., Pres. Roy. Coll. Physicians, London; the President of the Royal College of Surgeons of England; the President of Royal College of Surgeons of Ireland; the President of King and Queen's College of Physicians of Ireland; the President of Royal College of Surgeons of Edinburgh; the President of Royal College of Physicians, Edinburgh; the President of the Faculty of Physicians and Surgeons of Glasgow; the Master of the Society of Apothecaries of London; the Governor of the Apothecaries' Hall of Ireland; Sir Thomas Watson, Bart., M.D., D.C.L., LL.D., F.R.S.; Sir William Jenner, Bart., M.D., K.C.B., D.C.L., F.R.S.; Sir George Burrows, Bart., M.D., D.C.L., F.R.S.; Sir Robert Christison, Bart., M.D., D.C.L., F.R.S.E., Edinburgh; Sir Joseph Hooker, K.C.S.I., M.D., F.R.S., Director of Kew Gardens; Professor Owen, F.R.C.S., C.B., F.R.S., British Museum; Dr. Carpenter, M.D., C.B., F.R.S.; Professor Acland, M.D., D.C.L., LL.D., F.R.S., Oxford; George Busk, Esq., F.R.S.; Luther Holden, Esq.; Dr. Hudson, M.R.I.A., Dublin; Professor Huxley, LL.D., Sec. Royal Society; Thomas Keith, Esq.; Professor Lister, LL.D., D.C.L., F.R.S.; Robert Mc Donnell, Esq., F.R.S., M.R.I.A., Dublin; Professor George Paget, M.D., D.C.L., LL.D., F.R.S., Cambridge; Professor Allen Thomson, M.D., LL.D., F.R.S.; Professor Burdon Sanderson, M.D., LL.D., F.R.S.; Professor Spence, F.R.S.E., Edinburgh; Spencer Wells, Esq., F.R.C.S.

Section I. *Anatomy.*—President: Professor Flower, F.R.S. Vice-Presidents: Professor Macalister, M.D., Dublin; Professor Rolleston, M.D., F.R.S., Oxford; Professor Turner, F.R.S., Edinburgh. Secretary: Professor Thane.

Section II. *Physiology.*—President: Professor Michael Foster, F.R.S., Cambridge. Vice-Presidents: Dr. Pavy, F.R.S.; Professor Purser, M.D., Dublin; Professor Rutherford, M.D., F.R.S., Edinburgh. Secretaries: Dr. C. S. Roy; Professor Gerald Yeo.

Section III. *Pathology and Morbid Anatomy.*—President: Dr. Samuel Wilks, F.R.S. Vice-Presidents: Dr. Bristowe; Jonathan Hutchinson, Esq.; Professor Sanders, M.D., F.R.S.E., Edinburgh. Secretaries: Dr. Payne; Marcus Beck, Esq., M.S.

Section IV. *Medicine.*—President: Sir William Gull, Bart., M.D., D.C.L., F.R.S. Vice-Presidents: Professor Gairdner, M.D., Glasgow; Dr. Quain, F.R.S.; Dr. William Roberts, F.R.S., Manchester. Secretaries: Dr. Duckworth; Dr. W. M. Ord.

Section V. *Surgery.*—President: John Eric Erichsen, Esq., F.R.S. Vice-Presidents: Professor E. H. Bennett, M.B., Dublin; Professor Humphry, M.D., F.R.S., Cambridge; W. S. Savory, Esq., F.R.S. Secretaries: H. G. Howse, Esq.; Thomas Smith, Esq.

Section VI. *Obstetric Medicine and Surgery.*—President: Dr. Mc Clintock, LL.D., Dublin. Vice-Presidents: Dr. Barnes; Dr. Matthews Duncan, LL.D., F.R.S.E.; Dr. Priestley. Secretaries: Dr. Galabin; Dr. John Williams.

Section VII. *Diseases of Children.* President: Dr. West. Vice-Presidents: Dr. Gee; Timothy Holmes, Esq. Secretaries: Dr. Donkin; R. W. Parker, Esq.

Section VIII. *Mental Diseases.*—President: Dr. Lockhart Robert-

son. Vice-Presidents: Dr. Crichton Browne, F.R.S.E.; Dr. Maudsley. Secretaries: Dr. Gasquet; Dr. Savage.

Section IX. *Ophthalmology.*—President: William Bowman. Esq., F.R.S. Vice-Presidents: G. Critchett, Esq.; Henry Power, Esq., M.B.; Dr. Argyll Robertson, F.R.S.E., Edinburgh. Secretaries: Dr. W. A. Brailey; E. Nettleship, Esq.

Section X. *Diseases of the Ear.*—President: W. B. Dalby, Esq. Vice-Presidents: Dr. Cassells, Glasgow; Dr. Fitzgerald, Dublin. Secretaries: Dr. Urban Pritchard; Dr. Laidlaw Purves.

Section XI. *Diseases of the Skin.*—President: Erasmus Wilson, Esq., F.R.S. Vice-Presidents: Dr. Cheadle; Dr. R. Liveing. Secretaries: Dr. Cavafy; Dr. Thin.

Section XII. *Diseases of the Teeth.*—President: Edwin Saunders, Esq. Vice-President: John Tomes, Esq., F.R.S.; Charles Spence Bate, Esq., F.R.S. Secretary: C. Tomes, Esq., F.R.S.

Section XIII. *State Medicine.*—President: John Simon, Esq., C.B., F.R.S. Vice-Presidents: Dr. George Buchanan; Professor de Chaumont, F.R.S.; Dr. Douglas Maclagan, F.R.S.E., Edinburgh; J. Netten Radcliffe, Esq. Secretaries: Professor Corfield, M.D.; Dr. Thorne Thorne.

Section XIV. *Military Surgery and Medicine.*—President: Surgeon-General Professor Longmore, C.B. Vice-Presidents: Sir W. Muir, M.D., K.C.B., Director-General Army Medical Department; Surgeon-General Sir Joseph Fayrer, M.D., K.C.S.I., LL.D., F.R.S.E., India Office; Dr. J. W. Reid, Director-General Medical Department of Navy. Secretaries: Surgeon A. B. R. Myers, Coldstream Guards; Surgeon-Major Sandford Moore, Aldershot, R.N.

Section XV. *Materia Medica and Pharmacology.*—President: Professor T. R. Fraser, M.D., F.R.S., Edinburgh. Vice-Presidents: Dr. Lauder Brunton, F.R.S.; Professor Sydney Ringer. Secretaries: Dr. E. B. Baxter; Dr. F. T. Roberts.

Museum.—Committee: Chairman, Jonathan Hutchinson, Esq.; Waren Tay, Esq.; C. Stewart, Esq.; Dr. V. Poore; Dr. F. Macnamara. Secretary: Dr. J. F. Goodhart.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-EIGHTH ANNUAL MEETING.

The Forty-Eighth Annual Meeting of the British Medical Association will be held at Cambridge, on Tuesday, Wednesday, Thursday, and Friday, August 10th, 11th, 12th, and 13th, 1880.

President: Denis C. O'Connor, A.B., M.D., Professor of Medicine in Queen's College, Cork.

President-elect: G. M. Humphry, M.D., F.R.C.S., F.R.S., Professor of Anatomy in the University of Cambridge; Senior Surgeon to Addenbrooke's Hospital.

An Address in Medicine will be delivered by J. B. Bradbury, M.D., F.R.C.P., Physician to Addenbrooke's Hospital; Linacre Lecturer in Physic.

An Address in Surgery will be delivered by Timothy Holmes, M.A., F.R.C.S., Surgeon to St. George's Hospital.

An Address in Physiology will be delivered by Michael Foster, M.D., Hon. M.A., F.R.S., Prælector in Physiology in Trinity College, Cambridge.

The business of the Association will be transacted in Eight Sections.

Section A.: Medicine.—*President:* George Edward Paget, M.D., D.C.L., F.R.S., Cambridge. *Vice-Presidents:* George Johnson, M.D., F.R.S., London; P. W. Latham, M.A., M.D., Cambridge. *Secretaries:* W. B. Cheadle, M.A., M.D., 2, Hyde Park Place, London, W.; D. B. Lees, M.A., M.D., 2, Thurloe Houses, Thurloe Square, London, S.W.

Section B.: Surgery.—*President:* William S. Savory, M.B., F.R.S., London. *Vice-Presidents:* William Cadge, F.R.C.S., Norwich; John Wood, F.R.C.S., F.R.S., London. *Secretaries:* John Chiene, F.R.C.S.Ed., F.R.S.Edin., 21, Ainslie Place, Edinburgh; George E. Wherry, M.B., M.C., F.R.C.S., 63, Trumpington Street, Cambridge.

Section C.: Obstetric Medicine.—*President:* W. S. Playfair, M.D., London. *Vice-Presidents:* H. Macnaughton Jones, M.D., Cork; Henry Gervis, M.D., London. *Secretaries:* R. N. Ingle, M.D., F.R.C.S., 21, Regent Street, Cambridge; C. E. Underhill, M.D., 8, Coates Crescent, Edinburgh.

Section D.: Public Medicine.—*President:* Henry W. Acland, M.D., LL.D., F.R.S., Oxford. *Vice-Presidents:* Arthur Ransome, M.A., M.D., Manchester; Thomas Pridgin Teale, M.A., F.R.C.S., Leeds. *Secretaries:* William Armistead, M.B., St. Mary's Villa, Station Road, Cambridge; Thos. J. Walker, M.D., 18, Westgate, Peterborough.

Section E.: Psychology.—*President:* J. Crichton Browne, M.D., LL.D., F.R.S., London. *Vice-Presidents:* G. F. Blandford, M.D., London; P. M. Deas, M.B., Macclesfield. *Secretaries:* G. M. Bacon, Hon. M.A., M.D., Lunatic Asylum, Fulbourn, Cambridge; Henry Sutherland, M.A., M.D., 6, Richmond Terrace, Whitehall, S.W.

Section F.: Physiology.—*President:* William Rutherford, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Arthur Gamgee, M.D., F.R.S., Manchester; Robert McDonnell, M.D., F.R.S., Dublin. *Secretaries:* W. H. Gaskell, M.A., M.D., Grantchester, Cambridge; William Stirling, D.Sc., M.B., Marischal College, Aberdeen.

Section G.: Pathology.—*President:* Sir James Paget, Bart., D.C.L., LL.D., F.R.S. *Vice-Presidents:* Samuel Wilks, M.D., F.R.S.; W. Howship Dickinson, M.D. *Secretaries:* W. S. Greenfield, M.D., 15, Palace Road, Albert Embankment; Charles Creighton, M.A., M.D., Anatomical Museum, Cambridge.

Section H.: Ophthalmology.—*President:* William Bowman, F.R.C.S., F.R.S., London. *Vice-Presidents:* Henry Power, F.R.C.S., London; Henry R. Swanzy, M.B., Dublin. *Secretaries:* W. A. Brailey, M.A., M.D., 38, King's Road, Brownswood Park, London, N.; David Little, M.D., 21, St. John Street, Manchester.

A Subsection of Otology will be formed, of which Mr. W. B. Dalby, F.R.C.S., of London, will be Chairman, and Dr. James Patterson Cassells of Newton Terrace, Sauchiehall Street, Glasgow, and W. D. Hemming, F.R.C.S., honorary secretaries.

Treasurer: R. M. Fawcett, M.D., 3, Scrope Terrace, Cambridge.

Honorary Local Secretaries: Bushell Anningson, M.A., M.D. (Hon. Medical Secretary), Walt-ham-sal, Barton Road, Cambridge; A. P. Humphry, Esq., M.A. (Hon. Reception Secretary), Corpus Buildings, Cambridge.

Letters relating to the strictly medical work (Sections, Museums, etc.) of the meeting should be addressed to Dr. Anningson; other letters to Mr. A. P. Humphry.

TUESDAY, AUGUST 10TH, 1880.

2 P.M. Meeting of Committee of Council at the Guildhall.
2.30 P.M.—Meeting of the Council of 1879-80 at the Guildhall.
4 P.M.—Short service, with sermon by the Bishop of Ely in King's College Chapel.
5 P.M.—General Meeting in the Senate House. President's Address: Annual Report of Council and other business.
8 P.M.—Tea and coffee in the Hall of Caius College (close to the Senate House).

WEDNESDAY, AUGUST 11TH.

9.30 A.M.—Meeting of Council of 1880-81 at the Guildhall.
11 A.M.—Second General Meeting in the Senate House. Address in Medicine.
12 A.M.—Conferring Honorary Degrees in the Senate House.
2.30 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
8 P.M.—Soirée in the Fitzwilliam Museum and grounds of Peterhouse by the Reception Committee.

THURSDAY, AUGUST 12TH.

9.30 A.M.—Meeting of the Committee of Council at the Guildhall.
10 A.M.—Third General Meeting in the Senate House. Reports of Committees.
11 A.M.—Address in Surgery in the Senate House.
12 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
5.30 P.M.—Public Dinner in the Hall of Trinity College.

FRIDAY, AUGUST 13TH.

10 A.M.—Address in Physiology in the Senate House.
11 A.M.—Sectional Meetings in the New Museums and Lecture Rooms.
2.30 P.M.—Concluding General Meeting in the Senate House. Reports of Committees and other business.
4 P.M.—Garden party in the grounds of King's College by the President.
8 P.M.—Conversazione in St. John's College and grounds.

Ladies: [illegible] Party, and Conversazione.

SECTIONAL ARRANGEMENTS.

Section A.—Medicine.

The following are the subjects for discussion in this Section.

1. "Hysterical Anæsthesia." The subject will be introduced by Dr. Bristowe. Dr. Althaus, Dr. Brown-Séquard, Dr. Broadbent, Dr. Buzzard, Dr. Dreschfeld, Dr. Matthews Duncan, Dr. Ferrier, Dr. Balthazar Foster, Dr. W. Moore, Dr. Wade, and others, are expected to take part in the debate.

2. "Asthma." The discussion will be opened by Dr. Andrew Clark. Dr. Berkart, Dr. Eade, Dr. T. Hayden, Dr. Douglas Powell, Dr. F. Roberts, Dr. Burney Yeo, and others, are expected to take part in the debate.

The following papers have been promised for reading in the Section.

Althaus, J., M.D. The Diagnosis and Treatment of Localised Brain-lesions.

Anderson, McCall, M.D. On the Curability of Attacks of Acute Phthisis (Galloping Consumption).
Barlow, J. 1. Cases of Hysterical Analgesia in Children. 2. (With Dr. D. Lees). The Diagnostic Value of Cranio-tabes.
Bowers, R. L., M.D. Stertorous Breathing in Apoplexy, and the Management of the Apoplectic State.
Brown-Séquard, C. E., M.D., F.R.S. Unilateral Convulsions due to Brain-disease.
Buckley, L. Duncan, M.D. The Management of Eczema of the Anus and Genital Organs.
Burgess, T., M.D. The Transfer of the Epileptic Aura by Blistering.
Cheadle, W. B., M.D. The Existence of Two Distinct Species of Eruptive Fever, commonly included under the head of Measles.
Churton, T., M.D. The Naming of Diseased States so as to indicate the Chief Causes (Ætiology).
Collie, A., M.D. The Incubation Period of Enteric Fever.
Cousland, H. Radcliffe, M.D. 1. An Unrecorded Disease of the Scrotal and Inguinal Hairs (with specimens). 2. The Local Treatment of Psoriasis.
Dawson, R., M.D. Physiognomy relative to Disease.
Dolan, T. M., Esq. The Diagnostic Significance of Œdema of the Left Arm, and of the Left Side of the Neck and Thorax.
Drysdale, J., M.D. A Case of Duodenal Fistula.
Drysdale, C. R., M.D. Syphilitic Insanity.
Duffin, R., M.D. Narratives, with Post-Mortem Inspections, of Two Cases of Embolism of the Pulmonary Artery.
Ferrier, D., M.D., F.R.S. Affections of Vision from Cerebral Diseases (with specimens).
Fitzpatrick, T., M.D. The Limits of Heredity in Disease.
Foster, B., M.D. Aortic Insufficiency and the Coronary Circulation.
Gairdner, W. T., M.D. The Therapeutics of Bright's Disease.
Gowers, W. R., M.D. Paralytic Chorea.
Holden, J. Sinclair, M.D. Salicylic Acid in Diabetes.
Howard, B., M.D. The Trismus of Impending Apnœa or Threatened Death: its Interpretation and Use: with Anatomical Explanations.
Lees, D. B., M.D. (with Dr. Barlow). On the Diagnostic Value of Cranio-tabes.
Mahomed, F. A., M.D. The Relation of Fibroid Degeneration (Arterio-capillary Fibrosis) to Chronic Bright's Disease, and their Differential Diagnosis.
Marcet, W., M.D., F.R.S. The Influence of Altitude, with Reference to the Treatment of Pulmonary Disease.
Meldon, Austin, M.K.Q.C.P. The Pathology and Treatment of Gout.
Moore, W., M.D. 1. A Case of Anæsthesia, with Tremor, Paresis, Analgesia, Achromatopsia, Amyosthenia, Ischæmia, and Hystero-Epilepsy. 2. Case of Hemichorea, with Hemianæsthesia, Ischæmia, and Hystero-epilepsy.
Parkes, R. W., Esq. The Treatment of Empyema by Paracentesis, with Simultaneous Injection of Purified Air."
Payne, J. F., M.D. The Late Outbreak of Plague in Russia.
Rabagliati, A., M.D. The Classification and Nomenclature of Disease.
Roberts, W., M.D., F.R.S. Beef-tea and Peptonised Beef-tea.
Squire, Balmanno, Esq. The Treatment of some of the Commoner Chronic Skin-Diseases by the Prolonged (several hours) Daily Immersion of the Patient in various Aqueous Solutions at the Neutral Temperature (92° Fahr.).
Startin, J., Esq. Acne and its Treatment.
Sturge, W. Allen, M.D. Cases of Hemianæsthesia of Special and General Sensation, of Organic Origin, accompanied by Hemiopia.
Sutton, O., M.D. The Nomenclature of Pneumonia and other allied Lung Inflammations.
Tuke, George, M.D. The Cause of the Bad Odour sometimes associated with Excessive Sweating of the Feet; with Directions for Treatment.
Thompson, Reginald, M.D. 1. The Pathogeny of Inspiration. 2. Pulmonary Syphilis.
Tibbits, E. T., M.D. The Modern Theory of the Action of Digitalis.
Yeo, I. Burney, M.D. The Treatment of Asthma at Monte Dore.

Dr. W. R. Gowers will give a demonstration of the Clinical Measurement of the Corpuscles and Hæmoglobin of the Blood.

Section B.—Surgery.

Discussion will take place in this Section on the following subjects.

1. "The Treatment of Wounds." The discussion will be opened by Professor Lister, F.R.S.

The following papers on this subject are promised.

Lister, Henry Tod, [illegible] the Cautery as an Antiseptic.
Ferrier, D., M.D., F.R.S., and Yeo, G. F., M.D. The application of the Antiseptic Method in Cranio-Cerebral Injuries.
[illegible], H. H., Esq. The Treatment of Wounds by a Modified Use of Antiseptics.

2. "Stricture of the Urethra." The discussion will be opened by Sir Henry Thompson.

The following gentlemen have promised to take part in the discussion: T. Ashton, Esq. (Leeds); T. Bryant, Esq. (London); F. H. Bennett, M.D. (Dublin); Reginald Harrison, Esq. (Liverpool); Berkeley Hill, Esq. (London); Lawrence Jordan, Esq. (Birmingham); Edward Lund, Esq. (Manchester); W. Mac Cormac, Esq. (London); Professor Macleod (Glasgow); Oliver Pemberton, Esq. (Birmingham); William Stokes, Esq. (Dublin); Walter Whitehead, Esq. (Manchester); John Wood, Esq. F.R.S. (London).

The following papers are also promised in this section.

[illegible], Thomas, Esq., F.R.S.E. A Method of Operating by Means of Suspension.
[illegible], E., Esq., Surgical Pathology of the Upper Extremity.
[illegible], J. H., M.D. The [illegible] of Compound Dislocation of the Shoulder-joint.
[illegible], J. D., Esq., Rectal Feeding.
Swinburne, C. B., Esq. A Method of Treating [illegible].
[illegible], Esq. A case illustrating [illegible] of the Clavicle, the whole of the Scapula, the Upper Extremity, and [illegible] the Shoulder-joint.
[illegible], Esq. The Result of Twenty Cases of Intravenous Injection of Milk.
Ogston, Alexander, M.D. The Treatment of Flat Foot.
Owen, Edmund, Esq. Should the Hot Bath be employed in the Treatment of Strangulated Hernia?
Page, Herbert W., Esq. Immediate Suture of Divided Nerves.
Palmer, M., Esq. A Case of Ligature of the Carotid and Subclavian Arteries for Aneurism of the Innominate. (The specimen will be exhibited.)
Smith, E. Noble, Esq. The Etiology of Pott's Disease of the Spine.
Stokes, William, Esq. Suprapubic Luxation of the Femur.
Sympson, T., Esq. Case of Stone in the Bladder having for its Nucleus a Portion of Bone.
Teevan, W. F., Esq. Bigelow's Operation for Stone in the Bladder, with Cases.
Thomson, Sir Henry. Lithotomy at a Single Sitting.
Walker, Thomas J., M.D. A Demonstration on the method of applying the plaster-of-Paris Jacket in the Recumbent Position.
Whitehead, Walter, Esq. Removal of the Tongue.

Section C.—Obstetric Medicine.

The following subjects will be discussed in this Section.

1. "Uterine Hæmostatics." The discussion will be opened by Dr. Atthill.

2. "The Removal of Uterine Tumours by Abdominal Section." The discussion will be opened by Mr. Spencer Wells.

The following gentlemen are expected to take part in the discussions: Dr. H. Gervis, Dr. Matthews Duncan, Dr. Barnes, Dr. Heywood Smith, Dr. A. Wiltshire, Dr. G. Roper, Dr. G. E. Herman, Dr. Galabin, Dr. W. Williams, Dr. P. Boulton, Dr. A. H. McClintock and Dr. T. More Madden (Dublin), Dr. C. E. Lyster (Liverpool), Dr. Savage and Mr. Lawson Tait (Birmingham), Dr. Murphy (Sunderland), Dr. G. H. B. Macleod (Glasgow), Dr. Thorburn (Manchester), and Dr. A. E. A. Lawrence (Clifton).

The following papers have also been promised in this Section.

Bassett, John, M.D. *Post Partum* Hæmorrhage.
Bennet, J. Henry, M.D. 1. Hæmorrhage and Sickness during Pregnancy. 2. Abortion in connection with Inflammation of the Cervix and of the Body of the Uterus.
Donovan, W., Esq. A few Cases of Labour.
Donovan, J. Matthews, M.D. On Open Fallopian Tube.
Edis, Arthur W., M.D. On the influence of Uterine Disorders in the Production of Sick Headaches and other Allied Affections.
Gervis, H., M.D. Some points in the Treatment of Uterine Flexions.
Hewitt, Graily, M.D. On Congestive Hypertrophy of the Mucous Lining of the Body of the Uterus.
Jones, H. Macnaughton, M.D. Obstetrical Knowledge in its relation to the Present Standard of Medical Education.
Lawrence, A. E. Aust, M.D. Cases of Malignant Disease of the Uterus treated with Chian Turpentine.
Macdonald, Angus, M.D. The Communicability of Puerperal Fever.
Macdonald, Keith N., M.D. Practical Remarks on the best Treatment to be adopted in cases of "Accidental" and "Unavoidable" Hæmorrhage.
Mapother, E. D., M.D. Sterility: Excision of Anomalous Membrane: Conception.
Savage, Thomas, M.D. Hysterotomy.
Tait, Lawson, Esq. On the Treatment of Uterine Myoma by Enucleation, Hysterotomy, and Oöphorectomy.
Thornton, J. Knowsley, Esq. One Hundred and Fifty Cases of Complete Ovariotomy performed Antiseptically, with Remarks on the Essentials to Success in the Application of this Method.
Walter, W. M.D. A Case of Cæsarean Section in which the Mother and Child were saved.
Whitehead, A., M.D. Glycosuric Pruritus Vulvæ.

Section D.—Public Medicine.

The subjects for discussion are:

1. "The General Working of the Public Health Administration in Great Britain and Ireland." The discussion will be opened by Dr. Alfred Carpenter and Dr. F. T. Bond.

2. "Diseases communicable to Man from Diseased Animals used as Food." The discussion will be opened by Mr. F. Vacher of Birkenhead and Mr. E. J. Syson of Huntingdon.

The following papers are also promised in this Section.

Dobell, H. M., Esq. The Peculiarities of Rubeola and Hydrophobia (with Diagrams).
Dyne, C. R., M.D. Infectious Diseases and European Quarantines. 2. Vital Statistics of the East End of London.
Fowler, Charles R., M.D. Enteric Fever.
Hakes, H. Nelson, Esq. Pavement Dispensaries.
Kelly, Norman, M.D. On Effects of the Excessive Alcoholism on the Death-rate.
Sansom, A. E., M.D. Suggestions for the Reform of the Out-patient Department of Hospitals.
Wells, T. Spencer, Esq. On Premature Burial.
Wilson, J. T., M.B. Questions connected with the Management of Fever Hospitals.

Section E.—Psychology.

The subject for discussion in this Section is:

"The Influence of Alcohol in the Causation of Insanity." The discussion will be opened by Dr. G. M. Bacon; and Dr. Hack Tuke, Dr. Shuttleworth, Dr. More Madden, and other members, have intimated their desire to take part in it. The following papers on this subject are promised.

Beach, Fletcher, M.B. The Intemperance of Parents a Predisposing Cause of Imbecility in Children.
Sutton, Sir H., M.D. Cases of Alcoholic Insanity in Private Practice.

The following papers are also promised in this Section.

Blyth, [illegible], G. F., M.D. Cutaneous Discolorations in the Insane resembling Bruises.

BROWNE, J. Crichton, M.D., F.R.S.E. 1. The Necessity for a School of Medical Psychology in London. 2. A Plea for the Minute Study of Mania.
DOLAN, T. M., Esq. The Detention of Lunatics in Workhouses.
MOXON, W. J., M.D. Rapid Death from Hæmorrhage into the Pons Varolii and Medulla Oblongata.
SAVAGE, G. H., M.D. A Case of Multiple Apoplexies simulating General Paralysis in a Woman.
TAIT, Lawson, Esq. Two Cases of Menstrual Epileptic Mania treated by Oöphorectomy.
TUKE, D. Hack, M.D. The Recovery of the Insane.

SECTION F.—PHYSIOLOGY.

The following are the subjects for discussion in this Section.

1. "The Evidence derived from Clinical Observations and Physiological Experiments as to the Seat of the Formation of Urea in the Body." The discussion will be opened by Professor Gamgee, F.R.S., of Manchester.

2. "Sleep and Hypnotism." The discussion will be opened by Professor Preyer of Jena.

The following papers have been promised in this Section.

BUCH, De Burgh, M.B. On Bone and the Formation of Osteoblasts.
BROWN-SÉQUARD, C. E., M.D., F.R.S. The Effects produced by various Lesions of the Base of the Brain on the Excitability of the so-called Motor Centres.
ELLIOT, R., M.D. The first Publication of the now Established Theory of the Second or Sharp Sound of the Healthy Mammalian Heart.
FERRIER, D., M.D., F.R.S., and YEO, G. F., M.D. The Cerebral Visual Centres.
GIBSON, George A., Sc.D., M.B. On the Relation of the Radial Pulse to the Heart-beat.
HAMILTON, D. J., M.B. On a New Method of making Sections of an Entire Brain.
HAYCRAFT, J. B., M.B. On Urea in Blood and Muscle.
MCKENDRICK, J. G., M.D. Rhythmic Movements of the Gills of the Goldfish.
NEWMAN, David, M.B. On the Contraction of Striated Muscle, and the Composition of the Broad Dark Bands.
STIRLING, William, M.D., Sc.D. On the Effect of Certain Drugs on the Reflex Excitability of the Spinal Cord (preliminary notice).

Besides the discussions and papers, there will be demonstrations in the Physiological Laboratory.

SECTION G.—PATHOLOGY.

The special subjects for discussion are as follows.

1. "The Influence of Injuries and Morbid Conditions of the Nervous System on Nutrition." The discussion will be opened by Mr. Jonathan Hutchinson. The following papers upon this subject are promised.

BUZZARD, T., M.D. The Affection of Joints in Locomotor Ataxia, and its Association with Gastric Crises.
DUCKWORTH, Dyce, M.D. On Gout considered as a Tropho-neurosis.

The following gentlemen are also expected to aid in the discussion of this subject: Dr. Brown-Séquard, Dr. Clifford Allbutt, Dr. Althaus, Dr. Byrom Bramwell, Dr. Dreschfeld, Mr. E. Nettleship, Dr. Vivian Poore.

2. "Micro-organisms; their Relation to Diseases." The discussion will be opened by Professor Lister, F.R.S. The following papers upon this subject are promised.

AITKEN, Lauchlan, M.D. On Bacillus Malariæ.
MACLAGAN, T. J., M.D. The Germ Theory, in its Bearing on the Pathology and Treatment of the Specific Fevers.

The following gentlemen are expected to take part in the discussion: Professor E. Klebs (Prague); Professor Cohnheim (Leipzig); Rev. W. H. Dallinger, F.R.S.; Professor Burdon Sanderson, F.R.S.; Dr. Vandyke Carter (Bombay); Professor Ray Lankester, F.R.S.; Mr. Malcolm Morris; Dr. Douglas Powell; Dr. William Roberts, F.R.S. (Manchester); Dr. Ernest Sansom.

The following papers have also been promised.

CROCKER, Radcliffe, M.D. The Histology of Lichen Circinatus.
DRESCHFELD, Julius, M.D. 1. Contributions to the Pathology of Fibroid Phthisis (with preparations and microscopic sections). 2. The Histological Relations of some forms of Sarcoma and Carcinoma.
ELLIOT, Robert, M.D. 1. Batrachian Type of Heart in a Youth Twenty Years of Age. 2. A Typical Case of Aneurismal Heart.
GOWERS, W. R., M.D. Two Cases of Sclerosis in Syphilitic Subjects.
HAMILTON, D. J., M.D. A brief *résumé* of Pathological Researches on Tubercle and allied Affections of the Lung.
LEECH, D. J., M.D. On Glomerular Nephritis.
LEES, David B., M.D. A Case of Tubercular Tumour of the Pons Varolii, associated with Conjoined Deviation of the Eyes.
OGSTON, Alexander, M.D. The Nature of the Globes Epidermiques of Epithelioma.
OSLER, William. Case of Medullary Neuroma of Brain (with microscopic specimen and drawing).
PAGET, Sir James, Bart., F.R.S. On Pathological Catalogues.
ROBERTS, D. Lloyd, M.D. Some Observations in the Histology of Breast-Tumours.
THIN, G., M.D. The Pathology of Psoriasis.
TURNER, F. C., M.D. Histology of the Nervous Centres in Hydrophobia.

Series of specimens, microscopic and other, illustrative of special subjects, will also be demonstrated by the following gentlemen.

BRAMWELL, Byrom. Sclerosis of the Spinal Cord.
CARTER, Vandyke. Spirillum of Relapsing Fever.
DRESCHFELD J., M.D. 1. Spinal Cord from a case of Joint-lesion in Locomotor Ataxy. 2. Various forms of Cirrhosis and Fatty Degeneration of the Liver.
HAMILTON, D. J. 1. Cirrhosis of the Kidney and Liver. 2. Connective Tissue, or Sarcomatous Tumours.
MERCER, Clifford (New York). Microphotographs by D. J. J. Woodward, of Sections of Cancer; also others, showing the application of Photography to the Micrometry of Blood-corpuscles. Microphotographs by Theodor Drecke, of Sections of Spinal Cord.
THIN, George, M.D. 1. Specimens of Diseased Breasts associated with Affection of the Skin of the Nipples. 2. Specimens of Cancer.

SECTION H.—OPHTHALMOLOGY.

The following are subjects for discussion in this Section.

1. "The Nature of Glaucoma."

2. "Toxic Amaurosis, especially in relation to Colour Perception." Professor Donders (Utrecht) will deliver an address on some points relating to the Perception of Colours.

The following papers have been promised.

BARLOW, T., M.D. Diffuse Tuberculosis of the Choroid.
BERRY, George, Esq. On Central Amblyopia.
BRAILEY, W. A., M.D. On the Size of the Aqueous Chamber in Glaucoma.
COUPER, J., Esq. 1. On the Treatment of Obstruction of the Lachrymal Duct by Rapid Dilatation with Large Probes. 2. On the Operative Treatment of Conical Cornea.
COWELL, G., Esq. On Glaucoma.
CRITCHETT, G. Anderson, Esq. On the Employment of Atropine in Correcting Errors of Refraction.
DUYSE, Dr. Van (Ghent). On Tuberculosis of the Eye.
FORBES, Litton, M.D. (for Mr. Bader). A New Treatment of Purulent Ophthalmia.
FUCHS, Dr. (Vienna). On Tobacco-Amaurosis.
GOWERS, W. R., M.D., On Optic Neuritis in Chlorosis.
HIRSCHBERG, Dr. (Berlin). On Quantitative Analysis of Diplopic Strabismus.
HIGGENS, C., Esq. On Hyposcleral Cyclotomy.
HULKE, J. W., Esq., F.R.S. On so-called Ophthalmoplegia Interna.
HUTCHINSON, Jonathan, Esq. 1. On the After-treatment of Cataract Operations. 2. On Chronic Relapsing Cyclitis.
LANDOLT, Dr. 1. The Shape of the Cranium in Anisometropia. 2. Traumatic Cataract.
MCHARDY, M. M., Esq. The Value of Gymnastic Visual Exercises in the Treatment of Functional Amblyopia.
MORTON, A. S., Esq. On Myosis.
NETTLESHIP, E., Esq. On Colour-Blindness in Atrophy of the Optic Nerve.
POWER, H., Esq. On some Points in the Development of the Eye.
SMITH, Priestley, Esq. On the Pathology of Primary Glaucoma.
STORY, J. B., M.B. Toxic Amaurosis.
TAYLOR, C. Bell, M.D. 1. On the Value of the Continuous Galvanic Current as a Therapeutic Agent in certain Diseases of the Eyeball and its Appendages. 2. An Epitome of Eight Hundred Cases of Cataract Extraction.
TEALE, T. Pridgin, Esq. On the Rapid Determination of Hypermetropia by the Ophthalmoscope.
WALKER, T. Shadford, Esq. On the Amblyopia and Amaurosis of Tobacco and Alcohol.
WALKER, G. E., Esq. 1. On a Case of Sympathetic Ophthalmia. 2. On the Cicatrix of Filtration Theory.
WARLOMONT, E., M.D. Optometry in its relation to the Examination of Soldiers.
WATSON, Spencer, Esq. On the Advantage of Opening the Capsule before making the Corneal Incision in Cataract Operations.
WOLFE, J. R., M.D. On Corneal Transplantation.
Professor SNELLEN (Utrecht) will also offer a paper.

The following instruments will be exhibited and explained.

COUPER, Mr.: A new Refraction Ophthalmoscope.
FORBES, Dr. L.: A new form of Artificial Eye.
BRAILEY, Dr., for Dr. HIRSCHBERG: A new instrument for estimating the amount of deviation of the eyes in strabismus.
SMITH, Mr. Priestley. A new Tonometer.

Subsection of Otology.

The following subjects will be discussed in this Subjection.

1. "The Therapeutic Value of Electricity in Ear-Diseases."

2. The Comparative Value of the various Mechanical Aids to Hearing, with special regard to the several kinds of Artificial Drumheads, and to those Instruments which Assist Deafness by Conducting or Transmitting Sound, either directly or indirectly, to the Organ of Hearing.

The following gentlemen have promised to take part in the discussion: Dr. James Patterson Cassells (Glasgow), Mr. E. C. Baber (Brighton), Mr. A. Gardiner Brown (London), Dr. Kirk Duncanson (Edinburgh), Mr. George T. Field (London), Mr. Douglas Hemming (Bournemouth), Dr. A. H. Jacob (Dublin), Professor H. Macnaughton Jones (Cork), Dr. Loewenberg (Paris), Dr. W. A. McKeown (Belfast), Dr. A. Ogston (Aberdeen), Dr. Pierce (Manchester), Dr. Urban Pritchard (London), Dr. Story (Dublin), Dr. Torrance (Newcastle-on-Tyne), Dr. E. Woakes (London).

The following papers have been promised.

BROWN, A. Gardiner, Esq. A New Standard for Hearing Power by Comparison with the Sense of Touch.
CASSELLS, J. P., M.D. 1. Antiseptic Aural Surgery. 2. A New Hearing Instrument.
PIERCE, F. M., M.D. 1. A Case of Lupoid Eczema of the Auditory Meatus. 2. A New Method of Treating Chronic Suppuration of the Ear.
TORRANCE, R., Esq. The Treatment adopted in a Recent Case of Vascular Neoplasia.
WOAKES, E., M.D. The Case of Electricity in Ear-Disease.

ANNUAL MUSEUMS.

The Pathological Collection will be in the Anatomical Museum.

Honorary Secretary to the Pathological Collection: C. Creighton, M.D., Anatomical Museum, Cambridge.

The Exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetics, and Sanitary Appliances, will be in connection with the Reception Room in the Guildhall.

Honorary Secretary: G. Wallis, Esq., Corpus Buildings, Cambridge.

Honorary Secretary to the Sanitary Collection: W. Armistead, M.B., Station Road, Cambridge.

Excursions.

On Saturday, August 14th, there will be excursions to Ely, Peterborough, and Audley End.

Honorary Secretary to the Excursion Committee: G. Wallis, Esq., Corpus Buildings, Cambridge.

Annual Dinner.

The number of persons that can be accommodated in the Hall of Trinity College is limited to 350. Tickets for the annual dinner will be reserved for members who make application, accompanied by payment of one guinea, to A. P. Humphry, Esq., Corpus Buildings, Cambridge.

Accommodation in Cambridge.

A list of lodgings in Cambridge, giving the prices at which they will be obtainable at the time of the meeting of the Association, will shortly be published for the assistance of those members who desire to bespeak rooms. Owing to unavoidable absence from Cambridge, the Honorary Reception Secretary is at present unable personally to undertake the engagement of lodgings.

Francis Fowke, *General Secretary*,
British Medical Association.

161A, Strand, London, July 15th, 1880.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

At a meeting of the Committee of Council, held at the offices of the Association, 161A, Strand, on Wednesday, July 7th, 1880—Present: Dr. Alfred Carpenter (President of the Council) in the Chair; Mr. Husband (Treasurer); Dr. Arlidge, Dr. Bushell Anningson, Mr. Baker, Dr. de Bartolomé, Dr. L. Borchardt, Dr. J. B. Bradbury, Dr. C. Chadwick, Dr. A. Davidson, Dr. W. A. Elliston, Dr. Falconer, Dr. B. Foster, Mr. R. S. Fowler, Dr. E. Long Fox, Dr. W. C. Grigg, Dr. J. H. Gibson, Mr. Arthur Jackson, Dr. C. E. Lyster, Mr. F. E. Manby, Mr. F. Mason, Dr. E. Morris, Mr. Nicholson, Dr. G. H. Philipson, Dr. T. L. Rogers, Dr. R. C. Shettle, Dr. Alfred Sheen, Dr. Sieveking, Mr. H. Stear, Dr. A. P. Stewart, Dr. Markham Skerritt, Dr. Wade, Dr. Waters, Mr. C. G. Wheelhouse:

Read letters of apology for non-attendance from Dr. Parsons, Dr. Duffey, and Dr. Ward Cousins.

The subject of the International Congress and the question of holding a business meeting only, on the day previous to the meeting of the International Congress, was considered.

It was moved:

"That the Annual Meeting in 1881 be held as usual, in the second week in August."

Whereupon an amendment was moved:

"That the Committee of Council recommend that the Annual Meeting of the British Medical Association be held during the week following the assembling of the International Congress in 1881."

The amendment having been put from the Chair, the same was declared to be lost.

A second amendment was then moved:

"That the Annual Meeting be held as usual in August, 1881."

The amendment having been put from the Chair the same was declared to be carried.

The amendment having been put as a substantive motion, the same was declared to be carried.

The President of the Council asked for instructions regarding the Vaccination Bill now before the House of Commons, and placed upon the table a petition against the adoption of the Bill.

Resolved: That the petition be approved, and the members of the Committee of Council present invited to sign it.

Resolved: That the 171 candidates for election, whose names appear on the circular convening this meeting, and the two supplementary lists, be, and they are hereby elected members of the British Medical Association.

Read letter from Dr. Crowe of Worcester, relative to the formation of a branch for Worcestershire and Herefordshire.

Resolved: That the proposed by-laws be affirmed, and that the Worcestershire and Herefordshire Branch be, and it is hereby recognised as, a Branch of the British Medical Association.

Resolved also: That the warm congratulations of the Committee of Council be offered to the members of the Association in Worcestershire and Herefordshire on the successful formation of a Branch, which the Committee of Council trust may be the means of extending the Association in those counties. Their thanks are due to Dr. Strange, Dr. Crowe, and others, for their labours in the formation of the Branch.

Read letters from Dr. Clelland, of Adelaide, together with a requisition to be recognised as a Branch, signed by twenty-two members of the Association, and asking for the recognition of a Branch for Adelaide and South Australia.

Resolved: That the branch for Adelaide and South Australia be, and it is hereby recognised as a Branch of the British Medical Association.

Read letter from Dr. Milford of Sydney, relative to the formation of a branch in that colony.

Resolved: That the Sydney and New South Wales Branch be and it is hereby recognised as a Branch of the British Medical Association.

Resolved: That the Committee of Council desire to offer their warm welcome to the Australian Branches formed at Adelaide and Sydney, now formally recognised, and trust that the new Branches may not only be the means of cementing the good feeling which already exists between the members of the medical profession in England and her Colonies, but may also facilitate the interchange of ideas, and so prove of value in the advancement of medical science, and the interests of the medical profession.

Resolved unanimously: That the gold medal of the Association be awarded by the Committee of Council of the British Medical Association to William Farr, C.B., M.D., F.R.S., D.C.L., as an expression of their high appreciation of his long, unwearied, and successful labours, in behalf of statistical and sanitary science; as a recognition of the light he has thrown upon many physiological and pathological problems, and on account of the extraordinary services his work has rendered to the advancement of the health of the nation.

Read minutes of the Journal and Finance Committee, and minutes of the Office and Printing Sub-Committee.

The minutes contain the examination of the quarterly accounts, amounting to £2,734 19s. 6d., and a recommendation that a further sum of £1,500 be invested.

Resolved: That the minutes of the Journal and Finance Committee, together with those of the Office and Printing Sub-Committee, both of to-day's date, be approved, and the recommendations carried into effect.

Read minutes of the Scientific Grants Committee of to-day's date.

Resolved: That the minutes of the Scientific Grants Committee of to-day's date be approved, and the recommendations carried into effect.

The minutes contain recommendations for grants to be made, amounting to £225, and a request for the payment of £50 to be allowed for the purposes of this Committee.

The report of the attendances of the Committee of Council was then considered.

There appeared to be seven vacancies, namely, five who had attended the fewest number of meetings, Mr. A. Jackson, appointed honorary secretary to the Yorkshire Branch, and Dr. Arlidge, not returned as a representative of the Staffordshire Branch. The names of the late Mr. Callender, F.R.S., Dr. Lyster of Liverpool, Dr. Morris of Spalding, and Dr. Rogers of Liverpool, were taken off in accordance with By-law 28, and that of Dr. Bradbury by lot.

Resolved: That the remaining thirteen gentlemen be nominated, together with seven to be nominated, as members of the Committee of Council for the year 1881.

Eleven gentlemen were proposed for nomination.

Mr. Husband and Mr. Manby having been appointed scrutineers, a ballot was taken, the following gentlemen were found to have the greatest number of votes, and were accordingly declared to be nominated: viz., Dr. Leech, Mr. C. Macnamara, Dr. Farquharson, M.P., Mr. J. R. Humphreys, Mr. H. Power, Dr. A. T. H. Waters, and Dr. C. Holman.

Resolved: That the seal of the Association be attached to the transfer of £1,000 London and North-Western Railway Four per cent. Debenture Stock, and to the contract for paper.

Read letter from Dr. Patterson Cassells and Mr. Dalby asking for the appointment of a second secretary to assist in the Subsection of Otology.

Resolved: That Mr. Douglas Hemming be appointed second honorary secretary to the Subsection of Otology.

Read letter from Dr. Thompson, Honorary Secretary to the Irish Graduates Association, asking that notice of a meeting to be held at half-past five, on Wednesday, August 11th, might be included in the notices of meetings in the Daily Journal of the Annual Meeting.

Resolved: That the notice of meeting of the Irish Graduates be allowed to be inserted as usual in the Daily Journal.

A list of gentlemen was placed before the Committee of Council, as those whom the reception committee wished to have cards of invitation to attend the addresses and sections at the Annual Meeting in August next:

Resolved: That the list be approved, and the invitations of the Reception Committee issued accordingly.

The annual Report was then considered, and after several alterations it was referred to the Committee appointed to draft it to have the alterations carried out.

WEST OF IRELAND BRANCH.

THE annual meeting of this Branch will be held at Queen's College, Galway, on Thursday, July 22nd, at 4 o'clock P.M.

The following papers have been promised:

1. A Case of Intestinal Obstruction, in which the Opium and Restricted Dietary Method of Treatment was relied on: Cure. By Dr. Deely.
2. The Pathology of Mammary Epithelial Tumours. By Dr. Lambert.
3. Two Cases of Abscess of the Knee-Joint. By Dr. Rutherford.

JOHN J. LYNHAM, *Hon. Sec. and Treasurer.*

Galway, July 14th, 1880.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Squirrel Hotel, Wellington, on Thursday, July 22nd, at 3 P.M., under the Presidency of J. MEREDITH, Esq., M.D.

Mr. Lawson Tait of Birmingham will read a paper on Oöphorectomy in Cases of Dysmenorrhœa.

Dinner at half-past five o'clock punctually.

Members who may wish to read papers, or make any communications to the meeting, are requested to send notice to the undersigned.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, June 21st, 1880.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual general meeting of this Branch will be held at 198, Union Street, Aberdeen, on Saturday, the 24th instant, at 1.30 P.M.

Hospital visit at 11.30 A.M.

Dinner with the North of Scotland Medical Association, at the Palace Hotel, Union Bridge, at 3 o'clock P.M. Tickets, exclusive of wine during dinner, 5s.

J. URQUHART, *Honorary Secretary.*

NORTH OF ENGLAND BRANCH: ANNUAL MEETING.

THE sixteenth annual meeting of this Branch was held in the Lecture Room of the Literary Society, Fawcett Street, Sunderland, on Wednesday, June 30th. There were present about forty members and visitors.

The retiring President, Dr. G. H. PHILIPSON, in a complimentary speech, introduced the new President, G. B. MORGAN, Esq., of Sunderland, who took the chair.

President's Address.—The PRESIDENT, after thanking the members for the honour conferred upon him, delivered an interesting and eloquent address upon the progress of medicine and surgery; and, among other matters, dwelt upon the use of antiseptics, the administration of anæsthetics, the improvement in hospital nursing, the work of the Ambulance Association, and the great advance in knowledge of the general practitioner.

Vote of Thanks to the President.—It was moved by Dr. GIBSON, seconded by Dr. HUNTLEY, and carried by acclamation: "That the grateful thanks of the meeting be accorded to the President for his able address, and that it be printed and circulated amongst the members."

Vote of Thanks to the Retiring President and Officers.—It was moved by Dr. LEGAT, seconded by Mr. MORDEY DOUGLAS, and resolved: "That the best thanks of the meeting be given to the retiring President, Dr. G. H. Philipson, the Council of Management, and the other officers, for their valuable services during the past year."

Election of New Members.—The following gentlemen were unanimously elected members of the Association and Branch: H. B. Allan, Esq., Southwick; Thomas Fell, Esq., Sunderland; Thomas Gibbon, Esq., Seaham Harbour; Walter Murray, M.B., Haydon Bridge; Edward Stiven, M.B., Sunderland; Benjamin Strachan, M.B., Sunderland; Charles Welford, M.B., Sunderland.

Report of Council.—The Council gave a favourable report of the position and usefulness of the Branch. During the year, eleven new members had been elected. At the present time, the Branch consists of two hundred and thirty-seven members.

Treasurer's Account.—The Treasurer's account showed that the receipts, including a balance of £17 15s. 9d., amounted to £62 14s. 3d. The balance, after all payments, amounted to £33 3s. 11d.

Officers for 1880-81.—Dr. HORAN proposed, Dr. Foss seconded, and it was unanimously carried: "That the next annual meeting be held at Darlington, the autumnal meeting at Barnard Castle, and the spring meeting at Tynemouth; that J. W. Eastwood, M.D., be President-elect; T. W. Barron, M.B., Honorary Secretary and Treasurer; and Drs. Philipson, Drummond, Dixon, and S. W. Broadbent, the Council of Management."

Representatives in the General Council of the Association.—It was moved by Dr. ADAMSON, seconded by Dr. L. G. BROADBENT, and carried unanimously: "That the following gentlemen be the representatives of the Branch in the General Council of the Association: H. E. Armstrong, Esq.; W. C. Arnison, M.D.; S. W. Broadbent, Esq.; W. H. Dixon, M.D.; David Drummond, M.D.; J. W. Eastwood, M.D.; G. H. Hume, M.D.; Edward Jepson, Esq.; Andrew Legat, M.D.; G. B. Morgan, Esq.; Thomas Oliver, M.D.; G. H. Philipson, M.D.; and T. W. Barron, M.B., *ex officio.*

Representative in the Parliamentary Bills Committee.—Dr. DRUMMOND proposed, Mr. S. W. BROADBENT seconded, and it was unanimously carried: "That Dr. Philipson be the representative of the Branch in the Parliamentary Bills Committee of the Association."

Medical Education.—The five resolutions submitted by the Committee of Council for the consideration of the Branch were read by the Secretary, who was instructed to report to the Committee of Council that the Branch approved of Resolutions II, III, and V, but disapproved of Resolutions I and IV.

Vote of Thanks to the Committee of the Literary Society.—On the motion of the PRESIDENT, it was resolved: "That the warmest thanks of the meeting be accorded to the Committee of the Literary Society for kindly allowing the Branch the use of the Lecture Room for the purposes of the meeting."

Dinner.—The dinner took place at the Queen's Hotel. The President occupied the chair, and Dr. Barron the vice-chair. About fifty members and friends sat down to dinner. Among the guests present were Colonel Lord John Taylour, Captain Johnson, R.N.; Major Bulkeley; and the Rev. W. R. Burnet, M.A., Vicar of St. Thomas's.

CORRESPONDENCE.

THE HISTORY OF OVARIOTOMY.

SIR,—I am obliged by your admission of my reply to your leading article on the 19th of June last, and should have been more so if your explanation had been more satisfactory, and had not been tinged with the same partisanship as the article complained of, and which is too evident to be mistaken. I am too well known professionally to allow such attacks to pass by unnoticed. Amongst the great body of medical men (whom it is your duty duly and truly to represent as a fair journalist), I think I may say I have the good wishes of some hundreds, many of whom have by their written vouchers fully acknowledged my priority and position as a British ovariotomist. Allow me to give you a few samples, which, if not sufficient to convince you, I can furnish you with as many more as you may require.

You say, that, "I may be well assured that there is no intention on our part [the Editor] of robbing him [Dr. Clay] of any reputation due to his early and successful work in the same field." Is it possible, after what has been written, that you can acknowledge my early and successful career? But let us see what you state farther on: "We entertain the belief that ovariotomy was not generally recognised by professional opinion as a legitimate operation until after 1860." And this eighteen years after I introduced it into England, and, followed by other eminent men, both in London and in the provinces, and an age after it had been fully established in America.

In 1843, Dr. James Blundell wrote to me, after my fifteenth or sixteenth operation, "My cordial congratulations on your great success: not the hap of lucky accident, but the well-earned result of a great mixture of enterprise, science, and exact care." Again, in 1844, Dr. Blundell writes: "The brilliant success of your operations will be applauded by all who have honesty and intelligence enough to appreciate your efforts: yes, indeed, yours is a high and holy undertaking: persevere."

Dr. Channing, prof. med. Boston, Mass., in 1856: "I drove to Dr. Clay's house in Manchester. He is a marked man in the profession; he has been eminently successful in establishing the operation of ovari-

otomy in England: his has been a great success. I was exceedingly pleased with him."

Professor Simpson, of Edinburgh, writes to me in 1847: "My dear Dr. Clay, the operation is your own; none can rob you of your claim. Call it ovariotomy, not peritoneal section. Your success is brilliant."

T. Bryant, Esq., F.R.C.S., of Guy's Hospital, states in his work on *Ovariotomy*, "Dr. Charles Clay, of Manchester, is the first great apostle of ovariotomy in this country."

The Edinburgh *Medical Journal*, of 1867, states: "Dr. Clay perseveringly continued not only to operate, but, in every other manner within his power, to urge the propriety of the proceeding on his fellow-countrymen. Without his untiring efforts, we do not believe the operation would have now stood in the position which it holds."

I also refer you to Druitt's *Operative Surgery* for his eulogy on the same subject.

Now, sir, these are a few proofs in my favour, and I can furnish you many more, if these are not sufficient. I now come to your second point. You say, "We are informed that Mr. Wells never saw Dr. Clay operate before he operated himself, and only once some years after his (Mr. Wells') first case." In answer to this gross and unpardonable misrepresentation, with Mr. Wells' own admission that his first case was in 1858 (his visit to me was in 1857), will he deny, when confronted with two other gentlemen, also present, who heard him declare how much gratified he was to see the operation for the first time, and who heard the number of inquiries he made concerning it? Will Mr. Wells deny his own letter of thanks to me afterwards?

I now proceed to your third point: "We do not know of any published record of Dr. Clay's cases." Of your reading capacity I am no judge. I shall only observe, the cases were published as they occurred, but being all in private practice, I was not allowed or justified to give names and residences. I never massed my cases, or published them as a whole, for that reason.

In every operation I always took especial care to have at least three or four medical men present, which in the whole would amount to a large number, and all will fully bear me out, that I always made a point of informing them that I always passed the sutures through the peritoneum, unless by mere accident it was missed, which occurred once or twice, and a slight hernial protrusion followed, which required a compress.

Let me remind you, my operations in this country were my own. I had no pilot to guide me, no one to assist me, in my difficult task. Chloroform and ether were unknown. My only assistance was what I could glean from my professional brethren in America, who, to their honour and honesty, fully accord to me what, from some cause or other, which I cannot explain, you refuse.

Allow me, before I conclude, to state that, in my opinion, vivisection has no more to do with advancing the success of ovariotomy than the Pope at Rome.

I agree with what Sir William Fergusson expressed in 1875: That "in surgery he was not aware of any of these experiments on the lower animals having led to the mitigation of pain or to improvement as regards surgical details."

And now, having answered your critical remarks, and referring you to a pamphlet on ovariotomy, published by the Society for the Total Abolition of Vivisection, and sold by Pickering, 196, Piccadilly, London, where you may satisfy your curiosity still further, I have a few questions to ask you on this matter, which you yourself have gratuitously opened, and which many of my friends, members of your associated body, declare must not be closed unsatisfactorily.

1st. Are you prepared to avow yourself the author of the article, called "leading", in the number of the 19th of June, and the following July the 3rd, and to accept the responsibility of the same?

2nd. If not, are you prepared to give up the name of the author of those articles?

3rd. Are you prepared to withdraw the following words? "Dr. Clay had achieved fair success in the provinces, yet somehow he failed to inspire confidence among either provincial or metropolitan surgeons, and thus to really establish ovariotomy as a justifiable operation." No doubt you will have fully perceived by this time that this statement is libellous, and calculated to do a serious injury.

I wait your admission of my defence, and your answers. I see in the *British Association Journal*, of July 3rd, you constitute yourself a judge of equity in professional matters. You ought to be the better able to act fairly in this matter.—I am, &c., CHARLES CLAY, M.D.

THE PETITION AGAINST THE VACCINATION BILL, 1880.

SIR,—Readers of the *Echo*, on Thursday and Friday evenings of last week, must have been somewhat surprised to see that a petition had been presented from the British Medical Association, signed by 2,000 medical men, against vaccination. The facts of the case are, that I had the honour of presenting a petition from the Committee of Council of the British Medical Association against the Vaccination Acts Amendment Bill; that this, having been incorrectly described by the *Echo*, the editor of that paper has ignored my twice-repeated request to make that explanation which I am now glad to have the opportunity of laying before your readers.—Faithfully yours,

House of Commons, July 14th. R. FARQUHARSON.

ASYLUMS AND UNLOCKED DOORS.

SIR,—*Apropos* of your article on the Woodilee Asylum, I beg to mention that Dr. Rutherford conducted another associate, Dr. Neil Carmichael, of Glasgow, and myself, through the asylum on May 15th last, and I can testify to the practice of having the doors unlocked during the day. We entered by the open main door of the building, and passed through many rooms and corridors, every door of which was opened by a common handle, like the room-door of a private house. The patients, who were then inside, in place of looking upon the superintendent as a jailor, were amusing sometimes in their demonstrations of esteem for him.

Outside, in the ample estate and farm grounds were seen, as can be seen every day, gangs of lunatics, under the charge of attendants who are distinguished by a high cap, working cheerfully in excavating and banking earth, and in draining and other field and garden operations. In and around the asylum buildings everything is done to occupy the attention of both male and female patients with varieties of work and healthful entertainments, to divert the shattered mind from introspection and suspicion, and to prepare the body, by useful exercise, for balmy sleep at night. Patients treated in this way, who do not moon away their hours in dreary locked corridors and high-walled airing gardens, have little inducement to run away—the dignity of labour being associated with their comparative freedom. To quote a sentence in one of Dr. Arthur Mitchell's publications, "It may be accepted as always true, that that which is best for the insane poor is best in the end also for the pockets out of which they are supported".

Doors without locks would be attended with danger in the treatment of bad isolated cases, and would not afford the protection *ab extra*, which the humblest workman's house has.

My copy of the Woodilee report has been sent to a friend; but it recurs to me that, in addition to the general absence of confinement and unnecessary restraint, the work done by the patients of both sexes in this asylum, and the limited use of alcoholic drink in it, are features worthy of commendation.—Yours respectfully, WM. WHITELAW, M.D.

Wellington Place, Kirkintilloch, July 5th.

MILITARY AND NAVAL MEDICAL SERVICES.

PROMOTIONS AND CHANGES.—The following promotions and changes among the officers of the Army Medical Department were published in the *London Gazette* of the 6th inst.:—Temporary Surgeon-General Sir Anthony Dickson Home, V.C., K.C.B., to be Surgeon-General, vice Hampden Hugh Massy, M.D., C.B., granted retired pay; Brigade-Surgeon John Lyster Jameson to be Deputy-Surgeon General, vice A. D. Home, V.C., K.C.B.; Brigade Surgeon John Phillips Cunningham, M.D., to be Deputy-Surgeon-General, vice G. Pain, granted retired pay. The local rank of Surgeon-General conferred upon Deputy Surgeon-General John Andrew Woolfryes, M.D., C.B., C.M.G., in the *Gazette* of the 28th of January, 1879, is converted into temporary rank, but without pay or allowances. Surgeon-Major John Meane to be Brigade-Surgeon, vice Augustus Patrick Meyers Corbett, M.D., deceased; Surgeon-Major Charles Carroll Dempster to be Brigade-Surgeon, vice H. T. Reade, V.C., promoted; Surgeon-Major William Henry Corbett, M.D., to be Brigade-Surgeon, vice E. Y. Kellet, whose promotion has been cancelled; Surgeon-Major Richard John William Orton, from half-pay, to be Surgeon-Major; Surgeon-Major George Simon, M.D., has been granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major William Langworthy Baker has been granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major Alexander Campbell McTavish is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major Edward Denham Tomlinson is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major James Barry, M.D., retires from the service, receiving a gratuity.

THE NAVAL MEDICAL SERVICE.

SIR, There appeared, in the JOURNAL of May 1st, a reply from "Mentor" to a letter of mine in the [illegible] of the preceding week. As I have been abroad, it has only recently come to my notice.

I am challenged to name any ships in which the sick are seen under the circumstances described. I refer to the six gun sloops named after seabirds. In those vessels there is an option offered between seeing the patients in a small darkened chamber, within which four men might perhaps be packed upright like herrings in a cask, and some such place as I mentioned. That place is employed in certain of those ships; but I decline to particularise further.

Medical officers are required to carry such superfluities as a dozen lancets, two trephines, etc. For dentistry—an art that might well be encouraged—they carry only forceps for incisors, a key, a punch, and a gum lancet. There is no apparatus for so important a matter as the administration of chloroform. Stethoscopes and clinical thermometers are only carried optionally and without official sanction, so that no remark need be made on the absence of laryngoscopes, specula, ophthalmoscopes, etc. The medicine-chests contain no chloral-hydrate, bromide of potassium, iodoform, or salicin. Of the drugs supplied, the amounts are very small. Thus one patient alone often consumes all the iodide of potassium; and the same occurs with other drugs.

"Mentor" charges me with frivolity. There is nothing frivolous in my complaints, nor is there any self-seeking. He advises me to seek elsewhere a field for my talents. I distinctly affirmed that surgeons are not permitted to resign, and could name more than one whose application has been refused, even on home service, were it not likely to be prejudicial to them.—I am, sir, yours obediently,

A NAVAL SURGEON.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, July 12th.

The Census.—Viscount ENFIELD presented a Bill for taking the census of England. The noble Viscount pointed out that the census would be taken on April 3rd, 1881, and there would be no delay that could possibly be avoided in its completion, and the expenses would be borne by Parliament. Numerous scientific bodies recommended that it should be extended to other heads or subjects, eight in number, in addition to those hitherto comprised in the returns; but that course would involve both delay and considerable expense. Neither was it suggested that it should comprise a religious census. That was attempted in 1851, but the result was most unsatisfactory. The difficulties in the way of such a plan were almost insurmountable, and would not be provided for by the Bill. It was also suggested that a return of the weekly and daily wages earned by the labouring-classes would be desirable; but, with regard to such a suggestion, it was sufficient to say that such a return would be received with suspicion by the labouring-classes as laying the foundation for new taxation. The Bill was founded on the principles of the Act of 1870, and he trusted that it would meet with the approval of the House.—The Bill was read a first time.

HOUSE OF COMMONS.—Monday, July 12th.

Calf Vaccine.—Mr. DODSON stated, in answer to Mr. HASTINGS, that the Local Government Board were making inquiries as to the best arrangements to secure a constant supply of vaccine lymph. As the Board would be answerable for the quality of the lymph, great care was required. There was every desire to push the matter on as fast as possible, but he feared some time must elapse before they were in a position to begin to supply it.

The Fever in Ireland.—Mr. FORSTER, in reply to questions of Mr. PARNELL and Mr. O'CONNOR POWER, said he should lay on the table that evening the report of Dr. Nixon, a medical inspector, who had been sent down to inquire into the condition of the districts in Ireland where fever existed. So far as he was informed, the fever prevailed chiefly in the Swinford Union, and he believed it was now on the decline. The last report showed that, out of 96 persons in the infirmary, 41 were suffering from fever. Some difficulty was experienced in obtaining a second doctor, but that difficulty was overcome; and steps had also been taken to obtain the services of extra trained nurses, and a comfortable ambulance had been provided. The sanitary condition of the district was deplorable, and he could understand when fever once arose how difficult it was to check it. The vice-guardians were taking steps to remove the sources of disease, as well as to prevent it spreading; but the difficulties were much increased by the fear of the disease, and the unwillingness of the people to acknowledge it existed in their houses. The guardians were doing their best, and were told they were not to spare money or their efforts.—In reply to further questions from Mr. O'CONNOR POWER and Mr. PARNELL, Mr. FORSTER said the sanitary conditions which he complained of was the overcrowding of the cabins. The guardians were doing what they could to prevent the spread of the disease; but it was not a matter that could be dealt with in a month or two. The bad condition of the cabins made them fever-beds as soon as fever appeared. The Local Government Board were doing their best to prepare for any future outbreak.

The Sanitary Condition of the War Office.—In Committee of Supply, Mr. A. O'CONNOR complained that the War Offices in Pall Mall were in a very bad sanitary condition.—Lord F. CAVENDISH begged members not to press too much upon the Government in this matter. The necessity of more being done for the public offices would not be lost sight of.—Lord R. CHURCHILL dwelt on the manner in which the Treasury Bench had attempted to shelve the subject of the sanitary improvement of the War Office.—Mr. ADAM replied that the sanitary state of the War Office had been considered by a committee, presided over by Sir William Jenner. That committee had made certain recommendations, which had been carried out; and although he was far from saying that the whole of the War Office was as it should be, the great sanitary defects had been removed.

The Canal Boats Act.—Mr. DODSON, in replying to Mr. JOSEPH COWEN, said that the Local Government Board had made regulations to prevent overcrowding in canal boats, and it rested with the local authorities to see that those regulations were observed. The Government had at present no intention to propose further legislation on the subject.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Board of Examiners on the 5th instant, and, when eligible, will be admitted to the pass-examination.

Messrs. George D. Mackintosh, Laurence I. Ruck, David R. Paul, and James T. Carter, students of the Edinburgh School; Alexander Cowley, Gray Hassell, and John R. Stuart, of the Aberdeen School; Harman Visger and Henry H. Parsloe, of the Bristol School; Robert B. Carruthers and John T. Smith, of the Manchester School; George W. Ridley, of the Newcastle School; J. R. Lucas Dixon, of the Liverpool School; David W. Whitfield, of the Dublin School; Thomas G. C. Hesk, of the Sheffield School; Ignacio Gutierrez-Ponce, of the New York and Paris Schools; and Frederick W. Hewitt, of the Cambridge School.

Seven candidates were rejected.

The following gentlemen passed on the 6th instant.

Messrs. Edward Kershaw, Alfred B. Liptrot, and John A. Laycock, of the Manchester School; Samuel Brookfield, and Robert Hardie, of the Newcastle School; Alfred Thomas and James F. H. Owen, of the Liverpool School; Alexander Milne, of the Aberdeen School; Arthur H. Hart, of the Birmingham School; Albert E. Foster, of the Leeds School; and Frederick Deighton, of the Cambridge School.

Thirteen candidates were rejected.

The following gentlemen passed on the 7th instant.

Messrs. William Harding and Roger Kirkpatrick, students of the Edinburgh School; Lewis Powell and Thomas Cardwell, of Guy's Hospital; William Dudley, of the Birmingham School; John Yates Bostock, of the Cambridge School; William Heaton Horricks, of the Manchester School; A. H. N. Lewers, of University College; James Robertson, of the Charing Cross Hospital; David Pugh Edwards, of St. Bartholomew's Hospital; and Reginald Whiteside Statham, of St. Thomas's Hospital.

Thirteen candidates, having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months, including one who had an additional three months.

The following gentlemen passed on the 9th instant.

Messrs. Cecil M. Hendriks, Alexander J. Grant, Charles O. Fowler, Harry Harlock, and Henry J. Harries, students of University College; Ernest A. White, Ernest H. Simmons, Henry W. Hooper, and John U. Bolton, of St. Bartholomew's Hospital; William Wilson, Samuel B. A. Edsall, and Albert Green, of Guy's Hospital; George Greenwood and John H. Williams, of the London Hospital; Montagu W. Williams, of the Middlesex Hospital; Thomas E. Rogers, of the Charing Cross Hospital; and Mark Style, of St. Mary's Hospital.

Seven candidates were rejected.

The following gentlemen passed on the 12th instant.

Messrs. Edward H. Tenison, Percy F. Money, Edward O. Croft, and Walter F. Scott, students of University College; William D. Smallpiece, James F. Saunders, Edward S. Tresidder, and Albert S. Topham, of Guy's Hospital; Charles M. Chadwick, and William A. Norry, of the London Hospital; Edward F. Collins, and William Davies, of the Middlesex Hospital; and Sidney Davies, of St. Bartholomew's Hospital.

Eleven candidates were rejected.

The following gentlemen passed on the 13th instant.

Messrs. Edward O. Newland, Arthur L. Fireman, and Edward W. Roberts, students of Guy's Hospital; Charles J. Dabbs, and Bedros Aslamian, of the London Hospital; James E. Kershaw, of St. Thomas's Hospital; Richard H. Botham, of King's College; James W. Draper, of University College; George E. Bloxam, of St. George's Hospital; and Harry A. Francis, of St. Bartholomew's Hospital.

Fourteen candidates were rejected.

The following gentlemen passed on the 14th instant.

Messrs. Mohamed I. Khan, William H. Horsman, Robert W. Watson, Wilmott H. Evans, William H. Tomlins, and Charles L. Ashby, of University College; Alfred M. Sutton, Francis G. F. Chittenden, and John H. Greenway, of Guy's Hospital; John L. Stretton and John H. Harris, of St. Bartholomew's Hospital; Frederick W. S. Stone, of St. Thomas's Hospital; and Charles J. J. Harris, of the Charing Cross Hospital.

Eleven candidates were rejected.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At the Convention held on July 2nd, 1880, the following gentleman was admitted a Fellow.

Thomson, John Roberts, M.D.Edin., Bournemouth.

At the same time, the following gentleman was admitted a Member.

Sarell, Richard, M.D.Edin., Pera, Constantinople.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 8th, 1880.

Knight, Alfred Osborne, Tewkesbury, Gloster.
Villanueva, Francis Hoster, 57, Southampton Row.

The following gentlemen also on the same day passed their primary professional examination.

Divecha, K. R., Grant Medical College, Bombay.
Garmon, John Cornelius, Edinburgh Infirmary.
Smith, Gilbert Thomas, St. Bartholomew's Hospital.
Thurston, Daniel, London Hospital.

UNIVERSITY OF DUBLIN.—At the Trinity Term Examination for the Degree of Bachelor of Medicine, held on Monday and Tuesday, June 14th and 15th, the successful candidates passed in the following order of merit.

William H. Line, Archibald A. Hamilton, Alexander B. McKee, Fitzgerald Isdell, John L. Cuppaidge, Robert J. Polden, Charles S. Purdon, Richard T. Baker, Henry L. Clare, Stuart Davis, John T. Creery, Charles Adams, John M. Nicolls, William S. Gordon.

At the Trinity Term Examination for the Degree of Bachelor of Surgery, held on Monday and Tuesday, June 21st and 22nd, the successful candidates were arranged as follows.

Thomas Lucas, Thomas R. Lingard, Alexander B. McKee, Charles S. Pardon, Edward E. Moore, John T. Creery, Robert J. Polden, William H. Line, John L. Cuppaidge, Charles H. Dixon, George Brazier-Creagh, Archibald A. Hamilton, Charles Adams, John S. Kane.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the University, held on Monday, June 21st, 1880, in the Council Chamber, Dublin Castle, Sir Robert Kane, LL.D., F.R.S., Vice-Chancellor, conferred the following degrees and diplomas.

Doctor in Medicine.—John Howard Battye, Belfast; George J. Coates, Cork; John J. Dinnis, Cork; Arthur Hickman, Galway; Edward Horan, Cork; Daniel Lehane, Cork; William J. Matthews, Belfast; William T. Mullally, Galway; Patrick Mullane, Cork; James Mullin, Galway; John F. L. Mullin, Galway; Menus W. O'Keeffe, Cork; Samuel Townsend, Cork.

Master in Surgery.—Charles Hall, M.D., Belfast; John Hosford, M.D., Cork; Charles Frederick Knight, M.D., Cork; John Martin, M.D., Galway; William Smyth, M.D., Belfast; William Stokes, M.D., Galway; John Wilson, M.D., Belfast and Cork; Ralph Worrall, M.D., Belfast; George J. Coates, Cork; John J. Dinnis, Cork; P. Mullane, Cork; Menus W. O'Keeffe, Cork; Samuel Townsend, Cork.

Diploma in Midwifery.—William Stokes, M.D., Galway; George J. Coates, Cork; Patrick Mullane, Cork; Menus W. O'Keeffe, Cork.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

BALLYMAHON UNION.—Medical Officer for Ballymore Dispensary District. Salary, £100 per annum, with £20 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 19th instant.

*BELGRAVE HOSPITAL FOR CHILDREN. Surgeon. Applications, with testimonials, to the Honorary Secretary on or before July 24th.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensary Surgeon. Salary, £100 per annum. Applications, with testimonials, to the Secretary on or before July 27th.

EVELINA HOSPITAL FOR SICK CHILDREN. Registrar and Chloroformist. Salary, £30 per annum, with an additional £20 if held for twelve months. Applications, with testimonials, not later than July 27th.

GORT UNION.—Medical Officer for Ardrahan Dispensary District. Salary, £14 per annum, with £15 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 29th instant.

HERTFORD BRITISH HOSPITAL, Neuilly, Paris.—Resident Clinical Assistant. Salary, 100 francs per month. Applications, with testimonials, on or before July 20th.

*HEREFORD GENERAL INFIRMARY.—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before July 20th.

*KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser. Salary, £— per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary, on or before July 23rd.

*NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications, with testimonials, to the Secretary on or before July 21st.

NEWCASTLE-IN-EMLYN UNION.—Medical Officer for the Kenarth District and Workhouse. Salary, £131 15s. 0d. per annum.

NORTH STAFFORDSHIRE INFIRMARY. House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications, with testimonials, not later than July 27th.

OWENS COLLEGE, MANCHESTER. Lectureship in Practical Surgery. Applications, with testimonials, not later than July 20th.

PARSONSTOWN UNION.—Medical Officer for Kinnitty Dispensary District. Salary, £120 per annum, with £20 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 27th instant.

ROSCOMMON COUNTY INFIRMARY.—Apothecary who will act as Registrar at a salary of £50 per annum, with first-class rations and apartments; or if the offices are separated, apothecary will receive £30 yearly, and will not be required to reside in the institution. Election on the 31st instant.

*ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan. Salary, £80 per annum, apartments, rations, washing, etc. Applications, with testimonials, not later than July 28th.

*TOWNSHIP OF MANCHESTER. Assistant Medical Officer for Workhouse at Crumpsall, and Resident Assistant Medical Officer at the Workhouse Receiving and Casual Wards, at a joint Salary of £150 per annum. Applications, with testimonials, not later than July 28th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BURTON, John E., L.R.C.P., elected Honorary Medical Officer to the Liverpool Ladies' Charity and Lying-in Hospital, *vice* J. H. Wilson, L.K.Q.C.P.

STUDDERT, Richard C., A.B., M.D., appointed Surgeon to the Frome Cottage Hospital.

WILLIAMS, W. Roger, L.R.C.P.L., appointed Senior House-Surgeon to the Royal Albert Edward Infirmary and Dispensary, Wigan, *vice* F. A. Harris, L.R.C.P.L., resigned.

WILSON, John H., L.K.Q.C.P., appointed Consulting Medical Officer to the Liverpool Ladies' Infirmary and Lying-in-Charity.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

*WALFORD, Edward, M.R.C.S., appointed Medical Officer of Health for the Urban Sanitary District, Ramsgate, *vice* J. W. Barry, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

EDIS.—On the 13th instant, at 22, Wimpole Street, S.W., the wife of Arthur W. Edis, M.D., F.R.C.P., of twins—both girls.

MARRIAGE.

FOSS—MCEWEN.—On the 13th instant, at Holy Trinity Church, Chester, by the Rev. C. de B. Winslow, M.A., of St. Nicholas, Blundell Sands, assisted by the Rev. J. M. Moss, M.A., and the Rev. E. Marston, M.A., rector of the parish, the Rev. Hugh James Foss, M.A., S.P.G., Missionary of Hiogo, Japan, third son of the late Edward Foss, Esq., to Janet, only Daughter of William McEwen, Esq., M.D., of Chester.

THE Council of King's College, London, at their last meeting, elected Dr. Buzzard an Honorary Fellow.

THE SANITARY INSTITUTE.—The following gentlemen will act as presidents of sections at the Exeter September meetings: Section 1 (Sanitary Science and Preventive Medicine), Dr. de Chaumont, F.R.S., Professor of Military Hygiene at Netley. Section 2 (Engineering and Sanitary Construction), Robert Rawlinson, C.E.C.B. Section 3 (Meteorology and Geology), Sir Antonio Brady.

PRESENTATION.—Mr. George Pizey, medical officer of health for the urban district of Clevedon, Somersetshire, has been presented with a silver inkstand, and pen and pencil-case, the former bearing the following inscription: "Presented to George Pizey, M.R.C.S., chiefly for the poor inhabitants of Clevedon, as a small token of their gratitude for the unremitting and kind attention he has shown them during a long period of years. July 7, 1880."

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the licenses of the college, held on Monday, Tuesday, Wednesday, and Thursday, July 5, 6, 7, and 8, the following candidates were successful: *The First Professional Examination.*—Julia Cock (London), Lucy Elizabeth Cradock (London), Constance Hitchcock (London). *The Licence to Practise Medicine*—James Henry Beattie (Dublin), Robert Ettingsall Beattie (Dublin), George Harry Broadbent (London), Fanny Jane Butler (London), Alexander Cosgrave (Bradshaw), Patrick Richard Deunehy (Dublin), Augustus Newton Dickenson (Dublin), George Philip Elliott (Dublin), William Henry Fitzmaurice (Dublin), Hubert Flanagan (Dublin), William Gibbon (Dublin), William Frederick Gilbert (Dublin), Henry S. W. Hall (Dublin), John Hugh Harrick (Queensland), James Kernan (Dublin), John McCullagh (Dublin), William Joseph Magee (Dublin), Anthony Hickman Morgan (Dublin), Patrick O'Donaghue (Loughrea), James Joseph O'Dwyer (Dublin), William Renner (London), Samuel Sharpe (Cootehill), John Whittaker Tate (Dublin), Harry Clark Wilson (London). *The Licence to Practise Midwifery.*—J. H. Beattie, R. E. Beattie, G. H. Broadbent, J. Butler, A. Cosgrave, H. Flanagan, W. F. Gilbert, H. S. W. Hall, J. H. Harricks, J. Kernan, J. McCullagh, Alexander B. McKee (Dublin), J. J. O'Dwyer, W. Renner, S. Sharpe.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M. West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M. Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY .... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. Sa. 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Quekett Microscopical Club, 8 P.M. Annual meeting.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

TESTIMONIAL TO MR. ARTHUR O'BRIEN JONES, F.R.C.S.

THE proceedings in the case of Howell *v.* West and Jones (referred to in the BRITISH MEDICAL JOURNAL of April 24th, 1880, page 630), which so painfully touches the character and interests of the whole medical profession, have at length terminated with the unanimous decision of the judges of the Court of Appeal in favour of the defendants.

It has been widely felt in the profession that the position of Mr. Jones, in the present circumstances, possesses strong claims upon the sympathy and support of his medical brethren, any of whom may become liable at any time to similar unpleasant prosecutions.

As a practical token of this sympathy (which found a prompt expression in a resolution of the Council of the Metropolitan Counties Branch of the British Medical Association, at a meeting held May 3rd, 1880), a committee, composed of the undersigned members of the Association and others, has been formed, and a treasurer appointed, to receive subscriptions for the purpose of indemnifying Mr. Jones to some extent for the great pecuniary loss which he has necessarily sustained in law costs, in addition to much mental anxiety.

To insure as wide a testimonial as possible from the members of the profession, it has been judged advisable to limit the amount of each subscription to the sum of *One Guinea*. It is requested that subscriptions may be forwarded by crossed cheques or P. O. orders on Notting Hill Branch Post-Office, Archer Street, W., addressed to the treasurer of the fund, Dr. E. H. Vinen, 17, Chepstow Villas, Bayswater, W.—John Wood, chairman, S. O. Habershon, M.D., A. P. Stewart, M.D., Wilson Fox, M.D., George C. Jonson, Walter Dickson, M.D., Septimus W. Sibley, Erasmus Wilson, George A. Ibbetson, Ernest Hart, William Allingham, Edwin Saunders, George D. Brown, T. Stretch Dowse, M.D., W. C. Grigg, M.D., E. Hart Vinen, M.D., treasurer; Alexander Henry, M.D., secretary.

A SUFFERER.—We doubt whether such a letter could be published at all in this JOURNAL; certainly not without signature. It imputes fraud and misconduct to the persons referred to; and if revised so as to exclude such imputations, would still be as appropriate to a daily paper as to our columns.

MOUNTAIN AIR IN PHTHISIS.

SIR,—Dr. J. H. Bennett of Mentone has opened a discussion upon the influence of mountain air in the treatment of pulmonary consumption, in the BRITISH MEDICAL JOURNAL for July 10th. I wish to place in a stronger light some of the considerations which ought to influence the profession at large, before they take upon themselves the weighty responsibility of sending phthisical patients to spend a winter amidst the snows of the Alps.

The main desiderata as regards climate, as proved by all recent experience, are fourfold:—firstly, dryness; secondly, such prevalence of sunshine as may enable invalids to enjoy the open air, and to admit it freely to their rooms; thirdly, absence of extreme temperatures; fourthly, a pure aseptic atmosphere, so far as is possible. Let us see how far the climate of Davos Platz, to which at the present moment the question seems to be confined, "for Tinto", as Dr Bennett says, "may be considered beyond the reach of English invalids", fulfils these four conditions. The first is undoubtedly complied with in a great measure, the "mean humidity" at Davos Platz varying from 62 to 72 as against an average of between 80 and 90 in England; Davos can, however, claim no superiority over the Riviera in this respect, as the mean humidity at Cannes is 65.2 (De Valcourt).

The second requirement is also fairly complied with, according to the figures given by Dr. C. T. Williams, who gives the number of rainy or sunny days in the winter season as from 43 to 57, while the fine days, not all of them probably windless, a very important point in high altitudes, are given as 110 against an average of 12 in London for the same period. The number of rainy days for the entire year is not given, but from the usual laws of rainfall they could not be computed to average less than 100. This number compares well with the English winter stations—Bournemouth 156, Torquay 209, Penzance 257—but is not low compared with the Mediterranean stations, Malaya 40, San Remo 48, Algiers 63.

It is in the third qualification, that of the avoidance of extreme temperatures, that Davos Platz fails most conspicuously to satisfy the requirements of the invalid. The winter temperature is given by Dr. Williams as showing a range of no less than 91° Fahr. from – 16.7° to 75°. It is true that the extremes of cold are more easily met than those of heat, but to meet them requires close confinement in stove-heated rooms, and an absence of proper ventilation. In contrast to this enormous range of 91 degrees, I may place that of the six winter months at Bordighera in 1879, where the thermometer ranged from 29° to 75°— a difference of 46° only. The maximum, as will be seen, is the same as at Davos Platz, whilst the minimum, which has only been exceeded upon a single night during the last five years, is 45° higher. The range at Mentone, in 1879, was rather larger, being from 25° to 78°; but the mean for the winter months was 52.9°—rather higher than at Bordighera, where it was 51.7°. That of Davos Platz, during the same period, must have been about 27°. The temperatures of Bordighera are taken from the careful observation of Mr. F. Fitzroy Hamilton; those of Mentone from observations made under similar conditions by M. Bruyn Andrews.

The last condition, that of a pure atmosphere, is no doubt complied with at Davos; at any rate, so long as the patient is beyond the walls of his hotel; but the rarefaction of the air, for which so much has been claimed, is a source of danger, especially to those patients who suffer from hæmorrhage or from enfeebled action of the heart.

In conclusion, I would urge English medical men, especially those who have not had opportunities for Continental travel themselves, to extreme caution in the selection of cases for Davos; for although a certain number do well, many within my own knowledge have derived serious harm from their having been sent there; and patients whom the place does not suit are often retained for weeks or months by weather which renders the roads by which they must depart impracticable. I think the main indications which ought to prevent a medical man from sending a patient to Davos are the following: firstly, any tendency to hæmorrhage; secondly, enfeebled circulation; thirdly, any disorder of the digestive organs. This last is of absolute importance, as a patient who cannot assimilate large quantities of food cannot support the intense cold, unless confined to close rooms, which will, in all probability, destroy all chance of his deriving benefit from the change of climate. It is greatly to be wished that some English medical man, who had no pecuniary interest in the hotels there could make Davos his residence during the winter. We should then have a chance of learning some of what I may venture to term the secrets of Davos; for the reports of such of our patients as return, and of a few professional excursionists, supply the only information which we have to guide us at present.—Yours sincerely,

J. A. GOODCHILD, L.R.C.P.Lond.

Heathfield House, Ealing, July 11th, 1880.

A STUDENT (Edgware Road) should apply to Mr. Miller, Registrar of the General Medical Council, at the office of the General Medical Council, 315, Oxford Street.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE DIAGNOSIS OF RÖTHELN: A QUERY.

SIR,—I am unable to throw any additional light on this subject; and I write only to point out the strange discrepancy which exists between the published accounts. Almost every letter which has lately appeared in the JOURNAL gives a description differing from the rest in some important particular. Thus, in the JOURNAL for July 3rd, Dr. R. M. Wilson states that the rash appears suddenly, with hardly any period of invasion, and that it is entirely gone by the third day. In Aitken's *Practice of Medicine*, the eruption is said to appear on the third or fourth day, and to continue for from six to ten days. Dr. Dyce Duckworth has lately reported a case with twenty days' incubation, and prodromata for thirty-six hours. Dr. Tilbury Fox, again, describes the rash as dusky-red and papular; says there are *no catarrhal symptoms;* the disease is not contagious. Aitken states that crimson stigmata first appear, rapidly running into irregularly shaped patches, with obtuse angles; whereas, in the JOURNAL, the eruption has, I think, lately been described as indistinguishable from that of measles.

I have myself recently seen a case in which a rash appeared on the face and hands, with slight sore-throat and pyrexia. At about the sixth day, when I was called in, the hands were thickly covered with highly-elevated papules, some of which were semivesicular; so that, from the mere appearance of the eruption, I should have diagnosed variola. The face, however, was then quite clear. The total absence of pyrexia, and a history of somewhat similar cases following each other at short intervals (in a young ladies' school), forced me to consider it rötheln. The rash in this case lasted fully ten days. I did not see the others, but was told that in them the rash was not nearly so elevated, and only persisted two or three days.

I would ask whether distinct affections are confounded together as rötheln, or whether one and the same disease has a wide range of variation in symptoms and course? My own case points rather to the latter solution.—I am, etc.,

M.D.(LOND.)

P. H. R.—We would rather not give an opinion, but should prefer that our correspondent be advised by some one who knows better than we can all the circumstances. We can say, however, that it does not seem to us, under the circumstances, that it at all necessarily follows, that separate visits should be counted for each person in the house, seeing that they are all children of the same family and ill at the same time; and five shillings to seven and sixpence a visit would, we presume, be a very moderate remuneration; but we by no means imply that it would be sufficient if the circumstances of the patients admitted a higher rate. Such matters involve a great many complicated questions, which cannot be settled on the imperfect data supplied to us, or, indeed, otherwise than by local knowledge. The original sum asked by our correspondent does not appear to us excessive, but, nevertheless, it might be advisable, if the plea put in be a valid one, to accept it in some modified form.

A SOURCE OF TYPHOID FEVER.

SIR,—You will oblige me by inserting the following remarks in the JOURNAL. From time to time, I have had cases of typhoid fever under my care when the local dispositions were anything but favourable for such, nor was I able to trace their origin to a typhoid source. What struck me as rather remarkable in connection with these cases was their occurring in houses where persons who were much about them prior to and during their illness had leucorrhœal discharges, and none of which persons got the typhoid. The idea has occurred to me frequently (and no work that I have looked into on the subject alludes to it as an origin of the disease) that perhaps the matter which produces typhoid fever may be or reside in some special kind of uterine or vaginal secretion. Not being connected with any institution, and my scope for observation in private being limited, I am anxious that those who have ample opportunities should have their attention drawn to the above statement, which may turn out to be only a coincidence. In any case, there seems to me a wide field open for investigating the effects of uterine and vaginal secretions in their various states on the human constitution.—Yours truly,

J. P. DOYLE, L.R.C.S.I., L.K.Q.C.P.I.

72, Lower Mount Street, Dublin, June 4th, 1880.

ANTIVACCINATION.

SIR,—It is certainly astounding that there should exist at the present day men in our ranks whose minds are not yet clear as to the efficacy of vaccination. Scepticism upon such a subject, which does not admit of argument, can only have its origin in arrant bigotry or profound ignorance. But that men should be found bearing medical titles, bold enough and sufficiently arrogant to make known, by publishing in the daily papers, views altogether opposed to recognised and unquestionable fact, is to be much deplored. Neither Jenner nor any of his followers have ever claimed for vaccination more than experience has taught us to expect from it. "Duly and *efficiently* performed, it will protect the constitution from subsequent attacks of small-pox as much as that disease itself will. I never expected it would do more; and it will not, I believe, do less." So wrote Jenner upwards of eighty years ago; and time has shown him to be pretty correct in his deductions.

Everyone knows that it is not maintained for vaccination that it is a sure and certain protection against small-pox, even should the operation have been in all respects *efficient*. And this principle was held by Jenner. There are peculiar constitutions which neither vaccination nor small-pox itself will preclude from recurrent attacks, as was exemplified in the case of a negro, who was known to have been the subject of no less than ten infections. Implicit faith would take the place of unbelief were sceptics placed in the position which some of us have had to occupy. Consign them unprotected in charge of an isolated community, in which the disease, in a malignant form, might be performing its ravages, with all its attendant horrors; and it would be amusing to see how readily these recusants would avail themselves of Jenner's great discovery, and bare the arm to receive the point of the lancet imbued with magic power. I remain, your obedient servant,

GEORGE WORTHINGTON.

THE DEAF AND DUMB.

SIR,—I shall be glad if you, or any of your correspondents, can give me the address of any institution in which the dumb are taught to talk; and I should also like to know if a girl born dumb, but not deaf, with no apparent malformation of the mouth or throat, could be taught to talk in such an institution. The girl has evidently a taste for music; she can hum a tune, though she cannot utter a syllable. Believe me, yours truly,

M. A.

THE BRUSSELS M.D.

SIR,—In answer to the query of "Medicus" in last week's JOURNAL, I would advise him to read Green's *Pathology*, and the article on Mental Diseases in the second volume of Reynolds' *System of Medicine*. Parkes' *Hygiene* is the best, especially as the examiner expect the candidate to be well up in the contents of this book. With regard to the other subjects, I need not specify authors; but, concerning anatomy, your correspondent should take care to at least know the contents of Heath's little book.—I am, sir, yours faithfully,

M.D. BRUSSELS.

WOOLSORTERS' DISEASE.

MR. G. RENDLE (Forest Hill) draws attention to the fact that, in the fortieth report of the Registrar-General, it is recorded that, during the year 1877, one death occurred from "Poison from Alpaca" and three from "Woolsorters' Disease".

FALLING-OFF OF THE HAIR.

SIR,—Would you kindly ask, through the medium of your JOURNAL, what is the best preparation to use to prevent the falling-off of the hair? This is a question that is nearly always left to quacks; so I should like to have the opinion of some of the leading members of our profession.—I remain, yours truly,

W. A.

AN ADVERTISEMENT.

THE subjoined advertisement, taken from the *Bazaar*, has been forwarded to us from more than one source. The members of the General Council of St. Andrew's will no doubt be interested in considering this very remarkable document.

"W. Alfred Johnson, M.D., L.R.C.P.(Edin.), L.S.A.(Lond.), Member of the General Council of St. Andrew's, Author of "Practical Economy", now running every Wednesday in *The Bazaar, Exchange, and Mart*, will be pleased to answer any questions, medical or surgical, or on Natural History, 1s. each letter.—Hereford Road, London, W."

"The clerks of Dr. Johnson, Author of "Practical Economy", now running through *The Bazaar, Exchange, and Mart*, every Wednesday, will be pleased to answer any questions referring to housekeeping, furniture, decorating, repairing, etc., all kindred subjects, also photography, painting, and electro-plating at home, etc. Price 1s. each letter.—Hereford Road, London, W."

REGISTERED PRACTITIONER (Grenada).—It is not certain that any particular practitioner is not registered because his name does not appear in the *Register*, especially if he has been many years out of England, as the regulations striking off names of practitioners for change of address without giving address is apt to mislead. We recommend our correspondent to communicate with Mr. Miller, Registrar of the General Medical Council, and to put to him the questions contained in the letter addressed to us. It would be unusual for the Colonial Office to appoint a gentleman who had not put himself on the *Register*. If he be a senior practitioner holding *bonâ fide* appointments, we do not imagine this omission would be in any way fatal to his appointment.

COMMUNICATIONS, LETTERS, etc., have been received from:—

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THE HARVEIAN ORATION,

DELIVERED AT

THE ROYAL COLLEGE OF PHYSICIANS

Friday, June 25th, 1880.

By JOHN W. OGLE, M.D., F.R.C.P.,
Consulting Physician to St. George's Hospital.

[*Continued from page 12.*]

I WILL now pass on from the objects of Harvey's teaching to say a few words on his method of thought. Harvey's method was essentially what is often termed the "Baconian" method—that of the then coming age—the *experimental* and observational one—the age in which, to quote my friend Sir Alexander Grant, "modern philosophy took a splendid start in Bacon and Descartes, while modern science commenced its glorious career with Galileo and Newton": a philosophy in which analysis or induction plays a great part, which has for its main objects the physical enjoyment and social comfort of man and the propagation of human power, and had for its great prophet and herald the illustrious Bacon. Of Bacon, Macaulay has finely said that to make man perfect was no part of his plan. His great characteristic was the persuasion that nothing was too insignificant for the attention of the wisest, which is not too insignificant to give pleasure or pain to the meanest. His peculiar aim was to make imperfect man comfortable. The beneficence of his philosophy resembled the beneficence of the common Father, whose sun rises on the evil and the good, whose rain descends for the just and the unjust." To quote Bacon's own words, "*Usui et commodis hominum consulimus*".

Of this method I will quote the words of Cardinal Newman, who, in his *Idea of a University*, remarks of Bacon: "His is simply a method whereby bodily discomfort and temporal anxieties are to be most effectually removed from the greatest number; and already, before it has shown any signs of exhaustion, the gifts of nature, in their most artificial shape and luxurious profusion and diversity, from all quarters of the earth, are, it is undeniable, by its means, brought even to our doors, and we rejoice in them."

To Bacon, Harvey was at once friend and physician. Still he does not appear to have much valued his philosophy, as, although he "esteemed him much for his witt and style", as Aubrey says, yet he said of him, "He writes like a Lord Chancellor"—speaking in derision. How far Harvey thought this scorn was due to Bacon for not receiving the Copernican system—the greatest of all scientific doctrines—and for being wholly ignorant of any branch of mathematics, I do not pretend to affirm.*

Much has been said and written about the prominent excellences of the modern philosophy; much jargon has been resorted to, and consequently very much bewilderment has arisen; but, after all, it is the philosophy and method of common work-a-day sense (a sense thought by some to be by no means common), the gathering by observation or experiment of particular facts, the generalising of these facts, the induction or drawing out from them a knowledge of general laws or principles, under the guidance of which inferences may be made. That is, the method is at once inductive and deductive; for, as Sir A. Grant says, men reason, and always have done, deductively. "During a great part of life we are employed, not in finding out new laws of nature, but in applying what we knew before, in appealing to general beliefs or supposed classes of facts, and in drawing our positive or negative conclusions accordingly." By the natural instincts of our own minds, and by the influence of our surroundings, affected as they are by the teaching of former ages, unconscious of our debt to master-minds of the past, we reason correctly without any knowledge of scholastic logic, without any proper logical teaching.

This method and doctrine was not new even in the time of Aristotle, to whom, more than to any single person, the scientific education of the world is due. He had already said that, in any science, art, or province of knowledge, "you must study facts". Great principles on any matter can only be gained from experience; and when investigation of what is called nature is complete, demonstration will then, and only then, be possible. To quote Sir A. Grant again, "Aristotle only taught what had been taught before him. He did not invent the process of reasoning, any more than the grammarian, who first distinguished nouns from verbs and gave them their names, did not invent nouns and verbs; he only clearly pointed out a process which had, though unconsciously, been carried out."

As Macaulay puts it, "The inductive method has been practised ever since the beginning of the world by every human being. It is constantly practised by the most ignorant clown, by the most thoughtless schoolboy, by the very child at the breast. That method leads the clown to the conclusion that, if he sows barley, he shall not reap wheat. By that method the schoolboy learns that a cloudy day is the best for catching trout. The very infant, we imagine, is led by induction to expect milk from his mother or nurse, and not from his father."

Harvey, then, was of this school, and only did what he did by virtue of its teaching. To this method, though acknowledged to be fraught with such practical and beneficial results, exception has been taken, inasmuch as it openly professes, contrary to the Platonic teaching, to exclude the search for truth as truth and for its own sake. However true this may be of the method generally, it cannot be said of our Harvey, whose books teem with expressions and sentiments showing that his one great object was the truth, not, of course, unmindful of the contingent advantages of his researches.

At the time of Harvey, though English life was so agitated, though political animosities and feelings were so barbarous and savagely intemperate that after the death of Charles I the army surgeons were bidden to search in his disembowelled body for signs of French disease or impotency*—though London was not even lighted by lamps and lanterns, much less by gas—though there was no standing army, no Turnpike Acts, and but little appliances for locomotion, members of Parliament coming up to London in bodies, and attended by guides and attendants—when no sanitary measures or police existed—when the Royal Society was as yet unborn—when coffee-houses supplied the place of newspapers—when storms at sea could be referred to witchcraft, as was the case when Harvey was, with his friends, detained on the sea in a storm, for the cause of which several women were brought up to London for trial as witches—when the inhabitants of all England were only about five million two hundred thousand people—when Harvey could define London, as he did in his description of the *post mortem* examination of Dr. Parr, as a city "especially destitute of light, cool, and mobile air, the grand cherisher of life, and one whose grand characteristic is an immense concourse of men and animals—where ditches abound, and filth and offal lie scattered about, to say nothing of the smoke engendered by the general use of sulphurous coal as fuel,"—still true scientific method prevailed.

Yet, during such times, as Macaulay remarks (though speaking of a little later period), notwithstanding all the political and social revolutions, a body of sages had turned away with benevolent disdain from the conflict, and had devoted themselves to the nobler work of extending the dominion of man over matter.

"The torrent which had been dammed up in one channel" (alluding to the politics of the times), "rushed violently into another. The revolutionary spirit ceasing to operate in politics, began to assert itself with unprecedented vigour and hardihood in every department of physics. The year 1660, the era of the restoration of the old constitution, is also the era from which dates the ascendancy of 'the new philosophy'—in that year the Royal Society, destined to be a chief agent in a long series of glorious and salutary reforms, began to exist. In a few months experimental science became all the mode. The transfusion of blood, the ponderation of air, the fixation of mercury, succeeded to that place in the public mind which had lately been occupied by the controversies of the rota. Dreams of perfect forms of government made way for dreams of wings with which we were to fly from the Tower to the Abbey, and of double-decked ships which were never to founder in the fiercest storm. All classes were hurried along by the prevailing sentiment—Cavalier and Roundhead, Churchman and Puritan, were for once allied. Divine jurists, statesmen, nobles, princes, swelled the triumph of the Baconian philosophy. Poets sang with tremulous fervour the approach of the golden age. Cowley, in lines weighty with thought, and resplendent with wit, urged the chosen seed to take possession of the promised land flowing with milk and honey, that land which their great deliverer and law-giver had seen as from the summit of Pisgah, but had not been permitted to enter. Dryden, with more

* Dr. Draper sums up Bacon's character as follows:—"It is time the sacred name of philosophy should be severed from its long connection with that of one who was a pretender in science, a time serving politician, an insidious lawyer, a corrupt judge, a treacherous friend, a bad man." That Harvey was not indebted to Bacon for his philosophy is shown by the fact that Bacon's *Novum Organum* was published in 1620, whilst Harvey's subject, though his work was not published till 1628, had been promulgated in 1616.

* The hair of the king was sold after his death, partly as a means of cure for king's evil.

zeal than knowledge, joined his voice with the general acclamation, and foretold things which neither he nor anybody else understood."

Again he remarks: "But it is not less true that the great work of interpreting nature was performed by the English of that age as it had never before been performed in any age by any nation. The spirit of Francis Bacon was abroad...a spirit admirably compounded of audacity and sobriety. There was a strong persuasion that the whole world was full of secrets of high moment to the happiness of man, and that man had, by his Maker, been entrusted with the key which, rightly used, would give access to them. There was at the same time a conviction that in physics it was impossible to arrive at the knowledge of general laws, except by the careful observation of particular facts. Deeply impressed with these great truths, the professors of the new philosophy applied themselves to their task; and, before a quarter of a century had expired, they had given ample earnest of what had been commenced."

I have, in the short sketches which I have just given of the teaching and method of Harvey and his predecessors, laid some stress upon the use that has been made of dissection of the lower animals, both in a dead and also in a living state; and I have done so with a special purpose in view, as I think on an occasion like this it is not going out of our way to give attention for a few minutes to a subject which has lately been much under discussion, not only among medical men, but by the public in general. I mean the subject of vivisection. It is only within the last few years that a cry has been raised against practices which we know to have existed for centuries, and which, we have every reason to suppose, have led to important discoveries, and to results which have tended to greatly benefit mankind.* It is quite possible that abuse of the practice of vivisection may have first raised this outcry; but, once begun, it has spread in an almost ridiculous and hysterical manner, and assertions have been made and charges brought forward which are altogether unwarrantable and unfounded.

The anti-vivisectionists confine themselves chiefly, as far as I can find out by reading their numerous letters and pamphlets, and the proceedings of their public meetings, some of which appear to be only remarkable for a "sagacious vacuity", to three assertions.

1. They assert that man has no *right* to use animals for purposes of scientific research, or to put them to suffering in order to save man pain, or to acquire knowledge which may be used for the benefit of man.

2. They assert that no valuable knowledge has been gained by experiments on animals, and that those who have added the most to our stock of information have not practised vivisection. They confidently assert this with respect to Harvey.

3. They assert that vivisection (or any experiments on living animals) is so demoralising in its tendency that such practices should in every way be discountenanced, and should be entirely forbidden under *any* circumstances.

With regard to the first of these assertions, as it is upon this ground that the anti-vivisectionists found their position, it is necessary that we should take a cursory glance as to what we are told in Holy Writ of the power which, it seems God's will, should be given to man over the brute creation, and of the manner in which this power has throughout all ages been exercised by man. At creation we read, "Let us make man in our image, and let him have *dominion* over every living thing that moveth on the earth." After the flood, when Noah came forth from the ark, this power to man is given in still stronger terms: "And the *fear* of you and the *dread* of you shall be upon every beast of the field, and upon all that moveth on the earth; into your hands they are delivered." That God intended the use of animals to serve in every way for the good of man is shown by his clothing Adam (immediately after the fall) with the skins of beasts, afterwards commanding that beasts should be slain and eaten for food, and that they should be compelled to share in man's labour and take the hardest portion of it, and that they should be brought into subjection and trained for that labour. That this must be through considerable inconvenience, and even suffering, cannot be questioned; indeed, much has been lately said about the cruelty exercised over horses, not only in their training, but when they are employed in working for their masters, and those masters of a class and education who ought to be ashamed of countenancing such cruelty. We may also, I think, with all due reverence, mention that as soon as man sinned it was ordained by God that animals should be offered in sacrifice (until the time when the One Great Sacrifice for sin was offered), so that for many centuries animals were daily slain, that by their suffering and death man might be freed from the penalty of his transgressions.

We may, I think, look carefully through both the Old and New Testaments, and fail to find any command against using the brute creation for any good service to man; and it seems to me that the anti-vivisectionists are driven into a corner when they quote the speech of Balaam's ass as a protest against cruelty to animals! We have only to read St. Peter's comment upon the incident to see that "the dumb beast speaking rebuked the madness of the prophet" in disobeying God's commands in order to gain the wages of iniquity; and that he was not protesting against those blows, which (with the wisdom of his species) he would no doubt have considered his due under ordinary circumstances. The hunter urges his right to the chase by quoting the example of Esau, who was not condemned for being a hunter, and for going out to seek for savoury meat to tempt the palate of the aged Isaac, who had, as we learn from the context, no occasion to resort to the chase to satisfy the requirements of life. We cannot, I think, find any direct prohibition against using the brutes for any purpose which may conduce to the good of man; and there is direct sanction to their destruction in order to supply man with clothing and food, and for causing them to suffer in training for service, and for slaying them for religious purposes. Do the anti-vivisectionists know that, with very few exceptions, every horse they see in the streets has at one time undergone a process of vivisection?—not to mention the mutilation of tails and ears of domesticated animals, which is universally carried on; and this for our advantage as well as that of the animals themselves. It is needless here to say that we are not wishing to countenance the practice of any cruelty, or of giving any unnecessary pain in operations upon living animals, but simply to affirm that, for man's good, man has the right given him to use the beasts, to cause them to suffer, and to take their lives. And what greater good can be gained for mankind, I may ask, than the enlightenment and instruction of those to whom is entrusted the care of the sick and the alleviation of all those ills of body to which flesh is heir?

Not even the most vehement of the anti-vivisectionists will, I think, assert that the life of a man is not of infinitely greater value than that of a beast. To put the question to the test, is there any father who, seeing a child in imminent danger, would scruple to inflict any amount of prolonged torture upon even a domesticated animal, if by so doing he could save the life or suffering of the child? We can imagine a parent being placed in such circumstances; but can hardly imagine an anti-vivisectionist, acting up to his principles, having the courage of his opinions, and urging at such a moment, "that a man has no right to cause a beast to suffer, whatever good may be gained to man by so doing".

The second assertion is, "that not one scientific point has been discovered, nor any curative agent more successfully applied, by means of vivisection".

To confute this very foolish and contemptible declaration—one which has been publicly made, only a few days ago, at a meeting in Willis's Rooms, in London*—we need only glance over all the most important discoveries which have been made; and we shall find that in most, if not all of them, there is mention of the practice and value of vivisection. We must first allude to the subject which especially claims our attention to-day—viz., the circulation of the blood. It is unnecessary to remind my audience of the constant practice of vivisection by those who threw light on this subject. We find Galen describing minutely his experiments on living animals, as dividing arteries, laying open their chests, etc.; and Harvey treats it as a matter of course that all his conjectures should be verified by, as he says, "experiments on a great variety of animals"; and the benefits to mankind can hardly be estimated which have been derived from the labours of those vivisectionists who have followed in the lead of these great men, and worked on the circulation alone. The labours of Dr. Hope, in conjunction with Sir Benjamin Brodie; of Stokes; of C. J. B. Williams,† and others, solved the mystery which had previously attended the different sounds of the heart in disease and health, by their experiments upon animals, which were brought under the influence of the woorara poison, operated upon, and

* Many must remember the [illegible] which met in the early days of the [illegible] at the [illegible] and other animals, at the Royal Institution. [illegible] to be interesting pieces of the Natural Sciences, of [illegible] demonstrating the effects upon animal [illegible] are pumped [illegible] audience [illegible] propriety in the [illegible].

* Fourth annual meeting of the International Association for the Total Suppression of Vivisection, held June 15, 1880. At this meeting, according to the *Times* of June 16, Lord Halsbury proposed a resolution demanding the total abolition of the practice of vivisection, on the ground that it was not only scientifically useless, but opposed to the laws of God, and the higher interests of society. He declared his belief that, if the opinion of learned men could be obtained, it would be found that no result would ever be acquired from vivisection adequate to the torture it inflicted. The Marquis Townshend, in seconding, complained that the medical profession did not come forward and answer the statements averred against it. Lord Shaftesbury expressed his hearty concurrence with the object of the Association. Experience had shown that regulation of vivisection was not effective. It could not be kept within bounds without total prohibition. He found day by day men of knowledge asserting that vivisection was not only useless, but actually dangerous, through being misleading. They found that dogs were very different animals from men, and he might be allowed to say, in many respects very superior animals to men.

† Whose experiments on animals, on the contractility of the air tubes, are of great interest. See the *Edinburgh Medical and Surgical Journal*, 1837, and *On Diseases of the Chest*.

the sounds of the heart ascertained. One of the first outcomes of Harvey's discovery was the tourniquet; and I think we may estimate that that simple instrument alone has saved more lives than probably have been lost by the lower animals in vivisection. Again: much was gained in the treatment of aneurism by Hunter and Sir Astley Cooper by their experiments. Transfusion of blood, as before alluded to, was entirely ascertained from vivisection; as also the torsion of arteries and other modes of surgical treatment, all bearing upon Harvey's great discovery.

Concerning the nervous system, we have the well-known experiments of Sir Charles Bell, followed up by those of Dr. Marshall Hall, whose discoveries have been ranked by many as only second to those of Harvey himself;* and later by Dr. Brown-Séquard, whose experiments on the nervous system of animals led to very important results. That Jenner experimented upon animals in his investigations concerning vaccination is a fact too well known to need insisting upon. The great cry of the anti-vivisectionists is, that if animals are operated upon at all, it must be when under the influence of an anæsthetic; but we may well retort: *How were the influences of anæsthetics discovered but by experimenting upon animals?* We find that Sir J. Simpson sought long for an anæsthetic, and tried many and various drugs on the lower animals, before he discovered chloroform; and our own reason would tell us that every sensible experimenter would fear to try the effects of such powerful agents on human subjects until they had been proved upon the lower animals, let the possible suffering caused be whatever it might. Surely no anti-vivisectionist will dispute the value of this discovery, which, as Sir James Paget so ably puts it, in his paper on Anæsthetics in the *Nineteenth Century*, has, more than any other, added to the sum of human happiness. "Past all counting", he says, "is the sum of happiness enjoyed by the millions who, in the last thirty-three years, have escaped the pains that were inevitable in surgical operations—pains made more terrible by apprehension, more keen by close attention; sometimes awful in a swift agony; sometimes prolonged beyond even the most patient endurance; and then renewed in memory or in terrible dreams. These will never be felt again." I need hardly call to the mind of my hearers the use obtained from anæsthetics, as a means of diagnosis of tumours and of conditions apt to be masked by muscular spasm.

We must remember that Galvani made his first discovery (in galvanism) by means of his experiments on frogs, which experiments have led to all we know about current electricity, electro-magnetism, magnetic electricity—with all their applications to therapeutics, electro-telegraphy, plating, lighting, etc. It is not necessary that I should here explain the immense importance of galvanism and electricity, both in diagnosis and in the treatment of disease. We also find that experiments were made by Fontana, Hunter, and Brodie, as to the effects of lightning, with some results as to the treatment of those affected by this agent.

I will next touch upon a subject which is at present claiming our serious attention—viz., contagion, infection, induction, and transmission of disease. It seems absolutely necessary that in researches of this kind experiments on animals should be performed.

If the hands of skilled operators are tied and shackled, most important results may be lost. I may mention that Dr. Wilson Fox and Dr. Andrew Clark, two of our Fellows, have performed most interesting experiments on animals as to the artificial induction of tubercle.

The action of various poisons of an animal and vegetable nature is also receiving much attention, and their antidotes are being carefully searched for. And, under this head, we may put that terrible affliction known as rabies or hydrophobia.†

At present no satisfactory treatment has been discovered for it, though there is reason to hope that we may eventually find such; but how can it be discovered unless by experiments on animals, and by subjecting them to the sufferings to which human beings are liable? We may mention that the late Dr. Swaine Taylor performed many experiments as to the action of poisons upon the lower animals in several cases where an accusation was brought against persons for murder by poison—experiments upon which the life of a criminal might be said to depend. In Mrs. Marshall Hall's interesting Life of her husband, it is related that at the time when some lamentable cases of criminal poisonings occurred, in which the employment of strychnia was suspected, but which could not be satisfactorily proved by the ablest analytical chemists (contestable results alone being obtainable in certain cases), Dr. Marshall Hall, having shown the extreme susceptibility of the frog to strychnia, suggested that it would prove the most delicate test of the presence of the poison, and, aided by Mr. Bullock, of Hanover Street, and myself, he performed a series of experiments which satisfactorily demonstrated that a young frog might be violently affected by the five-thousandth part of a grain of strychnia. It must be remembered that experiments on lower animals assist us in obtaining a knowledge of the action of remedies upon the animal economy—of their antagonism to each other—as also of the antidotes of poisons. In proof of this I could, if opportunity permitted, adduce numbers of examples.

The third assertion of the anti-vivisectionists is, that the practice of vivisection is necessarily so demoralising that under any circumstances it ought to be forbidden. Their cry is that experiments of this nature ought not to be undertaken because of the hardening effect on the moral nature of an habitual contemplation of suffering without any effort to relieve it. Surely this is a perversion of Butler's argument; for it is not the misery endured by the animal under investigation that is the object of contemplation, as is the case where human misery is passed by unhelped. Perhaps field-sports may in this manner be justified, while all agree that sports which involve cruelty out of all proportion to the benefit derived by man in their pursuit, such as cock-fighting, bull-baiting, putting animals to death painfully where only death is required, should be abolished. (It is unnecessary to point out the wide difference between causing or witnessing suffering out of mere curiosity, or from pleasure in it, and of causing pain in a brute creature with the special object in view of saving suffering to our fellow-creatures.) Undoubtedly no painful experiment should be seen by one unable to comprehend the design of such experiment; his mind would be in an unfit condition, and the moral effect would be bad; and therefore no one should be allowed to make such experiments who has not been trained to observation, and so become capable of making a fit use of his power.*

That legislation is necessary must be allowed, but I think we must also add, that the measures enforced by law should not be of a nature to cripple the hands of those who are fully competent to conduct their researches in an enlightened and careful manner. By restrictions of an unwise nature the very object of legislation may be defeated, as those leading men of our profession who are the best qualified to gain good from operations are scarcely likely to have time or inclination to go

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* I would here desire to mention how much Dr. Marshall Hall's method of assisting the apparently drowned is valued. This will be seen from the following notice of the National Lifeboat Institution, lately printed:—"The National Lifeboat Institution continues to use every effort to distribute and make widely known throughout the British Isles and the colonies its admirable instructions for the restoration of the apparently drowned. When it is remembered that in one year no less than two thousand six hundred persons were drowned in the rivers, canals, and lakes of England and Wales, excluding Scotland and Ireland, and that this probably is the average number drowned every year in those waters, it will at once be seen that these very important, but simple, instructions cannot have too large a circulation. Their leading principles are founded on those of the late Dr. Marshall Hall, combined with those of Dr. H. R. Silvester, and are the result of extensive inquiries which were made by the Institution in 1863-64 amongst medical men, medical bodies, and Coroners throughout the United Kingdom. They are now exclusively in use in her Majesty's fleet, in the coastguard service, at all the stations of the British Army at home and abroad, in the lighthouses and vessels belonging to the Corporation of the Trinity House, the Metropolitan and provincial police forces, the London Board Schools, and the St. John Ambulance Association. They have also been translated into all the European languages, and have appeared even in the Chinese language. We may add, that large illustrated placards of these instructions, and small copies of the same, are supplied by the National Lifeboat Institution, Adelphi, London, at a cost little beyond the actual price of the paper on which they are printed."

† I have in my possession some documents bearing on the way in which the spread of rabies in Norway has been met by the Government. In correspondence with Dr. Hornemann, State Councillor at Copenhagen, and Dean of the Danish College of Health—the permanent Medical Council to which all medical and hygienic questions are referred by Government, and which has certain judicial functions as to questions of responsibility for actions, etc.—that gentleman wrote to me, January 29th, 1879, as follows. "First, I must state that the Danish General Board of Health, or Royal College of Health, has no President, but a *Decanus*, renewed every year, so that I am no President, but only one of the eldest members of the Board. Besides this General Board of Health, which is only consulting, we have a Veterinary Board of Health to attend to all epizootic diseases. From the documents I hope to send you, you will see that all special and extraordinary steps against hydrophobia were taken by the Government and that Board. A report on the hydrophobia in Denmark in 1874, 1875, and 1876, is just now published in the *Transactions of the Royal College of Health*, and reprinted in No. 5 of the medical paper (*Ugeskrift for Laeger*, or Medical Weekly Report) which I hereby send you. From this report, you will see that the disease first appeared in the year 1874 in Jutland, apparently introduced or coming from Holstein and Slesvig; and as the first cases (amongst dogs) were a little doubtful, and very few, the Government did not put the existing law, or the Epizootic Act of December 29th, 1857, into execution, but only ordered, through the local authorities, to kill all suspected dogs, and that the healthy dogs should be muzzled. But next year (1875) the disease reappeared amongst dogs in Jutland, and was transmitted to the island Fyen; and from Fyen, in the beginning of 1874, to Sealand, etc.; and some cases (four) of hydrophobia amongst the inhabitants were observed and communicated to the Royal College of Health. The College (or Board) therefore insisted upon the necessity of allowing the law in its full strength to be carried out for the whole country; and, in consequence of that law, all dogs in the kingdom were locked up or chained, and all loose dogs were killed. So the disease was checked; and in 1877 no new cases appeared. (But the number of foxes seemed augmented, and their boldness much increased.) I hope you will, by means of a translator, find out what is to be observed in the medical paper I hereby send you, and in the documents I will send you as soon as possible."

* Here I cannot resist the opportunity of protesting against the use of vivisection for purposes of examination for medical degrees. I have understood that on one or more occasions, at a certain examining board, candidates have been required to demonstrate on a living animal some parts of the internal anatomy. This custom cannot be sufficiently repudiated.

through tedious difficulties in gaining licenses, and resorting to the places where alone such experiments can lawfully be carried on. In looking over the reports, just published, given by the Inspector to the House of Commons for the last two years, it has struck me that the number of experiments has been greatly on the decrease—481 having been performed during 1878, and only 270 during the year 1879. No doubt the anti-vivisectionists will triumph in this fact; but is it not possible that those in whose hands the experiments would be the most safe and valuable have been withheld from making them? while, as we well know, the unscrupulous, who would not hesitate to evade the law, and carry on experiments in an underhand way, are the most likely to conduct them carelessly or with cruelty. I think I may, with propriety, mention, that a series of experiments likely to lead to important results ave lately been arrested in a hospital with which I am acquainted, rom a fear that, with the extravagant outcry of the anti-vivisectionists n the ears of the public, the interests of the hospital might be injured f a licence were taken out, by means of which alone such experiments could legally be carried on.

To show that the character of those who have practised vivisection has not been such as to lead us to suppose that they would be unmindful of suffering, or that the experiments had had a hardening effect upon them, we may allude to the man in honour of whose name we are assembled to-day. It is impossible to carefully study his life without being struck with the humanity, benevolence, and kindly feeling which under all circumstances he displayed. Those who have before me stood in this place have given us in full the history of Harvey's life and labours, so that we feel to have an almost personal acquaintance with him, can picture him in his daily and domestic life, and fancy we can see him feeding and talking to his pet parrot in a tender manner, which could scarcely be looked for in a man whose moral nature had been hardened by witnessing suffering which he had needlessly or carelessly caused.

(To be continued.)

THE METROPOLITAN WATER-SUPPLY.—In the annual report of Colonel Bolton, the Water Examiner, appointed under the Metropolis Water Act, 1871, it is stated that during the year 1879 "considerable advance has been made in extending the constant supply to the metropolis, upwards of one-fourth of the total number of houses supplied being now on constant service." Colonel Bolton advocates a public administration of the metropolitan water-supply under one authority. He adds:—"Under the system of proposed unification, and pending the establishment of other sources of supply, a project which has long been under consideration, for collecting and impounding the upper waters which flow into the river Thames, during the time when such waters are in a state of the greatest freedom from impurities, might be practicable. It would necessitate the acquisition of large areas of land at suitable places, which could not well be acquired by any individual company on account of the great cost and the difficulties of obtaining the necessary compulsory powers of acquisition and subsequent protection, all of which, however, could be readily accomplished by a public authority intrusted with the administration of the metropolitan water supply; and such impounded waters would thus be common to and available for the districts now supplied by the six companies drawing their supplies from the river Thames." Colonel Bolton concludes as follows.—"1. Unification of the metropolitan water-supply will insure a better supply of water, both as to quantity and quality, on more economical terms, and, consequently, at cheaper rates, than can be afforded by several independent companies. 2. It will ensure the introduction of constant service at an earlier date, and at a cheaper cost of alteration and adaptation of fittings. 3. It will effect a saving, immediately, of about half a million sterling, by rendering new works proposed to be carried out unnecessary, and will utilise for districts requiring extensions the spare power now existing in other districts. 4. By the redistribution of the several districts into zones of levels, not only will the supply be better regulated, and waste prevented and controlled, but a great saving will be effected in pumping and other distributory expenses, in addition to the economy secured by consolidation of administration. 5. It will enable the metropolis generally and the heart of London in particular to be better protected from the effects of fire, by the provision of an ample and immediate supply of water under pressure, besides the facilities for the concentration of the greatest available pressure on the most valuable and exposed positions. 6. Greater facilities will be afforded to the local authorities in carrying out these sanitary arrangements in their respective districts, which are dependent upon an ample and efficient water-supply."

AN ADDRESS
ON
NURSES AND NURSING:

Being the President's Address, delivered at the Annual Meeting of the Metropolitan Counties Branch.

By S. O. HABERSHON, M.D., F.R.C.P.,
Senior Physician to Guy's Hospital; President of the Branch.

I AM deeply sensible of the honour conferred upon me, in placing me in the position of President of this Branch of the British Medical Association, and I thank you for the confidence you have in me. I cannot be unmindful of the distinguished members of the profession who have previously held this office, and none more distinguished than the surgeon who this day resigns the chair. The knowledge of their character, and of their ability, the consciousness of their talents, and of the manner in which they have discharged the office devolving upon them whilst occupying the presidential chair, make me feel my own incompetence, and my insufficiency. I trust that that incompetence, and the shortcomings connected with my own service, will be lost sight of in the practical operations of this Branch of the Association, and that the year may be one of good success.

Nearly forty years ago, the British Medical Association began its useful career. Like the spring of a great river, its source was scarcely recognised; it might have passed by unnoticed and forgotten; but, as the distance increases from its source, the stream widens, till, like the great river before us, it becomes a mighty stream. So with the Association; each year its power has expanded, its breadth of usefulness has increased, and the effects of its beneficent influence have spread throughout the land.

There is a value in association which can be gained by no individual effort, however wise and energetic that effort may be. One drop of water may be charged with mighty influence and latent power, but it can never form a river, and myriads of drops must be combined with one another to form the Thames, or any of our fertilising streams. Association, combination, co-operation, are the sources of our strength and power.

The value of association is seen in its effects on the *interchange of thought*. A thought, however true and real it may be, requires embodiment in living action, that its power may be realised. If it exist alone, it may be lost, but, when planted in the minds of a hundred or a thousand others, it becomes intensified; thus with a galvanic battery, the increase in the number of cells augments the power; but not only is the power multiplied in the interchange of thought in our Association, but the pleasure is enhanced; and in the several meetings of the Association, this truth is continually manifested.

Need I refer to the British Medical Association in its *promotion of science?* Not only by its grants, by its general encouragement to the varied branches of professional knowledge, and its collateral sciences, does it effect this object, but the JOURNAL of the Association may be, and has been, a help to pioneers in science, and to those engaged in the advancement of learning; and it has also diffused the clinical researches and the labours of the members of the profession throughout the whole of its ranks.

The benefits that arise to the profession by the promotion of *kindly feeling and mutual confidence* are found, not only in the large annual meetings of the whole Association, but in those varied Branches, which I am glad to learn are constantly increasing. This Branch Association has grown to formidable proportions, and it is now subdivided into other Branches. These, during the past year, have had most valuable meetings, and I need only refer to the discussion on antiseptic treatment to illustrate the value of its work. The simple clinical detail of the cases that occur in everyday practice, with the practical lessons connected with them, are of inestimable value, and are full of interest.

With these several benefits from association, not the least is the power afforded for *united effort;* there is irresistible energy when elements of living force are combined, sometimes like the torrent that breaks forth, and carries everything before it; at another, like the continual dropping upon the hard stone that corrodes, the effect of which is seen after long action. But with the increase in power, there is the greater responsibility, lest it be misused, or directed into some injurious or unworthy channel. The larger the vessel, the greater is the impetus,

and the more important is the helm that guides the ship. If I were to refer to the good work that the Society has effected, I must have a longer period than is at my command. I might refer to its work in connection with Poor-law medical officers; with the laws connected with the Army and Navy Medical Services; with medical education; with professional representation; with the abuses of gratuitous medical advice; and, more recently, with the laws of vaccination, and the devising of means for the removal of objections to its universal use; but I wish to confine my remarks to some topic of general interest, and, amongst those subjects that are just now commanding universal attention, there is none, perhaps, more suitable at the present time, than the subject of *Nurses* and *Nursing*. My mind has been continually occupied with it, and many will share in my thoughts respecting it.

The medical profession cannot stand alone; it requires help; and a well trained and efficient nurse is one of its most valuable assistants. Who is there that has not felt the need, and who amongst us, that has seen anything of professional life, that has not felt that he might be infinitely more useful, if his efforts were seconded by the constant watching of a sensible nurse? Sometimes, the medical man feels that he is almost powerless, unless he can become nurse as well as doctor; at another time, he is thwarted by the meddlesome interference of a conceited and ignorant busybody, called a nurse.

Perhaps it may enable us to understand what we really desire, if we consider some of those specimens which are objectionable; and first let us recognise a *conceited nurse*. She appears most attentive and conciliatory, but quickly shows that she is quite satisfied with her own attainments; she was trained at such an institution, and received a certificate; she has nursed under Dr. or Mr. ——, men of the highest talent and world-wide fame; she had seen similar cases, and "brought them through", and well understands nursing in all its details; the doctor is all very well, he may give his directions, but as soon as his back is turned his orders go with him, and are set at naught, or even laughed at. "Oh, that may be very well, but I know what will be best." The nurse follows out the doctor's directions only as far as she chooses; and, if the patient recover in spite of her folly, she will chuckle that she has been the means of his restoration; and if the contrary, who is there to tell us what has been done? In a case of acute disease of the kidney or of the lung, where warmth is necessary, and ventilation has to be effected by the fire, and door, and other collateral means, the doctor may be no sooner out of the door than the window is opened. Ventilation is most important, but the nurse measures the temperature by her own feelings, and does not regard the draught on the patient. The doctor may think that the skin should perspire, but the nurse feels the room very oppressive, and she "ought to know", from her long experience and training. In a case of acute mania, exhausted with constant talking and want of rest, requiring nourishment and quietness, I have known the nurse, as soon as the doctor left, persuade the friends that a dose of calomel would be most effective; it was administered, the full purgative effect followed, and in a few hours the patient died from exhaustion. A conceited nurse is a terrible nuisance to a doctor, and a grievous injury to the patient.

Some nurses are, however, most *pretentious*. Let us watch one. An eminent surgeon a short time ago, at his time of consultation, found that the nurse had arrived with two stethoscopes, two thermometers, and a case of instruments—pretty well for a beginning. The surgeon justly said to his colleague, he thought that their presence was not needed. Worse, still, is the *meddlesome* and *officious* nurse. The doctor may give his directions, but he cannot enter into every negation. The patient may require absolute rest, but there must be constant washings; in how many cases is the life of the patient sacrificed, if the rules have been given to the nurse in her official training, that the back is to be washed and dusted? The doctor may order, as in a case of acute cæcal disease, that the legs are not to be moved, that the patient is to remain perfectly quiet; but the patient is pulled about, raised, and his back washed; or he is taken out of bed, and his bed made; and if it be objected that the doctor is disobeyed, it is at once stated, "You did not say that he was not to be so treated." As well might oysters be prescribed, and the shells be also administered; the contrary was not ordered. We have known a patient's life sacrificed when, having acute cæcal disease, she was directed to take a walk round the garden to relieve the so-called stomach-ache. And a case of general peritonitis would have little chance under one of these meddlesome nurses. Such a nurse would be very likely to administer a dose of castor-oil after an operation for hernia, or to give food on a liberal scale after concussion of the brain, or in serious injury to the chest, or in pneumonia.

A *lethargic* nurse is equally to be deprecated, where constant watching is required. It may be, in great prostration, food is to be administered every half-hour or less; but, because the patient remains quiet, it is not given; or the patient hesitates, and the nurse has more lethargy than tact, and allows precious time to be wasted. She quietly goes to sleep, because the patient does not ask for nourishment, or perhaps she places it at the bedside, in order that the patient may help himself. Willing, but obtuse, a nurse of this character is out of her proper sphere; but, unfortunately, instances of this type are not very rare; and some of the obstetric nurses, whose only training has been that they have had children themselves, are good illustrations of what is meant.

Other nurses, almost of the same class, we might regard as *obstinate*; but, perhaps, it may be from want of apprehension. The directions are given and repeated, but not carried out, and the excuse is made, "I thought so and so", instead of implicitly carrying out the orders of the medical attendant. One attempt is made after another to explain to the nurse, and the reason of the treatment is laid down, but still it is of no avail. A patient, for instance, may be almost dying from hæmorrhage, from the stomach or some other part, and the nurse is directed not to raise the head of the patient, lest syncope should be induced; not to allow the patient to move; not to give spirits by the mouth, but by enemata; but the thoughts of the nurse run counter to the express injunctions of the doctor. So, in aneurismal disease, and many others, the reasons for the plans adopted are not understood and are set aside. It is often difficult to say how much is perversity and how much is ignorance.

A trying type of nurse is one who is *worn out*, it may be, by advancing years and long service; but the senses are failing; the sight is so imperfect, that directions for the medicine are mistaken; the memory so defective, that ordinary things connected with the patient are forgotten; the hearing so blunted, that the patient's call for help is unheeded, because unheard.

How often has the doctor, and, still more, the patient, been tried by an *intemperate* nurse? We have known a private nurse found helpless on the floor of the room adjoining the patient, having taken all the wine or spirit left for the sufferer; or in such a helpless state that no directions could be given about the patient. These things occasionally happen in institutions, but far more frequently in private practice.

It is equally bad to have an *unsympathising* and *heartless* nurse, one who takes no heed to the little wants of the patient, but is put out by the irritability of the sufferer, or by the restlessness consequent on weakness. I have sometimes been most indignant to find that the cruel heartlessness of the nurse has aggravated the trials of the one laid low on the bed of suffering and death. But, whilst these are some of the characters of nurses familiar to every medical practitioner, they are but isolated instances—often bringing out, in brighter relief, the zealous care and the untiring devotion of those who have sympathy, combined with skill, and whose attention receives the warmest thanks of the sufferer. Often, in the wards of Guy's, have I seen the most attentive care and gentle watchfulness to the sick. Although untrained, according to modern notions, they were worthy patterns of what a nurse might do and be.

If such be the hindrances, how are they to be remedied? We would answer: By the training of proper nurses; by the employment of persons of good and worthy character; and by the encouragement of those who are suitable for this noble service. It is a service becoming the most educated minds and the most refined intellects; but it is not confined to one sex—nor to any class of society; for the gentleness and the refinement are not always in proportion to rank and position. Some of those who have been in the lowest ranks of life are examples of the gentleness and kindness, the skill and tact, which go a long way to produce the efficient nurse.

There is a great difference between the training of women and the training of nurses. Unless a woman have a good character, and be sober and cleanly in her habits, neat in her person, orderly in her ways, able to restrain herself and to use tact and kindness, and especially sympathy and gentleness, no amount of nurse-training will be of any avail. There are some nurses who, under the peevishness and fretfulness of disease, become angry and disturbed; for oftentimes the weakness of disease brings out the bad traits of character. The power of mind is then unable to govern and restrain the temper and the words. In these states, a nurse of proper character, who can sympathise with the weakness of the patient, will try to soothe, and will bear rather than resent.

The actual nurse-training is acquired by practice. How to move a patient, and to make the bed comfortable without aggravating disease; how to feed the sufferer; how to attend to those appliances which sick persons require—such as poultices, fomentations, bandages, etc.; how to keep patients clean, without augmenting disease and torturing them. Cleanliness is good, but to use turpentine to cleanse the feet is bad and needless. To wash a patient is good, but to persist in it may be a great nuisance. An old man, who had seen better days, and had fallen into neglect and affected with disease, was nursed by trained attendants.

The first day, they washed him well, and probably with advantage; the second day, the process was repeated; and on the third day, since the washing was a requirement of the nursing, the old man preferred being without the services of the nurses, and dismissed them. It is important to prevent bed-sores, and this may in most cases be done; but, unless the greatest care be used in attending to the especial need of a patient in other respects, a bed-sore may be prevented, but life may be sacrificed. It is the duty of the medical man to direct, in these matters, in all cases of acute disease; and, by nurses arrogating to themselves what is out of their province, they may thwart the medical attendant, and do more harm than good. Again: it is necessary that a good nurse should be able to observe the changing states of the patient, so as to report to the doctor; but this requires much practical experience.

But, where should this training be effected? Partly in private practice, but still more thoroughly in public institutions. This training, however, ought not to interfere with the staff of efficient nurses required for the hospital, but there should be an auxiliary band to the regular nursing staff. The remark has been made, and it is quite correct, that women who have borne the brunt of rougher work are more suited than those who have been brought up in the lap of luxury for the enduring fatigues of a nurse's life; but this does not interfere with the wide sphere of useful service for those who have received more intellectual training. The *training* of nurses must necessarily come from the doctors, just as right nursing must be under their control. The doctor must, in his practical knowledge of disease and its requirements, be the director in the details of nursing: as to the position of the patient, whether in heart-disease or aneurism; how the pain of pleurisy, or injured chest, may be lessened by gentle pressure; how the head is to be placed in syncopal, or raised in cerebral, disease; how the patient can be moved, if moved at all, with the greatest gentleness in peritoneal affections; so, also, how the room is to be ventilated; how the food is to be regulated—in its kind, its quality, the mode and time of its administration. These, and a hundred other questions about the nursing, must spring from the knowledge and be under the direction of the medical attendant. The nurse learns these things from him, and from him only. Another nurse may have personally acquired the knowledge and again communicate it; but the lessons vary with individual cases and particular modes of treatment. A nurse, who had not received her lessons on antiseptic treatment from the surgeon, would have no knowledge how to act in such cases. The training of nurses is one question, but the administration of hospital nurses is quite of a different character.

In hospitals and in public institutions, the nursing arrangements are drawing increasing attention, and various are the means adopted in securing an effective staff. In small hospitals, containing a comparatively few beds, the matron has directly under her control the several nurses, whether day or night, that constitute the active working staff of service; and it is considered, and that most justly, that, whenever possible, the household work—of cleaning, etc.—should be separated from the actual nursing. Where, however, the institution is larger, other arrangements are required; and several modes of operation are found in different hospitals. In some, there is the *central* system; and in others, what is called the *ward* system; and, again, there are modifications of these. In reference to the first, we may describe its general characters in a few words: the matron is the head of the whole of the nursing staff, and everything comes under her direct cognisance and control; whilst in each ward there is a presiding sister or lady-director, herself under the control of the matron, who has the supervision of the nurses, day and night, head-nurses, and probationers, helps, and ward-assistants, whatever they may be designated. The authority, however, is purely a central one, although the sister of the ward receives the directions of the doctor, and sees that his orders are carried out; but any wishes, or complaints, or charges concerning the nurses must be made to the matron by the doctor. Still, in this system—central, as it may be called, as regards its presiding genius—the matron is governed by a committee, as we see at King's College Hospital, University College Hospital, Charing Cross, and I believe some others; upon which committee the medical men are strongly represented, in order to direct the nursing arrangements. This is the case at King's College, even although the nursing of the hospital is farmed out (if I may use such a term without in the least having any invidious meaning) to St. John's Home.

Other large hospitals—as St. Bartholomew's, the London—are under what may be termed the *ward* system: the matron is still the head of the nursing establishment, but the individual sisters of the wards have more control in the wards; the nurses, probationers, and various other women employed are more directly under them, although appointed, engaged, and dismissed if need be, by the matron. The sister would receive any complaints or directions from the doctor, and be the channel of communication with the matron; the sister of the ward being as the colonel of the regiment, the matron as the general of the army or of the division. In a large hospital, this ward system works, we believe, better than the central one; it is more efficient, and works more harmoniously. The doctors are still consulted, as in the London and, I believe, at St. Bartholomew's hospitals, in the nursing arrangements as regards the medical requirements.

In other cases, there is a modification of these; but, at Guy's, an unique plan has been adopted during the last few months. The matron is made by the treasurer of the hospital supreme; not only to take the whole control of every ward, so that every complaint of an unfit nurse is to be taken directly to her, but varied regulations directly affecting the wellbeing and impinging on the treatment of the patients are introduced and arranged by the matron, sanctioned by the "sole executive authority" without any consultation with the medical staff. As one by one these wonders of nursing skill were propounded and found injurious, they have been dropped, or set aside, or modified; but still the power is maintained, and the medical staff are *practically* placed at the mercy of the matron. I say, this is an unique plan, and I know not its equal in the civilised world: in former times, the treasurer consulted the staff, and the matron was subordinate; but now science is placed on the lower scale, and arbitrary rule tries to enforce its orders and to control the requirements of the physician.

How long this state will last, I cannot tell: it is like one of those excrescences which we sometimes observe in the unnatural workings of perverted force—loathsome when it is witnessed, and injurious in its effects. We trust that it will, like some early abortions, speedily cease to exist.

In the hospitals, nurses are trained and have been trained well, and we desire most earnestly that this good work should go on and increase; but the new and inexperienced ought not to take the places of the old and efficient staff. The nurses which are necessary for the requirements of the sick should be permanent in their character, both for the sake of the patients, with whose maladies they become acquainted, and for the necessary observations and attentions of the medical men; in special wards, and where peculiar modes of treatment are carried out, this continuance of the nurse is especially desirable. To change a nurse in the midst of a critical case, or to place one who has been with contagious malady—as scarlet fever or erysipelas—to nurse a patient who has undergone a surgical operation, would be most disastrous. There are occasions when we must require a change in the nurses; but, as a rule, the responsible nurses in a ward should remain attached to one sphere of work, at any rate for a considerable period.

Many nurses who apply are too young; it is better to have those who have seen and experienced more of the roughness and work of life than those who have just attained to womanhood; and it is, I think, especially desirable that the sisters of the wards, who have the control of nurses and other attendants, should be married women, and at least over thirty years of age. To have the very young and inexperienced, is almost as great a mistake as to employ the aged, the infirm, and decrepid.

I think there can be no doubt that the training of nurses is best effected in public hospitals; for in them there is greater variety of disease, important surgical operations are more frequently performed, and the opportunities of watching special forms of disease are more numerous. But, as I have before said, these nurses should be, as far as possible, independent of the requirements of the hospital; otherwise, patients will be injured or lost by the mistakes of these inexperienced attendants. Probationers there must be; but they should not be placed in responsible positions till they have acquired sufficient knowledge. The duration of this training must vary according to circumstances: a whole year is not too long a period when it can be so arranged; but very efficient nurses have been trained in six months, or even in three months. The careful Bible nurses, whose services consist in kindly help rendered from house to house of those who are lying in beds of sickness amongst the poor, have been most valuable; but they do not require the training of those who have to take charge of cases of serious operation, as ovariotomy, or amputation of a limb, or tracheotomy; and, again, where a nurse is expected to know both how to attend to medical and to surgical cases—to diseases of the womb as well as to those of the eye—a longer period must necessarily be taken in her training. To train a nurse only in a surgical ward, and then place her in charge of a case of acute disease of the lung, would be as injurious as to apply the rules of ventilation adapted to a ward full of wounded soldiers to one containing acute disease of the bronchial tubes, the lungs, or the kidneys, acute rheumatism, and the like: in the former, fresh and cool air is beneficial; in the latter, a pure but warm atmosphere is indispensable. This danger of imperfect training is greater than may be supposed, for the nurse very frequently does not thoroughly appreciate the different condition in which the patient is placed: the surgical

case requires absolute rest to the limbs; the medical, rest to the injured or inflamed internal viscera.

But, when the training has been acquired, how is the nurse to be known by those who require her services? What is to be the connecting link between the patient and the nurse? The one requires the service; the other is willing to render that service. There are several methods to answer these ends: first, those adopted by private nurses; secondly, the formation of associations of nurses; and, thirdly, the formation of sisterhoods.

1. As to *private* nurses, the difficulty is to publish their addresses, the times when they are free, and the extent of their qualifications. Medical men who have known their skill are glad to employ them in other cases; and patients who have been benefited by their attention and watchful care are glad to recommend them to their friends, that they may receive similar benefit. Many private nurses are fully occupied; whilst others have months of continuous work, followed by an equal or longer period of absolute idleness. All their savings are wasted; and they quickly lapse into a state of depression and anxiety, or, despairing of future employment, join some public institution, or unite themselves in some association of nurses. Another disadvantage also is that, during the time that a private nurse is away from her home, the expenses of rent, etc., continue; and sometimes she may return home to find her room cleared of its valuables, and herself comparatively destitute. On the other hand, there is often more than corresponding advantage in the nurse having the whole of the money which she has so well earned for her own requirements. It would be a great boon, if there could be a registry home of private nurses, where persons could apply for them, where an account might be kept of their recommendations, the pay expected for their services, and whether they were free for fresh work. It would greatly assist many poor but most valuable nurses, if such an office or registry could be provided for them. A small fee for registration might be paid by the nurses, and another small fee by those who employ them, in order to meet necessary expenses.

2. A second plan for making nurses known, and for meeting the requirements of the public, is found in the various *associations* of nurses. Some of these are admirable institutions, of great value to the nurses, and certainly of great benefit to the public. In some, arrangements are made for training; in others, there is merely the association of those who have been already trained for the work. In some of these associations, the arrangements are strictly for the mutual benefit of the nurses; as small a sum as possible is taken from their earnings for the payment of the expenses of the institution, and for their board and lodging when not employed. In others, the nurses are engaged in such a manner that only about one-third of their earnings is really received by them; the nurses are let out, but the real profit is to the proprietor. This is a method that is much less to be advocated; for if in any case the labourer is worthy of her hire, this is certainly true in work so self-denying and arduous as that of a sick-nurse. There are, however, great disadvantages in the rules that are laid down by some of these associations, which may act injuriously upon the patients, and which make many persons shrink from asking for nurses from such sources. I refer to rules regarding the times for rest and for recreation, and sometimes for the removal of the nurse after a certain time. The necessary removal of a nurse after three months' attendance on one case is very objectionable, and may be most injurious to the patient; and the rules as to times of rest and recreation should not be of such a rigid character that they cannot in any case be set aside. I have known a nurse go for a walk as soon as she reached the patient's house, saying that she would see the doctor on his next visit; and another has left the patient at a most critical period of illness, when her own rest might easily have been postponed. There is always the danger lest the welfare of the nurse and her comfort be considered before that of the suffering, or it may be dying, patient. In some of the nursing institutions, and in some instances where the training of nurses is looked upon as the *primary* object, the patients certainly suffer, and their wants and requirements are disregarded. Disease will not conform to the rigid rules of any association; and, unless there be some liberty in the carrying out of these rules, the value of the association as a means of tending the sick and promoting their recovery must be lessened. The last phase of nursing associations is the formation of a company of limited liability. It may be very valuable; but I should think the patients will be anxious to be free from the liability of being badly nursed and injured whilst these limited liability nurses are being trained. I believe, however, that some of the associations of nurses are of the greatest public benefit. They are well conducted; the nurses are of excellent character, and all confidence may be placed in them.

3. The last method of making known the nurses, and of rendering them available, is by means of *sisterhoods*. Earnest women, often of the highest intellectual ability and training, are associated together; there is a strong bond of self-devotion to the work. With many, a true interest is taken in the discharge of the duties, and the greatest self-sacrifice is willingly offered. It is true that sentiment may sway the feelings and guide the imagination; but, for all that, some of the sisters connected with these associations are most efficient in their service, most watchful in their care, and they act under a high sense of duty. Kindness and gentleness are often combined with attention to the patient and a careful carrying out of the wishes of the medical attendant. Whilst allowing all this, there is, I think, the greatest objection to these religious sisterhoods. The same devoted nurses would be better without the bondage, and would be of more real value because more free. Religious observances are associated with the nursing duties; in fact, in these sisterhoods, the bond is of a religious character, and the rule is of the most rigid kind. In the association of nurses, the comfort of the nurse is often placed before the wellbeing of the patient; *here, religious* observances are placed above the duties of the nurse, and she must conform to the requirements of the order. It is a state where religious feeling and sentiment have sway. The dress, in all its detail, is of great moment; and badges must be worn, and the cross made into an idol, and worn as an ornament. It would seem sometimes as if the form of the nurse's cap was of especial value—it may be, extending to broad lengths of stiff starchy material. Would that it benefited the patient to the same extent as it panders to the pride of the wearer! Unfortunately, these sisterhoods are often a bondage to those who are entrapped by them, and but few have the moral courage to break the bond. When a hospital hands over its nursing to such an institution, it does so bound hand and foot, and with eyes blinded, I almost think. The control is outside the hospital; the appointments, the arrangements, the changes, are all made by the "mother" of this sisterhood; even the very names of the nurses are withheld, and their names are often changed. It is, unfortunately, too often a religion of externals. But mere external religious service becomes a bondage; and, although beautiful to man, it has no acceptance with God, and the reward is only that of human praise.

The more that nurses are actuated by truly Christian principles, the better will they discharge their daily duty; the higher their training, the more efficient will they become; and the more the mind is educated, the more humble will that mind be found, for increase of true knowledge leads to humility. The work of the nurse is a most important one, and its value is becoming more and more appreciated by the public; but it must be kept in its proper place. The nurse is not, or ought not to be, the doctor; nor can the medical man bear the offensive interference of conceited attendants. In private practice, the nurse may thwart the surgeon; and, in public institutions, those who ought to be an efficient help may become an unbearable hindrance. If the medical profession takes its proper place, the question is more easily settled; and the hearty co-operation of the nursing with the medical staff will enhance the value, promote the usefulness, and greatly increase the benefit of any institution.

I hope that the British Medical Association will be able to assist this great public requirement by the experience and the suggestions of its Fellows; namely, the providing of well-trained and efficient nurses in our public institutions and in the homes of the sick.

A NEW SANATORIUM FOR LONDON.—On Thursday last week there was opened a sanatorium and hydrotherapeutic establishment of a very superior character in the immediate neighbourhood of London, and many eminent members of the profession testified their interest in the undertaking by their presence; among these were Mr. Luther Holden, Dr. Roberts, Mr. Streatfeild, Dr. Garson, Mr. Parnell, etc. The house was formerly the residence of Lord Liverpool, and is known as Coombe House, Coombe Wood. It has fifty acres of ground, with fourteen acres of pleasure-ground, adorned with a very fine collection of forest-trees and shrubs. Attached to and adjoining are vineries, orchid houses, and a conservatory, opening on to a garden, and overlooking a rose-walk and terrace. There are a good billiard-room and a library; and the bedrooms not only look out on extensive lawns and land belonging to the house, but command a fine view of the Surrey hills. The establishment is under the charge of Dr. MacGeagh, who has already gained valuable experience at Bishop's Down Sanatorium and at Matlock, who has fitted the place with complete sets of baths for hydrotherapeutic treatment. The charm of this place, however, is not only in the facilities afforded for this therapeutic method, but the opportunities which are afforded here for country quiet and the soothing influences of rest, bracing air, fine scenery, and a healthy mode of life. Persons can be treated here under the charge of their own medical man, or can be placed, if desired, under the treatment of the medical superintendent. The establishment of Coombe House is an undoubtedly valuable acquisition to the therapeutic resources of the metropolis.

CLINICAL OBSERVATIONS
ON THE
INTRODUCTION OF TRACHEAL TUBES BY THE MOUTH INSTEAD OF PERFORMING TRACHEOTOMY OR LARYNGOTOMY.

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A FEW facts concerning the introduction of tubes passed through the natural passages into the trachea, instead of having recourse to operations for opening the windpipe through the neck, are considered worthy of attention; and in presenting these, it is thought advisable to confine the remarks as far as practicable to the relation of facts, refraining from entering into the merely discursive side of the question.

In considering the practicability of such a procedure, facts were looked for from various sources. *Post mortem* experience showed that instruments of the tube kind could, after a little practice, be passed with facility through the mouth into the trachea. This was accomplished by introducing the finger into the mouth, depressing the epiglottis on the tongue, and so guiding the tube over the back of the finger into the larynx. In experimenting with various instruments, it was found more easy to introduce those of a large calibre, such as Nos. 18 to 20, than instruments of the size of 8 to 10 catheters—the latter being more liable to catch on the various irregularities on the internal laryngeal surface.

While it was easy to introduce instruments by the mouth into the trachea, it was difficult to pass them through the nose into the air-passages. The nasal passages being on each side of the middle line, catheters passed through them were found to glide to the side of the pharynx, away from the middle line, and consequently away from the larynx; so much was this the case, that it was found impossible to introduce a nasal unarmed catheter through the nose into the trachea by any manipulation outside the mouth. A catheter, having a strong properly curved stilette, after considerable labour and many efforts, might find its way into the larynx; but even this could not be depended on. An instrument can, however, be passed through the nose into the pharynx; then, by introducing the finger into the mouth and hooking the catheter forward and toward the middle line, it can be guided into the larynx, and in this way respiration in the living might be carried on through the nose; but, though nasal instruments can be so introduced into the trachea, it is yet difficult to pass them when compared to the passage of like instruments through the mouth. The nasal tubes have also a decided disadvantage; they are necessarily of much smaller calibre than the tubes which are admitted through the mouth; in most people, one or other nasal aperture does not admit a tube of sufficient calibre to enable the respiration to be carried on easily.

The facility of introducing tubes by the mouth into the trachea having been ascertained on the "subject", the question which next presented itself was: whether there were any obstacles in the living body which would prevent or contraindicate their use. The instructions given in almost every text-book teaching the introduction of œsophageal tubes, would lead one to suppose that not only could such instruments be passed into the trachea, but that it was necessary to give special indications of their presence there, in order to avoid the awkward mistake of injecting fluid or food into the lungs. These precautionary indications are necessary, as, on several occasions, the stomach-pump tube has been unwittingly introduced into the trachea and left there, for shorter or longer periods, before the mistake has been recognised. Among these, may be mentioned the mistake made by no less a surgeon than Desault, who passed a tube into the trachea, left it there for some hours, and only became aware of its true situation when he began to inject food into it.* After the performance of tracheotomy, tubes have been passed through the trachea into the mouth, and the reverse way; and, from the scanty reports of those cases, one gathers that the parts have exhibited considerable tolerance to the presence of those instruments. A couple of cases of cut-throat, which came into my wards about the same time—the one having the windpipe severed immediately above the vocal cords, the other beneath them—showed a great and growing tolerance to external impressions; so much so that, even when the cords were digitally pressed on and held aside, no spasm was produced. Besides these, the passage of metallic and vulcanite instruments, as proposed by Trendelenburg and carried out by Schrötter, with the view of dilating strictures in chronic laryngeal stenoses, prove that instruments can be passed by the mouth and temporarily retained in the trachea without exciting an unsurmountable degree of spasm. And I would say that if they can be retained for ten minutes they might, as far as the fear of spasm is concerned, be retained for a much longer period. With these brief introductory observations, I will pass to the series of successful cases which I had during the year 1878.

CASE I.—*Removal of Epithelioma from Pharynx and Base of Tongue: Introduction of Tube into Trachea through Mouth to occlude Hæmorrhage from Larynx, and for administration of Anæsthetic.*—W. P., aged 55, a plasterer,* was sent me by Dr. Anderson, Duke Street, Glasgow, who stated he believed him to be suffering from epithelioma of the mouth. There was an ulcerated surface of the tongue, and also one on the anterior pillars of the fauces. The last two right lower molars were very sharp and rugged, and, though the ulcer had an epitheliomatous look, it was thought advisable to try palliative measures in the first instance. The two lower molars spoken of were removed, and he was placed under a course of iodide of potassium. After a very full trial, these measures were found inefficient, as, when he was seen by me two months afterwards, the disease had extended. He was then admitted into the hospital.

On admission, he stated that he had experienced for over a year sore-throat, pain in the right ear, and shooting pain in the back part of the tongue. On examining, an ulceration was found on the right side of the fauces, extending from the anterior pillar backward to the posterior wall of the pharynx—the latter of which was invaded for about an inch. From the fauces it spread downwards and inwards to the dorsum of the tongue, and the raised ulcerated margins extended from a point opposite the last right molar to the immediate vicinity of the epiglottis. Histologically, the characters of this disease were epitheliomatous.

With the patient's concurrence, it was resolved to remove the growth. As it was an operation which would cause considerable bleeding, precautions had to be taken to secure the air-passages from occlusion. Hitherto this had been effected by opening the windpipe, by laryngotomy, and the introduction of Trendelenburg's tampon-cannula. Instead of this, I had determined, should an opportunity present, to introduce into the trachea, by way of the mouth, a tube, which would extend beyond the vocal cords, and through which the patient would respire. The upper laryngeal opening could then be plugged outside this tube, so as to prevent the entrance of blood into the larynx. The plug could then be effected in various ways, by causing the tracheal tube to perforate a close sponge of suitable size, which, after the tracheal tube had been introduced, could then be fixed in the laryngeal orifice; by fixing to the tube, at a convenient part, a piece of fine muslin or other material, which would act as the *canule à chemise* used after lithotomy; by inflation of a circular closely fitting bag, etc.

Preparatory to the operation, a tube was several times inserted through the mouth into the trachea, beyond the vocal cords; and it was found that, with the exception of the cough which ensued immediately on its insertion, he bore the tube sufficiently well to warrant the success of the procedure. He could breathe freely through it, and the mucus expectorated was expelled through the tube with considerable force.

The operation was performed on July 5th, 1878. The usual cough followed the introduction of the tube; but it ceased as soon as he received a few whiffs of chloroform, and long before he became constitutionally affected by the drug; the chloroform seemed to exercise a local sedative effect. The upper opening of the larynx was stuffed with a sponge to prevent the entrance of blood. The tube projected several inches beyond the mouth, thus enabling the administration of the anæsthetic to be continued uninterruptedly during the whole operation, without in any way interfering with the manipulative procedure. The entrance and exit of air through the tube was both felt and heard distinctly, so that Dr. Symington (who administered the chloroform) had a ready guide to the state of the respirations. After the operation was finished, when the hæmorrhage had ceased and the patient had regained consciousness, the tube was withdrawn, it having acted throughout without the slightest hitch.

The operation may be briefly described as follows. An incision was made through the right cheek, from the angle of the mouth to the angle of the lower jaw—the latter being sawn through. This line of incision, once previously used by Dr. Foulis, though objectionable on *à priori* grounds, was followed chiefly on account of the extensive view of the internal parts afforded by it. The diseased surfaces were thoroughly removed by the knife, the instrument passing wide of the affected parts. The sawn angle of the jaw was afterwards drilled, and coupled by two strong silver wire stitches. The cheek was accurately brought together,

* Desault by Bichat, [illegible]

* The patient was afterwards shown at the Glasgow Medico-Chirurgical Society.

and a bandage applied to secure immobility of the lower jaw. His after-treatment consisted in perfect quiescence and fluid food. In a week the wound was for the most part healed, the only portion remaining open was that where the wires uniting the jaw protruded through the skin. In a month the wires were withdrawn, the jaw being then firmly united. He was dismissed to the Convalescent Home July 26th, 1878. Since then, he has several times presented himself, and, as he has cultivated a vigorous growth of hair, the facial linear cicatrix is no longer visible. The larynx in no way seemed to suffer, and the voice was in no way affected. The administration of the anæsthetic was carried on through the tube, which projected several inches beyond the mouth, quite uninterruptedly, and without in any way interfering with the operator. The respiration was felt and heard by the administrator; the tube, as it concentrated the flow of air, increased the sensation to the hand and ear. Once or twice during the time he was under the chloroform, mucus was thrown from the tube by an explosive expiratory effort. It must be obvious that as long as the tube which went beyond the vocal cords remained patent, there could not possibly be any fear of asphyxia, and the most frequent cause of fatality under chloroform would be avoided.

REMARKS.—It may be noticed that the tube answered all the purposes for which it was intended. 1. The chloroform was easily, uniformly, and uninterruptedly administered during the whole operation. 2. The administration of the chloroform in no way interfered with the performance of the operation. 3. The ingress and egress of air through the tube were both felt and heard, so that the administrator had a ready indication of the state of the respiration. 4. No blood entered the larynx. 5. The after-result was excellent.

CASE II.—*(Œdema Glottidis: Tube inserted into Trachea through Mouth.*—W. L., a commercial traveller, aged 42, was admitted into the Glasgow Royal Infirmary at 1.20 A.M. on 14th Sept., 1878, suffering from acute œdema glottidis. He had a note from Dr. Macmillan of Paisley Road, Glasgow, headed, "urgent case", and stating, "case of inflammation of trachea, probably requiring operative interference". After the patient was examined by my house-surgeon, Dr. Symington, he considered it necessary to send for me, and at 2.15 A.M. I found the patient in the following state. He sat in bed supporting himself with stiffened arms; his head was thrown forwards, and he had the distressed anxiety so characteristic of impending suffocation depicted on his countenance. His inspirations were crowing and laboured, and there was a very frequent forced attempt to swallow, attended by extreme pain, at the termination of which a long crowing inspiration ensued. He spoke in a muffled whisper, and confined his answers, when possible, to monosyllables, or substituted signs by head or hand. He complained of intense pain—a feeling of suffocation, and begged that something should be done for his relief. On examination, it was seen that the base of the tongue and the fauces were covered with whitened mucous membrane, at parts shrivelled up and pealing off, at others adherent. The parts not so covered were in a reddened congested state. The fauces and the upper portion of the larynx were much swollen, and had a hard thickened feeling, as if they had been slightly burned. The respiratory orifice was so much constricted that the tip of the forefinger occluded it. He constantly signed for cold water, which he took into his mouth, and after abortive attempts to swallow, he rejected it during a fit of coughing.

History.—It was afterwards ascertained that he had entered the kitchen of his house just as the boiling water had been poured from the potatoes preparing for dinner; snatched up a small potato in his fingers, and, finding it too hot for them, unthinkingly threw it into his mouth and attempted to swallow it, but it stuck at the back of his throat and nearly choked him. This happened twelve hours prior to his admission into the hospital. An hour after this mishap he felt somewhat relieved, and went out to transact some very pressing business, but finding his breathing becoming rapidly impeded, he had to return and send for his medical attendant. From this time the symptoms steadily increased, until he arrived at the hospital in the condition already mentioned.

Treatment.—It was just such a case as required prompt operative interference. Instead of opening the windpipe through the neck, it was resolved to introduce an instrument by the mouth. As the passage was so constricted, a No. 12 catheter was first introduced, and, the orifice being found so far patent, a catheter of larger calibre, and in shape resembling a rectal tube, was introduced. On its introduction there was evinced considerable excitement, accompanied by a spasmodic fit of coughing, which lasted for about a couple of minutes. In order to gain the patient's confidence, he was asked to hold with his own hand the portion of the tube which projected from his mouth, and told that he was at liberty to withdraw it if he felt it necessary. Half an hour afterwards he withdrew the tube, stating that he did so as he wanted to cough. When it was withdrawn, even after this short interval, he could speak more distinctly, and stated that his breathing was relieved. The tube was then reinserted, and fixed *in situ* for twelve hours. It was then removed, washed, and, after the patient had something to drink, it was reintroduced, and retained for other twelve hours. After the end of the first twenty-four hours, when the tube was withdrawn, he could breathe very much more freely, and could swallow solid food. It was, however, considered prudent to introduce and retain the tube in the trachea for other twelve hours, which was done. During the last period, he slept for four or five hours with the tube in the trachea. After the end of this time, the swelling round the orifice of the larynx had almost entirely subsided. The tube was then finally removed. This would be about thirty-nine hours from the time the tube was first introduced; but, excluding the time during which the tube was withdrawn for the purpose of cleaning it and feeding the patient, the instrument would be retained *in situ* for thirty-six hours. He afterwards made an uninterrupted recovery, and went out of the hospital six days after admission.* Regarding this case, the following facts seem worthy of note. The first introduction of the tube was followed by a prolonged (fully two minutes) spasmodic cough, which evidently gave pain. The second insertion was likewise followed by a spasmodic expiratory effort, but much slighter and of short duration. The sequence of the third intromission was a single abrupt expiratory effort, resembling a person clearing his throat, but there was neither cough nor pain. On the occasion of the first and second introductions, I perceived that the cough and the painful sensation subsided at the moment when a long inspiration took place. Before introducing the tube a third time, the patient was instructed to take a long inspiration as soon as the tube was inserted. He did so, and it is possible that this affected the result.

It will be observed that the word cough is used; and physiologists will be apt to say that, if the patient coughed, the tube could not have been passed through the vocal cords. The tube was passed into the trachea until the rings of that organ were felt, so that there can be no doubt that the tube had penetrated further than the true cords. The sound, which has been called a cough was at times rather like a person violently clearing the throat, but at others it was a distinct explosion—at such times generally sending some mucus forcibly from the orifice of the tube. A cylindrical tube of the calibre used does not fill the whole larynx at the level of the cords, but, resting chiefly on the respiratory portion, still permits the cords to come into contact anteriorly, to a greater or less extent. It is, therefore, possible that the portions of these structures remaining free could exercise sufficient restraining power on the air on the outside of the tube in front, so as to enable an explosion to take place, provided the volume of air coming from the lungs be greater than what could find ready egress through the tube itself. Whether this explanation be correct or not, there can be no doubt that the patient could say "Yes" and "No" distinctly while the tube was *in situ*—leading the air to the outside of the mouth—and to attempt other sounds and phrases, though the latter were unrecognisable.

Mucus was expelled from the tube by coughing. Sometimes a little mucus would be heard in the tube for a number of seconds, when a sudden expiratory effort would send it to the outlet of the tube, where it would be wiped away, or the cough might be strong enough to expel the mucus clear of the tube. In this instance, the mucus in the tube formed an impediment which was sufficient in itself to permit a distinct explosion when an effort to expel it took place.

This patient was extremely thirsty, constantly crying for drink, owing probably to the burned state of the parts. After the tube was inserted, he demanded a drink, and was much annoyed when he was presented with a teaspoonful of fluid. It was explained to him that it was feared the fluid "would go down the wrong way". This fear on our part was soon dispelled by the patient taking several mouthfuls of milk, and swallowing it while the tube was *in situ*. This he afterwards many times repeated, the parts encircling the tube so as to prevent the ingress of fluid.

CASE III.—*Acute Œdema Glottidis, following Chronic Laryngeal Affection: Insertion of Tube into Trachea through Mouth.*—M. R., a housewife,† aged 38, was admitted into the Royal Infirmary on December 8th, 1878, suffering from a laryngeal affection requiring operative interference. For more than a month previously she had suffered from a throat-affection, supposed to be ulceration of the larynx, for which she was treated by Dr. Nairn of Glasgow. From this she partially recovered, but on December 5th she took a relapse. She then experienced pain in the throat and right ear, and difficulty of deglutition, which increased until, when she attempted to swallow, the fluid passed by the nose. Her respirations became greatly impeded until, on the day of admission, her medical attendant considered operative interference imperative, and with

* This man was shown by me afterwards at the Glasgow Pathological and Clinical Society.

† This patient was afterwards shown at the Glasgow Medico-Chirurgical Society.

this view advised her to go to the Royal Infirmary, whither he himself conducted her in a cab. On admission, she was in the following condition. She had an anxious pained look; her respirations were laboured, crowing, and much impeded. The saliva trickled from her mouth, as she could not swallow, and very often a spasmodic cough took place, ending in bringing up some mucus mixed with saliva and slightly tinged with blood. She had aphonia; attempts to whisper evidently gave pain, so she curtailed them to monosyllables, or substituted a sign, such as a shake or nod of the head. She hesitated about making any attempt at deglutition; she did try, however, and apparently took a spoonful of milk, but after four or five seconds it was expelled during a fit of coughing. This was repeated with a like result. On examining the throat, the orifice of the larynx was found to be very much narrowed—œdematous tissue surrounding it on all sides and extending backwards in the form of a tumour, which completely blocked the pharynx. The tip of the forefinger could occlude the portion of the laryngeal orifice that remained patent. The epiglottis was not active, and neither it nor the surrounding parts exhibited the usual sensitiveness to touch. In consequence of the tumour-like extension of the œdema behind and to the sides, the larynx was pushed well forward and fixed in that position. Her pulse was rapid and weak; her skin was hot and clammy. She was about three months pregnant. It was just such a case as would have been operated upon by tracheotomy under ordinary circumstances.

A fresh No. 12 catheter was passed into the trachea by way of exploration, and then the smallest sized tracheal tube that was at the time obtainable. This was found to be just on the thick side, but it passed. A fit of coughing, which lasted more or less for a couple of minutes, ensued; after which she had comparative ease. The tube was inserted at 6.20 P.M. on December 8th, and was retained till 8 A.M. on December 10th—it being removed at intervals of about twelve hours to be cleaned and to permit an œsophageal tube to be inserted for feeding purposes. In all, it was in the larynx thirty-five hours. At the end of that time, the œdema had greatly subsided; she then breathed easily. She could swallow and speak a little, and from this time she made an uninterrupted recovery.

The following points are particularly noted. The introduction of the tube was easy, as the laryngeal orifice was thrown well forward and fixed, owing to the great amount of œdema; and from the same cause the parts had an impaired sensibility, which rendered the manipulation tolerable. The first tube seemed to fill the entire free portion of the larynx above the cords. The next tube was very slightly narrower, at the same time thinner in its walls, thereby affording a large internal diameter relatively to the size of the tube. The ease which this gave was great, and, after it was introduced, the patient marked her appreciation of it by grasping and clapping the hands of the operator by way of thanks. She turned on her side afterwards, and soon fell asleep. The two last times the tube was inserted, it did not cause any cough or spasm.

In the former case, it was noticed that there was a distinct cough; in this case, the expiratory explosion of air was not what could come clearly under the physiological term cough, except toward the end of treatment, when there were sounds which were more purely explosive in character. Again: at first, after the introduction of the tube, the patient could not give the monosyllables as noted in the former case. It must be remembered, however, that she had complete aphonia on admission. Toward the end of the first twenty-four hours, she began to say "Yes" and "No"; and, after the thirtieth hour, the monosyllables were sounded distinctly.

The expectoration was profuse, semi-purulent, fluid, and streaked or mixed with blood; but it afterwards, towards the end of the first twenty-four hours, began to be thick and tenacious. The expectoration was thrown to the outside of the tube, sometimes by a distinct cough, when a quantity of the mucus had partly occluded the tube for a moment. On several occasions, when the mucus began to be tenacious, a little brush, mounted on a wire of definite length, was pushed into the tube and the expectoration removed. Twice, when the breathing was not quite so free, the tube was removed, and a very thin coating of mucus was found in the interior; this was washed off and the instrument returned.

Remembering the state of the pharynx, rendering deglutition impossible, and the loss of sensibility of the larynx prior to the introduction of the tubes, she was not asked to swallow during the first twenty-four hours while the tube was in position. Several times, a catheter was introduced and [illegible] beef-tea, eggs, milk, and brandy were injected. At the end of the first day she began to swallow a little, and about the thirtieth hour she took several mouthfuls with the tube *in situ*. Several times she slept for hours with the tube in the trachea, and often she had snatches of sleep besides.

In this case, the œdema glottidis, mechanically blocking the pharynx, was [illegible] as to exercise pressure on the superior laryngeal nerves, exhibited in the non-sensibility of the epiglottis and the parts of the larynx above the true cords. This constituted a danger, as was shewn when she attempted to swallow. The impaired laryngeal sensibility, coupled with the fixity of the structure from the œdema, prevented the epiglottis and the neighbouring parts from closing the laryngeal orifice, when an attempt at deglutition was made. As a consequence of this and the pharyngeal obstruction, the fluid entered the larynx, passing down into the trachea before it produced the irritation necessary for its expulsion. A few seconds of quiescence ensued after the attempt to swallow the fluid before it was again brought up by coughing, and it is likely that the time might have been extended if persistent efforts to feed the patient were made. From cases which I have seen and heard of, this is not an unfrequent cause of at least hastening a fatal issue in children affected with œdema of the glottis. It is satisfactory to note that the patient, who was pregnant at the time when she was suffering from the throat-affection, afterwards had a well-developed strong child at full time.

[*To be continued.*]

ON A NEW METHOD OF ARRESTING GONORRHŒA.

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HAVING been for some time past occupied with the problem of the infective diseases of wounds, the subject of gonorrhœa, as an affection probably belonging to the same class of diseases, has occupied my attention. The extreme contagiousness of this disease, the existence of a distinct period of incubation, and the steady spread of the inflammation from a given spot, all point strongly to a parasitic origin. Acting on this idea, I made, in the spring of 1879, a number of inoculations of gonorrhœal pus, under certain precautions, into flasks containing infusion of meat or infusion of cucumber. In these flasks micrococci grew in large numbers, and also sometimes bacteria, showing that these organisms were present in the gonorrhœal pus. Circumstances prevented me from pursuing this subject further at that time. In the meantime, Dr. Neisser published an elaborate research on this subject, in which he showed the presence of enormous numbers of micrococci in gonorrhœal pus, and in the pus from contagious ophthalmia. He further asserted that these organisms were always of a definite size, and that they differed in respect of size from the micrococci found in wounds. The presence of large numbers of micrococci in gonorrhœal pus has since been confirmed by several observers. Whether these micrococci are the cause of the gonorrhœal inflammation or not, I do not attempt to say, but the general history of the disease, taken together with these facts, points strongly to the idea that its essence consists in the growth of these or allied organisms.

If this disease be due to the spread of organisms, where are they situated? Several facts lead to the supposition that they are not only free in the urethral canal, but that they are also present in the substance of the inflamed mucous membrane. Thus, in the case of erysipelas, it has been demonstrated that the skin at the margin of the inflammatory redness is full of micrococci. Koch found, in his case of erysipelas in rabbits, that bacilli were present throughout the inflamed part, and coextensive with the inflammation. The same writer obtained a progressive gangrene of the tissues in mice by the injection of putrid blood, and he has demonstrated conclusively that this gangrene is due to an organism—streptococcus—which is present in large numbers around the limits of the gangrenous part. A similar observation was made by him in a case of spreading suppuration in rabbits. Mr. Lister has long held the opinion that, in the case of putrid sinuses, the organisms were present, not only in the canal of the sinus, but also in the substance of the unhealthy granulation-tissue lining them. This view has been justified by the fact that, though formerly, by the simple injection of the sinuses with antiseptics, he did not often succeed in eradicating the septic element, yet, since he has adopted the use of Volkmann's sharp spoon, and has removed the layer of granulation-tissue lining them, success is by no means uncommon. And, lastly, I have demonstrated that, though many forms of organisms will not survive if introduced into a healthy animal, yet, if an animal be previously in a state of ill health, these forms of organisms are not destroyed, but may be found alive in the blood or tissues.

In the case of gonorrhœa, then, I suppose that, at the time of infection, a small number of the specific organisms, which in all probability possess a considerable resisting power to the destroying action of the healthy living tissues, are retained in the urethra, that these go on developing, that the products of their growth irritate and weaken the

mucous membrane in their vicinity, that the organisms can then penetrate into and live in that weakened tissue, and that the extension of this process over a portion of the mucous membrane of the urethra is the cause of the inflammatory symptoms.

Now, granting that this view, which I think must be admitted to be very probable, were proved, the problem to be solved for the cure of gonorrhœa would be, how to destroy these organisms without at the same time injuring the inflamed and highly sensitive mucous membrane. If they were destroyed, one would expect the extension of the disease to cease, and the inflamed mucous membrane to return more or less rapidly to a normal state. On thinking this matter over, two substances appeared to me suitable for this purpose, being both powerfully antiseptic, and at the same time but little irritating. These are iodoform and oil of eucalyptus.

The next question was, how to apply them. It is quite clear that, if used as an injection, there would be no certainty that they would be brought into contact with the whole of the inflamed surface, partly because the swollen mucous membrane would interfere with the passage of the fluid, and partly because the patient would not in many cases apply it effectually. At the same time, an injection could not be expected to do much good, for it would flow out very quickly, and the antiseptic would not have sufficient time to act. I therefore use these antiseptics mixed with cacao butter, and made into bougies of various lengths. These bougies are introduced well into the urethra, and a strap and pad over and around the orifice retain them. The bougie rapidly melts, and the mucous membrane of the urethra remains bathed in the antiseptic material for any length of time desired. These bougies possess an additional advantage over injections in that from their size (they have a diameter of a No. 9 or 10 catheter, tapering at the point), they, so to speak, unfold the swollen mucous membrane, and thus cause the antiseptic to be more thoroughly applied.

I have tried the two antiseptics separately and also combined, and I find that they are most effectual when used in combination (possibly because iodoform is soluble to a considerable extent in oil of eucalyptus, and is thus brought into more perfect contact with the mucous membrane). The formula which seems best is five grains of iodoform* and ten minims of oil of eucalyptus in a bougie of forty grains. These bougies have been made for me by Mr. Martindale, of New Cavendish Street.

The specific cause of the disease being eradicated by this means, the question of further treatment arises. It seems to me that, although the development of the gonorrhœa is arrested, yet, if the discharge be allowed to become septic and irritating, urethritis might be kept up for some time. I, therefore, order an injection of boracic lotion (saturated aqueous solution of boracic acid), or an emulsion of eucalyptus oil (one ounce of eucalyptus oil, one ounce of gum acacia, water to forty or twenty ounces) to be used for two or three days. At the end of that time, injections of sulphate of zinc, two grains to the ounce, may be begun. At the same time, the great tendency of the urethral mucous membrane, when once inflamed, to remain in a state of inflammation, must be kept in mind, and everything which might tend to keep up the inflamed state must be removed. Notably, the patient must be cautioned against drinking, and it is well to order diluents and alkalies.

The method may be summed up as follows. The patient is first told to empty his bladder, partly to clear out his urethra, and partly to prevent the necessity of expelling the antiseptic from the canal for several hours. He then lies down on his back, and a bougie from four to six inches long is introduced, and the orifice of the urethra closed by strapping. The bougie ought to be dipped in eucalyptus oil, or in carbolic oil (1—20) before insertion. The patient is instructed to refrain from passing water, if possible, for the next four or five hours. If the case be severe and advanced, he takes another bougie home, and is instructed to introduce it in the same manner after he next passes urine. On that evening, or on the following day, he commences the antiseptic injection, which he uses four or five times daily. On the third or fourth day, when the symptoms have entirely subsided, an injection of sulphate of zinc, two grains to the ounce, is begun.† At the same time, the other points mentioned are attended to.

I have now used this method in about forty cases, and in all the result has been the arrest of the progress of the gonorrhœa. For a day or two the purulent discharge continues; but afterwards it steadily diminishes in amount, becoming in four or five days mucous, and ceasing altogether in a week or ten days. At the same time, the scalding and pain and the symptoms of inflammation rapidly diminish, and disappear completely in about thirty-six to forty-eight hours. In fact, the case becomes no longer one of virulent gonorrhœa, but one of simple urethritis, rapidly progressing towards recovery, if properly treated.*

I have used this treatment only in the early stages of the disease, from the first to the seventh day after the commencement of the symptoms; but it has answered equally well in all. Thus the following is the case in which it was used seven days after the commencement of the symptoms. The patient presented himself on June 19th, stating that the symptoms of gonorrhœa had existed for seven days. There was a profuse purulent discharge from the urethra; the penis was somewhat swollen and red; there was intense scalding when urine was passed, and a constant feeling of heat and uneasiness; no chordee. A bougie, containing ten grains of iodoform and ten minims of eucalyptus oil, was passed down, and the orifice closed in the usual manner. The patient was also ordered an injection of an ounce of oil of eucalyptus and an ounce of gum acacia in a pint of water, to be commenced in the evening, and to be used four or five times daily. On the 19th, he again presented himself, and stated that he had not passed water till five hours after the introduction of the bougie; that the scalding and feeling of uneasiness rapidly subsided, and had completely ceased in forty-eight hours; and that the discharge had steadily decreased from the second day, and was now very small in quantity. He was ordered the sulphate of zinc injection, which completed the cure in three days.

In one case, there was a recurrence of the symptoms. The patient, a hospital patient, first presented himself on June 5th, stating that on June 2nd, five days after connection, a discharge had commenced, which had steadily increased, and was now profuse and accompanied with considerable uneasiness and scalding in passing urine. A bougie containing ten minims of oil of eucalyptus alone was inserted; no other treatment was ordered. On June 9th, he returned, stating that, after the introduction of the bougie, the scalding and uneasiness had diminished, and had almost disappeared on the evening of the 6th; but that on the afternoon of the 7th they began to return, and were now more severe than on the 5th. I introduced a bougie containing ten grains of iodoform and ten minims of eucalyptus oil, and gave the patient another to insert at bedtime. At the same time, I ordered the injection of boracic lotion to be commenced on the following day. When seen again on the 16th, he stated that this time the treatment had been successful, and that now the discharge was very slight. An injection of sulphate of zinc and a mixture containing copaiba were ordered, and the discharge ceased entirely on the 20th.

In two or three cases, there has been slight increase in the scalding on the first or second occasion on which the patient passed urine after the introduction of the bougies; but this has only been temporary, and these cases were as rapid as the others. In four instances, however, there has been considerable increase in the symptoms for twenty-four or thirty-six hours. In three of these, the bougies had been made with bees' wax; and they did not melt properly, and consequently came out of the urethra at various periods as small cakes. Further, it seems that some iodine had been set free from the iodoform, probably during their manufacture. In the fourth case, four bougies, each containing 10 grains of iodoform were introduced in succession. In all these, however, the symptoms passed off in about three days; and then the gonorrhœa was found to be checked, just as in the other instances.

Such are the results as yet obtained by this method. I do not claim any specific power for the two substances I have mentioned. It may be that there are other antiseptics which would be more suitable, and I intend to test any which seem likely to yield good results. Whatever substance be used, however, I venture to think that the results already obtained show that the principle on which it ought to be applied, and on which it will prove most satisfactory, is that which I have attempted to indicate in this paper.

My thanks are due to my colleague, Mr. Royes Bell, for having allowed me to use some of his cases; and to Mr. Farmer, the assistant house-surgeon, for carrying out the treatment in these instances.

* A considerable number of the cases have been treated with bougies containing ten grains of iodoform; but Mr. Martindale informs me that during the warm weather it is almost impossible to make them. I find, however, that bougies containing five grains are quite satisfactory, and I have had no symptoms of irritation following their use.

† In hospital practice, where the patient is only seen once a week, and where there is no great necessity for arresting the discharge quickly, I do not order the sulphate of zinc injection till the week following the introduction of the bougies.

* The course described here is that usually followed when boracic lotion has been employed as the injection; but since I have begun the use of the eucalyptus emulsion, the cessation of the discharge has, as a rule, been more rapid. Thus, to give an example, a patient came to the hospital on July 3rd with symptoms of gonorrhœa, which had lasted four days. He was suffering from a very acute attack, having severe scalding and commencing chordee. He had not previously suffered from gonorrhœa. A bougie containing five grains of iodoform and ten minims of eucalyptus oil was introduced; and he was ordered to begin an injection of the eucalyptus emulsion (1 in 40) in the evening. The patient showed himself again on July 7th, and stated that in twenty-four hours the painful symptoms had entirely disappeared, and that the discharge diminished rapidly, and ceased altogether on July 6th. I have since that time had several nearly as rapid cases. I have tried in three cases injections of eucalyptus emulsion without previous introduction of a bougie, but without any appreciable effect on the progress of the disease.

ACUTE ECZEMA OF THE FACE, FOLLOWING NEURALGIA.

By JOHN CAVAFY, M.D., F.R.C.P.,
Assistant-Physician to St. George's Hospital.

CHARLES F., aged 38, pastry-cook, applied as an out-patient on February 13th, 1880, stating that for five days he had suffered from severe pain in the left side of the head and face. The pain extended over the orbit, cheek, and lower jaw, and also to some extent over and behind the ear. On the scalp and down the neck numerous tender spots were found, the most marked being over the eyebrow and just behind the ear. He declared that the pain was at times maddening, but regularly intermitted about six o'clock in the evening to begin again on the following morning after he had risen. The left conjunctiva was slightly injected, and there was some lacrymation of the left eye, but the skin itself was not reddened or swollen, and appeared normal in every respect. There were no carious teeth, nor was the pain more severe along the course of the dental nerves.

As the neuralgia intermitted so distinctly, he was given quinine, of which he took nine grains daily for four days without the least benefit. The pain continued as before, and was worse than ever on February 17th, on the evening of which day it subsided as usual. On the following morning, the whole left side of the face was found to be much swollen, and from that time there was no return of the neuralgia. The swelling of the face, however, continued to increase, and on February 20th, when he was seen again, there was acute eczema affecting the parts which had previously been the seat of pain. The whole left side of the face was red and extremely œdematous, the eyelids especially being enormously swollen, so as to quite close the eye, the left ear was red and swollen, as was also the neck in its neighbourhood, and the whole affected parts were streaming with transparent discharge from innumerable small vesicles. At the margin of the scalp and beard there were a few yellowish gummy crusts. The swollen skin was not sharply circumscribed, but gradually shaded off into healthy texture, the demarcation being obscurely marked by numerous bright red papules. There was no pain beyond a sensation of burning and smarting, and the eczema yielded to purely local treatment, no return of neuralgia taking place after its subsidence.

Although a variety of erythematous and vesicular skin eruptions have been noticed to occur occasionally after neuralgia (more especially herpes zoster), yet an acute dripping eczema is a sufficiently rare sequel to merit a short record. The case, moreover, is not without interest from the point of view of diagnosis, as the swollen face and closed œdematous eyelids had a strong superficial resemblance to erysipelas. On looking a little more closely, however, the various points of difference became evident; these being a less angry redness, the absence of a sharp line of demarcation, and the presence of numerous bright red points (papules) beyond the swollen skin. The most valuable diagnostic points, however, were to be found in the general condition of the patient; there had been no antecedent rigors or vomiting, there was no general malaise, and, above all, no fever, the temperature being barely above the normal; whereas, in erysipelas, it would have been three or four degrees higher at least.

GROWTH OF FUNGI IN EAR-SYRINGES.

IN the JOURNAL for March 22nd, 1879, I drew attention to the growth of fungi in ear syringes (on the soft covering of the piston), and suggested, amongst other means, the application of vaseline, containing carbolic acid, to the piston, in order to prevent their growth. After thoroughly cleaning the piston of one of my syringes with boiling water and careful wiping, it was lightly coated with vaseline, containing carbolic acid (1.200). In spite of this, however, after the syringe had been in use about nine months, a quantity of microscopic fungus, embedded in a white gelatinous material, was found attached to the piston. I then had one of Messrs. Weiss's patent pistons, made of vulcanite, fitted to this syringe, and, on examination, after it had been in constant use for more than three months, only a very small quantity of fungus could be detected resembling that found on the leather-capped pistons. This would, in all probability, not have been present if all superfluous grease had been removed. This form of piston is certainly more cleanly, and appears less likely to favour the growth of fungi, than those pistons in which a soft covering is exposed to the action of the water. As it consists entirely of vulcanite, it has the especial advantage of being very easily cleansed. E. CRESSWELL BABER, M.B.Lond.

CLINICAL MEMORANDA.

THE DIAGNOSIS OF ROTHELN.

THE disease variously called rötheln, spurious measles, German measles, and rose-rash, though at first sight somewhat confusing, seldom, on close observation, presents any serious difficulty in diagnosing it from either measles or scarlatina. From the latter especially I have never found any difficulty in distinguishing it; it is with the former that there is some danger of confounding it. But the less prominence and pinker hue of the spots; the very slight, if not entirely absent, constitutional disturbance; and, above all, the freedom from bronchial affection, leave us in the end in no doubt that we have not true measles to deal with.

Mr. W. P. Brown, in the JOURNAL of June 10th, propounds the theory that the affection is a hybrid between measles and scarlatina, compounded of the two diseases, each exercising, however, an antagonistic effect on the other. Facts, however, are against this notion; and, in illustration, I will quote the following. Some years since, I was called to see a little boy (whom we will call A.) with well marked scarlet fever. He was at once removed from his own home to isolated lodgings. The disease ran a typical but mild course, and by the sixth day the eruption had entirely faded, and all fever had gone; the patient, however, being feverish, remained in bed. On that day, a fresh set of symptoms commenced; in short, those of measles; and this latter disease ran a fully developed course. Two or three days after my little patient began with scarlet fever, his brother B., a year or two younger, also showed symptoms of the disease. He was removed to the same lodgings, and went through the complaint in the same manner as A.; and, twelve days after entering the lodgings, began in his turn with measles, evidently contracted from A.

Now, I deduced from these cases one or two important conclusions. 1. As the period of incubation of measles is twelve days, and that of scarlet fever seldom, if ever, more than four or five; and as A. began with symptoms of measles six days after he had those of scarlatina, he must first have contracted the poison of measles, and then, two or three days afterwards, that of scarlatina, which, having a shorter period of incubation, developed from its course, uninfluenced by the circumstance that the germ of measles was all the time incubating in the system. 2. The presence of the fully developed disease of scarlet fever, as in the case of B., does not prevent the poison of measles from being received, and presenting its fully characteristic symptoms, after the usual period of incubation. T. MORLEY ROOKE, M.D.Lond., Cheltenham.

I SHOULD not have again troubled the readers of the BRITISH MEDICAL JOURNAL on the above subject, had not Dr. Robertson, by his article in the number for June 19th, rather, as I fear, increased than lessened the ambiguity about the position of rötheln in medicine that we both deplore; and that I hoped Dr. Tomkins' cases, and my former communication in this JOURNAL had at any rate done something to clear up. For I cannot help thinking, from his remarks, that some of his cases were cases of modified measles and not true rötheln; and this confounding together of cases of modified measles and rötheln is, I believe, the cause of that remarkable dissimilarity of description that cannot fail to strike anyone who reads the literature of the subject. My reason for thinking that Dr. Robinson was mistaken in the diagnosis of some of his cases is, that marked coryza and catarrh seem to have been present in several instances. One of the most important signs distinguishing rötheln from measles is the absence of coryza and cough (*vide* JOURNAL, June 5th, page 848, July 3rd, pages 9 and 37; Tanner's *Medicine*, 2nd ed., page 993; Bristowe's *Medicine*, p. 154). Aitken, it is true, is not of this opinion; but his description is at variance in almost every particular with other modern authorities, and the records of recent cases. That rötheln is not either modified scarlet fever or measles is proved by the following three cases that I had last year. (The three patients are all members of one family, and have from birth been under the constant medical supervision of my father, without whose knowledge, it is absolutely certain, they could not have had either measles or scarlet fever.) The first case was that of a little girl who had had undoubted scarlet fever three months previously. With her the rash appeared on the second day, on which day the temperature was 102 degrees Fahr. On the third day it began to fade, and by the fifth had disappeared, the child being apparently quite well. Branny desquamation took place. Sore-throat was present in this case. There was no coryza nor cough; she never had measles. In the second case, a brother of the preceding developed the rash on the fourth day of his sister's attack. Although the rash was well out, he

never felt ill, and did not go to bed. The temperature never exceeded 100 deg. Fahr. No coryza nor cough. The rash lasted four days, and was followed by branny desquamation. He had had measles, but not scarlet fever. The third patient was a younger brother of the last. The rash first appeared a week after the recovery of No. 2. The attack was very slight. Desquamation was almost imperceptible. He had no catarrhal symptoms. He had neither had measles nor scarlet fever. Besides these three cases, there were other children of the family, who were unprotected from scarlet fever, and had free access to the patients; no further cases, however, occurred. (I have not particularised the character of the rash in any of the above cases, as in all of them it was identical, and answered to the description I gave in my former article.) The above cases answer, it appears to me, what I may perhaps be allowed to call the *modified theory*, viz., the regarding of rötheln as either modified measles or scarlet fever. Here we have three members of a family of nine attacked; of these one has had scarlet fever, one measles, and one neither scarlet fever nor measles. Do we find that the symptoms vary in the one who had had scarlet fever and those who had not? Not at all: in all three cases the symptoms were identical, the only variation being in degree; and the severest cases being, as chance would have it, the one that had had scarlet fever, viz., No. 1. Now, if these patients had been suffering from modified scarlet fever, would not the unprotected ones have had scarlet fever pure; or at any rate could not the protected ones have had the scarlatinal symptoms less marked? But just the opposite of this was the case. Again, had it been modified measles, No. 1, who had just recovered from scarlet fever, but had not had measles, could surely have had measles simple, but neither was this so. In short, do not the fact that, whether rötheln occurs in patients who have had scarlet fever and measles, or one or neither of these complaints, the symptoms are identical, and the equally important fact that rötheln never gives either scarlet fever, or measles, prove that the modified theory is untenable.

But I see in the JOURNAL, July 10th, that Mr. W. P. Brown comes to the rescue with the *hybrid theory*, and this is, I confess, the view I took of rötheln before I had had any experience of the disease; but it is one now equally as untenable as the modified theory. My reason for so thinking is that, if it were a hybrid complaint, it would be seen more frequently in hospitals and houses containing both scarlet fever and measles patients at the same time; and, still more important, would not the symptoms vary? For instance, if it were a hybrid disease, should we not sometimes get the scarlatinal rash and the cough of measles? But this is not so; the rash always having more of the character of measles, and the cough being invariably absent. And, lastly, if it were only scarlet fever and measles present at once in the same person, would it not sometimes convey only one or other complaint to unprotected people? This it does not do. Rötheln always produces rötheln, as certainly as syphilis produces syphilis, and not small-pox. In conclusion, I would express a hope that, if there yet remain any sceptics who cannot believe in a new exanthem, they will produce some facts against its existence and not retail theories.

W. GILCHRIST BURNIE, M.R.C.S. Eng.

THERAPEUTIC MEMORANDA.

TREATMENT OF BROMIDE RASH BY SALICYLIC ACID.

I WISH to draw attention to a fact of therapeutic importance in the part that salicylic acid plays as a local agent in the cure of the pustules and the peculiar ulcerations arising from the prolonged toxic effects of the bromide of potassium.

The saturated solution of this acid (one grain to an ounce of water), applied frequently, and, where possible, constantly, by means of lint and oiled silk, is a most efficient and certain remedy in the worst cases.

Case.—Miss F. W., aged 23, of dark complexion and strumous habit, the subject of organic epilepsy from birth, has consulted me on several occasions during the past four years on account of large sores on the calves of both legs, on the fore arms, and other parts, resulting from the constant use of the potassic bromide during the last ten years. Thirty grains per diem is the utmost quantity now taken. For the past two years arsenic has been administered in combination with it, and this drug has undoubtedly had a powerful effect in controlling, but does not entirely prevent the recurrence of the eruption. At first I used various local astringents with more or less good results, but the salicylic acid lotion appears to act as an antidote, for in this, and other cases of a less severe character in which I have prescribed it, its good effects are immediately seen, and wounds of the size of the palm of the hand, have been soundly healed by it in a few (less than seven) days.

WILLIAM PROWSE, Cambridge.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF CEREBRAL MENINGITIS: RECOVERY.

(Under the care of Dr. FREDERICK T. ROBERTS, B.Sc.)

THE following case, the notes of which have been condensed by Mr. ATMARAM, Physician's Assistant, presents some points of practical interest.

C. L., male, aged 11, was admitted into the hospital on May 13th, 1880. The patient had been of active habits, and accustomed to be much in the open air. He had attended school, and been looked upon as an intelligent lad. He had always lived well, and had had good food and warm clothing. He resided in a healthy neighbourhood. There was nothing specially noticeable in his family history, except that two maternal aunts had died of pulmonary phthisis. His parents were both living and healthy. He had always enjoyed good health, and there was only a history of his having been affected with scarlet fever and whooping-cough when a child.

Present Illness.—The patient was stated to have received a "blow on the head" at school a month before admission, but no definite particulars could be obtained on this point. He came home feeling sick, and afterwards vomited. He was seen by a medical man, who ordered ice to be applied to the head. Headache subsequently set in, which grew worse; and, as at the same time the patient became very fretful and irritable, he was brought to the hospital.

State on Admission.—The patient was seen to lie on his left side, in a doubled-up position, his head and body being bent forwards, his thighs flexed upon his abdomen, and his legs upon his thighs. He seemed stupid, and objected to being disturbed, though he seemed quite conscious and coherent when spoken to, answering questions, and protruding his tongue, when requested to do so, with slowness and deliberation. He complained of severe headache, which seemed to be more or less general, and attended with exacerbations of a darting character. He evidently suffered acutely, for he shrieked and screamed loudly and at frequent intervals. He also muttered a good deal to himself. Photophobia was a marked symptom, the eyes being kept firmly closed, and the patient strongly objected to opening them, the light obviously causing an increase of the pain. There was no strabismus; and the pupils were equal. There were no convulsions, twitchings, paralysis, or other kind of motor disorder; and general sensation seemed to be normal. No sign of any injury to the head could be discovered.

Soon after admission, the patient vomited. The tongue was brown, furred, and tending to dryness. The bowels were constipated. The abdomen was markedly retracted. *Taches cérébrales* were well marked. The urine was passed involuntarily in bed. Temperature on admission 101.8°, but at 3 P.M. it reached 103.6°. The pulse was rapid, small, weak, regular. There were no symptoms connected with other organs of the body. Physical examination was only carried out with difficulty; but it was ascertained that the lungs and heart were free from disease. Ophthalmoscopic examination was attempted, but could not be satisfactorily performed. The patient was ordered to be kept as quiet as possible; to be properly fed; and to be kept clean and dry. The only active treatment adopted was to have the head shaved, and ice-bags kept constantly applied; though this was very difficult to manage, owing to the patient pushing them away.

With regard to the subsequent course of the case, without entering into details, the main points may be gathered up in the following remarks. The patient remained in the same posture throughout his illness, except that once or twice the head was slightly retracted. He continued to scream and shriek, and was often so noisy, by night as well as by day, that he disturbed the whole ward. He never lost consciousness, but often muttered to himself. He had very little sleep, and complained of the pain in his head frequently. Sometimes he was quiet, but only for short intervals. He was very irritable, and averse to being disturbed in any way. The intolerance of light persisted as a marked symptom. Liquid food was taken freely, and there was no vomiting. The bowels were only opened by enemata. The tongue became very brown and dry; and sordes appeared on the teeth

and lips. The patient emaciated considerably. He passed his urine in bed.

The temperature presented marked and curious variations, as evidenced by the following examples:

May 14th. 3 A.M. = 101.2°; 11 A.M. = 98.2°; 11 P.M. = 103.2°.
May 16th. 3 P.M. = 103.2°; 7 P.M. = 102.6°; 11 P.M. = 98.8°.
May 17th. 7 A.M. = 97.6°; 11 A.M. = 97°; 11 P.M. = 101°.

From May 17th to 21st, the temperature ranged from 100 to 103.6°. On the 21st, it fell at 7 A.M. to 98°, and at 11 A.M. to 96.6°. Until the 24th, it continued between 97° and 98.6°; but at 3 A.M. on that date it rose to 100°, and during the day presented these variations: 11 A.M., 104.6°; 2 P.M., 103.2°; 4 P.M., 100.8°; 7 P.M., 100°; 9 P.M., 99.2°. The temperature came down to the normal on May 30th, and remained so subsequently, except for a rise to 102° on June 1st. It was noted that whenever the temperature went up the patient was noisy; and that he became quieter when it was low. Signs of improvement began to appear about June 1st, and by June 11th the headache had almost entirely subsided, while the photophobia had considerably diminished; and on the 15th, this symptom ceased. The patient steadily progressed; the tongue cleaned; plenty of food was taken; flesh and strength were rapidly gained; and on June 29th the patient was sent to the Convalescent Hospital at Eastbourne. The head-symptoms seemed to have entirely disappeared; but the patient was rather fretful and emotional.

The only treatment adopted throughout was that already indicated, except that bromide of potassium, in ten- or twenty-grain doses, was tried on two or three occasions; but it seemed to do more harm than good, and did not procure any rest. The ice-bag was continued until June 11th. Great attention was paid to the feeding of the boy, and to his sanitary conditions.

REMARKS BY DR. ROBERTS.—I think there can be but little doubt that this was a case of meningitis, and of the simple kind. The fact of the phthisical history in the mother's family seemed at first to point to tubercular meningitis, but the subsequent course of events conclusively proved that the disease was not of this nature. Probably the "blow on the head" was the cause of the mischief, though there was no objective sign of any lesion when the patient came under observation. The phenomena presented in the course of the case indicated the nature of the pathological changes, and showed that these gave rise to irritation, and not to any degree of compression or of destruction of the brain-structure.

This case is instructive as regards prognosis, for it certainly seemed a very hopeless one; but I took the opportunity of impressing upon the students that it was by no means to be looked upon in that light, and that recovery might take place if the patient were only properly attended to, and kept alive while the disease was passing through its course. Cases of this kind require a very cautious opinion as to their prognosis, but they should never be given up as hopeless, although of course a fatal result must usually be anticipated. Everything will depend upon the nature and extent of the pathological changes, and a careful study of the clinical signs by which these are revealed will help materially in determining from day to day the probable termination of the case.

As regards treatment, my strong belief is, that medicines cannot materially modify the course of meningitis, and that the plan adopted in this case is the right one, namely, to see that the patient is properly supported, and to attend to his general well-being, leaving the actual disease to nature. At any rate, this case proves that meningitis can be recovered from without any active medicinal treatment, and if this had been adopted, probably credit would have been given to it for the cure of the patient, which it would not have deserved. The application of ice was probably useful, but I would not be inclined to attribute too much to its influence.

The curious variations of temperature, and the corresponding changes in the cerebral symptoms, also constituted an interesting feature in this case.

FAMILY PREDISPOSITION TO SCARLATINA.—In a recent report, Dr. F. H. Blaxall refers to several interesting cases of second attacks of scarlatina at Swindon; he states that he heard of five or six families in which children were attacked with scarlatina for the second time after a lapse of only three or four years, three such cases occurring in one family, and two proving fatal. This was authenticated by the medical attendant who attended the children on each occasion, and who stated that on the first attack the disease was well marked, followed by desquamation in all three children. There was evidently in this family inherent predisposition to contract the disease, the mother herself having suffered from two attacks. The practitioner in question also mentioned another family in which he had attended the same children three times for well-marked scarlatina.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SESSION, 1880.

Wednesday, July 14th.

DR. ACLAND, President, took the Chair at 2 P.M.

Navy Medical Department.—Mr. TURNER asked the President if he could furnish the Council with information why the Navy Medical Department has ceased to furnish a statement of the results of the examinations for admission to the Medical Department of the Navy; also if the returns from the Army Medical Department include the candidates for commission in the Medical Department of the Indian Army.

The PRESIDENT replied that there had been some delay in obtaining the information for which Mr. Turner had asked, and he was still unable to give a complete answer to the question. He had reason, however, to believe, from communications he had had with both departments, that there would be no difficulty in shortly obtaining the desired information.

Preliminary Education.—Mr. TURNER brought up the resolutions passed by the Council in Committee with regard to Preliminary Education, and moved their adoption, subject to amendments hereafter made. This was seconded by Sir JAMES PAGET and carried. They were as follows. [The portions included in brackets are those in which amendments were subsequently made by the Council.]

1. That an examination in English form a part of the preliminary examination. 2. That the examination in the English Language be such as is now provided for in the "Recommendations" of the Council, except that the last two lines of the foot-note to p. 8 of the last edition of the "Recommendations" be in future omitted. [3. That No. (2) of Clause 4 of the "Recommendations" be as follows: (2) Either English History or Modern Geography.] 4. That an examination in one Ancient Language form a part of the preliminary examination. 5. That Latin, including Translation from the original and Grammar, be the Ancient Language which is to be rendered compulsory. 6. That an examination in the Elements of Mathematics form a necessary part of the preliminary examination. 7. That the examination in Mathematics comprise: (*a*) Arithmetic, including Vulgar and Decimal Fractions. 8. That the examination in Mathematics comprise: (*b*) Algebra, including Simple Equations. 9. That the examination in Geometry comprise, as at present: (*c*) Geometry, the first two books of Euclid or the subjects thereof. 10. That there be an examination in the Elementary Mechanics of Solids and Fluids. 11. That it be understood that the examination in the Elementary Mechanics of Solids and Fluids may be passed either as preliminary, or before, or at the first professional examination; so that the passing of this examination is not to be regarded as necessary for registration. 12. That the examination in the Elementary Mechanics of Solids and Fluids comprise the Elements of Statics, Dynamics, and Hydrostatics. 13. That the following be the Optional subjects: (*a*) Greek) (*b*) French, (*c*) German, (*d*) Italian, [(*e*) Dutch], (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry. 14. That one of the foregoing Optional Subjects be made compulsory.

Dr. QUAIN moved, Dr. PITMAN seconded, and it was resolved:

"That Nos. (2) and (3) of Clause 4 of the Recommendations be altered as follows: (2) English History; (3) Modern Geography."

It was moved by the Rev. Dr. HAUGHTON, seconded by Dr. PYLE, and agreed to:

"That for the word 'Dutch', in Resolution 13, there be substituted 'any other Modern Language'."

The Rev. Dr. HAUGHTON moved, and Mr. MACNAMARA seconded:

"That in Resolution 13, between the words 'Botany' and 'Elementary Chemistry', the word 'Zoology' be inserted.

The motion was negatived.

The Rev. Dr. HAUGHTON required that the names and numbers of those who voted for and against the motion respectively, and of those who did not vote, be taken down. Against, 10: Sir James Paget, Dr. Pyle, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Mr. Turner, Dr. Pettigrew, Dr. Leet, Mr. Teale. For, 8: Dr. Pitman, Dr. Humphry, Dr. Aquila Smith, Mr. Macnamara, Rev. Dr. Haughton, Dr. Banks, Dr. Fergus, Dr. Hudson. Did not vote, 5: The President, Mr. Bradford, Dr. Rolleston, Sir William Gull, Mr. Simon. Absent, 1: Dr. Quain.

It was moved by Mr. TURNER, seconded by Sir JAMES PAGET, and agreed to:

"That the General Council's amended *Recommendations on Educa-*

tion and Examination be communicated to the several examining boards whose examinations are recognised by the Council; that their attention be drawn to the changes which have been made; that they be informed that the Council proposes that the additional requirements be not made obligatory on students until January 1, 1882; and that on and after that date no person be allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as specified in the following list: (1) English Language, including Grammar and Composition;* (2) English History; (3) Modern Geography; (4) Latin, including Translation from the original and Grammar; (5) Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof; (6) Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;† (7) One of the following Optional Subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other Modern Language; (*f*) Logic; (*g*) Botany; (*h*) Elementary Chemistry."

Preliminary Scientific Examination.—Mr. SIMON moved:

"That, in the opinion of the Council, it is desirable that intending candidates for the medical profession should, before they enter on the purely medical curriculum, have been instructed and examined in the Rudiments of Natural Science, Physical, Chemical, and Biological; and that, in proportion as this can be done, the present medical curriculum and present professional examinations should be lightened of all such matters."

Dr. FERGUS seconded the motion.

Mr. SIMON said that his proposal was that the examination should be passed after the preliminary general examination, and before entering on specially medical studies. If it were instituted, there should be brought into it those subjects which might well go out of the medical curriculum. He did not propose to enter into details as to the subjects. The examination might comprise such subjects as the mechanical laws of solids and fluids, heat, light, electricity, and the general anatomy of plants and animals; an elementary knowledge of these being required.

Sir JAMES PAGET thought that the adoption of the proposal would be an important step in the scientific education of the profession.

Sir WILLIAM GULL said that many persons came to the study of medicine quite unfitted for it. He thought that anatomy should be an ante-professional subject of education. The great point was to obtain more time for medical studies.

The Rev. Dr. HAUGHTON said that the practice of the University of Dublin was in conformity with Mr. Simon's proposal; but six years were required for the education of a medical student.

Dr. ANDREW WOOD said that the subject was a very important one.

Dr. ROLLESTON said that every gentleman ought to know chemistry and botany at least. All should be educated alike; and a man should not be specialised for the study of medicine before it was necessary. Care also should be taken not to put impediments in the way of those entering the medical profession later in life than usual.

The resolution was carried.

Mr. SIMON moved, and Dr. FERGUS seconded:

"That the foregoing resolution be referred to a committee of seven, with instructions to propose to the Council, before the close of the present session, the draft of a communication to be addressed to the licensing authorities with a view to giving it practical effect."

By the permission of the Council, this motion was withdrawn.

It was moved by Mr. SIMON, and seconded by Dr. FERGUS:

"That the resolution in Clause 8 be communicated to the licensing authorities under the Medical Act; and that it be recommended to those authorities to consider whether they can, separately or conjointly, take steps to promote the establishment of a preliminary scientific examination; and to require of all candidates for their respective licenses that, after passing the preliminary examination in general education, and either before commencing the purely medical curriculum, or at latest before the end of the first year thereof, they shall pass such a preliminary scientific examination as is proposed."

Dr. HALDANE moved, as an amendment, and Dr. ANDREW WOOD seconded:

"That, as the Council has agreed that it is desirable that intending candidates for the medical profession should, before they enter on the purely medical curriculum, have been instructed and examined in the rudiments of natural science—physical, chemical, and biological; and that, in proportion as this can be done, the present medical curriculum and present professional examinations should be lightened of all such matters, a committee be appointed to communicate on the subject with the licensing bodies, and to report to the Council at its next meeting."

The amendment was carried, and, having become the substantive motion, the following amendment was moved by Mr. MACNAMARA, and seconded by Mr. SIMON:

"That this resolution be referred to a committee of seven, with instructions to propose to the Council, before the close of the present session, the draft of a communication to be addressed to the licensing authorities, with a view of getting their opinion thereon."

The amendment was negatived.

Mr. MACNAMARA required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. Against, 10: Dr. Pitman, Sir James Paget, Dr. Rolleston, Dr. Andrew Wood, Dr. Scott Orr, Mr. Turner, Dr. Pettigrew, Mr. Teale, Dr. Hudson. For, 9: Mr. Bradford, Dr. Pyle, Dr. Aquilla Smith, Mr. Macnamara, Dr. Leet, Rev. Dr. Haughton, Sir William Gull, Mr. Simon, Dr. Fergus. Did not vote, 2: The President, Dr. Humphry. Absent, 3: Dr. Storrar, Dr. Banks, Dr. Quain.

The original motion was put to the vote, and agreed to.

It was moved by Dr. HALDANE, and seconded by Dr. ANDREW WOOD:

"That the committee specified in the foregoing resolution consist of the following members, with power to add to their number: Dr. Haldane (chairman), Dr. Rolleston, Dr. Storrar, Mr. Turner, Dr. Hudson."

Dr. ROLLESTON moved as an amendment, and Dr. HUDSON seconded:

"(*a*) That the Executive Committee be charged with this duty; (*b*) that they have power to add to their number; and (*c*) that they have power to pay the expenses of any members that they may summon to their assistance."

The amendment was negatived, and the original motion, having been put to the vote, was agreed to.

Preliminary Examination by the Medical Corporations.—Mr. SIMON moved:

"That, in Section 3 of Chapter 1 of the Council's *Recommendations on Education and Examination*, the list of bodies from which testimonials of proficiency in preliminary general education may, in the opinion of the Council, be properly accepted by the licensing authorities under the Medical Act, be amended by omission of its Part II; this amendment to take effect on and from the 1st of January next; and that notice be forthwith given to each licensing authority that, after the end of the present year, the examinations mentioned in Part II of the aforesaid list will not be regarded by this Council as satisfactory for the purposes of the Medical Act."

The further consideration of this motion was adjourned.

A Spurious Diploma.—The following minute and resolution of the Executive Committee, regarding an application for registration by Mr. Nathaniel Chappell, were read.

Minute, with resolution, passed by the Executive Committee on June 16th, 1880.

"Read: A letter from Mr. Nathaniel Chappell, who, in May 1879, made a former application for registration, with regard to which Mr. Ouvry furnished an opinion, pursuant to a resolution thereon by the Executive Committee, requesting to be allowed to be registered by virtue of a diploma purporting to confer the degree of M.D., 1849, of the University of Aberdeen, for which he paid £35, and to obtain which he states that he was, on the introduction of a certain Dr. Lang, examined by two Glasgow doctors of medicine, deputed by the University of Aberdeen, at the offices of Messrs. Lane and Lara, medical agents, in Adam Street, Adelphi, London. The applicant produces evidence to show that he was apprenticed in 1830, by apothecaries' indentures, to Messrs. Hill and Bletchly, at Wotton-under-Edge; and states that he has been in practice ever since, but that severe illness has prevented him from passing any examination.

"Resolved: That a copy of Mr. Chappell's application, together with a copy of Dr. Lang's letter, and a facsimile of the diploma, be forwarded to the Registrar of the University of Aberdeen, with a request that he will give the General Council such information as may enable the Council to decide on the case at its next meeting."

The following communications relating thereto, received from the Registrar of the University of Aberdeen, were read.

"University Library, Aberdeen, June 29th, 1880. Dear Sir,—In

* The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate: 1. To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; 2. To write correctly from dictation; 3. To explain the grammatical construction of sentences; 4. To point out the grammatical errors in sentences ungrammatically constructed, and to explain their nature; and, 5. To give the derivation and definition of English words in common use.

† This subject may be passed either at preliminary, or before, or at the first professional examination.

answer to your letter of the 26th instant, enclosing documents in reference to a pretended diploma granted to one Nathaniel Chappell, in 1849, by the authorities of a certain 'Elphinstone College' in Aberdeen, of which 'diploma' you also forwarded a facsimile, I have to say that the document is an *unquestionable forgery*. As I said, in my letter of May 17th, 1879, the names of the pretended 'professors' are not known here, and never were. I have nothing further to add, unless to point out that this so-called 'Elphinstone College' could not have been in America, as, in 1849, it would not have been possible to get a reply therefrom even in a month.—Believe me, faithfully yours, ROBERT WALKER, M.A., Registrar of the University of Aberdeen. W. J. C. Miller, Esq."

"University of Aberdeen, July 3rd, 1880. Dear Sir,—Thank you very much for the facsimile of the 'diploma', which I have received to-day. It is possible you may not have remarked certain evidences of spuriousness which appear on the face of the document—*e.g.*, 'foundationisque' twice for 'fundationisque', 'doctinæque praclara' for 'doctrinæque præclara', 'ocgentesimo' for 'octingesimo', etc. The school of Ruddiman has not come to *that* yet!—Faithfully yours, ROBERT WALKER. W. J. C. Miller, Esq."

It was resolved: "That the Medical Council having considered the application of Mr. Nathaniel Chappell, with all the documents submitted by him, refuse his application to be registered in the *Medical Register*."

Thursday, July 15th.

Dr. ACLAND, President, took the chair at 2 P.M. The Council devoted the first part of the day's sitting to the consideration of dental business.

Returns of Dental Licences.—Mr. TURNER moved, Dr. STORRAR seconded, and it was resolved:

"That the bodies conferring licences in dental surgery be requested to furnish, during the month of January in each year, according to the following form, a statement of the nature of the examinations—whether written, *vivâ voce*, or practical (one or all of the three)—and of the number of candidates for their licences, showing the respective numbers passed and rejected."

The form contains columns for the names of the licensing bodies; the diplomas; the nature of the examination; the number of those passed and rejected, who have gone through a curriculum; the same for those without a curriculum; and the totals of those rejected and passed.

Memorials regarding the Dentists' Act.—On the motion of Dr. QUAIN, seconded by Dr. HUMPHRY, memorials from the Association of Surgeons Practising Dental Surgery, and the British Dental Association, were ordered to be inserted in the minutes.

Registration of Dentists.—A letter from Mr. J. S. Turner, honorary secretary to the British Dental Association, regarding the position of certain persons whose names were in the *Dentists' Register*, and who had been rejected on the ground of being engaged in the practice of dentistry with pharmacy, was also ordered to be entered on the minutes.

It was moved by Dr. PITMAN, seconded by Dr. STORRAR, and agreed to:

"That the foregoing letter from the British Dental Association, and other communications received on the same subject, be referred to the Dental Committee, to ascertain the facts as to the several cases referred to in such letters."

"Certain persons having requested that the words 'with pharmacy' be omitted after their names from the *Dentists' Register*, that the Council refer all such cases to the Dental Committee, to ascertain the facts in each of such cases."

Dr. QUAIN moved, and Dr. PITMAN seconded:

"That the opinions on the subject of Dental Registration specified in the minutes of the Executive Committee for November 28th, 1879, be referred, with all the preceding documents, to the Dental Committee."

Mr. TURNER moved as an amendment, and Sir JAMES PAGET seconded:

"That the cases submitted to counsel, together with the opinions relating thereto, be now read in private."

The amendment was carried, and, having become the substantive motion, and been put to the vote, was agreed to.

Dr. STORRAR required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. For, 11: Dr. Pitman, Sir James Paget, Dr. Humphry, Dr. Pyle, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Mr. Turner, Dr. Quain, Mr. Simon, Mr. Teale. Against, 5: Dr. Storrar, Dr. Aquilla Smith, Mr. Macnamara, Rev. Dr. Haughton, Dr. Banks. Did not vote, 6: The President, Mr. Bradford, Dr. Pettigrew, Dr. Leet, Dr. Fergus, Dr. Hudson. Absent, 2: Dr. Rolleston, Sir William Gull.

Strangers having withdrawn, the cases and opinions in question were then read by the Registrar.

It was moved by Dr. STORRAR, and seconded by the Rev. Dr. HAUGHTON:

"That the cases relating to the *Dentists' Register*, submitted for the opinions of Mr. Bowen and Mr. Fitzgerald, and their opinions thereon, be inserted in the minutes."

The motion was negatived.

Dr. STORRAR required that the names and numbers of those who voted for and against the motion, respectively, and of those who did not vote, be taken down.

Against, 12: Dr. Pitman, Sir James Paget, Dr. Rolleston, Dr. Humphry, Dr. Pyle, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Mr. Turner, Dr. Quain, Mr. Simon, Dr. Fergus. For, 7: Dr. Storrar, Dr. Pettigrew, Dr. Aquilla Smith, Mr. Macnamara, Dr. Leet, Rev. Dr. Haughton, Dr. Banks. Did not vote, 4: The President, Mr. Bradford, Mr. Teale, Dr. Hudson. Absent, 1: Sir William Gull.

Dr. ANDREW WOOD moved, Mr. SIMON seconded, and it was agreed to:

"That the opinion of counsel be taken as to whether the Council can delegate to the Executive Committee the initiation of proceedings by the Dental Committee under Section 15 of the Dentists' Act, and that, if the opinion of counsel be that such power can be so delegated, the Council hereby delegate the same to the Executive Committee."

It was moved by Mr. MACNAMARA, seconded by the Rev. Dr. HAUGHTON, and agreed to:

"That the case of Mr. John Hamilton be referred to the Dental Committee, to ascertain the facts and report thereon forthwith to the Council."

Preliminary Examinations by the Medical Corporate Bodies.—The discussion of Mr. SIMON's motion on this subject was resumed.

Mr. SIMON said that the object of the preliminary examinations was not to test anything specially connected with the medical profession, but to ensure that those who enter it shall be well educated gentlemen. They should be tested by the same measure as was applied in other professions; and the standard—which must vary with the growth of education—should be applicable to all. To ensure this, the test should not be applied by the medical bodies, nor by bodies acting under their direction, but by persons conversant with common school education. The question to be determined was, not *e.g.*, what amount of Latin was necessary for a member of the College of Surgeons or Licentiate of the Apothecaries' Hall, but what amount of education would make a well educated gentlemen. There was danger that, in the hands of the medical authorities, the test might be applied with modifications of quality or with too much leniency. This might or might not happen; but it was contrary to the intention of the Council, which was, that the test should be applied in a general and not in a special sense. When the Council first framed its recommendations regarding preliminary examination, it had to recognise the absence of common examining institutions, and to accept provisionally the examinations conducted by certain medical bodies. That these were only to be recognised provisionally, had been kept in view throughout; and in 1877, the Council issued a recommendation to the effect that it was very desirable that the examinations should be left to the universities, and such other of the national examining bodies as were approved by the Council; and the recommendation was communicated to the licensing bodies in order that they might express their opinions thereon. In 1879, the answers from these bodies came before the Council, and were referred to the Branch Councils to be reported on in time for the present meeting; and the reports of the three Branch Councils had been received. The Council could not put aside the question of preliminary education; and the question ought to be settled at an early date in one way or another; either the recognition of the preliminary examinations conducted by the licensing bodies, or the recommendation in favour of leaving the examinations in the hands of the general educational bodies, should be withdrawn. But, seeing that examining bodies were much more available than they formerly were, it was time that the latter recommendation should be carried out. His proposal had not the force of law, but it had weight which, he hoped, would lead the Council to adopt it. There ought to be no uncertain voice on the matter. He did not propose that the Council should direct or control the Colleges, but that they should express an unquestionable opinion as to the continuance of the examinations.

Dr. STORRAR seconded the motion.

Mr. MACNAMARA said that it had long been the dream of his life that every one entering the medical profession should have a degree in

Arts; but this hope was Utopian in the present state of the public wants. One of Mr. Simon's reasons for his proposal was, that the corporations were liable to be influenced in their verdicts on the general education of students by the desire to secure them for the medical profession. Were not the universities—for instance those in Ireland—open to the same charge? But, on behalf of the corporations, he repudiated the charge; and so would the other representatives of medical corporate bodies. The examinations in Arts of the Royal College of Surgeons in Ireland was, he believed, as efficient as the Council could desire. The examiners, Drs. Davys, Malone, and Morton, resided at Swords, Limerick, and Nenagh; and how could they be influenced by a desire to swell the medical classes of the College? If the Council desired to interfere with the chartered rights of the Colleges by their recommendations, he would challenge them to go before the Privy Council; but, if they succeeded, they would do a great injustice to the medical students of Dublin. Mr. Simon wished the Council to settle the question; but this could not be done, so far as the Royal College of Surgeons in Ireland was concerned. He deprecated the passing of recommendations that could not be carried out. All the examining bodies were most desirous to comply with the recommendations of the Council as far as possible. He protested against the statement that the Council considered the present system of preliminary examination to be bad. The Council had not performed its duty of visiting the examinations; and, unless this were done, it was not justified in condemning them. Nothing would please him better than to receive the visitors hospitably in Dublin; and if they investigated the matter, they would no longer believe that the examinations of his College were bad. The College was really anxious to get rid of the task of undertaking the preliminary examination of students, but it was impossible to do so at present.

Dr. HUMPHRY said that it was a matter of principle that the preliminary examinations should be left in the hands of the great national examining bodies. There was no allegation of imperfection, nor accusation against the corporate bodies; but the medical bodies were not best fitted for conducting the general examination. The Colleges of Physicians of London and Ireland had long ago assented to the wish of the Council, and had ceased to hold preliminary examinations. The Royal College of Surgeons of Ireland, did not decide against the wish of the Council, but at present saw difficulties in the way of complying with it. This was an important point. He feared that, if Mr. Simon's resolution passed, it might be resented by the Irish College, and that the intentions of the Council might be frustrated. The Council should proceed carefully and slowly. The recommendations moved by Mr. Simon, could only be carried out by moral suasion, which had hitherto produced great results. The resolution, if passed, would put the Council in the position of not recognising the preliminary examinations of the corporate bodies. What would be the result of this? The corporate bodies would continue their preliminary examinations, and students would present their certificates in order to be put on the *Students' Register*. The Council might then either accept the certificate in opposition to its own recommendations; or might open the question whether a student should be admitted to the study of medicine without previous registration. With regard to reporting the bodies to the Privy Council, it must be remembered that the Council was only empowered to make representations as to imperfections in qualifications for practice; and he doubted whether the Medical Act gave this power in respect of the preliminary examinations. He believed that the holding of preliminary examinations by the corporate bodies would gradually cease in course of time.

Mr. TURNER thought that the Council had not yet arrived at the stage when it would pass the resolution proposed by Mr. Simon. They must trust to their power of moral suasion.

Dr. BANKS agreed as to moral suasion. At the same time the examination in general education should be conducted by men who were daily conversant with the subject. He hoped that the new Royal University of Ireland would soon be in a position to encourage a high degree of general education, as the Queen's University had done.

Dr. ANDREW WOOD said that the recommendations of the Council had only the effect of moral suasion, but had been largely complied with. The Council should hesitate before applying compulsion. The effect of the resolution proposed would be to disfranchise the Colleges and the Apothecaries' Halls, so far as regarded their preliminary examinations. As these bodies had been in the past willing to accede to the recommendations of the Council, would it be good policy to drive them into opposition? It would be a grievous error to excite an angry feeling in the corporations against the Council.

Dr. ROLLESTON supported the motion. The corporations could not conduct the preliminary examinations without being suspected. No legislation ought to put men into a position of temptation. No doubt the examiners were unimpeachable; but it would be well that none of them should hold office for more than two years.

Mr. MACNAMARA said that, in the Royal College of Surgeons in Ireland, the examiners were appointed yearly and were often changed.

Dr. PITMAN agreed in principle with Mr. Simon; but what was desirable and what was possible were too different things. If Mr. Simon's proposal were accepted, the corporate bodies would continue their examinations, but their certificates would not be accepted; the student would then go back, and at the end of four years would obtain his qualification to practise. He would offer this for registration, and could not be refused; but he must be refused if the Council acted consistently.

Sir JAMES PAGET said that Mr. Simon's proposal was impracticable. The Council had no power to enforce it. It was not correct to say that there was a general opposition to the wishes of the Council on the part of the licensing bodies; but they could not carry out what was not practicable. What was to be done with the five hundred men who came before the College of Surgeons every year, who looked to the College for the means of providing their preliminary examinations? If there was anything which would obstruct the progress of the Council in its attempt to improve the preliminary education of the medical student, it would be an imperative resolution such as that of Mr. Simon.

Dr. STORRAR suggested that Mr. Simon should withdraw his resolution.

With the consent of the Council, the motion was withdrawn.

Ventilation of the Council-room.—Mr. TEALE moved, Mr. MACNAMARA seconded, and it was resolved:—

"That the Council request the Executive Committee to consult an expert, with a view to the improvement of the ventilation of the Council-room."

Friday, July 16th.

Dr. ACLAND, President took the chair at 2 P.M.

Returns from the Navy Medical Department.—Mr. TURNER asked the President if he could furnish the Council with information why the Navy Medical Department has ceased to furnish a statement of the results of the examinations for admission to the Medical Department of the Navy.

The PRESIDENT said that he had received a letter from the First Lord of the Admiralty, in which he said that he could not find that the Medical Council had asked the Admiralty to furnish the information; but that there was not the slightest objection to its being furnished with the same information as was given by the Army Medical Department. The returns would, therefore, in future be at the disposal of the Council.

Time of Meeting of Council.—The Rev. Dr. HAUGHTON requested the President to take into his consideration the propriety of holding the annual meeting of the General Medical Council during the Easter recess.

The PRESIDENT stated that it had always been the practice for those who held his office to take pains to ascertain the time which was the best for holding the meetings of the Council with a view to discharge its duties, and with a view to the convenience of the members of the Council. There were considerations which rendered it undesirable to have the meetings necessarily held every year at a fixed date, but he was in a position to state that every effort would be made in the future, as in the past, to ascertain the wishes of members, and to fix the meetings accordingly.

Recognition of Previous Medical Examinations ad eundem.—Mr. MACNAMARA asked the President whether he could communicate to this Council the names of such of the authorities mentioned in Schedule (A) to the Medical Act as accepted *ad eundem*, either in whole or in part, the "previous medical examinations" conducted by other bodies, and if so, whether he would be good enough to give the Council this information, and to state in each case to what extent the acceptance went.

The PRESIDENT stated that there was no information available in the office which would enable him to answer the question.

The Dentists' Register and Mr. John Hamilton.—A communication from the Royal College of Surgeons of Ireland respecting Mr. John Hamilton, and the report of the Dental Committee thereon, were read and ordered to be entered on the minutes. The report of the Dental Committee was as follows.

"The Dental Committee have considered the case of Mr. John Hamilton, a registered dentist, referred to them by the General Medical Council to ascertain the facts, and have taken evidence. The Committee find that Mr. John Hamilton was registered on the 31st day of December, 1878, as 'in practice (with Pharmacy) before July 22, 1878';

and that on April 17, 1870, the said John Hamilton was registered, with the additional qualification of 'Licentiate in Dentistry of the Royal College of Surgeons in Ireland,' by virtue of a diploma then produced, and bearing date the 4th day of January, 1879. The Committee further find that in pursuance of the power given to the Royal College of Surgeons in Ireland by their supplemental charter, the President and Council of the said Royal College have, at a meeting held the 23rd day of October, 1879, removed the name of the said John Hamilton from the list of dental licentiates of the said College. The Dental Committee further find that, in consequence of the said order, the said John Hamilton has ceased to be a Licentiate of the Royal College of Surgeons in Ireland. The Dental Committee report these facts to the General Council."

It was proposed from the Chair, and resolved:

"That as, by the Report of the Dental Committee, it appears that Mr. John Hamilton has ceased to be a Licentiate in Dentistry of the Royal College of Surgeons in Ireland, his qualification as having been such Licentiate be erased from the *Dentists' Register*, and that the Registrar be ordered to erase such qualification from the *Register* accordingly."

A question having arisen as to the power of the Council to remove Mr. Hamilton's *name* from the *Dental Register*, it was moved by Dr. ANDREW WOOD, seconded by Mr. SIMON, and agreed to:

"That the case of Mr. John Hamilton be referred to the Dental Committee, for inquiry as to the facts of the case."

Foreign and Colonial Preliminary Examinations.—Mr. MACNAMARA moved:

"That all such bodies, the preliminary examinations of which cannot be visited by this Council, be removed from the list of bodies receiving its sanction."

The Rev. Dr. HAUGHTON seconded the proposal.

Dr. STORRAR suggested that it might be better to leave the recognition of foreign and preliminary examinations in the hands of the Branch Councils, who should deal with each case on its own merits.

By permission of the Council, the motion was withdrawn.

Recognition of Continental Preliminary Examinations.—Mr. TURNER moved:

"That the 'Gymnasial Abiturienten Examen' in Germany, and the corresponding examinations in other continental countries, required for admission to their respective universities, be accepted as qualifying for registration as a medical student."

He called attention to a report on the system of education on the Continent, presented to the Council in 1869. These examinations must be passed on leaving school, as a necessary prelude to admission to the universities. The subjects were: German and Latin—a thorough knowledge being required; Greek, enough to enable the candidate to read a book without preparation; history; French; mathematics; natural science; and elements of logic. These subjects were compulsory; and as voluntary subjects there were English, Italian, or some other modern language, etc. The examinations were held twice yearly, under the superintendence of a Government inspector. They were of a higher character than the preliminary examinations required by the Medical Council. Similar examinations were held in the other great continental countries. As Dean of the Faculty of Medicine in the University of Edinburgh, it had often been his duty to submit certificates brought by German students to the Branch Council in Scotland for recognition. If the motion were accepted, the Council would have proceeded in an important direction—that of the liberalisation of the regulations respecting foreign practitioners.

Dr. [illegible] which was carried.

Proposed Addition to Standing Orders.—Dr. FERGUS proposed:

"That the following additions be made to the Council's *Standing Orders*:—

1. "During the month of January in each year, the examining bodies which are recognised by the General Medical Council as capable of giving certificates of proficiency in the subjects required for preliminary examination, shall make a return to the General Council, according to a prescribed form, stating the number of the candidates who, in the preceding year, have passed the respective examinations of such bodies, and the number of those who have been rejected at such examinations."

2. "All preliminary examinations shall be by written papers, and the answers shall be regularly numbered and preserved by each body for at least [illegible]."

3. "The General Medical Council shall from time to time request that certain of the papers, both passes and rejections, shall be forwarded to its office, there to be examined either by members of Council, officials of that body, or by gentlemen appointed by the Council, or its executive body. If the examiner [illegible] that there are 'cases in which decided ignorance in general education has been displayed by candidates' who have passed their preliminary examination, such cases shall be reported to the General Medical Council or its executive committee, either of which shall intimate the fact to the examining body, and request more attention in future. If laxity is persisted in, the General Medical Council shall 'represent the body' to the Privy Council."

4. "A degree, either in Arts or Science, granted by a university or a licensing body recognised by the Council, shall be held a sufficient qualification as regards the subjects in which the holder of the degree has been examined. Subjects not covered by the degree must be passed before the person can be registered as a medical student."

Dr. PETTIGREW seconded the motion; which, after some remarks from Dr. Rolleston, Dr. Storrar, Mr. Simon, Dr. Humphry, and the Rev. Dr. Haughton, was withdrawn by permission of the Council.

Examination in Physics.—The Rev. Dr. HAUGHTON moved, Dr. BANKS seconded, and it was resolved:

"That it be referred to the committee on preliminary examination (specified in Clause 11 of the General Council's minutes for July 14, 1880) to consider whether the first division of the professional examination should include a separate examination in physics, meaning thereby the elements of heat, electricity, and magnetism."

The British Pharmacopœia.—Mr. MACNAMARA moved:

"That a Pharmacopœia Committee be appointed, with the view of considering and of reporting to this Council how best any future edition of the *British Pharmacopœia* may be brought up to the scientific standard of the present day."

He said that, when the *Pharmacopœia* was issued thirteen years ago, it was worthy of the Council; but now it was not up to the scientific standard, and in many respects was far behind. The nomenclature was not in accordance with the modern chemical doctrines; and there were many omissions in it, such as codeia, salicylic acid, santonine, etc. No expense should be spared in the perfection of the *Pharmocopœia* as a scientific work.

Dr. AQUILLA SMITH seconded the motion.

Dr. ANDREW WOOD said that there was already a Pharmacopœia Committee, whose duty it was to watch progress, and to recommend additions or omissions. It would be very dangerous to change the *Pharmacopœia* too often.

Dr. QUAIN said that it was very difficult to satisfy every one in preparing the *Pharmacopœia*. There had been a complete change in chemical nomenclature; but was there any reason why pharmacy should follow the phantasies of scientific nomenclature?

Dr. AQUILLA SMITH advised that the committee should begin to make preparations for a new edition.

Mr. MACNAMARA said that two or three years would be well spent in preparing the new edition.

The PRESIDENT called attention to the fact that five thousand copies of the last edition, with appendix, had lately been printed.

By permission of the Council, the motion was withdrawn.

Evening Lectures.—A communication from the directors of the Carmichael College of Medicine and Surgery, addressed to the President of the Medical Council, was read. It stated that a considerable number of the Medical students in Dublin were employed as clerks, assistants, etc., in such a way as to render regular attendance on lectures in the daytime an impossibility. Students who would otherwise join the school were deterred from doing so, owing to the rule which required attendance on half of each course of lectures. A request was forwarded to the directors, through one of their lecturers, from some students, that courses of evening lectures should be established. In this request, it was stated that the students in question were desirous of availing themselves of the lecture system; that they could not attend in the daytime; that, if they did not establish evening lectures, they would have to go to a school that did not require attendance; and that they considered it a great hardship to have to pay for lectures which they could not possibly attend. The directors gave this request full consideration, and came to the conclusion that it was their duty to accede to it. Their action had, however, been called in question by the Council of the Royal College of Surgeons in Ireland. It had been stated that men in business ought not to be encouraged to become medical students, and the authority of the General Medical Council, in recommending that four years should be spent exclusively in the study of medicine, had been urged in support of this view. In both statements, the directors most fully concurred; but they failed to see, as men in business were permitted to be medical students, that it was not a great deal better for them to have the opportunity of gaining such knowledge as, the directors believed, could only be obtainable from lectures, than that they should not. Under these circumstances, the directors were anxious to know the opinion of the General Medical Council; and they would be glad to retire from a position imposing

much personal inconvenience on the lecturers, should the Council consider the course they had taken undesirable.

The following resolution of the Royal College of Surgeons in Ireland was also read :

"That, in the opinion of this Council, the system about to be introduced in two of the Dublin Schools of Medicine (as stated in the public advertisements) of giving courses of lectures late in the evening, and at night, in addition to those given during the day, is objectionable, and should not be put in practice."

The Rev. Dr. HAUGHTON moved, and Dr. BANKS seconded :

"That in answer to the foregoing letter from the directors of the Carmichael College of Medicine and Surgery (of date November 5, 1879), the General Medical Council do not desire to express an opinion as to the hours of the day during which medical lectures should be delivered."

Dr. ROLLESTON moved as an amendment, and Dr. SCOTT ORR seconded :

"That the Council expresses its approval of the resolution contained in the letter addressed by the Royal College of Surgeons in Ireland to the Registrar of this Council."

The amendment was negatived.

Dr. SCOTT ORR required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down. Against, 14 : Dr. Pitman, Sir James Paget, Mr. Bradford, Dr. Humphry, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Mr. Turner, Dr. Aquilla Smith, Dr. Leet, the Rev. Dr. Haughton, Dr. Banks, Mr. Simon, Dr. Fergus. For, 3 : Dr. Rolleston, Dr. Scott Orr, Dr. Pettigrew. Did not vote, 2 : The President, Dr. Pyle. Absent, 5 : Mr. Macnamara, Dr. Quain, Sir William Gull, Mr. Teale, Dr. Hudson.

The original motion was then put to the vote and agreed to.

Certificates of Attendance on Lectures.—Mr. SIMON moved, and Dr. ANDREW WOOD seconded, and it was resolved :

"That the following report by the Irish Branch Council in regard to certificates of attendance on lectures be inserted in the minutes."

"This Branch Council report that, having taken into consideration the following resolution of the General Medical Council, as communicated in Mr. Miller's letter of 22nd July, 1879 :—'That the Branch Council for Ireland have its attention drawn to a statement made by a member of this Council to the effect that certificates of attendance have been issued in a Dublin school to students who have not given such attendance, and that the Branch Council be requested to inquire into this matter, and to report them to this Council at its next meeting.' Whereupon the following resolution was adopted :—'That this Branch Council are not able to throw any light upon the case referred to in Mr. Miller's letter of the 22nd July last, as to the school referred to.' The Council then further resolved :—'That a letter be addressed to the secretaries of the several schools and hospitals in this city, inquiring of them, for the information of the General Medical Council, what precautions have been adopted to insure the *bona fides* of certificates of attendance issued by them to their several students.' A copy of this resolution was forwarded to each of the following six medical schools :—1. School of Physic, Trinity College; 2. Royal College of Surgeons' School; 3. Carmichael Medical College; 4. Ledwich School of Medicine; 5. Catholic University Medical School; 6. Steevens's Hospital Medical College; also to each of the following ten Clinical Hospitals :—1. Sir Patrick Dun's Hospital; 2. Mercer's Hospital; 3. St. Vincent's Hospital; 4. Mater Misericordiæ Hospital; 5. Meath Hospital; 6. Adelaide Hospital; 7. City of Dublin Hospital; 8. Richmond Hospital; 9. City of Dublin Hospital; 10. Charitable Infirmary, Jervis Street."

The letters received in reply were appended.

The Rev. Dr. HAUGHTON moved, and Mr. TURNER seconded :

"That the General Medical Council are of opinion that no medical authority should receive a certificate of attendance upon lectures or hospitals, unless such certificate state the actual number of attendances made by the holder, and the total possible number of attendances."

The motion was negatived.

The Rev. Dr. HAUGHTON required that the names and numbers of those who voted for and against the motion, respectively, and of those who did not vote, be taken down. Against, 11 : Dr. Pitman, Sir James Paget, Dr. Rolleston, Dr. Humphry, Dr. Storrar, Dr. Haldane, Dr. Scott Orr, Mr. Macnamara, Dr. Quain, Mr. Simon, Dr. Fergus. For, 5 : Mr. Turner, Dr. Pettigrew, Dr. Aquilla Smith, Dr. Leet, the Rev. Dr. Haughton. Did not vote, 4 : The President, Mr. Bradford, Dr. Pyle, Dr. Andrew Wood. Absent, 4 : Dr. Banks, Sir William Gull, Mr. Teale, Dr. Hudson.

Medical Reform.—Mr. SIMON moved :

"That the Council beg leave to bring under the particular notice of Her Majesty's Government the position in which the question of legislation for the medical profession was left standing at the time when the late Government retired from office, and respectfully submits to Her Majesty's Government that, in the opinion of the Council, it is essential for those important public interests which are involved in the good ordering of the medical profession that Her Majesty's Government should, at their earliest opportunity, consider and determine the course which they will advise the Legislature to follow, with a view to terminate a period of indecision and unsettlement which is most injurious to the progress of medical education."

Dr. QUAIN seconded the motion.

Dr. ANDREW WOOD moved as an amendment, and Dr. PYLE seconded :

"That the question be not put."

Mr. SIMON said that the Council acted under a disadvantage in making regulations in a state of uncertainty. But for a political accident, the Committee of the House of Commons would have by this time made their report, and have made proposals for changes in the Medical Act and in the constitution of the Council. The Royal College of Surgeons had been seriously kept back in the work of reform, by the knowledge that great questions were being considered in Parliament. He would remind Dr. Wood that the appointment of the Select Committee was in agreement with his urgent recommendation. He did not come forward as an advocate of conjoint boards, but because the Council could not act with efficiency in the present state of uncertainty.

Dr. QUAIN said that the Council was the subject of grave accusation, and it was its duty to ask the Government to inquire into the matter. Inaction would appear to be an admission of guilt.

Mr. MACNAMARA supported Mr. Simon's proposal. The Council should give a decided vote in one direction or the other. The position of the Council in the present state of uncertainty was like that of a man sitting on a barrel of gunpowder smoking a pipe.

Dr. ROLLESTON could not vote for Mr. Simon's proposal. He objected to Government interference with the regulation of the medical profession; it had a demoralising effect.

Dr. PYLE did not think that Mr. Simon's motion was called for; but he was very desirous that the Committee of the House of Commons should go on again. It would be better to leave the matter in the hands of the Government.

The Rev. Dr. HAUGHTON said that some might object to Government interference; but there was much which the Council could not do without an Act of Parliament. For instance, it could not prevent a man from being registered with only one qualification.

The PRESIDENT called attention to the statement of Mr. Mundella, referred to in his address at the opening of the session, that the subject of the Amendment of the Medical Acts would be considered during the recess of Parliament.

Dr. HUMPHRY opposed the motion. It would be better "to bear the ills we know than to fly to others that we know not of."

Mr. SIMON having replied, the amendment was put to the vote and carried.

Mr. SIMON required that the names and numbers of those who voted for and against the amendment, respectively, and of those who did not vote, be taken down.

For, 12: Sir James Paget, Mr. Bradford, Dr. Rolleston, Dr. Humphry, Dr. Pyle, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Mr. Turner, Dr. Aquilla Smith, Dr. Leet, Dr. Banks. Against, 7: Dr. Pitman, Dr. Storrar, Mr. Macnamara, Rev. Dr. Haughton, Dr. Quain, Mr. Simon, Dr. Fergus. Did not vote, 2: The President, Dr. Pettigrew. Absent, 3: Sir William Gull, Mr. Teale, Dr. Hudson.

The Apothecaries' Society and the Select Committee on the Medical Acts.—It was moved by Mr. BRADFORD, and seconded by Dr. PYLE:

"That the General Council receive a communication from the Apothecaries' Society of London, relative to certain evidence which has been given before the House of Commons' Select Committee on the Medical Act (1858) Amendment Bill."

Dr. PITMAN moved as an amendment, and Dr. ROLLESTON seconded :

"That, inasmuch as the evidence given before the Select Committee of the House of Commons in 1879, on the Medical Act (1858) Amendment Bill, was not given by anyone under the authority of, or on behalf of, the General Medical Council, it would be improper for the Council to receive any statement in correction of that evidence."

With the permission of the Council, the original motion was withdrawn.

Visitation of Examinations.—Dr. ANDREW WOOD moved, Sir JAMES PAGET seconded, and it was agreed to :

"That the Council resume the visitation of examinations, and carry it on systematically from year to year."

It was moved by Dr. HUMPHRY, seconded by Dr. ROLLESTON, and agreed to:

"That it be a direction to the Executive Committee to instruct visitors to inquire into the causes of the rejections that appear in the annual returns."

Votes of Thanks.—It was moved by the Rev. Dr. HAUGHTON, seconded by Sir JAMES PAGET, and carried by acclamation:

"That the thanks of the Council are hereby cordially tendered to Dr. Acland, the President, for his efficient services during the present session of the Medical Council."

Dr. HAUGHTON moved, Sir JAS. PAGET seconded, and it was resolved:

"That the cordial thanks of this Council are eminently due, and are hereby tendered, to Dr. Andrew Wood, for his services as Chairman of the Business Committee during the present session of the Council."

The Council then adjourned.

REVIEWS AND NOTICES.

MODERN MEDICAL THERAPEUTICS. By G. H. NAPHEYS, M.A., M.D., etc. Sixth Edition. Philadelphia: Brinton. London: Baillière and Co. Pp. 607.

A BOOK in its sixth edition usually calls for but slight review, but this treatise is not yet generally known in this country.

The name of the present editor is not given, but the late Dr. NAPHEYS, in his preface to a former edition, says: "This volume differs from ordinary works on the practice of medicine in being devoted exclusively to practice; from works on materia medica, in treating only of therapeutics; and from a formulary, in that it is not a mere collection of prescriptions, but aims at a systematic analysis of all current and approved means of combating disease." Under the divisions of Nervous, Respiratory, Circulatory, Digestive, and Urinary Systems, diseases are classified alphabetically, thus: Apoplexy, Chorea, Epilepsy, Headache, etc. A separate section for Diseases of the Blood includes anæmia, gout, ague, rheumatism, and specific fevers. Diseases of Children are treated in another section; and a final part deals with Toxic Diseases, *i. e.*, alcoholism, opiism, hydrargyrism, etc. Surgical Therapeutics are constituted into a separate volume, and Diseases of Women are intended to be so.

Under each disease, a *résumé* is given of the views of certain authorities, or of the treatment followed in special hospitals, and then a shorter *résumé* of remedies; thus, under apoplexy, two pages summarise the opinions and practice of Dr. W. A. Hammond, another page those of Dr. J. Hughlings Jackson, a few paragraphs those of Dr. D. C. Wade as to ergot, of A. M. Hamilton as to hydrobromic acid, and of F. Runge as to rest and diet. Under general remedies, we have a few lines about arsenic, bromide and iodide, calomel and sublimate, strychnia, bleeding, purging, counterirritation, and electricity. The somewhat active and much-promising after-treatment of Dr. Hamilton contrasts markedly with the negative treatment of Dr. Jackson; but, in our experience, the phosphorus, strychnia, and electricity of the former physician have very seldom produced the hoped for effects.

Under Chorea, we consult with Drs. W. Aitken, Barlow, Hammond, and Da Costa, Bouchut, Hamilton, Hillier, Reveil, and the Children's Hospitals of London and Paris, and more briefly with many other known names, and are reminded of the claims of arsenic and anilin, antimony, cannabis, chloral, conium, ferric bromide, hypophosphites and phosphorus, cod-oil and quinin, stannum and strychnia, valerian and zinc, besides baths, spray, and movement cures. It will be evident that the book is a compilation, and that it rather provides a full *menu* than presses a particular potion; the work of selection is still mainly left to the reader, but the list is emphasised here and there to make it more than a mere catalogue. Referring for comparison to such allied books as Tanner's *Index of Diseases* (Broadbent) and the *Practitioner's Handbook of Treatment*, we find them both giving rather more general knowledge and suggestion, but less on the special point of treatment. Tanner says nothing of strychnia or ergot in apoplectic conditions, and Fothergill does not mention arsenic in chorea. Still less do medical text-books, such as Niemeyer or Bristowe, offer in therapeutical resource; and we turn rather to modern materia medica (in which pharmacy is eliminated)—Stillé, or Phillips, or Bartholow, or perhaps still rather to Buchheim or Ringer—if we want fresh hints in treatment. But the plan of all these books takes first the remedy and groups diseases under it; whilst Dr. Napheys' plan, as indicated, chapters the maladies in alphabetical order, and then groups under each remedies, and opinions about them. So that there seems to be a place apart for the book; it is not deep, it can scarcely be called scientific, but it is easy interesting reading, and likely to be of use to busy men. It has the further advantage to us of reflecting American practice; and, if this seem peculiar in places, it is at least original and suggestive; *e. g.*, Dr. G. T. Stevens of New York maintains "that chorea arises from irritation dependent on anomalous refraction of the eye, and largely on hypermetropia". Hence the first and great indication is to correct the faulty refraction by proper glasses; or, if that be impossible, to cover the eyes as in sleep, when the movements cease; internally, Calabar bean is indicated.

The anilin treatment of chorea deserves further investigation. We have seen rebellious cases quickly controlled from it; but mention should be made of the cyanotic condition produced. It is alarming in appearance, but we have no reason to think it so in reality. A bluish child has come as an out-patient for weeks.

Dr. A. M. Hamilton (New York) recommends nitro-glycerin in epilepsy—"one-tenth of a drop producing a rapid cerebral hyperæmia, safer and more lasting than that of amyl-nitrite, and a better abortant of the attack." Dr. Lockridge (Indianapolis) finds the following formula of service in almost every variety of headache: ℞ Potas. bromid. ʒij; tinct. radicis aconiti ʒj; aq. destil., syrup. simp., āā ʒij. Dessertspoonful every hour till relieved. This, as remarked, is a large dose of the principal ingredients; "but it rarely has to be repeated". Considering that the American tincture is made with 1 part to 2½, whilst the British is 1 to 8, and, further, the uncertainty of dessertspoons, it is highly probable that many such doses would *not* be required. The best mode of giving phosphorus in nerve-headache is said to be: Acidi phosphorici diluti ♏vj; syrupi phosphat. co. ʒiij. Dessertspoonful thrice daily.

"Moschus, in the dose of one grain every two hours, often proves successful in the sleeplessness of hypochondriasis" (Graves). There is certainly an element of truth in this "fact not generally known", and it deserves further inquiry. "In passive insomnia, especially in women, nothing can be better, as a stimulant and tonic, than Tarragona wine; next must be ranked good lager beer" (Hammond).

Amongst external remedies, Dr. S. Newington's mustard-baths should be mentioned. We believe they were of much service to Prince Bismarck when other things failed. A hot mustard foot-bath will help sleep with one-third ordinary dose of hypnotic (Anstie). Bartholow recommends, for all forms of neuralgia, the following combination: Chloral hydrat., camphoræ pulv., āā ʒj; morphiæ sulph. gr. ij; chloroformi ♏xl. Dissolve by gentle heat, and to these 160 minims add one-twelfth of a grain of atropia. Twenty minims will contain seven and a half grains of chloral and camphor, a quarter of a grain of morphia, and one-ninety-sixth of a grain of atropia, and may be given internally or painted on.

Some caution should be given about the use of gelseminum, and phosphorus deserves at least a mention.

Tendency to the use of large doses is shown again by Dr. Hammond's treatment of facial palsy by strychnia. Of a solution containing one grain to the ounce, he begins with ten minims thrice daily, and increases the dose by one minim every day till cramps are felt in the legs or jaw.

Dr. Comegys (Cincinnati) has cured refractory sciatica by touching with red-hot wire a spot on the ear of the affected side—the anterior part of the helix, close to the concha. In vertigo, "the practitioner should bear in mind the importance of assuring the patient positively of the absence of all danger" (Dr. A. Flint). Is this so? Dr. S. Weir Mitchell recommends above all things actual cautery to the neck once in five days.

Arsenic in asthma "is inadmissible in organic disease of the lungs and heart". Why?—We have known it very useful in both. With quinin it is recommended in "nervous hæmoptysis". For chronic bronchitis and phthisis, Parisel recommends an inhalation containing powdered cinchona and sulphur, of each half an ounce in syrup of allthæa. Is it generally known that "hæmoptysis may be promptly checked by applying over the lung a flannel pad soaked in chloroform?"(Dr. Weir). To prevent formation of gall-stones, Drs. Octerlony and Buckler give the hydrated succinate of peroxide of iron, on account of the large amount of oxygen contained in it and almost wanting in cholesterin.

Space will not permit further references; but these will show the suggestiveness of the book. It remains to notice a few minor points. Americanisms are not other than amusing. The bowels must be kept "soluble"; doses must be "divided up"; the facts may be "subsumed"; and certain points are "value-aids". But all will agree that "traveling" (p. 71) deserves the *l* which might be subtracted from "skillful" (p. 83). We look in vain for peritonitis or pyelitis; and think that under cardiac hypertrophy some mention should be made of Bright's disease. Most Englishmen are credited with living in London—*e. g.*, Dr. Oliver of Harrogate and Dr. Balthazar Foster of Birmingham; but after all, this will not affect the value of their prescriptions, and our final verdict would be, that this is an useful and interesting book, which no one can take up without finding something he did not know before.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 24TH, 1880.

THE GENERAL MEDICAL COUNCIL.

THE General Council of Medical Education and Registration has again met in annual session; and, having sat and deliberated for nine days, has dispersed. An account of the daily proceedings is given in the JOURNAL of this and the preceding two weeks. We here follow our usual custom of giving a summary of the work done—in which, it will be seen, the negative character has a large share.

The question of the amendment of the Medical Acts did not, in the present uncertainty as to the manner in which the subject is to be treated by Parliament, occupy the attention of the Council to any extent. In his opening address, the President referred to the state of the question, and to the information given by the Vice-President of the Committee of Council on Education that the subject would be considered during the parliamentary recess. At a late stage of the session, Mr. Simon brought forward a proposal that the Council should urge on the Government the necessity of bringing the vexed question of medical reform to a settlement; principally on the ground that the Council could not act in a decided and satisfactory manner in the present state of uncertainty and suspense. The proposal was, however, put aside by the adoption of a modification of "the previous question".

The time of the Council was mostly occupied with matters relating to Preliminary and Professional Education; especially the former.

With regard to professional education, the only topics considered were certain memorials regarding examination in mental diseases and in ophthalmology, and the education in obstetric medicine. The Medico-Psychological Association had communicated to the Council a resolution passed at the last annual meeting of the Association, in favour of making mental diseases a subject of examination for all degrees and licences to practise medicine in the United Kingdom; and a memorial to the same effect, *mutatis mutandis*, had been received from ophthalmic surgeons in London with regard to ophthalmic medicine and surgery. The Obstetrical Society of London memorialised the Council in favour of rendering compulsory a six months' course of study of Obstetric Medicine. The Council, while admitting the importance of these subjects, did not see fit to issue special recommendations regarding them.

The requirements of the Council as regards the Preliminary Education of the medical student were considered in detail, and some additions were made. On the first day of the session, Dr. Storrar brought the subject forward in a speech in which he reviewed the proceedings of the Council in regard to it *ab initio*. He ended by proposing the appointment of a committee to consider whether any, and what, changes should be made. The debate was continued on the following day; and in the end an amendment proposed by Mr. Teale was carried, providing for the appointment of a Committee to report during the session. A series of proposals for amending the recommendations regarding general education were accordingly brought up, and carefully considered in Committee of the whole Council; and the modified recommendations which will be found at page 129 were finally agreed on. It was also determined that they should not come into force until the beginning of 1882. The changes made are as follows. 1. The provision is withdrawn "that an examination may be accepted as satisfactory which" (in itself) "secures a sufficient grammatical knowledge of English"—so that a special examination in the English language is required in all cases. 2. English History and Modern Geography are added to the compulsory subjects of examination. 3. The Elementary Mechanics of Solids and Fluids are placed on the compulsory list, and are defined as comprising the elements of Statics, Dynamics, and Hydrostatics; and permission is given to pass the examination either as part of the preliminary or before or at the first professional examination. 4. The list of optional subjects has had several subjects added. In place of "Greek, French, German, and Elementary Mechanics of Solids and Fluids", it now is "Greek; French; German; Italian; any other Modern Language; Logic; Botany; and Elementary Chemistry."

A proposal by Dr. Leet, the representative of the Apothecaries' Hall in Ireland (to which body is due the credit of having instituted an extensive preliminary examination many years ago), that Greek should be made a compulsory subject, led to a long debate, and was in the end negatived by a large majority; its only supporters, we believe, being four of the Irish representatives.

A proposal of the Rev. Dr. Haughton, that the preliminary examination should be amended by being divided into three parts, Greek and a modern language being added to the compulsory subjects, was also defeated; as was another by the same gentleman, to the effect that the English is the only language necessary for the education of the general practitioner.

An important motion was brought forward by Mr. Simon, and approved by the Council, that candidates for the medical profession ought to be instructed and examined in the rudiments of natural science before commencing their strictly professional studies; and that, in proportion as this would be done, the medical curriculum should be relieved of such matters. The resolution was ordered to be communicated to the licensing authorities under the Medical Act, with a request that they will consider whether they can take steps to provide such an examination. What is proposed is something analogous to, but probably less elaborate than, the preliminary scientific examination of the University of London. If such an examination, not of too exhaustive a character, can be devised in such a way as not only to increase the scientific knowledge of the intending student of medicine, but to relieve him of a part of the work that is crowded into his four years' curriculum, and thus give him more time for attending to the strictly professional subjects, a great improvement in medical education will be effected.

In connection with the subject of Preliminary Examinations, the question of continuing the recognition of certain of the bodies whose examinations are accepted came before the Council. Mr. Simon brought forward a proposal that the recognition of the Council should, after the end of the present year, be withdrawn from the preliminary examinations conducted by the several licensing bodies—all of whom, except the Royal College of Physicians in London and the King and Queen's College of Physicians in Ireland, hold such examinations. Mr. Simon held that it was time to carry out the long standing recommendation of the Council, that the preliminary examinations should be left to the universities and other national educational bodies; the deficiency in the means available for examination, which led to the acceptance of examinations conducted by the licensing bodies, having been to a very great extent supplied. The proposal, however, did not meet with favour in the eyes of the Council. The representatives of the licensing bodies profess that they are willing to give up their preliminary examinations, which are a source of some trouble to them; but at the same time they do not think that the time for doing this has yet arrived.

A proposal by Mr. Macnamara, to withdraw the recognition of all preliminary examinations which could not be directed by the Council—*i.e.*, the colonial and foreign examinations—was withdrawn; and, on the other hand, the Council approved of a proposal, by Mr. Turner, to add to the list of recognised examinations the German "Gymnasial Abiturienten Examen" and other similar continental examinations which

students are required to pass on leaving school before being admitted to the universities.

The Council, we are glad to record, resolved to renew the visitation of examinations—a duty which has lain in abeyance for several years; and the visitors are to be directed to inquire into the causes of rejection at the examinations. The subject was brought forward at a late hour of the last day of the session, and very little was said about it; but no part of the work done by the Council during the session exceeds in value the resolution to resume the visitations.

Among the matters brought before the Council was a communication from the Carmichael College of Medicine and Surgery in Dublin, stating that a number of students of medicine in that city were engaged in houses of business during the day, and could only attend lectures in the evening; and that the College had therefore instituted additional courses for the special benefit of these students. The Royal College of Surgeons in Ireland, however, had expressed disapproval of the course followed; and the Carmichael College accordingly applied to the Medical Council for an opinion on the subject. The Council, however, decided on not expressing any opinion as to the hours of the day at which lectures should be delivered.

A report of the Branch Council for Ireland, in reply to a reference made to it at the meeting of the General Council in July 1879, with reference to an allegation that certificates of attendance on lectures were incorrectly given, was presented. It stated that the Branch Council had made inquiry of the medical schools and hospitals in Dublin as to the means employed for ascertaining the attendance of students; and gave the replies received. In connection with this, the Rev. Dr. Haughton proposed a motion, which, however, was negatived, to the effect that all certificates should state the actual number and the total possible number of attendances.

A curious case of forged diploma came under the notice of the Council. One Mr. Nathaniel Chappell, in 1879, applied for registration, and presented a diploma purporting to have been granted to him after examination by the "Elphinstone College" in Aberdeen. By the advice of the Council's solicitor, the diploma was impounded by the Registrar, and was declared to be a forgery—and an awkward one, by reason of its faulty Latin—by the Registrar of the University of Aberdeen. The Council refused Mr. Chappell's application for registration. As far as we can judge, this forgery is a somewhat ridiculous illustration of the old saying about the danger of a little knowledge. It is a historical fact, that in the reign of James IV of Scotland—to whose reign the institution of the "Elphinstone College" is assigned—William Elphinstone, Bishop of Aberdeen, did, among other worthy acts, found an university in Aberdeen, under the sanction of a Pope's bull. The manufacturer of the diploma apparently had become possessed of this information; but he overlooked the important fact that the university founded by Bishop Elphinstone never bore his name, but, after being for a while known as "St. Mary's College", was for a long series of years and until modern times widely known as "the King's College and University, Aberdeen".

A question was raised by Mr. Turner, as to the reason why returns of the candidates examined for the Medical Service of the Navy are not furnished to the Council in the same way as for the Army Medical Department. From the President's reply, it appears that the Council will in future receive from the Admiralty information analogous to that supplied by the military authorities.

The Report of the Finance Committee for 1879 shewed that the actual income had exceeded the expenditure by £902 7s. 7d. It appears, however, that the expense of working the Dental Act is likely to be greatly in excess of the income derivable from the registration of dentists.

Half of one day's sitting was devoted to the transaction of business imposed on the Council by the Dental Act. It seems that there are a large number of persons on the *Dental Register* whose right to occupy that position is open to question; and the task of investigating their claims has been referred, in accordance with law, to a committee.

THE BACONIAN METHOD AND THE USE OF HYPOTHESES.

WE every now and then hear it asserted that we should follow the method of Bacon in our scientific work, and that we should not use hypotheses. We have already remarked on the matter in a short note, under the heading "Hypotheses non fingo", a year or two ago. In that article, we quoted Lewes and Jevons on the need of hypotheses in scientific investigations. We shall quote Jevons again.

In the now issuing edition of the *Encyclopædia Britannica* is an article on Francis Bacon by Adamson. From it we take the following extracts.* "It has been pointed out, and with perfect justice, that science in its progress has not followed the Baconian method; that no one discovery can be pointed to which can be definitely ascribed to the use of his rules; and that men the most celebrated for their scientific acquirements, while paying homage to the name of Bacon, practically set at naught his most cherished precepts."..... "The true scientific procedure is by hypothesis, *followed up and tested by verification;* the most powerful instrument is the deductive method, which Bacon can hardly be said to have recognised."..... "Progress in scientific discovery is made mainly, if not solely, by the employment of hypotheses, and for that no code of rules can be laid down, such as Bacon had devised."

Here we have two statements by a Professor at Owens College: (1), that no discoveries *have been* made on the Baconian method; and (2), that progress *is made* mainly, if not solely, by the use of hypotheses. We imagine that some of our readers will be startled by these two dicta. All we say is that such statements had better be met. Those who hold contrary opinions should point out discoveries made on the Baconian method. The literal assertion prominently made is that there are none at all. Here is a simple issue for those who loudly proclaim the advantages of Bacon's method. It is not the vague one that discoveries cannot be made by this method, but that since Bacon's time discoveries have not been made by it.

Jevons (*Principles of Science*, second edition, page 507), writes:—"The value of this (the Baconian) method may be estimated historically by the fact that it has not been followed by any of the great masters of science." Jevons speaks more strongly still; he says that Francis Bacon "ludicrously failed in attempting to apply his method". He speaks of the "blind accumulation of facts on the Baconian manner". "Whether we look to Galileo, who preceded Bacon; to Gilbert, his contemporary; or to Newton and Descartes, Liebnitz and Huyghens, his successors, we find that discovery was achieved by the opposite method to that advocated by Bacon." Jevons believes the Newtonian Method to be the true Organon. Newton's celebrated saying, "Hypotheses non fingo", he thinks, "bears the appearance of irony". "Newton said he did not frame hypotheses; but in reality the greater part of the *Principia* is primarily hypothetical—endless varieties of causes and laws being imagined, which have no counterpart in nature. The most grotesque hypotheses of Kepler or Descartes were not more imaginary. But, Newton's comprehension of logical method was perfect; no hypothesis was entertained unless it was definite in conditions, and admitted of unquestionable deductive reasoning; and the value of each hypothesis was entirely decided by the comparison of its consequences with facts" (*op. cit.*, page 583). "Throughout Newton's works, as I shall show, we find deductive reasoning wholly predominant, and experiments are employed, as they should be, to confirm or refute hypothetical anticipations of nature."

In an address, introductory to the Session 1876-7, at Owens College, Manchester, Adamson takes Roger Bacon as his subject. Speaking of Roger, he says: "..... his outline of a perfect scientific method seems

* Adamson gives the following references: Brewster, *Life of Newton*, 1855 (see particularly vol. ii, p. 403-405); Usson, *Ueber Bacon von Verulam's Wissenschaftliche Principien*, 1868; Liebig, *Comparison of Bacon von Verulam*, etc., 1863 (translated in Macmillan's Magazine for July and August 1863). Mr. Adamson, however, thinks Liebig did not understand Bacon's method.

to me very remarkable. It is true ..... that he does not recognise the function and value of hypotheses in general; yet, in the particular case of mathematical deduction requiring subsequent verification, he approaches the modern view. On the whole, I do not think it an extreme conclusion that Roger Bacon has come very near, nearer certainly than any preceding and than any succeeding writer, until quite recent times, to a satisfactory theory of scientific method. There is, one would say, almost a complete contrast between his view of physical science and that presented in the later *Organon* of Francis Bacon. According to Francis Bacon, the ultimate end of science is to attain knowledge of the most general qualities of things—the forms which give rise to the phenomena of nature. To gain this knowledge, we (1) collect instances, or exercise induction; (2) apply certain rules to eliminate the unimportant elements; (3) sum up the results in general propositions, rising always from the less to the more general. We thus pass from effects to causes; but, in order that the method may be of real service, may be applicable to all, the collection of effects must be absolutely complete. We must know all the phenomena before we can proceed with safety to draw any conclusions whatsoever. It need hardly be said that this is not induction, and that *no science ever made progress by this method.*" (The italics are ours). Adamson quotes Coleridge as follows:

"Let any unprejudiced naturalist turn to Lord Bacon's questions and proposals for investigation of simple problems, to his Discourse on the Winds, or to the almost comical caricature of this scheme by Robert Hooke, and put it to his conscience whether any desirable end could be hoped for from such a process, or inquire of his own experience or historical recollections whether any important discovery was ever made in this way."

Later on, Adamson says: "Francis Bacon seems never to have recognised the value of the deductive application of simple laws to analyse a complicated case, with the subsequent verification which alone gives scientific certainty. In true perception of the nature of science, and consequent glimpses of scientific method, I cannot help thinking that Roger Bacon is incomparably superior to his more famous namesake."

Mill says (*Logic*, ii, pp. 16-17, 8th ed.): "When Newton said, 'Hypotheses non fingo', he did not mean that he deprived himself of the facilities of investigation afforded by assuming in the first instance what he hoped ultimately to be able to prove." Again (*op. cit.* p. 18), Mill writes, partly quoting Comte: "Neither induction nor deduction would enable us to understand even the simplest phenomena, 'if we did not often commence by anticipating on the results; by making a provisional supposition, at first essentially conjectural, as to some of the very notions which constitute the final object of the inquiry'."

With some people, hypothesis is a term of abuse. One reason probably is, that the true acceptation of the word by scientific men is not understood. It is often taken for granted that an hypothesis is a conclusion; it is only a provisional conclusion. Moreover, making hypotheses is often taken to mean mere random guesswork, which probably bad hypotheses are. The framing of hypotheses, says Adamson, "is not left to the imagination alone, but to the *scientific imagination*". Faraday said: "Let the imagination go, guarding it by judgment and principle, and holding it in and directing it by experiment." There seems to be prevalent the erroneous assumption that an hypothesis is made out of nothing. This is a strangely impossible interpretation of the word. Some think it is mere idle working of a mind which has not observed carefully. But there is required for the framing of anything deserving to be called a legitimate hypothesis "a *preliminary* critical induction". Then, so far from an hypothesis being taken to be a conclusion, to be trusted like an ascertained relation of facts, it, by its very nature, demands "subsequent experimental comparison, verification, or proof, the canons of which can be laid down with precision".

Those who say they "like facts, not theory", are talking idly, if by theory they mean hypothesis. Many of those who say they do not like theory are those who do not like anything difficult or complex, and really like theory very much. The distinction is not into people who make hypotheses and others who do not, but into those who make good ones and those who make bad ones; with another distinction, cutting across the other, into those who make them consciously for careful investigation to methodise further work, and into those who use them unconsciously to explain away something unusual or puzzling, and who thus confuse hypothesis and conclusion. Perhaps the most celebrated example that can be given of the right use of hypotheses is the use made of them by Kepler. He made nineteen respecting the forms of the planetary orbits, and disproved them before he made the twentieth and proved it—that those orbits are ellipses. Is an hypothesis, then, a conclusion? Does this example not show that it was to a great man a means of investigation?

The speech of some bewrayeth them; they repudiate hypotheses, and yet make suppositions, doing under a Latin word what they object to do under a Greek one. We grant that the meaning of words is in their use and not in their mere etymology, and that the two words originally meaning the same thing may have come to have somewhat different significations. Supposition is used rather in the sense of surmise, not to be followed to its consequences, whereas hypothesis is used by scientific men as a name for a provisional anticipation, to enable one to investigate a complex matter methodically, the work being expected to end either in verification or in disproof of the hypothesis. But we believe that some of those who repudiate hypothesis use the term supposition for what is nothing other than hypothesis. The very man who "dislikes hypotheses" may, nevertheless, "suppose" that disease of the liver will account for all sorts of morbid conditions of distant parts of the body; that local irritation produces distinct particular effects of almost any kind. He does not appear to know he is speaking hypothetically in spite of his language. To hold oneself in doubt about a matter, and yet to form an hypothesis to enable one to work methodically and steadily at it; to disprove this, make another, and work again for and also against it by patient observation and experiment, seems to be abhorrent to some people. Smothering our own convictions, we will not say they are wrong. It may be a useful method to stand quiet, and wait to be struck by facts. It may be that observations unguided by hypothesis lead to important discoveries. Thus one of Mr. Herbert Spencer's critics appears to suppose that the great law of attraction was discovered by observations of the movements of the planets. This critic is one whose antecedents compel one to treat his opinion with respect. Mr. Herbert Spencer asserts, in rejoinder, "that neither Newton's observations of the movements of the planets", nor other such observations continued by all astronomers for all time, would yield "the great law, attraction". Contrariwise, it is contended that, when the reviewer says, by implication, that Newton had no antecedent hypothesis respecting the cause of the planetary motions, he (the reviewer) is not only going beyond his possible knowledge, but he is asserting that which even a rudimentary acquaintance with the process of discovery, might have shown him was impossible. Without framing beforehand the supposition that there was at work an attractive force varying inversely as the square of the distance, no such comparison of observations as that which led to the establishment of the theory of gravitation could have been made. Later on, Spencer says, "The reviewer quite erroneously thinks that observations, unguided by hypotheses, suffice for physical discoveries." Indeed, it seems difficult to understand, even verbally, the statement that Newton could set to work to prove by observation that bodies attracted one another inversely as the square of the distance, without his first supposing that they did so. Supposing is not concluding, as this celebrated example shows. For it is well known that Newton abandoned his famous hypothesis for a time, because it was not in accord with some observations which later on he found to be wrong.

There is no need for anyone to assert that he likes facts better than hypotheses. It is taken for granted that a sane man prefers knowledge to surmises—the certain to the uncertain. There is no person out of an asylum who does not prefer facts to anticipations, which may be unprovable; nor is there anyone in an asylum who prefers hypotheses to what he believes to be facts. To say that a person prefers hypothesis

to fact is indeed an Hibernicism almost as bad as saying that a person "has pleasure in being miserable", or that, as we sometimes hear said, "he enjoys bad health".

What is objected to is, taking a heap of unassorted facts to be scientific knowledge. Science is an organisation of facts. The "fact-heaps", as we have heard them irreverently called, are at the best only materials for science. To collect facts, to observe properly, requires not simply the presentation of phenomena, but an attentive attitude of some sort on the part of the observer. If a man observes with equal attention, and gives equal prominence to all things, just as they come, he is not up to his work. He reminds one of the *ci devant* astronomer spoken of by Clifford, who, while observing the sun, noted that, when one of the sun-spots began to enlarge, a rap came at his front door; or of Mr. Glegg, who observed that, "before the burning of York Minster, there had been mysterious serpentine marks on the leaves of the rose-trees, together with an unusual prevalence of slugs, which he had been puzzled to know the meaning of, until it flashed upon him with this melancholy conflagration."

So we think that, when an orator, delivering an introductory lecture to students, advises them to follow the method of Bacon, he should say too that some eminent men hold that it is not the method of science; and if he tells them to observe, without guidance from hypothesis, that there, too, there are contrary opinions. He may, of course, say, if he supposes some of them to be imperfectly educated, that everybody who knows the meaning of words agrees that an hypothesis is not to be taken as a conclusion, but as something to be verified or disproved by further observation and experiment.

THE Library of the Obstetrical Society will be closed during the month of August.

M. COHN of Alfort communicated to the Academy of Medicine, at their last meeting, some fresh experimental researches on malignant pustule and anthracoid œdema.

DURING the thirteen weeks of last quarter, ending on 3rd instant, the metropolitan death-rate averaged only 19.4, against 22.2, 22.5, and 22.5 in the corresponding periods of 1877, 1878, and 1879.

THE French Government has allotted to M. Pasteur the sum of 50,000 *francs* for the purpose of enabling him to carry out his researches on the contagious diseases of animals.

A REPORT of the case of a German officer who died of glanders, contracted through using an infected handkerchief, has been published in the *Militar Wochenblatt*.

MALARIOUS fever is said, by *Allen's Indian Mail*, to have broken out among the British troops at Mhow, a large military station in Central India.

MR. CLEMENTS MARKHAM promises a book on a subject he has made peculiarly his own, *A Popular Account of the Introduction of Peruvian Bark into British India and Ceylon*: and he will give particulars of the progress and extent of its cultivation.

THE eleventh meeting of the German Anthropological Congress will take place this year at Berlin, from August 5th to 12th. Information as to details is to be obtained of M. Albert Woss, 167, Alte Jacobstrasse, Berlin.

A SUIT for malpractice, with damages laid at 10,000 dollars, was instituted against two Baltimore surgeons recently, in a case of fracture of the arm. Dr. Walls, one of the surgeons, gave an account of the case and its treatment, which was so clear and convincing that the plaintiff and counsel made a public apology and withdrew the suit.

AT the meeting of the West Derby (Liverpool) Board of Guardians, last week, it was resolved to petition Parliament against the Bill for limiting the prosecution of the neglect of vaccination. Dr. Carmichael stated that during the last three years, 38,981 persons had been vaccinated in that union, without a single complaint of injury of a permanent character.

THE deaths referred to diarrhœa in the twenty largest English towns, which had steadily increased from 51 to 183 in the four previous weeks, further rose to 258 last week, of which 165 occurred in London; they were equal to an annual rate of 2.3 per 1,000 in London, while the rate did not exceed 1.3 per 1,000 in the nineteen provincial towns.

THE following members of the medical profession in France were decorated with the order of the Legion of Honour on the occasion of the *fête* of July 14th: MM. Alphonse Guerin and Germain Sée were created commanders; MM. Chauveau and Regnault officers; and MM. Grimaux de Seigne, Ball, Morel, and Brown-Séquard, knights of the order.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT the annual meeting, held on the 13th instant, the following officers were elected for the year ensuing. *President:* Dr. J. S. Bristowe. *Vice-Presidents:* Dr. G. Buchanan, Dr. Thomas Stevenson, Dr. C. O. Baylis, Dr. W. H. Corfield. *Treasurer:* Dr. J. W. Tripe. *Secretaries:* Dr. J. N. Vinen, Mr. S. F. Murphy. *Council:* Dr. G. P. Bate, Dr. A. T. Brett, Mr. F. M. Corner, Dr. J. Dixon, Dr. T. O. Dudfield, Dr. A. Hill, Mr. E. L. Jacob, Mr. S. R. Lovett, Dr. E. C. Seaton, Dr. J. Stevenson, Dr. R. P. B. Taaffe, Dr. J. F. W. Tatham.

THE LATE PROFESSOR ALFRED HENRY GARROD.

WE have already noted that it is in contemplation to publish a memorial edition of the writings of the late Professor Alfred Henry Garrod, F.R.S. A committee has been formed to carry out this object, consisting of Professor W. H. Flower, LL.D., F.R.S.; P. L. Sclater, Ph.D., F.R.S.; Dr. A. Günther, F.R.S.; O. Salvin, F.R.S.; F. M. Balfour, F.R.S.; Professor E. A. Schäfer, F.R.S.; G. E. Dobson; E. R. Alston; Professor F. Jeffrey Bell; W. A. Forbes, secretary. It is estimated that Mr. Garrod's collected papers will form a volume of about five hundred pages, royal octavo, illustrated by twenty-five plates and numerous woodcuts. Each subscriber to the fund will be entitled to receive a copy of the work for every guinea subscribed. Intending subscribers are requested to forward their names, and to state the amount they are willing to subscribe, to the secretary of the Garrod Memorial Fund, 11, Hanover Square, London, W.

POISONING BY BRONZE-POWDER.

ON Wednesday of last week, Mr. G. Collier, Deputy Coroner for the Eastern Division of Middlesex, concluded an inquiry as to the death of William Ball, aged 13, which, it was alleged, arose from inhaling bronze-powder while employed at the printing establishment of Messrs. Clay, Son, and Taylor. Bronze-powder consists of an alloy of copper (in very fine powder) and is used in printing in gold. The printing is done by means of a mixture of size and gamboge, the powder is then dusted over, and the superfluous portion wiped off with wool. The boy mentioned to his parents that the powder got up his nose, and produced a tingling in his nostrils. On the fourth day of this work (June 10th), he complained of sickness and pain in the bowels. On the 13th, Mr. C. W. Latham was sent for to visit him; he was still suffering from sickness and pain, with great distension of the abdomen, and tenderness on pressure; no diarrhœa. He fell into a state of collapse, and died on the 18th. By order of the coroner, Mr. Latham made a *post mortem* examination on the 22nd, and found that death had resulted from peritonitis; the mucous membrane of the stomach and intestines was not affected. He removed the stomach and a portion of the liver, which were analysed by Dr. Tidy, who found that both contained copper; and who gave it as his opinion that the deceased had died from the effects of metallic copper-poisoning, and that he had inhaled the poison in the process of bronzing. Evidence was given to the effect that it was customary in printing establishments where bronzing was going on for

the persons engaged in it to be allowed a certain quantity of milk daily, owing to the dangerous nature of the work; and a lad named Grayling stated that, while employed on the same kind of work, he became ill, and was compelled to give it up in consequence. On behalf of the firm, evidence was given by persons in their service, who stated that they never experienced any ill effects while engaged in the bronzing process. Dr. Meymott Tidy suggested to the notice of employers—1. The free use of milk; 2. That the persons engaged in bronzing should wear a covering over the nostrils and mouth; 3. That the bronzing should be carried out in a separate room, and not in the general workshop, in order as far as practicable to limit the injurious effects of the process; 4. That a dress composed of calico or like material, tied round the neck and wrists, should be worn by those engaged on the work, and removed before leaving the premises; 5. That cleanliness should be strictly enforced, and the persons engaged in bronzing required to wash themselves before leaving the premises. The jury returned a verdict in accordance with the evidence of Dr. Tidy.

MEDICINE TO THE MIND DISEASED.

A DISCUSSION has taken place in the Medical Council, upon a petition from the Medico-Psychological Association, that all candidates for licenses to practise medicine should be examined on the subject of diseases of the mind. No body is more competent than the Medico-Psychological Association to speak with authority of the numbers of ignorant men who are engaged in the treatment of diseases of the mind; and no one can doubt that the desire of the Association to remedy this prevailing ignorance is wise and laudable. The Medical Council, however, have rejected the prayer of the petition—partly, no doubt, on the ground alleged; that they cannot overload the curriculum of medical study with new subjects; but more, we apprehend, from the strong feeling which prevails throughout the profession, that mental diseases are the appanage of a class governed by peculiar laws; and that, if the Government and the country are satisfied, the Council of Medical Education had better attend to needs and duties which more nearly concern the medical interests of the community. Dr. J. Mortimer Granville, who is an authority on the subject of the reforms which are so urgently demanded in the lunacy laws, has a letter in the *Times* this week, which we are not sure that we quite understand. He appears to regret the action of the Medical Council in rejecting what, he thinks, the wise recommendation of the Medico-Psychological Association. But, at the same time, he claims the refusal of the Council as "a fresh argument in support of his own proposal, to entrust the duty of certifying in lunacy exclusively to official experts. There can be no valid reason for rejecting an overture to examine in mental medicine, except it be the recognition that this subject is neglected". There would seem to be here the usual "three alternatives". First, we may let the matter alone, and continue to scramble along in unblissful ignorance. Secondly, all medical men might be required to learn, let us say, the essentials of medicine in relation to insanity. Thirdly, a distinct class of medical men might be educated and empowered to act in the treatment of the insane. It is this third and last proposal which we understand Dr. Granville to advocate; and, although objections may be made to it, a great deal may be said in its favour. It would be well if all medical practitioners could recognise and treat a case of insanity with the facility with which they are expected to recognise and treat a case of enteric fever. But the laws which interfere with the free medical treatment of mental diseases forbid; and the laws which collect insane patients under lock and key, in institutions which offer extremely limited hospital facilities to students, forbid it also. On the other hand, if we accept Dr. Granville's "proposal to entrust the duty of certifying in lunacy exclusively to official experts"—that is to say, entrust the diagnosis and the initiation of treatment to them—it will be difficult not to extend the trust to the course of treatment; and thus wholly to entrust the care and cure of the insane to official experts. For it ought not to be, as it too often is, forgotten, that the certification of a lunatic does not merely mean an act of labelling, or, as some would say, of branding, but it means an act of treatment often more important than all other measures of treatment combined. The term "official expert" may perchance raise fears in the sane, let alone the insane, bosom; but, in reality, it only means one who is skilful in the particular matter, and who has official sanction for the exercise of his skill. If this be the meaning of the term, then we are disposed to think favourably of Dr. Granville's proposal; and, on the whole, to prefer it to the possession of an infinitesimal quantity of psychological knowledge by every member of the profession; and very greatly to prefer it to the present practice of entrusting the care and cure of the insane to any persons whom it may please justices and commissioners to licence, whether they be medical men or not. The physician whom we have been here led incidentally to mention has published many other proposals, aiming at the reform of the lunacy laws, which are animated with the same broad principles which have been advocated in this JOURNAL. That we should differ in some details is to be expected, from the difficulty of the subject; but that which is most noteworthy is the consensus of independent opinion upon the main questions at issue.

DIARRHŒA IN LONDON.

THE deaths in London referred to diarrhœa, which had steadily increased from 16 to 93 in the five preceding weeks, further rose to 165 last week; these were, however, 18 below the corrected average number in the corresponding week of the last ten years. These 165 fatal cases included 128 of infants under one year of age, and 27 of children aged between one and five years. The fatality of diarrhœa showed considerably the largest proportional excess in East London. The deaths of four children, and of a male aged sixty years, were referred to simple cholera or choleraic diarrhœa.

THE WELBECK POISONING CASES.

THE mischief which has been caused by the mysterious something that was eaten by the visitors at the late sale of the Duke of Portland's effects has proved to be much more widespread than was at first supposed. Officers of health in distant places being confronted with certain cases of diarrhœa presenting unusual features, have been able to ascertain that the sufferers had been to the Welbeck sale, and had partaken of certain of the viands there provided. Considering that some two thousand persons were attracted to the sale, some by the hope of good bargains, and others by curiosity only—the place, with all the remarkable evidences of the eccentricity of the late duke, being during the sale thrown open to the public—it is probable that we have not yet learnt anything like the real dimensions of the outbreak. Of the recognised cases, four have proved fatal, the non-fatal cases being of all shades of severity. One case has been diagnosed by Dr. Bartolomé of Sheffield, as one of undoubted cholera; and certain other cases have proved of great intensity. The facts of the epidemic are being diligently investigated on behalf of the Local Government Board by Dr. Ballard, in whose hands the inquiry may safely be left. We shall be disappointed if the results of the inquiry do not prove that there is much more connection between food and disease than is commonly supposed. The recent outbreak on board the *Cornwall*, coupled with this epidemic, and others not dissimilar in circumstances, which have from time to time been reported, all seem to show that food, as food, may oftimes be a source of very definite mischief to its consumers.

WOOLSORTERS' DISEASE.

WE are glad to be able to state that Mr. Spear has now sufficiently recovered from his recent attack to be able to resume his investigations at Bradford into the causation of this disease. During the temporary suspension of the inquiry, some important additional facts have been brought to light. It appears that some cows and sheep, which were grazing in a field adjoining a hair-factory, amongst the workers of which certain cases of woolsorters' disease had occurred, were suddenly taken ill at intervals, and died within a few hours. *Post mortem* examination of one of the fatal cases, by local experts, showed that the animal had died of splenic fever: a diagnosis confirmed by Professor Greenfield of the Brown Institution, to whom parts of the viscera were forwarded for examination. It seems that part at least of the water

drunk by these animals was derived from that in which the wool had been washed at the factory—the washings being led direct into the field and distributed by means of trenches in the soil. This fact would seem of itself pretty strong evidence that "woolsorters' disease" in the human, and "splenic fever" in cattle, are one and the same disorder; and Dr. Greenfield's laboratory experiments have proved this beyond a doubt. If the investigation now being made should result in finding a prophylactic for anthrax both in man and in beast, it will have a very important value. It has already produced some useful results, and may be expected, now that it has aroused so strong an interest, to achieve still greater before its conclusion. It may be added, as a matter of interest, that, while this investigation is going on in England, M. Pasteur has been continuing in France his experiments into the same disease, under the name of "Charbon". Not deterred by the storm which he recently raised in the Academy of Medicine, with regard to the question of fowl-cholera, the eminent chemist, at the Academy's last meeeting, read a further memoir on the subject of anthrax, in which he recapitulated the experiments that have already been quoted in these columns. He wound up by saying that, if farmers chose, anthrax would soon be only a memory for their animals, their shepherds, for butchers and tanners, because the disease is never spontaneous, but exists where it has been imported, whence its germs are disseminated by the unconscious agency of earth-worms; that, in short, if in a particular locality the conditions for its preservation did not exist, it would disappear thence in the course of a few years.

A GOOD SORT OF MEASLES.

In a recent report, the Medical Officer of Health for the Hyde District adverts to a tradition, that is unfortunately too common amongst the poorer classes in the North, that it is essential that children should go through measles before adolescence. He says that on inspecting a house in which a case of measles had occurred, and finding the sanitary arrangements satisfactory, he learnt that the case was due to an old woman, who, having heard of what she called "a good sort of measles", in the neighbourhood, took a child there in order that it might take the infection. Her expectations were so far realised, that the child caught the disease, which, however, nearly proved fatal to it. There can be no doubt that measles is largely spread in this way, and the question of its effectual prevention is, perhaps, more an educational than a sanitary one.

THE SALUBRITY OF THE ISTHMUS OF PANAMA.

The following interesting note was presented at the *séance* of the Académie des Sciences of Paris, held on June 28th, by M. de Lesseps: "Much has been said lately on Panama, especially in the United States, about the yellow fever existing there. The rare cases of this fever that do occur there prove that the disease neither originates nor spreads in the district. Several ships, with numbers of patients on board suffering from very characteristic yellow fever, arrived lately. There being no one authorised to prevent passengers from the infected ships landing, they have done so, and pretended that those who died of the disease from which they themselves were suffering were victims to the climate. There are no sanitary precautions and hygienic rules at Panama any more than at Colon. Nevertheless, the fever imported has not spread beyond the persons affected before their landing. This is surely evident proof of the salubrity of the Isthmus of Panama, which, from its situation between the two oceans, receives in turn and without intermission the healthy breezes of the Atlantic and of the Pacific."

NOXIOUS VAPOURS.

It is, perhaps, too much to expect that the present Government, with its already overwhelming troubles and complications, should attempt to deal this session with the important question of noxious vapours; although, as Lord Midleton said on Friday last week in the House of Lords, it is rather surprising that they have not shown the same willingness to deal with it as they had to deal with hares and rabbits, it being essentially a poor man's question. The report of the Royal Commissioners which was published in the recess of 1878, showed so clearly the necessity for further legislation for regulating noxious trades, that a Bill was introduced into the House of Commons in the next session, by Mr. Sclater-Booth, for dealing with the subject. The principle of this measure, except in one particular, received very general assent; but, in consequence of the opposition of certain manufacturers in the House, it had to be thrown overboard, for lack of time to discuss it. In the first session of the present year, the Bill, redrawn and amended, was again introduced by Mr. Sclater-Booth—a fact which Lord Midleton seems to have overlooked—but had not reached the stage of consideration when Parliament was dissolved. Meanwhile, as Lord Midleton pointed out, the revival of the chemical trade last winter has served to aggravate the nuisance and injury. It is, of course, unfortunate that the new Government has had to come fresh to the consideration of a subject about which the minds of its predecessors were pretty well made up; and the delay in dealing with this important question is apparently for the moment unavoidable. The subject is, however, one that merits the very early attention of the Government; and perhaps Mr. Dodson, in his enforced retirement, may have time profitably to turn his thoughts to the unnecessary amount of injury and disquietude that is constantly being caused over large tracts of the country by the evolution of noxious vapours.

LUNACY LAW REFORM.

In the House of Lords, on the 20th instant, in moving the second reading of the County Court Jurisdiction in Lunacy (Ireland) Bill, the Lord Chancellor for Ireland said that "it was a measure to protect the interests of lunatics who had small properties". "The Chancery management of lunatics' estates did not reach the numerous cases of of those whose means were too small to permit them to avail themselves of its machinery. About 724 of such cases were known to exist in asylums, having property "which needed to be preserved and administered, but which was left to the mercy of relations or strangers, who did with these unhappy people what they would, and gave them what care they pleased". "By the provisions of the measure, the County Court Judges would have jurisdiction in lunacy within the areas of their districts, and in cases where the property of the lunatic did not exceed a gross sum of £700, or £50 a year. This Bill was only part of a larger measure which it would be hopeless to think of passing this year." The Bill was read a second time. This measure is a very judicious one; it initiates in one direction the line of reform which has been advocated so earnestly in these columns; and we trust that it will be the forerunner of comprehensive measures of lunacy law reform on this side of the Channel.

SUITS FOR POST MORTEM EXAMINATION.

A singular case came before the Gloucester County Court on Monday. Mr. Walter Brown, house-surgeon at the County Infirmary, was sued by a labourer named Cuff, who claimed £2 damages for a *post mortem* examination of his wife, which was made without his knowledge or consent. Cuff's wife was admitted into the infirmary in April with an internal complaint, and she died about a month afterwards. After her death a pathological examination was made to discover the seat of the disease, and it was found that she died from peritonitis, the disease for which she had been treated. The plaintiff admitted that he had not suffered any pecuniary loss, but alleged that the examination had hurt his feelings, and that portions of the body had been taken away. For the defence medical evidence was called to show that the examination made was not in any sense of an anatomical character, that it was important in the interests of medical science, and that it was usual in certain cases. The allegation that any of the organs of the body were taken away was denied. The judge gave a verdict for the defendant. Oddly enough, a similar case was lately commenced in Cincinnati by Ann Farley, a widow, against Dr. William Carson, a leading physician, to recover five thousand dollars for injuries alleged to have been caused to her feelings by reason of a *post mortem* examination made on her husband by the defendant. In her complaint, she alleged that her husband went to the Cincinnati Hospital to be treated for injuries which, resulting in an abscess of the liver, caused his death. The defendant Dr. Carson, made

the *post mortem* examination without her knowledge or consent, by reason of which she claimed to have been injured to the extent of five thousand dollars. The court held that, as a question of law, no property right in the dead is injured by a *post mortem* examination, and that there is no case in which mere injured feelings will give a right of action. The case was taken from the jury and judgment rendered for the defendant.

MIDWIVES' CERTIFICATES.

THE power possessed by so-called uncertificated midwives to give certificates for burial in cases of still-born children was shown, at an inquest held by Mr. Humphreys, to have been seriously abused. It appears that on Friday last a single woman, living at a common lodging-house in the East End of London, was delivered of a female child, which lived an hour and a half. A medical man was called in to see the child after death, but being unable to certify, as he had never attended it alive, he communicated with the coroner, who in due course issued his warrant for an inquest. It turned out, however, that the child had been buried by the parish authorities, who had received from the midwife in attendance on the mother a certificate to the effect that it was still-born. The coroner "strongly commented" on the course taken by the midwife. She was, however, "not present to explain the matter", and "the proposed inquiry fell through". A more singular parody of the forms of inquiry was rarely reported. It is lamentable to reflect how often the evils connected with the present unregulated system of midwifery have been exposed, and how universally and unanimously they have been condemned, but how vigorous and undisturbed a vitality they still display.

THE LOUVAIN OATH.

THE German medical papers print the following oath as that which is imposed upon the candidates for the Doctorate of Medicine of the University of Louvain.—"Ego N ——— testor Deum omnipotentem me in curandis aegris diætam aliaque remedia, quantum ingenii viribus assequar, ex Artis regulis ad aegrotantium salutem et commodum commendaturum, nec prece nec pretio aliâve de causâ pharmacum noxium cuiquam propinaturum; audita vel visa inter curandum silentio suppressurum; in disquisitione forensi ad judicem fideliter relaturum quid actum, quid repertum sit, et de indole mali ex animi sententiâ religiose prononciaturum; eos qui quarto die morbo acuto decumbunt, moniturum ut rebus suis spiritualibus et temporalibus mature provideant; in his denique omnibus quæ ad Artis exercitium pertinent, pietati, honestati, et conscientiae, operam daturum. Ego idem sancte promitto me, ad quemcumque statum devenero, curaturum, quantum in me erit, honorem et prosperitatem Universitatis Catholicae. Haec spondeo, voveo ac juro. Sic me deus adjuvet et haec sancta dei Evangelia."

THE WORK OF M. BROCA.

IT will not be uninteresting to recall to the memories of our readers some of the researches undertaken by the lamented M. Broca, whose premature death we chronicled in our impression of last week, and whose absence will be much deplored at our annual meeting, where he would have received the honorary degree of D.C.L. from the University of Cambridge. The localisation of the faculty of speech is one of the greatest discoveries of modern science. M. Bouillaud had shown that aphasia generally coincides with a lesion of the left hemisphere; but M. Broca, studying the anatomical lesion and the functional disturbance more minutely, demonstrated that aphasia is coincident with the destruction of a limited region of the encephalon—the posterior part of the third left frontal convolution. When that region is destroyed, speech is gone; so long as it is retained, speech remains. This is the rule—a rule almost without exception; and the exceptions even are far from incontestable. This was, as a matter of fact, one of the most interesting of scientific discoveries; it was, indeed, the first cerebral localisation, and is at the present time the most precise and important. Since that time, the mechanism of the encephalon has been easier of comprehension. It is true that this mechanism is still very obscure, and of such a complex nature that it is difficult to conceive when it will be clearly and simply made out; but it is none the less true that, thanks to the precise determination of the aphasic lesion, it is known that there are regions in the brain where certain intellectual functions originate and become elaborated, to manifest themselves outwardly in the form of movements. The knowledge of this important and essential fact is due exclusively to M. Broca (*Bulletins de la Société Anatomique*, 1861). Shortly before this great discovery, Broca had founded the Société d'Anthropologie, which really means that he created the science of anthropology. It is true that he had predecessors. Blumenbach and other philosophers had studied the races of men; but it had not occurred to any of them to group all that concerns the study of man into one science. The French Société d'Anthropologie has outstripped all similar societies in other countries, and during twenty years Broca was its life and soul. He inspired and animated it, and gave it not only existence, but life. In the same way that Lavoisier created chemistry, Broca created anthropology; less, perhaps, by his own discoveries and personal labours than by his activity, ardour, and powerful and generalising mind. The comparative anatomy of man and the primates, prehistoric monuments, the influences of civilisation, the data yielded by statistics, have all been examined, studied, and analysed by him. He inspired more or less directly all the labours of the Société d'Anthropologique and the *Revue Anthropologique;* and, if only the work bearing his signature were attributed to him, it would represent but a very small part of his actual labours. The impartial verdict of scientific history will stamp M. Broca as the founder and creator of the science of anthropology. To few is given the rare good fortune of making a fruitful discovery and of creating a new science. Although but fifty-six years of age at the time of his death, Broca had belonged to the Faculty of Medicine thirty-four years. He entered it in 1846 as assistant teacher of anatomy, and by competitive examination obtained the grades of prosector in 1848 and of *agrégé* in 1853. In consequence of there being no professorial vacancy, he waited much longer for a chair, and only obtained one in 1867; at an age, however, when it was at that time rare to don the professorial robe. Nominated in the first instance professor of internal pathology, he quitted that chair some years later to teach surgery, and continued in that path until fourteen hours before his death, when he gave his last hospital lecture. From time to time he obtained, beyond the pale of the Medical Faculty, all the distinctions which could be heaped upon him by the French scientific societies, with the exception of the Institute, which had not as yet conferred its membership upon him. He had recently been elected a senator. His written works are voluminous. He was the winner of the Portal prize in 1850; author of memoirs and papers on the pathology of the cartilages, on rickets, hernia, hernial stricture, vertebral arthritis, and the galvano-cautery. He published two well known works; one on *Aneurisms* in 1856; and the first volume of a *Treatise on Tumours*, in the beginning of 1866. M. Broca also delivered several admirable speeches on questions of public health, at the Academy of Medicine; of these, the most remarkable, perhaps, were his discourses on the mortality of nurselings, on the alleged degeneration of the French population, on the movement of population in France, and on organisation of the military sanitary service.

THE "FASTING MAN" OF NEW YORK.

THE performances of Mr. Tanner of Minnesota, who began with what is described as a "forty days' fast" in New York on June 28th, are attracting great public interest, but are regarded with complete incredulity in medical circles. When he arrived in New York, the members of the profession, especially the members of the Neurological Society of New York, expressed their willingness to superintend the arrangements of his so-called "fast", provided that he allowed them to take the precautions which they considered necessary to prevent deception. These, however, he rejected, according to the *New York Medical Record*, as "too exacting". Under these circumstances, he resorted to less exacting persons as his supervisors, and placed himself in the hands of irregular or "eclectic" physicians. Our medical contemporary is very

guarded in its references to the results, observing that, up to the last dates, he was "said to have eaten nothing", and had "apparently only gargled his mouth with water at intervals, drinking none". It adds: "Assuming that he had not taken any food, his condition was remarkable. It is unfortunate that, under present circumstances, the results will probably not be accepted by scientific men."

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General, for the week ending July 10th, it appears that the death-rate in the eight principal towns was 20.4 per 1,000 of estimated population. This rate is 0.4 above that for the corresponding week of last year, and 0.5 below that for the previous week of the present year. The lowest mortality was recorded in Leith —viz., 13.3 per 1,000; and the highest in Paisley—viz., 25.5 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.9 per 1,000, being almost the same rate as for the previous week. A decrease occurred in the number of deaths from measles, while in scarlet fever and diseases of the bowels there was a considerable increase. A female, aged forty-five years, who died in Glasgow of confluent small-pox, was said to have been vaccinated, but no mark visible. Acute diseases of the chest caused 90 deaths. The mean temperature was 57.8°, being 1.3° below that of the preceding week.

AMBULANCE DRILL AMONG VOLUNTEERS.

AT the meeting of the West of Scotland Artillery Association, held at Irvine on the 17th instant, an interesting competition in ambulance drill took place. Detachments, consisting of four men, had their proficiency tested in the arrest of hæmorrhage; knowledge of the positions of the main arteries of the body; the application of tourniquets; the use of Esmarch's triangular bandage; stretcher exercise, and the carriage of the wounded by improvised seats. The competition was open to all branches of the service. The umpires appointed by the Association were: Professor George Buchanan, Glasgow; Mr. Chiene, Edinburgh; Dr. Dycer, Edinburgh; and Dr. J. C. Renton, Glasgow. Eight detachments competed, and each one had to bring in a supposed wounded man from among the sandhills in the ground adjoining the competition; and the head of the detachment was questioned as to his treatment of the injury in question, and as to the best method of overcoming the different obstacles and inequalities in the ground over which they had to pass. At the close, the umpires issued the following notice: "Eight squads of four men each competed, and in general we have to report most favourably of the knowledge and aptitude of the competitors. We have no difficulty in awarding the first prize to E Company, 1st L.R.V., Sergeant G. Sawers; and the second prize to 1st Renfrew (Greenock), Corporal McGowan."

GLASGOW OPHTHALMIC INSTITUTION.

THE annual distribution of prizes to the students attending the above institution took place on the 14th instant, in presence of a large number of the supporters and friends of the institution. From the report, it appears that forty-nine students attended the ophthalmic classes, and that the prizes had been very well competed for. This year, operative ophthalmic surgery has been introduced into the prize competitions.

UNIVERSITY OF EDINBURGH.

AT a meeting of the University Court held last Friday, Mr. James Hunter, F.R.C.S.E., was recognised as a lecturer on the Institutes of Medicine whose course would qualify for graduation. The second professional examination, held in July, which was formerly limited in its numbers to a considerable extent, has this year been attended by about 150 candidates. The competitive examination for the appointments to the resident physicianships in the University wards for clinical medicine in the Royal Infirmary was held last week, when Messrs. J. W. Anderson, Dobie, Logan, Lundie, Maxwell, and Scot Skirvins were the successful candidates; they will each have six months' term of office. Previously to this, there were only two clinical residents appointed, but the increased work in the New Infirmary, and the desire to extend the number of such valuable prizes, led to the adoption of the new scheme.

GLASGOW DISPENSARY FOR SKIN-DISEASES.

THE classes at this institution were brought to a close on the 14th inst., when the prizes were given to the successful students. The examinations had been partly oral and partly written; and the results had satisfied the examiner, Dr. McCall Anderson, that two prizes should be given. These were awarded to Mr. John M. Young and Mr. James Erskine in order of merit.

IRELAND.

THE ROTUNDA LYING-IN HOSPITAL.

DR. W. J. SMYLY having completed his term of office (three years) as Assistant-Physician to this hospital, has been succeeded by Mr. Andrew Horne, L.K.Q.C.P.I. At the general meeting of the Board of Governors held last week, at which Mr. Horne was elected, a vote of thanks was passed to Dr. W. J. Smyly for the efficient and satisfactory manner in which he discharged his duties, and for the care and attention he paid to the patients under his care during his term of office.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

IN reply to a letter from the Honorary Secretary of the Dublin Branch of the Association, requesting the aid and co-operation of the Royal College of Surgeons in Ireland in endeavouring to procure for Dublin the advantages which it is believed would result from the establishment of an efficient system of compulsory and early notification of the existence of infectious diseases in that city, the following resolution, adopted by the Council of the College, has been received: "That this College recognises the great desirability of registration of infectious diseases, and would approve of any measure which would make efficient provision for such registration without interfering with the confidential relation of the physician to his patient, or imposing upon him a responsibility inconsistent with his professional practice. That the College considers that in any legislative proposition the onus of reporting to the sanitary authority ought to devolve upon the responsible occupier of the house in which the disease occurs." The aid and co-operation of the Irish Medical Association having also been requested by the Honorary Secretary of the Board, the Committee of Council of that Association have been good enough to pass a resolution convening a special meeting of the full Council of the Association for the 27th instant, to consider the entire question. The subject will also, we are informed, be brought under the notice of the Dublin Sanitary Association. One of the by no means exceptional "nuisance reports", presented at last week's meeting of the Executive Committee of the last named Association, furnishes a proof, if one is required, of the necessity and importance of this measure. The report referred to stated that, since June 4th, 1880, eight patients suffering from typhus fever had been admitted to hospital from one particular house situated in the midst of a largely populated neighbourhood.

THE HEALTH OF DUBLIN.

ON June 16th last, the North Dublin Board of Guardians called upon their dispensary medical officers to state their opinion as to the high death-rate of their districts. As the issue of the Report of the Dublin Royal Sanitary Commission was then daily expected, and as the dispensary medical officers had already expressed their views as to the causes of the high death-rate of the city before the Commission, they did not consider they could throw any additional light on the subject a few months subsequently, and reported accordingly. The guardians, however, insisted on having a report, and it is now before us. The points on which information was desired were: (1) The cause of the high death-rate; (2) the general sanitary condition; (3) the number of

small-pox and fever patients for the last week; and (4) suggestions for the improvement of the general health of each district. Seven gentlemen sent in reports; but as, indeed, might be expected, "the subject has formed the basis of so many reports and recommendations, that it is almost impossible to adduce new facts." The fact is that the causes of the high death-rate are, as expressed in the foregoing statement of one of the reporters, perfectly well known. And it is mere waste of time calling for reports and suggestions as to checking disease, and for the improvement of the sanitary state of the city, when such suggestions are never, or but very imperfectly, carried into effect.

CLONMEL DISTRICT LUNATIC ASYLUM.

THIS institution appears to be overcrowded, as recently some of the patients were sent back to their friends, although not recovered, in order to relieve the asylum to some extent; but there are at present twenty-five inmates in the asylum above the estimated number. Changes were recommended last January for increasing the amount of accommodation, but nothing has since been done. The governors passed a resolution last week hoping that the Board of Control will take the necessary steps to carry out the projected enlargement with as little delay as possible.

AN IRISH GRIEVANCE.

EARNEST attention ought to be given to the subjoined report of an analysis of medicines lately supplied by a druggist to the Carrickmacross Union. The analysis was made by Dr. Cameron, Professor of Chemistry to the Royal College of Surgeons of Ireland. The report speaks for itself, and reveals a very sad state of things, which is believed only to illustrate the present most unsatisfactory state of the supply of medicine to the various unions in Ireland generally. Medicines and medical appliances are supplied to these unions, as all other necessaries are, by contract; and the guardians, who, however intelligent they may be on other matters, know nothing of medicines or their prices, have the privilege of appointing the successful contractor for the year. Should this individual be fortunate enough to have a few friends on the board, the other competitors have little chance, no matter how much better their drugs or cheaper their tenders may be. In the presence of such a state of things as Dr. Cameron's report discloses, is it not full time for some change to be made? Some time ago, the Local Government Board proposed a plan which would have insured pure medicines for the sick poor, and in this way would have been a great boon, and would have saved thousands of pounds every year to the country. The proposed plan was, to establish a central depôt for medicines and medical appliances in Dublin, presided over by an Apothecary-General, at a respectable salary. From this centre, all the unions were to be supplied. Some of the druggists and others were able, however, to get up such an agitation, that the Local Government Board had to relinquish their scheme; and so, ever since, things have continued in the same unsatisfactory state. No great intelligence or public spirit are needed, however, to make plain the absurdities and dangers of the present system, and the obvious necessity for some such plan being adopted as the very able and excellent one lately proposed by the Local Government Board; a plan which, had it been accepted at the time, would have been a complete and satisfactory solution of the difficulty, and also a great boon to the country in every respect. Dr. Cameron's report, referred to above, is as follows.

"*To the Guardians of the Carrickmacross Union.*

"Gentlemen,—I have to report very unfavourably upon the drugs which you have sent to me for analysis. The *Quinine*, so called, did not contain any quinine at all, but was composed of a substance about one-eighth the price of sulphate of quinine, termed sulphate of cinchonine. The other articles were sent in quantities quite insufficient for a complete analysis. I do not, however, hesitate to say that the results of my analysis show that all of them were not of proper quality. *Tincture of Catechu:* This article contained about one-half of the amount of extract yielded by properly prepared tincture, which no doubt was caused by deficiency in the strength of the spirit of wine used in preparing the article. *Tincture of Cinchona (Bark) Compound:* This article was deficient in spirit, and contained about three-fourths of the amount of extract which it ought to include. The costly article, saffron, prescribed by the *Pharmacopœia* to be used in preparing this tincture, is wholly absent from it. *Ammoniacal Tincture of Guaiacum:* This tincture contains more extract than is usually found in the preparation, probably owing to its excess of ammonia. There is a deficiency of spirit. *Etherial Tincture of Lobelia:* The extract is deficient to the extent of about one-fourth the proper quantity; the ether used was the cheap kind termed "methylated". *Tincture of Perchloride of Iron:* The amount of perchloride of iron in this article is correct, but there appears to be no spirit of wine at all in it. The term tincture is a misnomer in this case. *Tincture of Belladonna:* This tincture contains about three-fourths of the proper amount of extract, and it is deficient in spirit. *Aromatic Spirit of Ammonia:* The ammonia is in excess, but the far more costly aromatic oils are in a great deficiency, in this tincture. *Aromatic Sulphuric Acid:* This article contains two-thirds only of the amount of sulphuric acid prescribed by the *Pharmacopœia*. It contains very little spirit of wine and very little bark; it is a very inferior article."

DISPENSARY HOUSES ACT.

THE Act for giving facilities for providing dispensary-houses and dwelling-houses for medical officers of dispensary districts in certain parts of Ireland became law on July 21st, 1879; and since then a disposition has been shown in many instances to take advantage of the provisions of the Act, and proceedings under it are still pending in several cases. Certificates have been issued under the Act in the following Unions up to last April: Tralee Union, for Castleisland Dispensary District; Milford Union, for Rosguill Dispensary District; and Downpatrick Union, for Strangford Dispensary District. We may add that the Act enables the Commissioners of Public Works to make loans for assisting any owner—a board of guardians being included under that designation—upon production of a certificate signed by the Secretary of the Local Government Board, to erect, enlarge, improve, or purchase a house or building to be used as a dispensary or a dispensary residence.

CORK NORTH INFIRMARY.

AT a meeting of the trustees of this institution held last week, an application was received from Dr. S. O'Sullivan, Assistant-Surgeon, requesting to be appointed a visiting surgeon, so that the surgical staff of the infirmary might consist of three surgeons, an assistant-surgeon, and a house-surgeon, as is the case at the Cork South Infirmary. Allusion having been made to Dr. O'Sullivan's long connection with the infirmary, and the care he had always bestowed in the treatment of the cases intrusted to him, he was unanimously elected. Dr. Henry Corby, the House-Surgeon, then applied to be appointed Assistant-Surgeon, having been seven years acting in his present position, a request with which the trustees also complied.

BELFAST WORKHOUSE.

DR. MACCABE, Inspector under the Local Government Board, has recently inspected this workhouse, and his report—a most exhaustive one—has lately been under the consideration of the Belfast Board of Guardians. He states that the sanitary condition of the house is not altogether satisfactory; for, during the six months ending June 28th, the average number resident in the workhouse amounted to 2,647, with 480 deaths; and of these latter, 82 infants under twelve months were included, the rate of infant mortality—an important guide to the sanitary condition of an establishment—being very high. He considers that the Belfast Workhouse seems hardly adequate to the wants of the Union, the blocks of the building which constitute the main body of the house being in such close proximity to the adjacent blocks that there is not sufficient air-space between them, and the sun-light is too much excluded. The wards also appear to be unduly filled, and the allowance of cubic space to each inmate is frequently below the standard authorised by the Local Government Board. The insufficient allowance of cubic space is especially observable in the probationary wards, in the fever hospital block, in the lying-in wards, in the nursery department, in the healthy female sleeping-wards, and in the main buildings throughout. The ventilation in the hospital wards has been much improved under the advice of the medical officers, while important improvements have been made in ventilating the ordinary wards. Dr. MacCabe

hopes that, when the new building for lunatics is completed, the space now occupied by the insane will be so distributed amongst other classes as to increase the cubic and floor-space at present available. The hospital for the treatment of acute and contagious diseases is also overcrowded; and when the measurement and cubic space allowance sanctioned under a recent limitation order comes into the hands of the medical officers, it will become their duty to advise the guardians to provide some additional accommodation for the sick. In doing so, Dr. MacCabe recommends that wooden sheds should be used for the reception of contagious diseases; and that these should extend in parallel lines behind the fever hospital block, if the workhouse boundaries afford sufficient ground-space. These sheds for the reception of cases of infectious disease should be built of pitch-pine, and varnished, and can be erected at a very moderate expense. The general condition of the workhouse, with the exception of the overcrowding, appears to be quite satisfactory; the inmates were well clothed and healthy in appearance, and the sleeping-wards were found in good order. As regards the female lunatic department, Dr. MacCabe considers that another paid responsible officer is absolutely necessary for the care of 112 lunatics; for it should not be forgotten that all persons classed as lunatics are potentially dangerous, and legally irresponsible for the consequences of their impulses and acts. In the workhouse, he saw epileptic lunatics who were actually dangerous to themselves and to others; and he advises that any cases in which the imposition of restraint of any kind may be found necessary should be transferred to the district lunatic asylum.

THE RISCA COLLIERY EXPLOSION.

THE following is a list of persons recovered from the Risca colliery explosion on July 15th, 1880, with remarks.

1, Thomas Bowden; 2, Thomas Jones; 3, John Jones; 4, David Scannel; 5, Thomas Thomas; 6, James Davies; 7, Thomas Jones; 8, William J. Tovey; 9, John Bray; 10, John Morgan; 11, Henry Foze, 12, James Heycock; 13, Charles Rendell: hair and arms scorched; fractured forearm; dislocation of left elbow; contusions about the body. 14, William Mathews: hair and hands scorched; bruised about body; several contusions to head and face. 15, John Potter: dislocation of right arm and left shoulder; fracture of left arm; compound fracture of left leg; fracture of the base of the skull; scorched about back. 16, Wm. Caine: no injuries. 17, John Fry: no injuries. 18, William Hughes: no indication of being burnt. 19, Joseph Hemmings: scorced about head, face, arms, and legs. 20, Thomas Cheady: extensive fracture of skull; escape of brain; left arm nearly blown off at shoulder; scorched back of hands and right arm; all ribs fractured on left side; escape of stomach and contents of bowels; fracture of both bones of left leg; fractured jaws. 21, John Oliver Howell: scalp-wound over forehead; singed back part of head, more especially on left side; and singed back of hands. 22, Henry Brookman: slightly scorched left hand, hair, and beard; scalp-wound on right side; and fractured skull. 23, Thomas Wallace: extensive scalp-wound; fractured skull; scorched right hand and arms. 24, John Woodford: scorched about head and both hands; left hand crushed by a fall; compound fracture of right leg. 25, Frederick Baker: scorched about the head, both hands, and arms. 26, Thomas Morgan: singed about the head, both arms, and hands. 27, Wm. Phillips: singed about head, arms, and hands; compound fracture of left leg. 28, Thomas Rogers: scorched about head, arms, and hands. 29, Jephtha Johnson: very much scorched about head and both arms. 30, William Morgan: slightly scorched about head and face, and very slightly about hands; hair of head slightly singed. 31, Charles Poole: scorched about head and face, and very slightly about hands. 32, Alfred Shore: head mangled to pieces; left thigh dislocated at hip; left leg fractured; right leg fractured and left arm absent; mangled from head to foot; disembowelled. 33, Cornelius Ford: scorched about hands; left leg broken; left arm nearly blown off at shoulder; right arm also; skull fractured; brain all out. 34, William Vaughan: both arms and hands scorched; skull fractured; brain protruding. 35, Charles Edwards: both arms blown off; left leg blown off below knee; arms and head severely scorched. 36, Charles English: both arms severely scorched. 37, [illegible] Tovey: hands, arms, beard and hair scorched. 38, Thomas Price: scorched about hands; hair scorched [illegible]. 39, [illegible] scorched about hands; making a total of 39 brought to the pit-head, 20th July, 1880.

Mr. Robathan writes further in connection with this record: "I may say that the majority of those scorched would have recovered, had the ventilation not been stopped. Having lived in Risca forty years and seen the results of many explosions, I have never seen such mangling of bodies; limbs twisted from their sockets, legs fractured, not from falls; they appeared to have been affected by several currents or whirlwinds. The skulls were in many cases fractured, and not a portion of brain left. You will see, by the remarks I have made, the nature of the injuries."

GUY'S HOSPITAL.

THE following is the report of a Committee "appointed to inquire into and report upon the circumstances which have to be dealt with, in order to secure the employment of efficient nurses by night and by day, and in special cases, and that it be empowered to report upon any particulars connected therewith, which it may think desirable".

The Committee have carefully considered the circumstances referred to them with reference to two main questions: 1. How to secure a supply of suitable and properly trained nurses for the patients; 2. How to provide for the due co-operation of the medical staff with the governors.

The Committee have sat fourteen days, and have examined, or conferred with, the Treasurer; Dr. Habershon; Dr. Wilks; Mr. Bryant; Mr. Howse; Dr. Hilton Fagge; Dr. Taylor; the Medical Superintendent; the Matron; Miss Loag, the former Matron; all the Sisters on duty.

At the third meeting, the Treasurer retired from the Committee, wishing to leave them entirely free in their inquiries.

The Committee are satisfied that, in all changes which have been introduced, there has been an honest endeavour to supply properly trained nurses for the hospital, to provide for their comfort and health, and to place them in a position of due subordination to the direction of the medical staff. But frank communication and hearty co-operation between the medical staff and the authorities responsible for the supply of nurses are necessary for the success of this endeavour.

The Committee inquired, in the first instance, into the alleged deficiencies in the nursing in former years. It appears that the domestic arrangements, though gradually improved under the late treasurer, to whom the hospital is much indebted for his long and most valuable services, were not wholly satisfactory; and thus, partly in consequence of this circumstance, partly owing to increased demand elsewhere, the supply of suitable candidates, such as would be acceptable as servants in private families, was becoming more restricted. The technical instruction and the training of the nurses were often insufficient, and there was a want of proper supervision. It is needless to dwell on details of alleged abuses; and it may be admitted, without hesitation, that many of the sisters and nurses heretofore attached to the hospital were capable persons, and attended to the sick with kindness, intelligence, and sympathy.

The Committee next inquired into the changes introduced in November, 1879. They consisted mainly of a new scale of remuneration, lower in nominal pecuniary amount, but on the whole advantageous to the nurses. Regular and more comfortable meals and better food were provided, cooking by the nurses in the wards was stopped; the hours of recreation were altered, so as to diminish the time spent out late in the evening; a monthly holiday of an entire day was abolished; every nurse was called upon to enter into an engagement to take her share of night duty when required; and a uniform dress for the several classes was, as a general rule, insisted upon. Several of these changes were distasteful to old sisters and nurses, of whom many left the hospital rather than agree to them. A few of those who left on Miss Burt's appointment would have had to leave on other grounds. The Committee are of opinion that there has been an exaggerated estimate of the effect of these changes on the sisters and the nurses, though it is true that some persons highly valued by the medical staff have left the hospital.

The present state of the wards has engaged the especial attention of the Committee. From the evidence of the sisters, it appears that in about two thirds of the wards there is now no dissatisfaction, and in many there is reason to believe that there is considerable improvement. There is no valid reason for believing that in any case is interference with the orders of the medical staff either sanctioned or connived at by the matron. All the changes she has made have had for their object, at all events, to secure proper nursing by day and by night; to meet the demands of the medical staff in special cases; and, in some instances, to comply with the wishes of the sisters and nurses themselves. It must also be borne in mind that she has had to aim at these objects under circumstances of considerable difficulty.

The Committee directed their inquiries especially to the question whether any of the recent changes in the nursing department had in any

degree tended to restrict the opportunities of the students for the study of disease, or otherwise prejudicially affected the medical school.

Feeling a deep interest in the continued prosperity of the school, and in the advancement of medical science, the Committee had a long conference with the dean of the school on the subject. It appeared that although the recent excitement and controversy have tended to unsettle the minds of the students, there is no reason to think that the present nursing arrangements put any real hindrance in the way of medical observation, or practice on the part of the students.

The Committee would gladly have passed over without comment the circumstances connected with the appointment and reception of the matron, but they feel it necessary to refer to them in order to explain the difficulties which have arisen. It appears to the Committee that needful changes were introduced without sufficient consultation and preparation, that some details were unduly insisted upon, and that much misapprehension ensued. That misapprehension might have been avoided by personal explanation, which, however, under the circumstances, became impracticable.

The matron was not personally introduced to the staff. She was apparently authorised to frame rules, on which the staff were not consulted; but which, in their opinion, affected (though unintentionally on the part of either treasurer or matron) the medical treatment of the patients. The matron herself understood that no further authority than that of the Treasurer was required; and he, on his part, was under the impression that the changes contemplated would be acceptable to the medical staff.

The Committee cannot feel surprised that the staff resented the publication of the article on the crisis at Guy's Hospital in the April number of the *Nineteenth Century*, which they deemed to be an attack from within the walls of the hospital on their professional honour; but the Committee have no evidence that any one now in the hospital was responsible for the article, or had any knowledge of its contents before it was printed.

The Committee are firmly convinced that the treasurer, the medical staff, and the matron have had the same object in view, viz., to promote the good of the hospital and the comfort of the patients. It is, however, essential that there should be no bar to frank personal communication between those who are practically engaged in arduous duties involving complicated arrangements, and provision for sudden emergencies.

The Committee cannot find sufficient justification for the difficulties which have existed between the medical staff and the matron almost from the date of her entrance into the hospital, nor can they see in the present state of feeling, any just ground for calling upon her to abandon the duties of a post which she did not seek, but which she was specially invited to undertake.

Having thus expressed their opinion on the above questions, the Committee proceeded to consider most carefully what recommendations they should submit to the Court, with the view of placing matters upon a footing satisfactory to both governors and medial staff.

They understand that the staff desire that no rules affecting their patients should be issued without their previous knowledge, that no person should be supreme in the removal or dismissal of nurses without some appeal: and that the staff should have some recognised right and a simple way of bringing their requirements before the governors.

The Committee therefore recommend that the Court should make such arrangements as may be necessary to render the attendance of the governors at the Taking-in Committee more regular; and they would suggest that the best way to effect this purpose would be to abolish the old plan of two governors coming on duty in rotation once a week, and to substitute instead the following arrangements; that each year not less than ten governors be nominated as the Taking-in Committee for the twelve succeeding months, and that they be requested to make such arrangements between themselves and the treasurer, as will procure the attendance of at least two members at every Taking-in Committee; that once a month, or oftener if necessary, two members of the medical staff, appointed by that body, be invited to attend the Committee with the view of deliberating on any matters relating to the medical and nursing arrangements; that regular Minutes be kept of the proceedings of the Taking-in Committee, and that such Minutes be brought for confirmation before the next Court of Committees as the sole executive body authorised by Act of Parliament; that, in any difference of opinion, the views of the medical staff, as well as those of the governors, be recorded on the Minutes.

The Committee consider that the full reports at present laid before the Taking-in Committee might with advantage be supplemented, so as to embrace every matter of importance.

The Committee believe that the above arrangement, while materially assisting the treasurer, would enable the governors to become more intimately conversant with the internal working of the hospital; and at the same time it would afford the medical staff an opportunity (the want of which they have felt) of personally coming in contact with the governors.

(Signed) HENRY H. GIBBS, CHARLES BARCLAY, TREVOR LAWRENCE, RICHARD M. HARVEY, J. A. SHAW STEWART, THOMAS DYKE ACLAND, SAMUEL HOARE (Chairman).

THE ANNUAL MEETING AT CAMBRIDGE.

THE following eminent foreigners have already accepted invitations to attend the annual meeting of the Association:—Professors Brown-Séquard, Marey, and Ranvier, and Drs. Landolt, Lucas-Championnière, and Weber, of Paris; Professor Busch, of Berlin; Professor Klebs, of Prague; Professor Donders, of Utrecht; Professor Gross, of Philadelphia; Professor Chauveau, of Lyons; Dr. Toussaint, of Toulouse; and Professors Howard and Darling, of New York.

At a congregation of the University of Cambridge on June 10th, graces passed the senate for conferring the honorary degree of Doctor of Law, on the occasion of the meeting of the British Medical Association, on the following gentleman:—Dr. C. E. Brown-Séquard, F.R.S.; Professor in the College of France, Paris; Dr. Chauveau, of Lyons; Dr. F. C. Donders, Professor of Physiology at Utrecht; Dr. S. D. Gross, of Philadelphia; Sir William Jenner, Bart., K.C.B., M.D., F.R.S.; Sir William Gull, Bart., M.D., F.R.S.; Sir George Burrows, Bart., M.D., F.R.S.; William Bowman, Esq., F.R.S.; the Rev. S. Haughton, M.D., F.R.S.; Joseph Lister, Esq., F.R.S.; Dr. Denis O'Connor, President of the British Medical Association; John Simon, Esq., C.B., F.R.S.; and Dr. Andrew Wood, F.R.S.E. At the same time, a grace passed for conferring the degree on Professor Paul Broca; the intention, however, has been defeated by his lamented death.

THE list of lodgings given in this day's JOURNAL shows that there will be no lack of accommodation for members during the ensuing meeting; and the prices, it will be seen, are moderate. Indeed, there are few places so well suited in this respect as Cambridge for a large meeting. Many lodgings, not included in the list, have been taken for members who availed themselves of the offer to secure rooms made in the JOURNAL, two or three weeks since, by the honorary local secretary, Mr. A. P. Humphry. Besides these, two or three hundred rooms in the colleges have been placed at the disposal of the reception committee; and some of these are still unassigned. The undergraduates reside in Cambridge during the vacation in much larger numbers than they used to do; and they all go into college, and commonly occupy the best rooms. Hence the available good rooms in the colleges are less numerous than at the time of the last meeting. The college authorities have, however, with much liberality, opened their doors as widely as possible, and have invited many guests.

VACCINATION ACTS AMENDMENT BILL.

THE following gentlemen have communicated to us their desire to have their names added to the petition against the Vaccination Acts Amendment Bill; and those members who have no opportunities of signing local petitions are requested to forward their authorisation to this office.

G. W. Lowe, L.R.C.P., Middleton-in-Teesdale; S. R. Lovett, Medical Officer of Health, St. Giles's; Charles J. Myers, M.R.C.S., L.S.A., Public Vaccinator of Somercoles District of Louth Union; Henry Denne, M.D., Edgbaston; Eli Crew, M.R.C.S., Alderley Edge; George H. Daly, M.D., Chippenham; Frederick Elsom, M.R.C.S., Whitwell; T. W. Norbury, M.R.C.S.Edin., Alderley Edge; J. Jamieson, F.R.C.S.E.; S. G. Litteljohn, M.B., Hanwell; H. J. L. Bennett, Dewsbury; Herbert Masser, Longford; Francis Vacher, F.R.C.S., L.R.C.P., Birkenhead; William Roden, M.D., Kidderminster; Chas. Hamon Hill, M.D., Islington; Robert Fowler, M.D., Bishopsgate Street Without; James Morris, M.D., Hyde Park Square; J. Edwin Eddison, M.D., Physician to Leeds Infirmary; Richard Ryder, M.D., Nailsworth; Herbert Markant Page, M.R.C.S.Eng., L.S.A.Lond., S.S.C.Cantab., Redditch; Septimus B. Farr, L.R.C.P., M.R.C.S., L.S.A., Andover; L. B. Mason, L.R.C.P., Medical Officer of Health, Pontypool; Samuel W. Smith, M.D., Pershore; William D. Sheppard, L.R.C.P., Cardiff; Simeon Snell, Ophthalmic Surgeon to Sheffield General Infirmary; W. R. Watson, L.R.C.P., L.R.C.S., Dennistown; Arthur Cooper, L.R.C.P., M.R.C.S., Welbeck Street; Richard Alford, Weston-super-Mare; J. J. Kirk Duncanson, M.D., F.R.C.P., etc., Edinburgh; J. Farrant Fry, L.R.C.P., Swansea;

Jacob Ashley, M.R.C.S., Public Vaccinator, Bath; Charles Edward Abbott, M.R.C.S., Braintree; Clement Hadley, M.R.C.S., Birmingham; John J. Harrison, L.A.H.I., Dublin; Robert Manners Mann, M.R.C.S., L.S.A., Public Vaccinator, Parish of Manchester, No. 3 District; William Blair, M.D., Jedburgh; George F. Rossiter, M.B., Weston-super-Mare.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-EIGHTH ANNUAL MEETING.

THE Forty-Eighth Annual Meeting of the British Medical Association will be held at Cambridge, on Tuesday, Wednesday, Thursday, and Friday, August 10th, 11th, 12th, and 13th, 1880.

President: DENIS C. O'CONNOR, A.B., M.D., Professor of Medicine in Queen's College, Cork.

President-elect: G. M. HUMPHRY, M.D., F.R.C.S., F.R.S., Professor of Anatomy in the University of Cambridge; Senior Surgeon to Addenbrooke's Hospital.

An Address in Medicine will be delivered by J. B. BRADBURY, M.D., F.R.C.P., Physician to Addenbrooke's Hospital; Linacre Lecturer in Physic.

An Address in Surgery will be delivered by TIMOTHY HOLMES, M.A., F.R.C.S., Surgeon to St. George's Hospital.

An Address in Physiology will be delivered by MICHAEL FOSTER, M.D., Hon. M.A., F.R.S., Prælector in Physiology in Trinity College, Cambridge.

The business of the Association will be transacted in Eight Sections.

SECTION A.: MEDICINE.—*President:* George Edward Paget, M.D., D.C.L., F.R.S., Cambridge. *Vice-Presidents:* George Johnson, M.D., F.R.S., London; P. W. Latham, M.A., M.D., Cambridge. *Secretaries:* W. B. Cheadle, M.A., M.D., 2, Hyde Park Place, London, W.; D. B. Lees, M.A., M.D., 2, Thurloe Houses, Thurloe Square, London, S.W.

SECTION B.: SURGERY.—*President:* William S. Savory, M.B., F.R.S., London. *Vice-Presidents:* William Cadge, F.R.C.S., Norwich; John Wood, F.R.C.S., F.R.S., London. *Secretaries:* John Chiene, F.R.C.S.Ed., F.R.S.Edin., 21, Ainslie Place, Edinburgh; George E. Wherry, M.B., M.C., F.R.C.S., 63, Trumpington Street, Cambridge.

SECTION C.: OBSTETRIC MEDICINE.—*President:* W. S. Playfair, M.D., London. *Vice-Presidents:* H. Macnaughton Jones, M.D., Cork; Henry Gervis, M.D., London. *Secretaries:* R. N. Ingle, M.D., F.R.C.S., 21, Regent Street, Cambridge; C. E. Underhill, M.D., 8, Coates Crescent, Edinburgh.

SECTION D.: PUBLIC MEDICINE.—*President:* Henry W. Acland, M.D., LL.D., F.R.S., Oxford. *Vice-Presidents:* Arthur Ransome, M.A., M.D., Manchester; Thomas Pridgin Teale, M.A., F.R.C.S., Leeds. *Secretaries:* William Armistead, M.B., St. Mary's Villa, Station Road, Cambridge; Thos. J. Walker, M.D., 18, Westgate, Peterborough.

SECTION E.: PSYCHOLOGY.—*President:* J. Crichton Browne, M.D., LL.D., F.R.S., London. *Vice-Presidents:* G. F. Blandford, M.D., London; P. M. Deas, M.B., Macclesfield. *Secretaries:* G. M. Bacon, Hon. M.A., M.D., Lunatic Asylum, Fulbourn, Cambridge; Henry Sutherland, M.A., M.D., 6, Richmond Terrace, Whitehall, S.W.

SECTION F.: PHYSIOLOGY.—*President:* William Rutherford, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Arthur Gamgee, M.D., F.R.S., Manchester; Robert McDonnell, M.D., F.R.S., Dublin. *Secretaries:* W. H. Gaskell, M.A., M.D., Grantchester, Cambridge; William Stirling, D.Sc., M.B., Marischal College, Aberdeen.

SECTION G.: PATHOLOGY.—*President:* Sir James Paget, Bart., D.C.L., LL.D., F.R.S. *Vice-Presidents:* Samuel Wilks, M.D., F.R.S.; W. Howship Dickinson, M.D. *Secretaries:* W. S. Greenfield, M.D., 15, Palace Road, Albert Embankment; Charles Creighton, M.A., M.D., Anatomical Museum, Cambridge.

SECTION H.: OPHTHALMOLOGY.—*President:* William Bowman, F.R.C.S., F.R.S., London. *Vice-Presidents:* Henry Power, F.R.C.S., London; Henry R. Swanzy, M.B., Dublin. *Secretaries:* W. A. Brailey, M.A., M.D., 38, King's Road, Brownswood Park, London, N.; David Little, M.D., 21, St. John Street, Manchester.

A Subsection of Otology will be formed, of which Mr. W. B. Dalby, F.R.C.S., of London, will be Chairman, and Dr. James Patterson Cassells of Newton Terrace, Sauchiehall Street, Glasgow, and W. D. Hemming, F.R.C.S., honorary secretaries.

Treasurer: R. M. Fawcett, M.D., 3, Scrope Terrace, Cambridge.

Honorary Local Secretaries: Bushell Anningson, M.A., M.D. (Hon. Medical Secretary), Walt-ham-sal, Barton Road, Cambridge; A. P. Humphry, Esq., M.A. (Hon. Reception Secretary), Corpus Buildings, Cambridge.

Letters relating to the strictly medical work (Sections, Museums, etc.) of the meeting should be addressed to Dr. Anningson; other letters to Mr. A. P. Humphry.

TUESDAY, AUGUST 10TH, 1880.

2 P.M.—Meeting of Committee of Council at the Guildhall.
2.30 P.M.—Meeting of the Council of 1879-80 at the Guildhall.
4 P.M.—Short service, with sermon by the Bishop of Ely in King's College Chapel.
5 P.M.—General Meeting in the Senate House. President's Address; Annual Report of Council and other business.
10 P.M.—Tea and coffee in the Hall of Caius College (close to the Senate House).

WEDNESDAY, AUGUST 11TH.

9.30 A.M.—Meeting of Council of 1880-81 at the Guildhall.
11 A.M.—Second General Meeting in the Senate House. Address in Medicine.
12.30 P.M.—Conferring Honorary Degrees in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
9 P.M.—Soirée in the Fitzwilliam Museum and grounds of Peterhouse by the Reception Committee.

THURSDAY, AUGUST 12TH.

9.30 A.M.—Meeting of the Committee of Council at the Guildhall.
10 A.M.—Third General Meeting in the Senate House. Reports of Committees.
11 A.M.—Address in Surgery in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
6.30 P.M.—Public Dinner in the Hall of Trinity College.

FRIDAY, AUGUST 13TH.

10 A.M.—Address in Physiology in the Senate House.
11 A.M.—Sectional Meetings in the New Museums and Lecture Rooms.
1.30 P.M.—Concluding General Meeting in the Senate House. Reports of Committees and other business.
4 P.M.—Garden party in the grounds of King's College by the President.
9 P.M.—Conversazione in St. John's College and grounds.

Ladies will be admitted to the Soirée, Garden Party, and Conversazione.

SECTIONAL ARRANGEMENTS.

SECTION A.—MEDICINE.

The following are the subjects for discussion in this Section.

1. "Hysterical Anæsthesia." The subject will be introduced by Dr. Bristowe. Dr. Althaus, Dr. Brown-Séquard, Dr. Broadbent, Dr. Buzzard, Dr. Dreschfeld, Dr. Matthews Duncan, Dr. Ferrier, Dr. Balthazar Foster, Dr. W. Moore, Dr. Wade, and others, are expected to take part in the debate.

2. "Asthma." The discussion will be opened by Dr. Andrew Clark. Dr. Berkart, Dr. Eade, Dr. T. Hayden, Dr. Douglas Powell, Dr. F. Roberts, Dr. Burney Yeo, and others, are expected to take part in the debate.

SECTION B.—SURGERY.

Discussion will take place in this Section on the following subjects.

1. "The Treatment of Wounds." The discussion will be opened by Professor Lister, F.R.S.

2. "Stricture of the Urethra." The discussion will be opened by Sir Henry Thompson.

The following gentlemen have promised to take part in the discussions: E. Atkinson, Esq. (Leeds); T. Bryant, Esq. (London); E. H. Bennett, M.D. (Dublin); Reginald Harrison, Esq. (Liverpool); Berkeley Hill, Esq. (London); Furneaux Jordan, Esq. (Birmingham); Edward Lund, Esq. (Manchester); W. Mac Cormac, Esq. (London); Professor Macleod (Glasgow); Oliver Pemberton, Esq. (Birmingham); William Stokes, Esq. (Dublin); W. F. Teevan, Esq. (London); Walter Whitehead, Esq. (Manchester); John Wood, Esq., F.R.S. (London).

SECTION C.—OBSTETRIC MEDICINE.

The following subjects will be discussed in this Section.

1. "Uterine Hæmostatics." The discussion will be opened by Dr. Atthill.

2. "The Removal of Uterine Tumours by Abdominal Section." The discussion will be opened by Mr. Spencer Wells.

The following gentlemen are expected to take part in the discussions: Dr. H. Gervis, Dr. Matthews Duncan, Dr. Barnes, Dr. Heywood Smith, Dr. A. Wiltshire, Dr. G. Roper, Dr. G. E. Herman, Dr. Galabin, Dr. W. Williams, Dr. P. Boulton, Dr. A. H. McClintock and Dr. T. More Madden (Dublin), Dr. C. E. Lyster (Liverpool), Dr. Savage and Mr. Lawson Tait (Birmingham), Dr. Murphy (Sunderland), Dr. G. H. B. Macleod (Glasgow), Dr. Thorburn (Manchester), and Dr. A. E. A. Lawrence (Clifton).

Section D.—Public Medicine.

The subjects for discussion are:

1. "The General Working of the Public Health Administration in Great Britain and Ireland." The discussion will be opened by Dr. Alfred Carpenter and Dr. F. T. Bond.

2. "Diseases communicable to Man from Diseased Animals used as Food." The discussion will be opened by Mr. F. Vacher of Birkenhead and Mr. E. J. Syson of Huntingdon.

Section E.—Psychology.

The subject for discussion in this Section is:

"The Influence of Alcohol in the Causation of Insanity." The discussion will be opened by Dr. G. M. Bacon; and Dr. Hack Tuke, Dr. Shuttleworth, Dr. More Madden, and other members, have intimated their desire to take part in it.

Section F.—Physiology.

The following are the subjects for discussion in this Section.

1. "The Evidence derived from Clinical Observations and Physiological Experiments as to the Seat of the Formation of Urea in the Body." The discussion will be opened by Professor Gamgee, F.R.S., of Manchester.

2. "Sleep and Hypnotism." The discussion will be opened by Professor Preyer of Jena.

Besides the discussions and papers, there will be demonstrations in the Physiological Laboratory.

Section G.—Pathology.

The special subjects for discussion are as follows.

1. "The Influence of Injuries and Morbid Conditions of the Nervous System on Nutrition." The discussion will be opened by Mr. Jonathan Hutchinson.

The following gentlemen are also expected to aid in the discussion of this subject: Dr. Brown-Séquard, Dr. Clifford Allbutt, Dr. Althaus, Dr. Byrom Bramwell, Dr. Dreschfeld, Mr. E. Nettleship, Dr. Vivian Poore.

2. "Micro-organisms; their Relation to Diseases." The discussion will be opened by Professor Lister, F.R.S.

The following gentlemen are expected to take part in the discussion: Professor E. Klebs (Prague); Professor Cohnheim (Leipzig); Rev. W. H. Dallinger, F.R.S.; Professor Burdon Sanderson, F.R.S.; Dr. Vandyke Carter (Bombay); Professor Ray Lankester, F.R.S.; Mr. Malcolm Morris; Dr. Douglas Powell; Dr. William Roberts, F.R.S. (Manchester); Dr. Ernest Sansom.

Section H.—Ophthalmology.

The following are subjects for discussion in this Section.

1. "The Nature of Glaucoma."

2. "Toxic Amaurosis, especially in relation to Colour Perception." Professor Donders (Utrecht) will deliver an address on some points relating to the Perception of Colours.

Subsection of Otology.

The following subjects will be discussed in this Subsection.

1. "The Therapeutic Value of Electricity in Ear-Diseases."

2. The Comparative Value of the various Mechanical Aids to Hearing, with special regard to the several kinds of Artificial Drumheads, and to those Instruments which Assist Deafness by Conducting or Transmitting Sound, either directly or indirectly, to the Organ of Hearing.

The following gentlemen have promised to take part in the discussion: Dr. James Patterson Cassells (Glasgow), Mr. E. C. Baber (Brighton), Mr. A. Gardiner Brown (London), Dr. Kirk Duncanson (Edinburgh), Mr. George T. Field (London), Mr. Douglas Hemming (Bournemouth), Dr. A. H. Jacob (Dublin), Professor H. Macnaughton Jones (Cork), Dr. Loewenberg (Paris), Dr. W. A. McKeown (Belfast), Dr. A. Ogston (Aberdeen), Dr. Pierce (Manchester), Dr. Urban Pritchard (London), Dr. Story (Dublin), Dr. Torrance (Newcastle-on-Tyne), Dr. E. Woakes (London).

The following communications have been promised, in addition to those enumerated in the JOURNAL of last week. A complete programme of the Sectional arrangements will be published before the meeting.

Anderson, E. C., M.A., M.D. The Presence of Leucin and Tyrosin in the Urine in Numerous Diseases.
Andrew, Edwin, M.D. A Successful Case of Sympathetic Ophthalmia.
Bell, J. H., M.D. 1. On Anthrax from Mohair in Woolsorters. 2. On Anthracæmia from Mohair in Woolsorters and Heifers.
Cory, Robert, M.D. The Influence of Removal of the Vesicle before Maturity on the Security afforded by Vaccination.
Dreschfeld, J., M.D. A Case of Duodeno-colic Fistula.
Fox, Cornelius B., M.D. The Impairment of the Intellectual Faculties of the Medical Officer of Health, produced by the Want of Independence of a Public Official.
Lee, Robert, M.D. A Simple Method of Diffusing in the Atmosphere Carbolic Acid, the Essential Oils, etc., for the purposes of Disinfection.
M'Vail, J. C., M.D. Ten Years' Surgery in the Kilmarnock Infirmary.
Myrtle, A. S., M.D. Dupuytren's Contraction of the Fingers.
Power, Henry, Esq. Amyloid Degeneration of the Conjunctiva (Section H, in place of paper announced last week).
Ransome, A., M.D. The Action of the Ribs in Mild Expectoration.
Toussaint, Dr. On the Physiological and Pathological Anatomy of Charbon, and on the Septicæmia produced by Inoculation of Charbon in the Sheep.

The following instruments will be exhibited and explained in the Ophthalmological Section.

Baber, Mr. C. 1. New Fixation Forceps. 2. New Ciliary Forceps. 3. A New Contrivance for Magnifying and Illuminating during Operations on the Eye.
Couper, Mr. 1. A New Refraction Ophthalmoscope. 2. A New Optometer.
Fowler, Dr. Litton. A New Form of Artificial Eye.
Gowers, Dr. 1. A New Form of Refraction Ophthalmoscope. 2. A New Instrument for Ophthalmoscopic Measurements.
Hirschberg, Dr. (by Dr. Brailey). An Improved Form of Strabometer.
Landolt, Dr. Some Improved Instruments.
Smith, Mr. Priestley. A New Tonometer.
Wadsworth, Dr. A New Form of Spring Speculum.

Colour-Blindness.

It is hoped that *all* members attending the meeting will present themselves for an examination of their colour perception, and thus assist in settling the much disputed question of the percentage of colour-blind persons. Holmgren's tests will be in readiness in a room adjoining the place of meeting of the Ophthalmological Section during the times of sitting. Directions for finding the room will be duly posted up.

Pathological Collection.

The following contributions have been already promised.

Microscopic Specimens: by Dr. Stephen Mackenzie, Dr. Charlewood Turner, Dr. D. I. Hamilton, Dr. Byrom Bramwell, Dr. Dreschfeld, Dr. Leech, Dr. Thin, Dr. Lauchlan Aitken, Mr. Malcolm Morris, Dr. Vandyke Carter, Dr. Osler (Montreal), Professor Klebs (Prague).

Drawings: by Dr. Reginald Thompson, Mr. James Startin, Dr. Hoggan, Dr. R. J. Lee, Dr. Greenfield, Dr. Creighton, Dr. Mercer (New York), Dr. Osler.

Other Preparations: by Dr. Alexander Ogston, Dr. T. Barlow, Dr. Dreschfeld, Dr. Creighton, Dr. Elliot (Carlisle), Mr. Lawson Tait, Professor Busch (Berlin).

Annual Museums.

The Pathological Collection will be in the Anatomical Museum.

Honorary Secretary to the Pathological Collection: C. Creighton, M.D., Anatomical Museum, Cambridge.

The Exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetic and Sanitary Appliances, will be in connection with the Reception Room in the Guildhall.

Honorary Secretary: G. Wallis, Esq., Corpus Buildings, Cambridge.

Honorary Secretary to the Sanitary Collection: W. Armistead, M.B., Station Road, Cambridge.

Excursions.

On Saturday, August 14th, there will be excursions to Ely, Peterborough, and Audley End.

Honorary Secretary to the Excursion Committee: G. Wallis, Esq., Corpus Buildings, Cambridge.

Annual Dinner.

The number of persons that can be accommodated in the Hall of Trinity College is limited to 350. Tickets for the annual dinner will be reserved for members who make application, accompanied by payment of one guinea, to A. P. Humphry, Esq., Corpus Buildings, Cambridge.

Accommodation in Cambridge.

A list of lodgings in Cambridge, giving the prices at which they will be obtainable at the time of the meeting of the Association, is published with the present number.

Francis Fowke, *General Secretary*,
British Medical Association.

161A, Strand, London, July 15th, 1880.

NORTH WALES BRANCH.

The thirtieth annual meeting will be held at Beaumaris on Tuesday, the 31st day of August.

Special arrangements are being made for the latter part of the journey

(across the Menai Straits), and for visits to the various objects and places of interest in the neighbourhood.

Further particulars will be announced by notices in the JOURNAL, and by circular to the members on an early day.

J. LLOYD ROBERTS, *Honorary Secretary.*

Denbigh, July 20th, 1880.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE twenty-eighth annual meeting of this Branch was held at the Ship Hotel, Greenwich, on Wednesday, July 7th, at 4 p.m. In the unavoidable absence of the retiring President, JOHN WOOD, Esq., F.R.S., the chair was taken by the President-elect, S. O. HABERSHON, M.D.

Report of Council.—Dr. HENRY, one of the honorary secretaries, read the following report.

In presenting the twenty-eighth annual report, the Council of the Metropolitan Counties Branch have the satisfaction of announcing a further increase in the number of members. At the last annual meeting there were 819 members on the list. Since that time, ten have died; eighteen names have been removed in consequence of resignation, and three on account of arrears. The number of new members admitted has been 54; making the total number at present 842.

The members who have died are—Mr. George W. Callender, F.R.S.; Mr. George C. Coles; Dr. Frederick Collins of Wanstead; Mr. John Greeves of Hammersmith; Dr. Arthur Leared; Mr. J. G. Massingham; Mr. C. F. Maunder; Dr. John Stanton; Dr. A. Walker of Hertford; and Mr. J. Soelberg Wells.

By the death of Mr. Callender, not only has the medical profession lost one of its most eminent members, but the Association has been deprived of an esteemed colleague, whose honourable character, clear perception, and aptitude for business, have rendered his services of the highest value. Mr. Callender had been for many years one of the representatives of this Branch in the General Council of the Association, and for several years one of the elected members of the Committee of Council. He was also chairman of the Scientific Grants Committee of the Association; and, at the meeting of the Association in Bath two years ago, he filled the office of President of the Section of Surgery. His death has caused a feeling of deep regret in the Association.

Mr. C. F. Maunder, surgeon to the London Hospital, was several years ago a member of the Council of the Branch; and Dr. Walker of Hertford was one at the time of his death.

The meetings of the Districts have continued to be a valuable means of carrying out the objects of the Association and the Branch, and of increasing their numerical strength. In the South London District, two important and instructive discussions have taken place during the session. The subject of the antiseptic treatment of wounds was ably brought forward at one of these meetings by Mr. Mac Cormac; and during the discussion, which extended over two evening meetings, a large number of the leading metropolitan surgeons expressed their opinions regarding the method advocated by Mr. Lister. At the other meeting, Dr. Bucknill led a discussion on private asylums. The warm thanks of the Branch are due to the Honorary District Secretaries, Dr. Grant, Dr. Dowse, and Mr. Nelson Hardy, for the able manner in which they have performed the duties undertaken by them.

Your Council regret to learn that the Secretary of the East London District, Dr. Alexander Grant, has felt himself compelled, in consequence of the pressure on his time, to retire from office. The members of the District have appointed Mr. Frederick Wallace of Hackney as his successor. Dr. Grant merits the warmest thanks of the Branch for the zealous and judicious manner in which he has performed his duties, and hearty congratulations on the success which has attended his labours.

At the last annual meeting, the subject of Medical Education was under the consideration of a Committee appointed by the Branch. On the replies received in answer to the questions issued by that Committee, an able report was drawn up, and presented to a meeting of the Branch held on December 6th, when, with some modification, it was adopted. The report has since been placed in the hands of the Committee of Council, who have sent copies of the same to the other Branches of the Association, asking for their opinion on the suggestions made. Several replies have been received, and the matter is still in the hands of the Committee of Council. The thanks of the Branch are eminently due to Mr. Charles Macnamara, the Chairman, and to the other members of the Committee on Medical Education, for the great labour which they bestowed on the subject committed to their care, and for their able analysis of the replies to the questions sent out by them.

The subject of the appointment of a Registrar-General, and the retirement of Dr. William Farr from the office of Superintendent of the Statistical Department, having been brought under the notice of your Council, the following resolution was passed and forwarded to Lord Beaconsfield.

"That the Council of the Metropolitan Counties Branch of the British Medical Association desires to express its deep sense of the very distinguished services which have been rendered by Dr. William Farr, F.R.S., as Superintendent during forty-two years of the Statistical Department of the General Register Office, and which have had the result of placing the science of vital statistics in its present position of soundness and efficiency; and the Council earnestly hopes that Her Majesty's Government will recommend that signal token of the Royal favour be bestowed on Dr. Farr, in recognition of the great public benefits conferred by his labours."

An application having been made to your Council to assist in the summoning a Conference on Animal Vaccination at the end of last year, your Council agreed that a sum not exceeding £5 should be spent in sending circulars of the conference to the members of the Branch.

The result of the voting for the election of officers and members of Council is as follows:

President: S. O. Habershon, M.D. *President-Elect:* Sir Henry Thompson, F.R.C.S. *Vice-Presidents:* Andrew Clark, M.D.; A. P. Stewart, M.D.; Robert Farquharson, M.D., M.P.; John Wood, Esq., F.R.S. *Treasurer:* Walter Dickson, M.D. *Secretaries:* Alexander Henry, M.D.; William Chapman Grigg, M.D. *Eighteen Ordinary Members of Council.* (The names to which an asterisk is prefixed are those of members elected in place of nine who retire.) William H. Brace, M.D.; George D. Brown, Esq.; Charles Davidson, Esq.; George Eastes, M.B.; C. Hilton Fagge, M.D.; *Sir Joseph Fayrer, M.D.; Henry I. Fotherby, M.D.; *Fred. H. Gervis, Esq.; *Edwin Humby, M.D.; *Charles Macnamara, Esq.; *John J. Merriman, Esq.; Fred. T. Roberts, M.D.; *John H. Salter, Esq.; Edwin Saunders, Esq.; *George H. Savage, M.D.; *C. Brodie Sewell, M.D.; *Septimus W. Sibley, Esq.; E. Hart Vinen, M.D. *Forty-one Representatives of the Branch in the General Council of the Association:* G. F. Blandford, M.D.; William Bowman, Esq., F.R.S.; Thomas Bridgwater, M.B. (Harrow); George D. Brown, Esq. (Ealing); J. Crichton Browne, M.D., F.R.S.; Samuel Cartwright, Esq.; W. B. Cheadle, M.D.; Andrew Clark, M.D.; W. B. Dalby, Esq.; C. Davidson, Esq.; Walter Dickson, M.D.; T. S. Dowse, M.D.; Chas. Drage, M.D. (Hatfield); George Elin, M.D. (Hertford); Robert Farquharson, M.D., M.P.; Stamford Felce, M.R.C.P.Ed.; S. O. Habershon, M.D.; H. Nelson Hardy, Esq.; Ernest Hart, Esq.; A. Henry, M.D.; J. Braxton Hicks, M.D., F.R.S.; T. Holmes, Esq.; Jonathan Hutchinson, Esq.; George Johnson, M.D., F.R.S.; A. O'Brien Jones, Esq. (Epsom); J. T. N. Lipscomb, M.D. (St. Alban's); Robert Liveing, M.D.; William Mac Cormac, Esq.; Charles Macnamara, Esq.; Sir James Paget, Bart., F.R.S.; R. Quain, M.D., F.R.S.; W. Rivington, Esq.; R. Shillitoe, Esq. (Hitchin); S. W. Sibley, Esq.; E. H. Sieveking, M.D.; A. P. Stewart, M.D.; Octavius Sturges, M.D.; Henry Sutherland, M.D.; Allen Thomson, M.D., F.R.S.; E. H. Vinen, M.D.; John Wood, Esq., F.R.S.

In conclusion, your Council congratulate the Branch on the prosperous condition at which it has arrived, and hope that each succeeding year will see an increased development of its numbers and of its power to act for the professional and public benefit.

Sir HENRY THOMPSON proposed, and Mr. ERNEST HART seconded:

"That the report of Council now read be received, adopted, and entered on the minutes."

Financial Report.—Dr. WALTER DICKSON (Treasurer) presented the statement of accounts for the year. The receipts—including a balance of £31 11s. 8d., in July 1879—amounted to £131 11s. 8d.; and the expenditure to £112 0s. 7d.; leaving a balance in hand of £19 11s. 1d.

Dr. VINEN proposed, Dr. F. T. ROBERTS seconded, and it was resolved:

"That the Treasurer's report now read be received, adopted, and entered on the minutes."

Vote of Thanks to the Retiring President.—Mr. NELSON HARDY proposed, Dr. A. GRANT seconded, and it was unanimously resolved:

"That the cordial thanks of the Branch be given to John Wood, Esq., F.R.S., for the able and courteous manner in which he has performed the duties of president during the year; for his constant attention to the interests of the Branch and of the profession; and for his hospitable reception of the members at South Kensington on the evening of May 14th."

President's Address.—Dr. HABERSHON, the newly elected president, delivered an address on "Nurses and Nursing", which is published at page 118.

Sir HENRY THOMPSON proposed, and it was carried unanimously, "That the best thanks of the Branch be given to Dr. Habershon for his excellent address."

Dinner.—At half-past six a large company of members and visitors, amounting in all to seventy-six, dined together,—Dr. Habershon in the chair. A meeting of the committee of council being held on the same day, many of the members accepted invitations to the dinner. Among them were Professor Humphry, President-elect of the Association; Dr. Carpenter, President of Council; Mr. Husband, Treasurer; Dr. Chadwick, Dr. Falconer, Dr. Clifford Allbutt, Dr. B. Foster, Dr. A. Davidson, Mr. F. Mason, Dr. Wade, Dr. Bradbury, Dr. Borchardt, Mr. R. H. B. Nicholson, and several others.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Hospital, Swansea, on Wednesday, June 30th, at 11 A.M.; Dr. T. D. GRIFFITHS (Swansea) President; there being forty members and two visitors present.

Members were hospitably entertained at breakfast by the President and Mrs. Griffiths previously to the meeting.

Presentation of Address.—An address, beautifully engrossed on vellum and framed, was presented to Dr. Andrew Davies, late Senior Honorary Secretary, by Dr. Taylor (Cardiff), previously to his resigning the presidency to his successor.

Vote of Thanks.—It was resolved, "That the best thanks of the Branch be given to Dr. Taylor for his services as President during the past year".

Report of Council.—The following report of Council, with a statement of accounts, was received and adopted.

"The Council of the South Wales and Monmouthshire Branch, in presenting their tenth annual report, have again to congratulate the members on its continued prosperity both as to numbers and finance. There are now one hundred and sixty-seven members of the Branch. We have lost two by resignation, and two by death—viz., Mr. Watkyn Rhys of Treherbert, and Mr. Evan Powell of Senny Bridge, Brecon; but seventeen new members have joined us since our last meeting, including eleven elected to-day.

"Our last annual meeting, under the presidency of Dr. Taylor (Cardiff), was a notable success, being one of the best, if not the best, attended meeting since our formation. Since then two ordinary meetings have been held: one in the autumn, at Tenby, which was but poorly attended; and the other in the spring, at Aberdare, which, under the auspices of Mr. Evan Jones, was thoroughly successful and enjoyable. The arrangements for our meetings during the year 1880-81 are as follows: autumn, Monmouth; spring, Llandilo; annual, Cardiff or Merthyr; the days to be fixed by the President, President-elect, and Honorary Secretaries.

"The address to Dr. Andrew Davies, late senior Honorary Secretary, has been placed in your hands for presentation to-day.

"A statement of accounts is appended to this report, by which it will be seen that we have a balance in hand of £27 2s. 6d., as compared with £25 15s. 9d. last year. Donations have been given to the Medical Benevolent Fund (£3 3s.) and the Murchison Memorial Fund (£2 2s.). Forty-eight subscriptions have been paid for 1879, and one hundred and six for the current year, leaving about sixty still unpaid.

"Your Council, having had the reduced circumstances and distressing position of Mr. Edward Bates, a member of this Branch, brought under its notice, would recommend that a donation of £5 5s. be transmitted to him from the funds of the Branch.

"They would also suggest that the British Medical Association should be invited to hold its annual meeting at Cardiff in 1882 or 1883, and that Dr. Edwards of Cardiff be suggested as President-elect."

President-elect.—It was proposed by J. TALFOURD JONES, M.B., seconded by Mr. E. RICE MORGAN, and carried unanimously, "That Pearson R. Cresswell, Esq., F.R.C.S. (Dowlais), be elected President-elect".

Members of Council.—The following were re-elected: W. T. Edwards, M.D.; J. Probert, Esq.; J. G. Hall, Esq.; S. H. Steel, M.B.; and George H. Brown, Esq., in place of the President-elect, who is a member *ex officio*.

Honorary Secretaries.—On the motion of Mr. T. J. DYKE, Dr. Sheen and J. Hancocke Wathen, Esq., were re-elected.

New Members.—The following gentlemen were declared elected: Dr. G. Ryding, Neath; J. R. Thomas, Esq., Llanelly; W. H. Lloyd, Esq., Llandilo; E. Williams, Esq., Llandovery; W. Clay Jones, Esq., Senny Bridge; R. Owen, Esq., Brecon; J. Davies, Esq., Merthyr; W. Byers, Esq., Penarth; E. P. Phillips, Esq., Haverfordwest; J. J. Bevan, M.B., The Mumbles; E. Fitzgerald, Esq., The Mumbles.

President's Address.—The President, Dr. T. D. GRIFFITHS, delivered an address on the Value of Physiological Rest in Medicine; and, on the motion of Dr. JOHN WILLIAMS (University College, London), a cordial vote of thanks was accorded to him for the same.

Papers.—The following papers were read.

1. Antiseptics in Midwifery. By John Williams, M.D., Assistant Obstetric Physician to University College Hospital, London.

2. Puerperal Convulsions, with special reference to Pathology and Treatment. By D. J. Williams, Esq., Llanelly.

3. Case of Aneurism of Descending Thoracic Aorta: with Specimens. By D. Arthur Davies, M.B., Swansea.

4. Remarks on Jaundice, Hepatic Cancer, and Gall-Stones. By J. Talfourd Jones, M.B., Brecon.

5. Demonstration of a New Method of Medical Bookkeeping: Exhibition of an improved Salter's Fracture-Cradle. By A. Sheen, M.D., Cardiff.

6. Recent Remedies introduced into Ophthalmic Practice. By Jabez Thomas, Esq., Swansea. (A printed paper circulated amongst the members.)

Several other papers were not read, owing to the absence of the authors.

Resolutions.—The following resolutions were unanimously carried.

Medical Benevolent Society.—It was moved by Mr. GEORGE A. BROWN, and seconded by Mr. W. H. LLOYD:

a. "That it is desirable to establish a Medical Benevolent Society for South Wales and Monmouthshire." (Mr. Brown introduced the subject by the reading of a paper.)

b. "That the President, President-elect, Ex-President, and Honorary Secretaries be requested to form a committee, with power to add to their number, to prepare rules and suggest the names of gentlemen as officers of the Society; and that they report at the next meeting of the Branch."

Pathological Committee.—It was proposed by Mr. D. J. WILLIAMS, seconded by Dr. A. DAVIES:

"That a Committee be formed for the purpose of reporting on pathological specimens, and exhibiting such as are of special interest, by the aid of microscope or otherwise, at the meetings of the Branch Association."

It was proposed by Dr. SHEEN, seconded by Mr. EVAN JONES:

"That the following gentlemen form such Committee, with power to add to their number: Dr. T. D. Griffiths; D. J. Williams, Esq.; D. Arthur Davies, M.B.; J. Farrant Fry, Esq.; and the House-Surgeon for the time being of the Swansea Hospital"

Seats for Shopwomen.—It was proposed by Mr. HANCOCKE WATHEN, seconded by Mr. J. RUSSELL, and resolved:

1. "That this meeting desires to express, on physical and moral grounds, its strong condemnation of the practice of not providing women employed behind counters with some means of taking rest during their prolonged hours of duty."

2. "That this meeting hereby instructs the Honorary Secretaries to bring the subject before the Council of the Association, with the view of obtaining the support of the members of the Association in ameliorating the present condition of such *employés*, either by influencing the legislature or public opinion, as may be deemed fit by the Council."

Prosecution for Libel.—It was proposed by Dr. A. DAVIES:

"That a subcommittee be appointed to consider the merits of the case between Mr. Thomas Hunt and the editor of the *Neath Times*, with discretionary power to decide whether any, and what, amount shall be contributed from the funds of the Branch in aid of the proposed prosecution; such committee to consist of the President, Messrs. Russell, Padley, Bligh, and Hall."

The Nursing at Guy's Hospital.—It was proposed by Mr. J. FARRANT FRY, and seconded by Mr. H. N. DAVIES:

"That this meeting desires to express its cordial sympathy with the medical and surgical staff of Guy's Hospital in their position in relation to the nursing arrangements, and to record its strong conviction that no system of nursing can work harmoniously and satisfactorily which is not entirely subordinate to the directions of the medical staff.

"That a copy of the foregoing resolution be forwarded by the Secretary for insertion in the BRITISH MEDICAL JOURNAL and the *Guy's Hospital Gazette.*"

The Government Antivaccination Bill.—It was proposed by Dr. SHEEN, seconded by Mr. J. HANCOCKE WATHEN:

"That this meeting views with regret and dismay the attempt now being made by the Government to pass a Vaccination Acts Amendment Bill, by which it is sought to do away with multiple penalties for the neglect of vaccination; and it is convinced that such a 'concession to ignorance and fanaticism' will have the most disastrous effect in checking that efficient vaccination which is so necessary to the control of small-pox."

Dinner.—The members afterwards dined together at the Mackworth Arms Hotel.

SPECIAL CORRESPONDENCE.

PARIS.

Death of Professor Paul Broca.—Increase of Crime.—The Weather and the Public Health.

You will have learned the death of Professor Paul Broca, which took place on Thursday night, the 8th instant, at the early age of 56. The suddenness of the death, the comparatively early age, the eminent position, and social surroundings of the deceased, have caused in Paris, as it will cause wherever his name is known, the most profound consternation and regret. Little did I imagine when in February last I announced his election as life-member in the French Senate, I should to-day, in less than five months, have to report his death. Nothing portended such an event, for up to the day of his death M. Broca seemed to be in the best of health. He went about his numerous occupations as usual, and in the afternoon of the day of his death he attended the Senate, where, feeling himself indisposed, he retired to a small room reserved for the senators, and after having rested awhile, he returned to his own home, and continued his occupations as if nothing had happened. After his dinner in the evening he retired, as was his wont, to his study, and set to work. At about half-past eleven his wife entered the room, and found him at his desk, between asleep and awake. She enjoined him to go to bed, to which he replied he would do so presently, but he had scarcely finished the sentence when he leaned back on the chair and expired, it was supposed from cerebral hæmorrhage, the result of overwork. About five or six years ago he had a warning of what was supposed to be due to some cerebral disturbance in the form of nervousness and giddiness, but he took no notice of it, and continued his occupations as usual. M. Broca was born in 1824 at Sainte-Foy-la-Grande, a small town in the department of the Gironde, and had at an early age acquired an European, nay a world-wide reputation, for his scientific works; and, the son of a medical man, he entered the profession in 1849, and soon became one of its brightest ornaments. He went rapidly through the different grades of the Faculty, and at his death he was Professor of Clinical Surgery at the Necker Hospital, Vice-President of the Academy of Medicine, Senator, and General Secretary of the Anthropological Society of Paris, of which he was one of the founders and most zealous members. He was also member of several other learned societies, and officer of the Legion of Honour. He formed one of the triumvirate composed of himself, the late Dr. Follin, and Professor Verneuil, all three distinguished in their way. These, being about the same age, were on the most intimate terms together, and were looked upon with great promise as representatives of a new era in the science and art of surgery. But M. Broca shone less as an operative surgeon than as a *savant*, and in the Senate he seemed to feel that he was not in his proper element, for since his election he took no active part in the working of that august body. He was rather below the ordinary stature, but had a remarkably large head; and if, as he himself taught, a man's intelligence is in proportion to the size of his brain, he proved a striking example of his own theory, for he had a most prodigious memory, and his knowledge of men and things was simply encyclopædic. His death is a real loss to science in general, and to the science of anthropology in particular, for which he had a marked predilection, and few will be found to compass the extended information he possessed. M. Broca was a man of independent means, having married a lady, the daughter of the late Dr. Lugol, the celebrated physician of the Saint-Louis Hospital, with a large fortune; but, notwithstanding this, he lived simply and unostentatiously, devoting himself solely to his professional work and scientific researches. He leaves behind him his widow, a daughter, and two sons, and a large circle of relations and friends to bemoan his loss. His interment took place in a family vault in the cemetery of Mont Parnasse, whither his body was conveyed, with all the honours due to him as a Senator, Academician, and Professor of the Faculty of Medicine. M. Broca belonged to the Protestant faith, and the funeral service was performed by a French *pasteur* of that church, who, in eulogising the deceased gentleman, spoke of his charitable disposition, his geniality, and his independent character. No fewer than eight orations were pronounced over the grave, all expressive of the regret so universally felt by the loss of such a man. At the Academy of Medicine, M. Henri Roger pronounced a most touching eulogy on the life and works of the deceased; and M. Trélat was requested to read the oration he had pronounced in his own name over the grave of his friend and colleague. This done, the proceedings of the meeting were cut short, as a sign of mourning; and at the meeting of the Anthropological Society, on Thursday last, the same formality was observed. Here M. Ploix, the President of the Society, after recalling the brilliant qualities of its founder and general secretary, read, with visible emotion, the panegyric he had pronounced over the grave of his lamented colleague, whom he looked on as the soul, if not the life, of the Society. In conversation with one of the leading members of the Anthropological Society, who was present at the funeral, he said to me, in speaking of the melancholy event, that the death of such a man was not simply a loss, but a public calamity. At the necropsy nothing was discovered to account for death, and even the brain, where some lesion might have been expected, was, to all appearances, perfectly healthy. The heart, however, was somewhat flabby, and its action seemed to have suddenly stopped. It was evidently a case of angina pectoris, as it was recollected that the deceased had from time to time, though at long intervals, suffered from pain in the region of the heart, which he attributed to intercostal neuralgia, and thought no more about it. The brain was not so large as was anticipated, but the frontal lobes were greatly developed. The brain and its membranes weighed about 1,400 grammes (nearly 50 ounces avoirdupois).

One would feel inclined to think that the march of civilisation would tend to keep down crime, but the contrary seems to be the case, at least as regards France, as was shown by M. Jules Simon, the great political economist, at a recent public meeting held in favour of repentant convicts. In his discourse, the learned senator stated that, according to official and consequently authentic documents with which he provided himself, crime in France has been steadily on the increase, as will be seen by the following statistical report taken from the criminal courts:—In 1830, 65,004 persons were tried for various crimes; in 1840, 81,902; in 1850, 116,087; in 1860, 150,406; and in 1877, 178,518. The number of repeated offenders increased in the same proportion, for while in 1830 it was 10 per cent., it rose in 1840 to 18 per cent.; in 1850, to 20 per cent.; in 1860, to 32 per cent.; and in 1877, to 40 per cent. Such, added M. Jules Simon, is the social evil we have to combat, and in order to do this we must begin with the prisoners, by endeavouring to improve their moral condition by separating them from one another, instead of confining them *pêle-mêle* in close prisons. They should be compelled to work in the open air, that is to say, they should be made to till the ground, and thus not only improve their own health, but make themselves useful, and make some return for their keep. The speaker then said that he had visited 60 or 80 prisons in and out of France, to form an opinion of the system of cells, and he has come to the conclusion that it is simply preposterous to shut a man up between four walls. The prison, he stated, did not improve man; and in proof of what he advanced he produced figures to show that as far as concerns adults, of 130,000 that left the prison, 65,000 returned to it in the space of two years. It therefore becomes necessary, in order to prevent repetition, to protect the released prisoner from being insulted, to endeavour to raise him in his own estimation, and thus to render him an useful member of society, instead of being branded for ever as a culprit. These are wise counsels, and deserve the attention of medical men as well as of political economists.

Summer may now be said to have fairly set in; and for the first time this year, the thermometer has marked to-day (July 18th) "summer heat" in the shade. This change in the temperature seems to have had a beneficial influence on the health of the population, for the weekly mortality, which, in Paris, was, to within a fortnight ago, upwards of 1,000, has come down to 908 for the week ending July 15th. Small-pox and typhoid fever, which caused such havoc, are evidently on the decline; and with reference to these two affections, I may mention a remarkable fact, brought to notice by Dr. Bertillon, the Director of the Statistical Office, that, during the past half-year, the mortality from typhoid fever has been six times greater in the army than in the civil population; and that from small-pox, nearly eight times less. Here, then, is an useful lesson of the efficacy of vaccination, as each soldier is, on enlistment, revaccinated; while, on the other hand, the mortality from typhoid fever is suggestive of the baneful influence of overcrowding and the defective sanitary conditions so notorious in French barracks.

HEALTH OF EMPLOYÉS.—Mr. Peter Robinson, of 103 to 108 Oxford Street, has erected, for the use of his employés, one of the Wenham Lake Company's iced water fountains, the water for which is first purified by a silicated carbon constant supply filter. Pure iced water is therefore always available for those in his employment. A similar fountain is erected for the convenience of his customers; and we trust so good an example will be followed by other of our large establishments.

PRESENTATION.—The friends of Dr. Evans Pierce, of Denbigh, who for 35 years has occupied a seat in the corporation, and been five consecutive times chosen mayor, has resolved to present the town with his portrait, which is to be hung in the council chamber.

CORRESPONDENCE.

HISTORY OF OVARIOTOMY.

SIR,—At p. 110 of your last number, Dr. Clay asserts that, before my first case of ovariotomy, in 1858, I visited him in 1857, and then said, how gratified I was "to see the operation for the first time".

Not liking to trust to my memory, before replying to this assertion, I have looked through my diaries for 1857 and some subsequent years, and I do not think I can be mistaken in saying, very confidently, that I never saw Dr. Clay before 1863. On the 4th of March in that year, a paper of his on ovariotomy was read at the Obstetrical Society. In the discussion which followed, I criticised Dr. Clay's practice, especially as to the length of the incision and his mode of dealing with the pedicle. A full report of the discussion may be found in the *Medical Times and Gazette* of April 18, 1863, p. 408. I was introduced to Dr. Clay at this meeting. He called on me next morning, and invited me to see one of his operations at Manchester. On the 19th of March, 1863, I left London early in the morning, assisted Dr. Clay at his operation in the afternoon, and returned to London at night. So far from seeing ovariotomy then for the first time, I had myself completed the operation on fifty-eight women.—I am, yours, etc.,

T. SPENCER WELLS.

3, Upper Grosvenor Street, July 19, 1880.

SIR,—Dr. Clay's letter in your number for July 17th was most interesting; and it only amplifies my remark in the impression for June 19th, that, when Mr. Wells began to operate, the former gentleman "had achieved fair success in the provinces". As Dr. Blundell wrote, Dr. Clay's was "a high and holy undertaking". It would be most interesting to have fuller details of the four hundred cases, especially with regard to the effects of shock on those patients who underwent the operation when "chloroform and ether were unknown".

Equally true was the remark that "*somehow* he failed to inspire confidence among either provincial or metropolitan surgeons, and thus to *really* establish ovariotomy as a justifiable operation". By "*somehow*" I did not mean to imply that Dr. Clay was *impar congressus Achilli*; I simply referred to that tide in the affairs of men that many fail to take at the flood through no fault of their own. By "*really* establish" I intended to signify, not that Dr. Clay played an unimportant part in the history of the operation, but that he could not be considered as *the* man with whom its establishment was and is most closely associated.

A glance at some of the best known text-books on surgery will throw light on the question as to who inspired confidence in this operation. Dr. Clay's first case was in 1842; Mr. Wells began in February 1858. Let us compare the observations made in editions published previously to the *latter* date with that which was added after Mr. Wells's practical work had begun to take effect. Before doing so, we must refer to Skey's *Operative Surgery*. In the first edition (1850), no mention is made of ovariotomy. In the second (1858), the operation is referred to; no names are given except Dr. Bird's. But Skey, admitting that "the execution has during the last ten years" (1848-58) "been attended with results that set at rest the early anticipations of danger which emanated from many of the most experienced members of our profession", adds: "Unhappily, the operation of ovariotomy is not applicable in all cases of ovarian cysts, nor perhaps in the majority of examples, unless we are permitted to enlarge the circle by the admission of cases in which the danger increases, and in which ultimate recovery is more than questionable."

Subsequent events in the history of ovariotomy have shown that, since 1858, the operation has been found to be applicable "in the majority of examples". Who has enlarged "the circle by the admission of cases in which the danger increases"—cases where ultimate recovery is anything but "questionable?" Clearly somebody who began at or after the year 1858. It may be, as far as this part of the argument goes, Mr. Wells, Dr. Keith, Mr. Bryant, or anyone but the operators who practised the operation earlier than 1858.

In the fourth edition of Fergusson's *System of Practical Surgery*, 1857, page 781, we are told, in a meagre paragraph, that ovariotomy is "now practised by Dr. Clay, Dr. F. Bird, Mr. I. B. Brown, Mr. Walne, and others"; it is certainly admitted to be "an admirable proceeding". But in the fifth edition, 1860, instead of one short paragraph, we find five pages on this subject, including the following remarks: "*Since the last edition of this work was published* a vast addition to operative, and, happily, curative surgery, has been added to our legitimate practice. The operation of ovariotomy is now so thoroughly recognised as a valuable means of saving life, and affording relief and comfort, that it can no longer be passed without notice, or held up to scorn, in a work professing to treat of ordinary surgery." Lizars is then named as the originator of ovariotomy in this country. The names of Messrs. Spencer Wells, Keith, and Bryant are added to the list of operators quoted above from the fourth edition. The operation is described in full. Mr. Wells' clamp, with movable handles, is figured, and the author states that it is to Mr. Wells that we are "chiefly indebted for the well-known trocar and cannula. Here Sir W. Fergusson openly declares the "legitimate" establishment of ovariotomy to have taken place between 1857 and 1860.

Again, in the sixth edition of Mr. Erichsen's *Science and Art of Surgery* (1872), vol. ii, p. 800, we find that, after an account of the history of ovariotomy previous to 1857, we are told that, "Not only did these unfavourable results discourage the profession, but a growing belief sprung up that this mortality, great as it was, did not by any means represent the whole extent of the fatal cases, and *notwithstanding that C. Clay, of Manchester, continued to operate, ovariotomy was in great danger of falling into such disrepute as to be excluded from ordinary surgical practice.* In 1857, appears for the first time the name of a surgeon, who was not only destined to revive ovariotomy, but to re-establish it firmly and definitely among the great operations in surgery; for in December of that year, Spencer Wells performed his first operation of this kind."

In short, it is Mr. Erichsen, in his classic treatise, who first distinctly specifies the historic facts as to the disrepute of ovariotomy subsequent to Dr. Clay's operations, and the ultimate effect of Mr. Spencer Wells's influence on the fortunes of this operation. Olshausen speaks of Dr. Clay as beginning in 1842 "with numerous operations". Further on, he observes:—"We must, however, hasten to the year and the moment in which we can record the most decisive, and the most advanced stroke in the whole history of ovariotomy. Spencer Wells, returned from the Crimean War, and appointed surgeon to the Samaritan Hospital, began his career as an ovariotomist in February, 1858." The panegyric that follows is too long for insertion, but it fully reflects German opinion on the subject.

Comment on the above is needless; but, in according the highest credit to Mr. Spencer Wells for the thousand cases of the operation, which others before me have maintained that he established, I have no intention of depreciating Dr. Clay's operative skill. I merely passed a criticism on the results, which has been long ago advanced by others; nor need my announcement that one surgeon has operated a thousand times in any way disparage the labours of contemporary operators.

July 19, 1880. AUCTOR.

LYING-IN HOSPITALS.

SIR,—Whilst agreeing with Dr. Atthill that the commonly accepted death-rate in childbed is not a correct one, and that it is considerably higher than is generally supposed, still I cannot accept his view that the class of patients admitted into lying-in hospitals differs to any great extent from the 10,818 cases delivered by the medical men from which Dr. McClintock draws his deduction. They were attended by men of repute, whose reputation necessarily attracted a much larger percentage of difficult cases to them than would fall to the lot of ordinary men or midwives. The ordinary death-rate of childbed cannot therefore be fairly decided upon the results obtained in the practice of such men.

An old established lying-in hospital does, no doubt, receive a large percentage of difficult and dangerous cases. If a comparison were made between the 10,818 cases above mentioned, and a similar number in a lying-in hospital, I believe it would be found there was but little difference, as regards either the number or the character of the obstetric complications occurring in both. Dr. Atthill lays great stress upon the large number of seduced and deserted women that are admitted into the Rotunda, and attributes the high death-rate in no small degree to this class of persons. It is a very important factor among others; but I am inclined from my own experience to believe, that both Dr. Johnston and Dr. Atthill exaggerate its influence. In the Report of the Rotunda Hospital for 1875, I believe I am correct in saying that, out of 60 cases of seduction, 10 died; and, of 16 deserted married women, 4 died in that year. Mental distress was assigned in each case as an important factor, if not the actual cause of death. At Queen Charlotte's Hospital, single women with the first child are received in large numbers. Out of 9,004 deliveries for 1857-1880, no fewer than 5,272 were single women; of these, 188 died, or about 1 in 28½; 103 widows; of whom 4 died, or about 1 in 21; and 3,638 married women, of whom 58 died, or about 1 in 62. Of late years, the proportion of single to married women has increased. At first sight, the above figures would seem to corroborate Dr. Atthill's contention. If, however, a careful analysis be made of the cases, and all those deaths which occurred during severe

epidemics of puerperal fever be deducted, I find that the mortality in single women does not differ very considerably from that in married women. Up to the year 1872, the mortality at Queen Charlotte's Hospital was about 1 in 30; previously to that date this death-rate was accepted, both by the Committee of Management and by the staff, as a normal average, due chiefly to the large number of single seduced women and deserted married women admitted. It was contended that it had always been so, and would always remain so; a plausible reason, and one which, on the surface, seemed to bear the impress of truth. It could not, however, stand the test of a rigid examination; for it was found that the deserted single and married women were no worse nourished or physically weaker than the ordinary run of cases in an out-door maternity. The women who died were frequently particularly strong healthy women, in whom the labour had been natural; whereas many of the cases which made excellent recoveries were delicate feeble women, delivered by the forceps. As regards the mental condition of the women who died, some were of a particularly happy and cheerful disposition, apparently unconscious of their fallen condition; while on the other hand, many a seduced girl or deserted married woman who fretted severely and was greatly depressed made a good recovery. This gave rise to a doubt as to whether this high death-rate amongst single primiparous women was not due to other causes than mental distress. An opportunity was soon afforded me of testing the accuracy of the assertion, that the high death-rate at Queen Charlotte's Hospital was due to the peculiar mental condition of the single women admitted, by tracing the history of 669 labours of seduced deserted single women, all of about the same class, placed under the same conditions in a private home, previously to delivery, and with about the same future prospects. Of these 669 deliveries, 142 took place in Queen Charlotte's Hospital, with 10 deaths in the hospital, and 6 shortly after removal: about 1 in 9—an enormous mortality. This great mortality among women received from a home is due, I believe, to the aggregation of recently delivered women and nursing mothers under one roof. This seems to exert a very pernicious effect upon the health, and renders the women peculiarly susceptible of puerperal fever. In corroboration, I may state that in the late outbreak of puerperal fever at Queen Charlotte's Hospital, out of 201 women admitted from the 1st of January, 1879, to April 23rd, 26 of these came from different homes in the neighbourhood, of whom 10 died, or 1 in 2.6; whereas there were only 6 deaths out of 175 women received from their own homes or in private lodgings, or about 1 in 29.

To revert to the 669 deliveries, there were 121 in the workhouse, with 4 deaths = 1 in 30; in the private home, 1 in 96; in lodgings and in the private houses of midwives, 300, with 3 deaths = 1 in 100. If we compare these results with those obtained at Queen Charlotte's Hospital since 1877—when the antiseptic system began to be more thoroughly introduced—up to the present date, we find that there have been 1,744 labours, with 32 deaths; if those 16 deaths which occurred during the recent outbreak of puerperal fever be deducted, the mortality is about 1 in 109. There were upwards of 190 complicated cases, including 86 instrumental ones, out of these 1,744 deliveries. Of these 1,744 deliveries, 1,070 were single women, of whom 23 died; deducting 13 who died in the epidemic of puerperal fever, there remain 10, or about 1 in 107. Six hundred and seventy-four were married; 9 died; deducting 3, as above, it gives a mortality of about 1 in 112. The average mortality, therefore, in Queen Charlotte's Hospital, whether amongst single women or married, is about the same, which is somewhat less than that which occurred in the practice of the gentlemen mentioned by Dr. McClintock. Since the hospital was reopened under the present antiseptic system, there have been upwards of 500 deliveries, with only 1 death. It is a remarkable immunity; and how long it will continue so exceptional cannot be foretold: I can only say, that we have had quite the average number of severe cases. The hospital has been for many weeks together overcrowded: cases of fretting and great mental distress have been quite as numerous as hitherto; still, our mortality has kept down. No cases have been sent out of the hospital to die elsewhere. As far as I can possibly tell, all those who have left the hospital are well and strong. We have had four most severe cases of septicæmia, that would, I believe, have died in former days. These lives were saved either by [illegible] syringing the uterus, or instituting permanent drainage of that organ.

The antiseptic system in force in this hospital since September 1879, and by means of which we have been able to obtain such remarkable results, is as follows:

1. All diapers for mothers are dispensed with; carbolic tow pads, retained in position by means of an ordinary calico bandage, are used instead, and burnt on removal.

2. All patients are washed with tow, which is burnt directly afterwards.

3. The labour ward linen is kept apart from the lying-in ward linen, and both are placed into tanks of running water; that into which the labour ward linen is placed has a large block of rock-salt in it, which prevents putrefaction.

4. All the linen is baked at a temperature of 250° on its return from the laundry and before it is served out for use.

5. Every ward is fumigated with sulphur on being emptied.

6. As soon as the third stage of labour is completed, the patient is syringed with a solution of carbolic acid, 1 in 80, and carefully sponged over with 1 in 20.

7. The midwives are non-resident, so as to prevent them from becoming accidentally contaminated, either by mixing with the nurses, or by thoughtlessly taking on themselves the duties of a nurse.

In conclusion, I beg to refer to Dr. Atthill's classification of deaths, which is an excellent one, and similar to the one we have mentally adopted. It was by means of such a classification, rigidly enforced, that we began to doubt whether our mortality, which, in the years 1877 and 1878, was only 1 in 78, was not still too high, and that it was perhaps due to preventable causes. Class IV should cease to exist; Class III should be reduced; and Classes I and II, perhaps, slightly so. I beg to leave the above facts in the hands of Dr. Atthill, under whose able direction, and that of his predecessor Dr. Johnson, much has been done to rescue lying-in hospitals from the unfortunate opprobrium into which they had fallen, and to prove that, under proper sanitary arrangements and antiseptic management, they may be rendered as safe as any private dwelling-house.—Yours faithfully,

W. C. GRIGG, M.D.,
Physician to Queen Charlotte's Lying-in Hospital.

July 1880.

THE NEW OPHTHALMOLOGICAL SOCIETY.

SIR,—As a provincial surgeon who takes interest in the diseases of the eye, I was pleased to see in a recent number a report of the establishment of an ophthalmological society; but, regret that a society, which is to embrace the United Kingdom and Ireland, should show such exclusiveness in its construction.

The able president stated, "The sole objection to a separate special society was that it might tend to encourage narrowness of view and work". That this very objection should appear in its formation is to be deplored.

The motion of Mr. Vose Solomon, that nine extra-metropolitan members should be added to the committee, which number was reduced to three on the suggestion of Mr. Power, and the reduction accepted by Mr. Solomon, I believe would represent the wishes of most provincial men. If the motion had been passed as first proposed, it would only have been a just compliment to provincial eye surgeons, and would have far outweighed any disadvantage due to a large committee; but, being negatived in its amended form, I fear it will be considered by many that the desire is to render the society metropolitan, and opposed to the admission of provincial members in its government.

As the prosperity of a scientific society depends much on a liberal spirit, I trust Mr. Solomon's views may yet receive consideration, my only wish being that the society should be a success.—I am, sir, yours, etc.,

EDWYN ANDREW, M.D.,
Surgeon to the Shrewsbury Eye Hospital.

THE GENERAL LYING-IN HOSPITAL.

SIR,—At yours and Dr. Fancourt Barnes's invitation, I made myself a governor of the General Lying-in Hospital; at the request of both, I attended the meetings of the Committee of Inquiry. After hearing the examination of the complainant and his witnesses, conducted by you as his counsel, I voluntarily offered my services in case Dr. Godson resigned. In subsequently accepting the request of the Committee of Management, to take charge of the hospital, pending the inquiry, I have done so in the interests of the hospital and of the profession.—Yours faithfully,

W. C. GRIGG, M.D.,
July 16th, 1880. Hon. Sec. Met. Co. Branch.

* This matter will, of course, come before the Metropolitan Counties Branch, of which Dr. Grigg is an Honorary Secretary, when he will have the best opportunities of obtaining a full investigation. Meanwhile, we can only say that the opening statement is inaccurate, in the sense that it is incomplete; and that the course which Dr. Grigg has taken [illegible] greatly to be deplored.

THE CASE OF MR. BUNCOMBE.

SIR,—Would it not be well, subject, of course, to Mr. Buncombe's approval, to raise a fund to bear the expense to which he will be put in defending himself from the charge of manslaughter on which he has

been committed by the verdict of the coroner's jury in the case of the Russian Salowstraal. I think it is our duty to stand by each other in such a matter. If we did so more thoroughly, we should receive less of the "scant consideration and absolute injustice", which, as you truly remark in your article on the subject, is too often our portion. I should be glad to forward £5 towards the above object.—Your obedient servant, A NON-PRACTISING MEMBER.

42, Dyke Road, Brighton, July 18, 1880.

TYPHOID IN SWITZERLAND.

SIR,—The letter of a "Traveller", in the BRITISH MEDICAL JOURNAL of July 10th, is, I think, calculated to cause unnecessary alarm. It is admitted that there was an outbreak of typhoid at Meiningen; but it is somewhat reassuring to know that, owing to the prompt and stringent sanitary measures adopted by the authorities of the Bernese Oberland, no fresh cases have been reported since June 20th, and that the few workpeople who were then sick are now convalescent. There has, I believe, been no suspicion of typhoid at any other health-resort.

Having recently visited Interlachen, Lucerne, Zürich, Berne, and Coire, besides the Kurorts in the Engadine, St. Moritz, Pontresina, Silva-Plane, Taresch-Schuls, and Davos Platz, I failed to hear of any case of typhoid, either from the visitors or from the resident physicians, to whom I am indebted for much courtesy and kindness.

No country has a better and purer water-supply than Switzerland; and, though I quite agree with your remarks as to the danger of drinking water of doubtful purity, no one need do this in a country where excellent milk may be obtained in every village, and Apollinaris may be had at every hotel; besides, pocket-filters are both portable and cheap.

Whilst admitting the importance of pure water and efficient drainage as safeguards to health, I am sure that the travelling English need not be deterred from coming to the playground of Europe, where the dangers of contracting epidemic disease are certainly not greater than they are at home.—I am, etc., FRANCIS PARSONS, M.D.

Hotel Belvedere, Schuls, Engadine, July 15, 1880.

*** The question of contracting epidemic disease must not be confounded with that of contracting typhoid fever and dysenteric diarrhœa from drinking superficial well-water, which is liable to contamination from cesspools in contiguity. There were so many painful examples last year of this occurrence, on the part of well known medical men, that the word of warning from "A Traveller" was very timely.

PITTED FROM SMALL-POX.

SIR,—The sight of a child pitted from small-pox is of so rare occurrence, that I venture to trouble you with short accounts of two such instances.

1. A boy, five years old, who lived at Fleet Road, was, at the advice of a doctor, not vaccinated, because, from five weeks to fifteen months, it had a sore head; after that time, the mother told me, she "did not trouble about vaccination". At three and a half years it was attacked and badly disfigured by small-pox, whilst the other child, who had been vaccinated at the third month, escaped.

2. Mrs. W. has borne four living children, of which the first died in convulsions when four months old. When the time came for having the second vaccinated, the mother would have escaped the compulsion by removing to another parish, but that her husband had got employment which prevented his leaving the neighbourhood; so they submitted to what some consider to be an unwarrantable interference with the liberty of the subject. But when the authorities came to look after the vaccination of the next child, the family migrated to a place beyond their jurisdiction. This unfortunate child was afterwards attacked by small-pox, on which the parents allowed the medical attendant to vaccinate the fourth child, a baby, and the operation succeeded; and though the two vaccinated children lived in the same room with the little small-pox patient, they escaped the disease. The mother is now a firm believer in the efficacy of vaccination; but lest there should be other parents as ignorant as she formerly was, I shall ask you to be good enough to add my name to the petition against the Vaccination Acts Amendment Bill.—I am, etc., EDMUND OWEN, F.R.C.S.,

Senior Assistant-Surgeon to the Hospital for Sick Children,
July 17th, 1880. Great Ormond Street.

THE Bollington Urban Sanitary Authority have increased the salary of their medical officer of health, Mr. James Allen, from £10 to £20 *per annum*. The proposal was carried unanimously, the board agreeing to pay the salary independently of the Local Government Board.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, July 16th.

Noxious Vapours.—Viscount MIDLETON, in calling attention to the report of the Royal Commission on Noxious Vapours, explained that the history of legislation on this question began in 1863, when the Alkali Act was passed. Eleven years later that Act was amended; but in 1876, so loud was the outcry from the districts affected, that a Royal Commission was appointed to inquire into the whole subject. A Bill resulted from the labours of the commission, but it unfortunately perished in the "massacre of the innocents". True, the Acts of 1863 and 1874 had been productive of great good; but so large had been the increase in late years of works from which noxious vapours were emitted that further legislation was imperatively demanded. This was essentially a poor man's question. He saw no conceivable object in incurring the expense of a Royal Commission if its recommendations were simply placed on one side. He hoped the Government would give the House an assurance that they would next session make some substantial effort to grapple with the question.—Vicount ENFIELD stated that the President of the Local Government Board was deeply impressed with the urgent importance of the question, and early next session a measure would be introduced.

HOUSE OF COMMONS.—Tuesday, July 13th.

Duty and Injury in the Streets.—Mr. ELLIOT asked the Secretary of State for the Home Department whether the Metropolitan Police were still being instructed to render "first aid to the injured and those suffering from illness"; and, if not, why was such instruction discontinued; whether there was many cases reported where assistance had been successfully rendered by the police in urgent serious cases; and whether there were any reports or other papers that he could lay upon the table of the House relative to the subject.—Mr. PEEL said that the Ambulance Association of the Order of St. John of Jerusalem some years since established ambulance classes. In August, 1879, these classes were transferred by arrangement from the Ambulance Association to certain of the divisional surgeons of the Metropolitan Police, who voluntarily undertook the service. It was proposed to hold some more classes in October, and all necessary facilities were given for the purpose of instruction. The course of instruction embraced the treatment of persons in a state of insensibility, casualties in the streets, and other practical matters connected with ambulance work, and rendering the first aid to the sick or injured. Sir E. Henderson had reported that the police who have attended these classes had evinced the greatest interest in the course, and had shown by their examinations a marked ability to grasp the subjects taught. There were no special papers which could be laid before Parliament.

Thursday, July 15th.

Fever in Ireland.—In reply to Mr. LYONS, Mr. W. E. FORSTER said he was informed that the guardians of the Swinford Union had obtained the services of two trained nurses from the Hardwick Fever Hospital, Dublin. There had been no occurrence of purpura hæmorrhagica as a complication of the prevailing fever, which could not be said to arise entirely or principally from distress, but was doubtless to be ascribed to the wretched condition of the houses. The Local Government Board had issued an order under the Public Health Act instructing the guardians to take whatever steps may be possible to put the houses in a better sanitary condition.

Pauper Lunatics from India.—The Marquess of HARTINGTON, in reply to Sir H. D. WOOLFF, who asked whether pauper lunatics brought from India and left chargeable on the rates of Portsmouth ought not to receive partial support from the India Office, as was the case at the port of landing in Essex, said that, considering the great advantages Portsmouth derived from the Government establishments there, he thought it was only fair that the town should be liable to a considerable portion, at any rate, of this expense. The matter was, however, under consideration at this moment.

Friday, July 16th.

The Colney Hatch Lunatic Asylum Scandal.—Mr. PEEL, in answer to Mr. LABOUCHERE, said a complaint had been received by the Secretary of State that Mary Ann Tooke, an inmate for the last six years at Colney Hatch asylum, had been delivered of a male child, and that another female lunatic had also been delivered of a child. Unhappily there was too much truth in these complaints, but he was glad to state that there was no reason to think that other cases of a similar nature had occurred in that asylum. The facts were now under the considera-

tion of his right hon. friend with a view of further proceedings being taken; and he thought the hon. member would see that it was not desirable in the present state of the case to publish the correspondence.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

SCARLATINA AT HYDE.

SERIOUS epidemics of scarlet fever and of measles have occurred at Hyde, near Manchester—a place containing about 30,000 people. Scarlatina has already proved fatal in about fifty cases, and measles in about half as many. The district has no means of isolation or of disinfection, although the need of such necessaries has been long urged by the Medical Officer of Health. The latter states, in a published report on the epidemic, that although, in his report for January last, he "wrote suggesting the value of isolation, combined with a proper system of disinfection, it was considered unnecessary by the then Sanitary Committee, and it was withdrawn from the report; so the epidemic, in a measure, has been allowed to run its course". Notwithstanding this remark, and the urgent and reiterated advice of the Medical Officer of Health to provide a hospital and disinfecting chamber, the chairman of the authority, when the reading of the report was concluded, said that "he did not know that anything required special attention". Comment upon such helplessness, in dealing with an epidemic, can hardly be needed.

REGISTRATION OF INFECTIOUS DISEASES.

SIR,—I have read with astonishment a letter in the JOURNAL of July 3rd, signed "One Sufferer out of many". This letter is a direct attack on the professional character and official capacity of the medical officer of health alluded to in it; and writing in the plural number, its author would have your readers believe that he is only expressing the acknowledged opinion of the majority, if not all, of the practitioners in the "large seaside watering-place" from which his letter issues.

Now, sir, I am a practitioner of many years' standing in this seaside watering-place; and with two other members of the medical profession, the mayor, and the ex-mayor, occupy a seat on the sanitary committee, and am, therefore, cognisant of all the doings of the medical officer of health. I know, as everyone in Blackpool does, for it has become public property here, by whom this letter was written, and at whom it has been flung, and I do not hesitate to say that the charges brought forward by "One Sufferer out of many" cannot be substantiated; and I am in a position to state that "One Sufferer out of many" cannot find two medical men in the town who will endorse the statements, or rather insinuations, made in his letter, or who would not be ashamed to impute to the medical officer such motives as this letter is intended to convey to your readers. It is well known here that, when the appointment became vacant on the retirement of Dr. Bird, Dr. Leslie Jones—I have permission to use his name—strongly advocated that the post should be filled by an independent man; but your readers will be surprised to learn that "One Sufferer out of many" was himself a candidate for the post, and possibly would now be glad, were Dr. Jones to throw it up in disgust, to jump into his seat. Before his appointment, Dr. Leslie Jones did valuable sanitary work; for instance, he was mainly instrumental in providing a sanatorium; and since his appointment as Medical Officer of Health, has done good service to the town; and I challenge "One Sufferer out of many" to find more than one practitioner besides himself (there are none of note in the place) who will say that Dr. Jones has not acted with pure motives in all he has done for the welfare of Blackpool, and has not held the interests of his brother practitioners constantly in view.

At any rate, I, for one, send this disclaimer to a letter which I think ought not to have been inserted in the pages of the BRITISH MEDICAL JOURNAL, and which displays such evident jealousy of a successful rival.—I am, sir, your obedient servant,

ALFRED ANDERSON, M.R.C.S., L.R.C.P.,
Member of the British Medical Association, and Member of the Blackpool Town Council.

*** We agree with our correspondent that such charges should most unwillingly be made and most reluctantly printed. It appeared to us, however, that the incognito was very carefully preserved, and that no one was publicly identified, but that a supposed individual experience was used, with this safeguard, to illustrate a point of great public and professional importance. If, as Mr. Anderson thinks and as we have since had reason to believe, the writer of the letter and the place to which he refers are correctly identified, we supply the antidote in publishing his letter. And we shall expect any further communications on the subject on either side to be signed. It is of no small public importance that an efficient registration of infectious diseases should be carried out; and it was with a view to open discussion of suggestions, obstacles and difficulties, as well as of arguments in favour of this practice, that we published the letter complained of. We shall regret it very much if any individual interest in this inquiry has thus been done.

THE COMPULSORY REGISTRATION OF INFECTIVE DISEASE AS A SUBSTITUTE FOR COMPULSORY NOTIFICATION.

SIR,—No educated physician will doubt that it is his duty to endeavour to prevent as well as to treat disease; and it is evident that the former most desirable object would be much furthered if the earliest information could be given to the public authority of the outbreak of any infective malady; and, subsequently sufficiently accurate local details as to its extension or diminution. The greatest advantages can, however, be purchased at too dear a price; and such would, in my opinion, be the case, if the medical attendant were legally converted into a species of hygienic detective, either directly, by himself sending notice to the sanitary authority, or indirectly, by his filling up a form and handing it to the occupier for such transmission. I consider that either of these proceedings would be antagonistic to professional traditions, and might in many instances, where families were desirous of concealing the existence of infective disease in their midst, lead to legitimate medical assistance not being resorted to at all.

I would wish to suggest to the consideration of your readers the system of registering every case of infective disease, the moment it is ascertained, with the Registrar-General, in the same manner as is at present done should the case have a fatal termination; and I would respectfully submit that such registration would be a practicable substitute for compulsory notification, by affording nearly all its advantages without any of its annoyances and drawbacks. Take, for example, the city of Dublin, which is divided into seven sanitary districts, each of moderate area, and in which the number of deaths from infective disease can every week be comparatively and accurately ascertained, by perusal of the weekly reports of the Registrar-General. These admirably drawn documents are widely circulated, are copied in the newspapers, and are practically accessible to everybody; and, although the reader is not told the exact house, or even street, in which each fatal case occurs, still he can form an excellent idea of the immunity or otherwise of each of the seven small districts of the city as far as fatal cases are concerned. This simple and perfect machinery for death-registration exists in every district, not only in Dublin, but all over Ireland; and nothing is wanting but a legal arrangement by which the medical attendant would at once transmit to the local registering officer notice of the occurrence of any infective case for publication in the weekly general report. Every medical practitioner at present does this in case of an infective death; and, while valuable public information is thus given, I have never heard of an instance of domestic privacy being annoyed through the Registrar-General's reports. A very satisfactory view of the existence or otherwise of infective disease throughout the whole country would thus be obtained, and a comparison of the number of cases, the ages of the patients, their several localities, and the number of deaths, would afford information of national value. I contend, however, that a moderate fee should be paid to the medical practitioner for his certificate of a case of infective disease, or of death from any cause; for it is surely unfair for the State to exact gratuitous labour from a profession which it does practically nothing to forward. No doubt some highly placed medical men would prefer to give these certificates gratuitously rather than accept the small fees which would be given, and many would sympathise with this view. Let such gentlemen turn their registration fees over to the Royal Medical Benevolent Fund, and they will much benefit the widow and the orphan. To the majority, however, these fees will be acceptable. Our great want, however, is the sanitary education of the mass of the people; and I trust the time will yet come when the humblest will recognise the local sanitary authorities as their best friends; and when infective disease breaks out in their homes, gladly seek their aid in preventing its spread.—I am, sir, your obedient servant,

T. J. B. QUINLAN, M.D. Univ. Dubl.,
Fellow of the King and Queen's College of Physicians.

29, Lower Fitzwilliam Street, Dublin, July 12, 1880.

MEDICAL OFFICERS' SUPERANNUATION.

SIR,—Will you, in the next issue of the JOURNAL, inform me if there be not a Bill for the Superannuation of Poor-law Medical Officers, and what service is required before one becomes entitled to such, and oblige,

July 13th, 1880. A DISTRICT MEDICAL OFFICER.

*** It is difficult to imagine in what part of the world our correspondent has resided not to have heard that the Medical Officers' Superannuation Bill became an Act now about nine years ago, and that it has been repeatedly acted upon. Moreover, we have answered questions thereon repeatedly. As, however, it is evident that our correspondent is in complete ignorance of its provisions, we will again repeat that the applicant, except under special circumstances, must have spent twenty years in the service; that he must have reached the age of sixty, or upwards; that he must have obtained a certificate from the inspector of his district that, owing to infirmity of mind or body, he has become incapable of performing his duty with efficiency; and then, after resignation of his office, the guardians may, if they choose, grant the applicant superannuation allowance.

There is no doubt that the Act would have, ere this, been amended, were it not for the unaccountable indifference of gentlemen, like our correspondent, who never take any trouble themselves, but leave the obtaining of this and like concessions to be fought for by a few.

MILITARY AND NAVAL MEDICAL SERVICES.

DISADVANTAGES OF THE NAVAL MEDICAL SERVICE.

SIR,—There is a point to which I wish to direct the attention of those who think of entering the Medical Department of the Royal Navy, and one which calls loudly for redress, namely, "compulsory half-pay". From the day that a surgeon is promoted to the rank of staff-surgeon, it seems that, unless serving abroad, he can never calculate with certainty on what income he may have to depend beyond the amount of half-pay he may be entitled to. He may be given temporary appointments, which may last from a few days to eighteen months sometimes, but may at any time find himself placed suddenly on half-pay. As he has to pay his own expenses to and from the ship or hospital, &c., as the case may be (and, if married, will also have the expense of moving his family), he gains very little by being employed in that way except "time". This is not the case in the army, where, with a very few exceptions, officers are always on full pay. Those who seek fair remuneration in a profession which has cost hard study, as well as money, to acquire, must not expect to do so in the Naval Medical Department, whilst the present state of things exists.

Another serious disadvantage resulting from this system of half-pay is the following. A. enters first of his batch at the competitive examination, thereby attaining a position which ought, in after years, to entitle him to promotion in the inspectoral grades; D. passes in fifteenth. We will suppose they are both promoted to staff-surgeons' rank in the same year. The time has now arrived when both are placed on the half-pay list at variable periods. By the accidents of the service, D. completes twenty years' full pay service, and is promoted to fleet-surgeon, possibly eighteen months before A., who, from no fault of his own, has fallen out of the race

altogether. By this change of position, D. succeeds to a vacancy in the inspectorial grades, while A., who at the commencement of his career had the best prospects, has to retire as a fleet-surgeon.—I remain, sir, yours truly,

OBSERVER.

SIR,—I was delighted to read the capital letter by "CRUX", in the JOURNAL of this week, on the "Naval Law of Suspect". The new order has caused an outburst of indignation throughout every branch of the service; a more insulting thing could hardly be conceived; and we hope that the professional papers of all classes will unite in condemning such a return to feudal despotism. As, sir, you may not have seen the document referred to, I beg respectfully to enclose one, which I hope you will find space to publish in our highly valuable JOURNAL.

I hear there are to be several candidates for the next examination—poor deluded fellows—please stop them, and oblige them, the whole navy, and, sir, your obedient servant,

INDIGNANT.

THE INDIAN ARMY MEDICAL SERVICE.

SIR,—In August a competitive examination will be held in order to select young surgeons for the Indian Army. Hitherto the competition has been keen, and the promises made to candidates liberal; but a good deal requires to be read between the lines of the India Office statements. Let candidates read the following lines from a young medical officer serving in Bengal. "The India Office Memorandum deliberately misleads young surgeons. It says not one word about men being attached to base and field hospitals, and being worked off their legs or into their graves, as poor young Dumbleton was, marching all over the country with detachments, or sent into cholera camps in tents with the thermometer at 120, while they are paid only unemployed pay, or 286 rupees 10 annas a month, although they have passed in the language for the lower standard. Further, men are often sent to officiate in charge of a regiment, and instead of drawing 450 rupees a month, as stated in the misleading document referred to, they only draw 286 rupees plus 100 rupees. Staff medical officers of the British service draw never less than 317 rupees from the day they land in the country. Here is an extract [the writer continues] "from a letter received by me from a young surgeon serving in a field hospital in Affghanistan: 'I have full charge of the hospital, and a beastly lot of trouble with it in the way of official returns, letters, etc., and I believe I cannot get a single pice beyond unemployed pay. I am beginning to think very strongly that I don't care much for this sort of thing, and that one or two years out here in India will be quite sufficient.'"

Such statements as these are worthy of consideration by intending candidates for the Indian Medical Service, who should also be informed that recent changes effected by the Government of India have deprived the service of several of its best appointments; set aside the rights of officers which were hitherto believed to be, and which are, guaranteed by Acts of Parliament; entirely altered the system of promotion; and subordinated the Indian Military to the British Medical Service. A significant fact may also be noted with advantage by youthful aspirants; viz., Surgeon J. McD. Stewart, who was one of five medical officers appointed to Bengal on the 31st March last, has already tendered his resignation, which has been accepted. It is also said that other young men, who recently joined the Indian, are now desirous of joining the British service.—Yours faithfully,

M.D.

COMBATANTS AND NON-COMBATANTS.

SIR,—Your remarks under the above heading, in your issue of the 12th June, must claim the attention of every medical officer in the service, and it is to be hoped that they will, one and all, since no one can tell when he may be the one affected, protest against the monstrous and iniquitous ruling, that, because he happens to be styled "a non-combatant", the medical officer is to be shut out from the advantages given to his more fortunate combatant brother-officers by clauses 88a and 88b, as published in army circulars, March 1st, 1880, under the head of "Royal Warrant: reckoning of service and retirement of combatant officers".

No medical officer wants to be considered or styled a fighting one, but that he is equally, and in many senses, more exposed than the purely combatant officer (to say nothing of departmental officers now included under the term combatant) no one, bearing in mind the instances you quote, and which might be multiplied, will deny. The excessive mortality of army medical officers has been again and again shown, and, even in times of peace they are exposed to the dangers and harassing duties inseparably connected with epidemics and trying occupations in the sickly seasons of hot climates.

Were a clause in a Royal Warrant specially framed to meet the cases of medical officers incapacitated from the effects of such arduous and trying duties, one would consider it but bare justice: but what is one to think when he finds such a provision thought of, and made, for combatant officers, so differently situated, who may never have soldiered out of England; who, while abroad, are as little exposed to contagion from deadly diseases, and who can obtain such frequent and long periods of leave.

Exchanges (for Doctors) between India and England are now, I believe, virtually abolished and the number of medical officers annually rendered unfit by exposure and service in the former country, always very great, will now be materially increased.—I am, sir, your obedient servant,

A.M.D.

July, 1880.

OBITUARY.

STEPHEN WARD, M.D., F.R.C.P.

WE deeply regret to have to report the death of Dr. Stephen Ward, for many years Physician to the Seamen's Hospital, Greenwich, and to the Hospital for Diseases of the Chest. Dr. Ward was one of the best known and most respected physicians practising in the City of London. He was President of the Hunterian Society, and was much esteemed and beloved by the members of that society and the profession at large. His contributions to medical literature related especially to diseases of the abdominal viscera and scurvy. Cultivated and gentle in manner, upright in character, skilled in his professional duties, of sound judgment and kindly heart, Dr. Stephen Ward has died in the prime of life, leaving behind him a memory which will be cherished by a wide circle of affectionate friends.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 15th, 1880.

Bensley, Nathaniel, Grove Road, Victoria Park.
Bray, Ernest Edward, Darlinghurst, Bognor.
Campe, Charles Frederick, Stratford, Essex.
Foster, William, Horton Lane, Bradford.
Holton, Francis William Parke Holton, York Crescent, Woolwich.

The following gentlemen also on the same day passed their primary professional examination.

Davies, John Charles, London Hospital.
Symons, George Francis, Guy's Hospital.
Watson, Henry Gervase, Sheffield School of Medicine.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

BELGRAVE HOSPITAL FOR CHILDREN—Surgeon. Applications, with testimonials, to the Honorary Secretary on or before July 24th.

*BRADFORD INFIRMARY AND DISPENSARY—Dispensary Surgeon. Salary, £100 per annum. Applications, with testimonials, to the Secretary on or before July 27th.

BUCKINGHAMSHIRE GENERAL INFIRMARY—Resident Surgeon and Apothecary. Salary, £80 per annum, with annual increase of £10 up to £100, with board. Applications, etc., with testimonials, to the Secretary, on or before August 3rd.

*EVELINA HOSPITAL FOR SICK CHILDREN—Registrar and Chloroformist. Salary, £30 per annum, with an additional £20 if held for twelve months. Applications, with testimonials, not later than July 27th.

FULHAM UNION—Medical Officer to the Workhouse. Salary, £105 per annum.

GORT UNION—Medical Officer for Ardrahan Dispensary District. Salary, £140 per annum, with £10 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 29th instant.

*HERTFORD GENERAL INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before July 28th.

MARTLEY UNION—Medical Officer of the Knightwich District.

*NATIONAL HOSPITAL FOR THE DEFORMED, Great Portland Street—Registrar. Applications to the Honorary Secretary before August 2nd.

*NORTH KENSINGTON AND KENSAL TOWN PROVIDENT DISPENSARY—Resident Surgeon. Salary, £80 per annum, with apartments, etc. Applications, with testimonials, to the Honorary Secretary not later than the 14th of August.

NORTH STAFFORDSHIRE INFIRMARY—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications, with testimonials, not later than July 27th.

*NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with apartments, attendance, coals, gas, etc. Applications, with testimonials, to the Secretary on or before September 1st.

*NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—Registrar. Applications, with testimonials, not later than Sept. 1st.

PARSONSTOWN UNION—Medical Officer for Kinnitty Dispensary District. Salary, £120 per annum, with £20 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 27th instant.

PORTSMOUTH LUNATIC ASYLUM, Milton—Assistant Medical Officer. Salary, £120 per annum, with board, furnished apartments, coals, etc. Applications, with testimonials, before the 28th instant.

PRESTON RURAL SANITARY AUTHORITY—Medical Officer of Health.

ROSCOMMON COUNTY INFIRMARY—Apothecary who will act as Registrar at a salary of £50 per annum, with first-class rations and apartments; or if the offices are separated, apothecary will receive £30 yearly, and will not be required to reside in the institution. Election on the 31st instant.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan. Salary, £50 per annum, apartments, rations, washing, etc. Applications, with testimonials, not later than July 28th.

SHEFFIELD FRIENDLY SOCIETIES' MEDICAL INSTITUTION—Junior Medical Officer. Salary, £120 per annum. Applications to the Secretary.

SOUTH STONEHAM UNION—Medical Officer of Health to the Sanitary District of the Union. Salary, £250 per annum. Applications, with testimonials, on or before August 2nd.

STOW UNION—Medical Officer to the First District and Workhouse, and Public Vaccinator.

*SWANSEA HOSPITAL Resident Medical Officer. Salary, £100 per annum, with board, furnished apartments, etc. Applications, with testimonials, to the Secretary not later than August 4th.

THETFORD UNION—Medical Officer to the Northwold District.

TOWNSHIP OF MANCHESTER. Assistant Medical Officer for Workhouse at Crumpsall, and Resident Assistant Medical Officer at the Workhouse Receiving and Casual Wards, at a joint Salary of £150 per annum. Applications, with testimonials, not later than July 28th.

UNIVERSITY COLLEGE, Bristol—Registrar and Secretary. Salary, £400 per annum.

*WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary on or before the 9th of August.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ANDERSON, R. B., F.R.C.P.Eng., appointed Public Medical Officer of Tobago.

DUNLOP, James, M.B., C.M., appointed Assistant Medical Officer to the Woodilee Asylum, Lenzie, near Glasgow.

GOUDE, Herbert, F.R.C.S.Edin., M.R.C.S.Eng., and L.S.A., appointed Resident Surgeon to the Small Pox and Vaccination Hospital, Highgate Hill, *vice* F. W. Strugnell, L.R.C.P., resigned.

JACKSON, George, F.R.C.S.Eng., appointed Honorary Surgeon to the Plymouth Public Dispensary, *vice* W. B. Stephens, M.R.C.S.Eng., resigned.

JONES, J. R., M.B.Toronto, L.R.C.P.Lond., appointed House-Physician to the Hospital for Women, Soho Square, *vice* J. H. H. Bottrell, M.R.C.S.

TREVES, Frederick, F.R.C.S., appointed Senior Demonstrator of Anatomy at the London Hospital Medical College, *vice* H. S. Wilson, M.D., resigned.

WESTMORLAND, J., L.R.C.P.Ed., appointed Certifying Surgeon for Factories for the Collyhurst, Harpurhey, and Blackley Districts, Manchester, *vice* J. B. Pinder, M.R.C.S.Eng., resigned.

WILLIAMS, W. Roger, L.R.C.P.Lond., appointed Senior House-Surgeon to the Wigan Royal Infirmary.

PUBLIC HEALTH.—During last week, being the twenty-eighth week of this year, 3,365 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. The annual death-rate was 17 in Edinburgh, 19 in Glasgow, and 30 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth 16, Leicester 16, Bristol 16, Salford 17, Hull 17, Birmingham 17, Leeds 17, Bradford 17, Brighton 18, Wolverhampton 19, Sheffield 19, Newcastle-upon-Tyne 20, London 21, Manchester 21, Nottingham 23, Plymouth 23, Sunderland 24, Oldham 25, Liverpool 26, and the highest rate 27 in Norwich. The annual death-rate from the seven principal zymotic diseases averaged 3.9 per 1,000 in the twenty towns, and ranged from 0.7 and 1.7 in Plymouth and Bristol, to 6.3 and 9.7 in Oldham and Norwich. Scarlet fever showed the largest proportional fatality in Norwich, Oldham, Bradford, Salford, and Sheffield; and measles in Sunderland. Small-pox caused three more deaths in London, but not one in any of the nineteen large provincial towns. In London, 1,441 deaths were registered, which were 50 below the average, and gave an annual death-rate of 20.5 per 1,000. The 1,441 deaths included 3 from small-pox, 29 from measles, 57 from scarlet fever, 11 from diphtheria, 35 from whooping-cough, 16 from different forms of fever, and 165 from diarrhœa—being altogether 316 zymotic deaths, which were 42 below the average, and were equal to an annual rate of 4.5 per 1,000. The deaths referred to diseases of the respiratory organs, which had steadily declined from 230 to 171 in the five preceding weeks, were but 176 last week, which, however, exceeded the corrected weekly average by 16; 91 were attributed to bronchitis, and 71 to pneumonia. Different forms of violence caused 48 deaths; 39 were the result of negligence or accident, including 18 from fractures and contusions, 2 from burns and scalds, 7 from drowning, and 10 of infants under one year of age from suffocation. Nine cases of suicide were registered.—At Greenwich, the mean temperature of the air was 63.1°, and 0.2° above the average. The general direction of the wind was south-west and north-east, and the horizontal movement of the air averaged 7.1 miles per hour, which was 2.5 below the average in the corresponding week of sixteen years. Rain fell on five days of the week, to the aggregate amount of 0.33 of an inch. The duration of registered bright sunshine in the week was equal to 23 per cent. of its possible duration.

COLNEY HATCH ASYLUM.—On Friday, the 16th inst., the annual outdoor *fête* was held in the grounds of this asylum. The weather being favourable, the entertainment passed off most successfully; it was, as usual, more enjoyed by the patients than any other of their treats, for the obvious reason that they were able to join in the various amusements in the company of their friends and relatives, to whom they had been allowed to send cards of admission. About one thousand patients and three thousand of their friends were assembled in a large meadow; an excellent band enabled them to dance who were so inclined; the Brothers Nimmo provided a comic entertainment on a stage erected for the purpose; a Punch and Judy show was seen to advantage; donkey-riding, photography, Aunt Sally, and sack-races were among the other amusements provided. Tea, lemonade, cake and fruit were served in abundance for the patients, and refreshments for the visitors were on sale; no alcoholic liquor was, however, obtainable, and to this must be ascribed in a great measure the fact that the afternoon passed without undue excitement, either among the patients or their friends. Sir William Wyatt, the chairman, and some other members of the committee, were present during the afternoon with a few friends.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY .... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 2.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C.; letters those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are to please to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents in the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SIR,—I should be much obliged if you could give me any information, through the columns of your paper, with respect to practices in Queensland or New Zealand or where I could procure such. What are the recognised fees of those colonies Can they be procured?—I enclose my card, and am, yours truly, QUÆSITOR.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to MR. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

ON THE ADMINISTRATION OF CHLOROFORM.

SIR, In answer to your correspondent, I beg to reply as follows. 1. Death from chloroform occurs about once in five thousand administrations. To have given it, therefore, without mishap, "some hundreds of times" argues little towards the safety of any particular method. 2. The strength of the vapour depends not so much on the thickness of lint or towel, as on the amount of fluid poured on. It is impossible to give a very strong dose with one thickness of lint. 3. As to depressing the patient by auscultation, the popular idea is that chloroform is never given if the heart be diseased. To proceed, therefore, to administer after examination of the heart is to assure the patient of its soundness. If chloroform cannot be given with safety under ten to thirty minutes, it is comparatively useless, at all events for hospital practice, as it is easy with ether to safely induce narcosis within three minutes. Your correspondent vaunts the "Scotch method". A glance through the medical journals of the past few years will show him that Scotland enjoys no immunity from chloroform deaths; indeed, I remember hearing of two such occurring in one year in one large hospital. A recent writer estimates that, in the past thirty-five years, five hundred persons have fallen victims to chloroform. During the past six months, eleven cases have been recorded. Either claims two, both occurring in America; but, in one of these, administration was by an unqualified dentist. Two deaths have been caused by bromide of ethyl and ethydene dichloride respectively.—I am, etc.,

ERNEST H. JACOB, M.D.

Leeds, July 1880.

INFECTIOUS HOSPITALS.

MR. W. J. SQUARE (Plymouth).—We much regret our inability to help our correspondent in his difficulty. But little is known as to the construction and working of fever hospitals throughout the country. As we indicated in a recent number, the Local Government Board have now taken measures to remedy this by commissioning their inspector, Dr. Thorne Thorne, to make inquiry into the subject. We would suggest that application should be made either to the Board or to Dr. Thorne for information on the points about which our correspondent desires particulars. Probably the hospitals of the Metropolitan Asylums Board are as efficient models as can be found. The best list of infectious hospitals with which we are acquainted is one appended to a paper by Dr. E. T. Wilson of Cheltenham, in the number of the *Practitioner* for February 1879.

BEEF-TEA AT ST. MARY'S HOSPITAL.

SIR,—Referring to an allusion to beef-tea in one of your interesting articles entitled "The Doctor in the Kit hen", will you kindly permit me to solicit the following information through your columns: 1. The steps taken at St. Mary's Hospital in making beef-tea. 2. The characters of good beef-tea when made. 3. If good beef-tea, when allowed to stand, should become a jelly.—I am, etc.,

ENQUIRER.

*** We have obtained, through the kindness of Mr. J. G. Wilkinson, House-Governor of St. Mary's Hospital, the following details in reply to these queries.

The mode of preparing beef tea at St. Mary's Hospital is as follows. The meat is cut into small pieces, and placed, in the evening, in an earthenware vessel, with sufficient cold water to cover the meat; in this it is allowed to remain all night. In the morning, the meat is taken out, placed in other water, and boiled for several hours. The meat of the previous day is then passed through a mincing machine, and put into the cold liquor in which the meat was steeped the previous night, and upon this the boiling liquor from the day's beef-tea is poured, and the whole well stirred, and it then forms the complete beef-tea. The characteristics of good beef-tea are, that all the nutritious elements of the beef should be made available; and by the process carried out as above, this is effectually done, the albumen, fibrine, and gelatine being all retained, and taken by the patient. Moreover, by the above method, a much smaller quantity of meat is required than under the ordinary mode, and it would, consequently, not become a jelly if allowed to stand; but by adding a larger quantity of beef, this result could, of course, be obtained. (This forms with us what is called beef-jelly.) It should, however, be remarked that, in very hot weather, the beef-tea cannot be made in this manner, as it would become sour from the length of time required for its preparation.

VACCINATION.

SIR,—I have unfortunately mislaid some of the back numbers of your JOURNAL, but I should like to reply to one of your correspondents (whose name I forget) who offered me some good advice how to retain my patients by making three, instead of four vesicles. It was formerly my custom, as a public vaccinator of the Sheffield Union—a post I held about twelve years—to produce two very large vesicles. Generally speaking, there was far too much areola; and the late Dr. Seaton, who came down to inspect my work, suggested that I should make four smaller, instead of the two larger, vesicles, covering, of course, the same skin-area. I have reason to believe that this plan was, *cæteris paribus*, followed by better results. One would philosophically suppose that a larger compound vesicle would be attended by more inflammatory action than a smaller one; it is simply a matter of *le sens commun*. Therefore, I shall not follow the advice of your correspondent, but continue to produce four vesicles of uniform size by the use of what I believe is the best "vaccinator" extant—Coxeter's. The great advantage of this instrument is its weight, which saves the necessity of using, I might almost say, any force on the arm of the infant.—Yours faithfully,

G. P.

MALFORMATION IN AN INFANT.

SIR,—The enclosed photograph is that of an infant, thirty hours old when taken. My reason for sending it is, that it appears to me to be a very unusual malformation. The frontal bone is divided, and the temporals (especially the left side) form quite a tumour; the occiput is in miniature; the body is well developed, and the child cries and sucks well; the hands are covered with a membrane, and the fingers webbed and drawn to a point; the toes are also webbed. The overhanging forehead and sunken eyes, with the general contour of features causes the appearance to be very repulsive. The child is now twelve days old; the mother is a healthy woman aged 40, and has had ten labours, nine children being alive. She says that she had a shock at about the fifth month of pregnancy; viz., a friend of her's shot himself through the eye, and has since been taken to a lunatic asylum; and about the same time she was much alarmed by a rat. She had an excellent labour, the occiput presenting; the infant was born asphyxiated, but artificial respiration soon restored it, much to the annoyance of mother and nurse.—I remain, sir, yours faithfully,

R. G. FORD.

67, Commercial Road, E., June 28th, 1880.

TREATMENT OF PHTHISICAL COUGH.

M.B. RECOMMENDS a trial of the tincture of gelseminum in fifteen minim doses. He has found it effectual when all other treatment has failed.

DR. T. F. PEARSE recommends the tincture of gelseminum sempervirens in twenty-five minim doses three times a day. He generally prescribes it with dilute phosphoric acid. If there be much expectoration, compound tincture of benzoin is often useful.

MR. T. GARRETT HORDER strongly advises "Phthisis" to try the effect of hydrobromic acid in doses of twenty minims. It may be given with the addition of spirits of chloroform. He has also found the inhalation of the vapour of iodine very useful in chronic cough.

ANOTHER correspondent recommends fifteen minims of hydrobromic acid and ten minims of chloric ether in a dessertspoonful of water four or five times a-day, with a pill containing a quarter of a grain of codeia three times a-day.

MR. A. de WINTER BAKER (Dawlish) recommends "Phthisis" to try the following formulæ: ℞ Tincturæ pruni Virginianæ, ʒj; Glycerini, ʒss.; Nepenthe (Ferris and Co.'s), ℥lv; aquæ q. s. He generally orders it to be given when the cough is troublesome, and repeated in three or four hours if required. In troublesome cases, he also orders a double dose to be given at bedtime. He has never known it fail to relieve cough; and it can be taken for a long period of time without disturbing the digestive organs.

A CAUTION.

SIR,—I have this week had letters from two medical men in Birmingham, from which I learn that some one is calling upon the medical men there, and borrowing money on the representation that he is my son, and, while in Birmingham, has had his purse stolen. If any other medical man who has been good enough to advance money, under the impression that he was relieving a son of mine in such an emergency, will kindly write to me, I shall be glad to put him in communication with the two gentlemen who have already taken the precaution to write to me on the subject.—Yours truly.

JAMES EDMUNDS.

2, Grafton Street, Piccadilly, July 21st, 1880.

CANVASSING FOR CLUB APPOINTMENTS.

SIR,—As I have frequently seen remarks in your JOURNAL condemning unprofessional conduct, I beg to submit the enclosed letters and card, which furnish a case in point, showing that your censures are needed. I may add that I hold the clubs for which Dr. Warren is canvassing. You will observe that one of the principal recommendations urged by Dr. Warren is that he dispenses his own medicines, contrary to my practice. As you have lately discussed this matter (dispensing and prescribing) in your JOURNAL, your publication of the correspondence will oblige

F. PEIRCE, M.D., F.R.C.S.I.

Hoylake, near Birkenhead, July 12th, 1880.

"Bank Road, Hoylake, June 21st, 1880.

"SIR,—Having been spoken to by several of the members of the Hoylake Oddfellows' Society relative to the post of medical officer to your society, I beg to offer my services to you as such. The facts that I attend personally to each individual case, and make up the necessary medicines myself, will, I trust, recommend me to your favourable notice. Should you elect me as your medical officer, I feel confident that you will be acting in accordance with the wishes of the majority of your members, and I shall do all in my power, both by personal attendance and unwearying attention on my patients to save and prolong the lives of your members. Yours obediently,

SAMUEL WARREN, M.D.

"To the Secretary of the Hoylake Oddfellows' Society."

"Hoylake, July 2nd, 1880.

"Dr. F. Peirce. SIR,—I wish to inform you that there is to be a summoned meeting of the Hoylake Benevolent Society on Saturday evening at 7.30 (the 10th instant), for the purpose of reading a letter from Dr. Samuel Warren offering his services as Medical Officer to the Society; and to hear any charge that any members may bring against you.—Yours respectfully,

"JOHN L. GRISDALE, Secretary.'

The following is a copy of the card to which Dr. Peirce refers.

"Members of the Grange Club,—Vote for Dr. Warren, the poor man's friend. Vote for Dr. Warren, who attends personally on you when sick. Vote for Dr. Warren, who makes up his own medicines for you. Vote for Dr. Warren, who, through constant and unwearying attention, saved the life of John H. Coy, when attacked with a disease which has proved so often fatal."

*** We prefer to leave our readers to form their own opinion on this correspondence, in regard to the maintenance of the dignity of the profession of medicine. The card, especially, of which a copy is given, is a very curious and interesting document.

AN ADVERTISEMENT.

DR. W. ALFRED JOHNSON. What we object to as unprofessional is the announcement in the *Bazaar* that "Dr. Alfred Johnson, M.D., L.R.C.P.(Ed.), L.S.A., Member of the General Council of St. Andrew's, will be pleased to answer any questions, medical or surgical, 1s. each letter. Hereford Road, London." It does not affect our opinion that, as Dr. Johnson now tells us, "The medical or surgical questions I answer are simple, requiring 'Yes' or 'No'; if advice be required, my fee is a guinea." For a physician to advertise that he will answer "simple medical and surgical questions" for a shilling, or to advertise that he will answer them at all, is obviously contrary to good professional standing; and we feel sure that, if Dr. Johnson will consult the medical members of the General Council of St. Andrew's on the matter, he will find that they entertain a strong opinion on the subject, to which, judging from the courteous tone of his letter, he will no doubt willingly defer.

A SOURCE OF TYPHOID FEVER.

SIR,—Mr. Doyle may certainly claim originality in his idea of leucorrhœal discharges being the source of typhoid fever; but does it not strike him that, if such be the case, we are singularly free from that disease?—Yours truly,

G. P.

FALLING-OFF HAIR.

SIR,—Your correspondent "W. A." does not mention the nature of the alopia for which he is asking for a remedy, whether it is partial or total in character, or if natural decay, or from disease. The best preparation I find for general loss of hair from ordinary circumstances is an ointment composed of equal parts of vaseline and castor oil, with the addition of five grains of the red oxide of mercury, half a drachm of liquor ammoniæ fortior, and a few drops of oil of rosemary. I am yours truly,

JAMES STARTIN.

17, Sackville Street, W., July 14th, 1880.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE DIAGNOSIS OF RÖTHELN.

SIR,—I have been away from home, and therefore have been unable to reply to Dr. Robinson's last communication before. I have no wish to deny the facts of Dr. Robinson's cases. What I object to is the deduction he draws from those facts, viz., that because certain cases of scarlatina and measles present additional or different symptoms to ordinary cases, therefore these cases cannot be scarlatina or measles, but must be a specific disease of a distinct nature. As well may we assert that the various epidemics of typhus, typhoid, or yellow fevers, which often present special symptoms in different epidemics, are neither of these, but some new form of disease.

As to Dr. Robinson's statement that sore-throat is not usually considered a symptom of measles, I would reply that I have found it a comparatively frequent, almost constant, symptom, so much so, that I would mention it as a symptom of this disease were I writing a description. But the sore-throat differs considerably from that of scarlet fever; in the latter being inflammatory in its nature, in the former catarrhal.

I have seen many cases of what Dr. Robinson would call rötheln, but have never hesitated to class them as modified scarlet fever or modified measles; if sore-throat be severe, with slight catarrh and coryza, with the former; if catarrh and coryza be severe, with slight scarlatinal sore-throat, with measles. Further, the advocates of the specific nature of rötheln have not mentioned anything of its treatment. I find that these cases do well on the ordinary treatment I pursue for scarlet fever, if the sore-throat be the prominent symptom, viz., chlorine in some form; or, if the disease resemble measles, diaphoretics.

With regard to Dr. Wilson's proof of the specific nature of rötheln, the fact that the epidemics of scarlet fever and measles were both of them mild, is a good argument that the following epidemic was a modified form of one or the other of these diseases; mild attacks not protecting from, but generally modifying, a second attack. Lastly, I would call attention to the fact that, so far as I am aware, there is not a single well authenticated case on record of severe scarlet fever or measles followed by rötheln. Such being the case, I see no reason to alter my opinion, and must still sign myself, yours truly,

DUBITANS.

SKELETONS IN THE CUPBOARD.

IT seems that Madame Sarah Bernhardt's custom of keeping a skeleton on view in her sitting-room is by no means original. It was the fashion, according to the *Parisian*, to keep a skeleton somewhere about the house as a mark of the elegance and superior intellect of its owner. Roger de Beauvoir, the celebrated Parisian wit, used to have a skeleton mounted on a pedestal. One day Victor Hugo came to see Roger de Beauvoir, and examined his skeleton with great curiosity. "Write me some verses on my skeleton, my dear Hugo," said de Beauvoir. Hugo took a pen and wrote on the scapula these lines:

"Squelette, réponds-moi: Qu'as tu fait de ton âme?
Flambeau, qu'as tu fait de ta flamme?
Cage déserte, qu'as tu fait
De ton bel oiseau qui chantait!
Volcan, qu'as tu fait de ta lave?
Qu'as tu fait de ton maitre, esclave?"

A correspondent sends the following version of this to the *British Architect*.

"Where is, gaunt skeleton, thy soul?
Where, human torch, thy sacred flame?
Deserted cage, when from thee sprang
Thy bird that sweet within thee sang?
Why, Etna, ceased thy lava's roll?
Thy freedom, slave, how didst thou claim?

M.R.C.P.—The proposition for a special "physician's attire" is retrogressive, and we think, opposed to the spirit of the time, which tends to depose the tailor costume maker from his place of honour, and to abolish distinctions of dress.

THE SURGICAL NECESSARIES FOR GENERAL PRACTICE.

SIR,—Your correspondent "Perplexed Practitioner", will find himself well equipped for general practice, if he obtains the surgical apparatus which I proceed to name.

A Macintyre's splint of japanned iron, with screw for extension.

Three long straight thigh-splints, which can be obtained from a carpenter; the notches at the lower end and oval opening for the ankle should be prepared, and the splints when required for use will only need to be cut to a proper length, and to be bored at the upper end for the attachment of the groin bandage. For fractures of the leg, three pairs of leg-splints should be kept in stock; and all these must have foot-pieces—that is to say, there will be three splints with the concavity to the left, and three concave to the right—but in other respects each splint of a pair similar in size and shape to its fellow. Leg splints used to be made with the foot-piece on only one splint of a pair. A rectangular back splint will be needed for fractures of the leg in its lower third.

Fracture-boxes are only required for severe compound fractures; and, in my opinion, it is best to have them made to suit cases as they arise.

For the upper extremity, the surgeon will do well to have several (*e.g.*, a dozen), straight concavo-convex splints of various lengths; two pairs of elbow-splints with set screws for determining their angle; and two or three pistol-shaped splints of medium size for the treatment of Colles's fracture. It is not necessary for a beginner to get special fracture apparatus (several forms have been designed for injuries of the collar-bone, for instance) he will do more wisely to begin with simple bandages and splints. For padding, nothing is better than bags made of "tick", or linen, of the same shape as the splints, and stuffed with tow, of which a good supply, one or two pounds, should be kept at hand. The bandages which I use are made of stout unbleached calico, eight yards long, and generally three inches wide: narrower bandages one and two inches in width are required for fingers and arms, and wider (four and five inches) for ribs. When these are torn from a piece of calico, they have no selvage, and are more readily applied.

For Sayre's and other plaster of Paris apparatus, a coarse muslin called "Victoria lawn" is used. It is a good plan to have a large tin vessel which will hold several pounds of plaster, in which the bandages can be charged with the dry powder as the case called. I have one that covers as they are very rarely required in general practice.

If your correspondent applies to Messrs. Maw of 12, Aldersgate Street, or to Messrs. Arnold of West Smithfield they will send him an illustrated catalogue, from which he can select a variety of articles such as I have described, at a cost of one or two pounds. I remain, etc., yours truly,

C. P. CRAWLEY, M.D. Lond.

Castle Cary, July 6th, 1880.

THE DEAF AND DUMB.

SIR,—In reply to your correspondent "M. A.", I refer him to the school of the Association for the Oral Instruction of the Deaf and Dumb, at 11, Fitzroy Square, W., which is under the superintendence of the introducer of the German or oral system—Mr. Wm. Van Praagh—who, I am sure, will be most happy to give your correspondent all the information he may require. Visitors are always welcome at the institution. I am, etc.,

METRON.

SIR,—The symptoms mentioned by your correspondent "M. A." indicate, as a rule, mental affliction. I should, however, like to examine his patient before giving a decided opinion of her case. Children with a "perfect" hearing are, of course, not admitted into schools for the deaf. I am, sir, your obedient servant,

11, Fitzroy Square, W., July 19th, 1880. WILLIAM VAN PRAAGH.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Jos. Rogers, London; Dr. J. A. Young, Edinburgh; Dr. W. M. Kelly, Taunton; Dr. R. H. Prior, St. Albans; Mr. Herbert Goude, London; Mr. A. H. Benson, Dublin; Dr. McEwen, Chester; Dr. C. Parsons, Dover; Our Dublin Correspondent; Mr. J. G. Wilkinson, London; Mr. D. W. Turner, London; Dr. Donald Macphail, Glasgow; Dr. MacLaughlin, Londonderry; Dr. E. Andrew, Shrewsbury; Mr. J. W. Morris, Swansea; Dr. W. F. Wade, Birmingham; Mr. G. Eastes, London; Dr. K. Fairclough, Old Trafford; Dr. McCraith, Smyrna; Mr. John H. Pugh, Dartford; Mr. G. B. Mason, Pontypool; Dr. Walton, Kilkee; Mr. F. R. Greenwood, London; Mr. Arthur Cooper, London; Dr. A. Allison, Bridlington; Dr. John E. Eddison, Leeds; Dr. James Morris, London; Medicus; S. P.; Mr. W. Van Praagh, London; Mr. C. Carter, York; Mr. R. Alford, Weston-super-Mare; Messrs. Mayer and Meltzer, London; Mr. Simeon Snell, Sheffield; Dr. R. Ryder, Stroud; Dr. S. W. Smith, Pershore; Dr. E. Haughton, London; Dr. D. Drummond, Newcastle-on-Tyne; Mr. H. M. Page, Redditch; Dr. W. Munro, Manchester; Mr. John Gabb, Bewdley; Dr. W. Alexander, Liverpool; Mr. W. D. Sheppard, Cardiff; Dr. P. O'Connell, Sioux City, U.S.A.; Mr. W. T. Black, Edinburgh; Dr. Joseph Coats, Glasgow; Mr. Edmund Owen, London; Mr. Cresswell Baber, Brighton; Mr. A. M. Sydney-Turner, Gloucester; Mr. T. Marsh, London; Dr. C. S. W. Cobbold, Colney Hatch; Dr. H. Denne, Birmingham; Dr. W. Blair, Jedburgh; A Provincial M.D.; Dr. F. Eklund, Stockholm; Dr. A. Sheen, Cardiff; Mr. J. Lloyd Roberts, Denbigh; Dr. Grigg, London; Dr. J. Edmunds, London; Mr. A. Mackenzie, London; Dr. John C. McVail, Kilmarnock; Dr. Godson, London; Mr. F. Elsom, Chesterfield; Mr. J. M. Atkinson, London; Dr G. H. Daly, Chippenham; Mr. W. R. Watson, Glasgow; Dr. J. B. Macleod, Dundee; Mr. R. Dickson, Carnoustie; Our Glasgow Correspondent; Dr. W. Roden, Kidderminster; Mr. W. Prowse, Cambridge; Dr. C. H. Hill, Islington; Mr. S. G. Litteljohn, Hanwell; Mr. H. J. L. Bennett, Dewsbury; Mr. J. Jamieson, Edinburgh; Mr. Francis Vacher, Birkenhead; Dr. B. Partridge, London; Mr. S. R. Lovett, London; Mr. James Startin, London; Mr. Charles Vipan, Brighton; Dr. Francis Parsons, Schuls; Mr. F. Treves, London; Dr. Clement Dukes, Rugby; Dr. Heywood Smith, London; Mr. C. W. Latham, London; Dr. G. Johnson, London; Mr. C. J. Myers, North Somercotes; Dr. Thomas Radford, Manchester; Mr. T. M. Stone, London; Dr. H. Barnes, Carlisle; Dr. Turle, London; Mr. A. Ashby, Grantham; Mr. James Dixon, Dorking; Dr. Wade, Birmingham; Dr. P. M. Braidwood, Liverpool; Messrs. Merritt and Co., London; Dr. McKendrick, Glasgow; Mr. G. H. Keyworth, Wem; Mr. Clement Hadley, Birmingham; Dr. J. Wilson Hamill, Manchester; Mr. H. Percy Potter, London; Mr. R. M. Mann, Manchester; Mr. H. Clarke, Upper Clapton; Dr. Leslie H. Jones, Blackpool; Mr. Jacob Ashley, Bath; Dr. C. Clay, Manchester; Mr. Lawson Tait, Birmingham; Dr. D. J. Rutherford, Balta Sound; Mr. J. Farrant Fry, Swansea; Our Edinburgh Correspondent; Mr. G. R. Rossiter, Weston-super-Mare; Mr. C. E. Abbott, Braintree; Mr. Osman Vincent, London; etc.

BOOKS, ETC., RECEIVED.

On Aneurism, especially of the Thorax and Root of the Neck. By R. Barwell, F.R.C.S. London: Macmillan and Co. 1880.

Medical Education and Practice in all Parts of the World. By H. J. Hardwicke, M.D. London: J. and A. Churchill. 1880.

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Post Office Orders should be made payable to Mr. Francis Fowke, at the West Central Post Office, High Holborn. Small amounts may be sent in postage stamps.

Agent for the Advertising Department in France: J. ASTIER, 67 Rue Caumartin, Paris.

THE HARVEIAN ORATION,

DELIVERED AT

THE ROYAL COLLEGE OF PHYSICIANS,

Friday, June 25th, 1880.

By JOHN W. OGLE, M.D., F.R.C.P.,
Consulting Physician to St. George's Hospital.

[*Concluded from page 117 of last number.*]

One principal trait which strikes me in studying Harvey's character is his devotion to the one object of his life; from the time when as a student at Padua his attention was drawn to it, he seems to have been absorbed in his pursuit, and to have made all that occupied him serve to further it. During the time that he was physician to the King, we do not see him led away by the excitements, pleasures, and intrigues, which in those days, more than at present, occupied the minds of all connected with the Court. His mind was so absorbed in his studies, and so bent upon solving the great problem of his life, that he led the King to feel interest in it also; and it is said of Charles I, that he ended by becoming an amateur doctor, especially fond of physiological pursuits. It was in his presence that many of the vivisectional experiments were performed upon the royal deer, which the King was glad to sacrifice in the pursuit of science. Of course, the courtiers followed their sovereign's example; and, in consequence, were present at many of Harvey's experiments, and among them may have been some in whom a love of science was really kindled, as in the Marquis of Dorchester, who conceived a true affection for medicine, and late in life became a Fellow of the College of Physicians, and its munificent benefactor.

The chief incidents of Harvey's life are too well known for it to be needful for me to relate any of them again, and with his character we have all a very intimate acquaintance. The opinion we have formed of him may, I think, be summed up in the words of one of his most recent biographers, viz., my friend Dr. Da Costa of Philadelphia. "Harvey", he says, "illustrates in his person the finest traits of the intellect and heart of the profession. Not content with the known, but with an eye ever eager to read the unknown; reverencing the past only in so far as it may help to enlighten the future; patient of search, keen of thought, ingenious of surmise, but holding surmise only as the glimmer of a truth to be ascertained; bold of inference, yet trying that inference by every test alike of thought and experiment before it is proclaimed law; consummate in reasoning and in the art of clear expression—we have in *his* mind the best example of a scientific mind; and in the qualities of candour, perfect benevolence, serenity, self-sacrifice, and untiring devotion, he nobly upheld the character long generations of good men have given to his calling when most perfect."

Such a man as described above can hardly, I say, be termed heartless and devoid of all feeling by any vehement antivivisectionist, yet, to quote his own words, he writes: "I had frequent recourse to vivisection, employing a great variety of animals for this purpose." Again, we may notice that the character of Galen was one wholly opposed to that of heartlessness or thoughtlessness. We read of him as a man with a reverent mind, piously disposed by nature, and often referring in his writings to "the will and government of the Almighty". I will quote a little sentence out of one of his works on the use of the human body, which he himself calls "nothing less than a hymn of praise to the Creator". He says: "I hold true piety to consist, not in the sacrifice of bulls or the raising of incense, but in studying to know myself and to make known to others the wisdom, power, and goodness of God." These are the words of a man who tells us that his knowledge was obtained by the inspection of the bodies of living animals, who gives us minute particulars of the experiments that he made upon them, and the conclusions that he drew from these experiments.

It would obviously be improper for me to remark upon the moral character of those men who in our own time have practised vivisection with (as we shall all admit) great benefit to our art; but I am may, before closing this part of my subject, remark that the late Dr. Hope was perhaps one of the greatest vivisectionists of this century, and I think I need not say that his character as a religious man is as well known as is his character as a scientific one.* Those who are not well acquainted with his life and work, so well known to all professional men, I would refer to the account of the numerous experiments that he performed upon donkeys, rabbits, etc., in the presence of some of our profession who may be here to-day. I am prevented by want of time from dwelling more at length upon this subject, and from mentioning many results obtained by vivisection which we know to be most valuable.

* See his Memoirs, written by his wife.

As is well known, Harvey spent some time at Oxford, before he was made Warden of Merton College. In company with the King and his followers, and during that residence, he was on intimate terms with Dr. G. Bathurst of Trinity College, brother of the then President; and by Dr. Bathurst he was materially assisted in the hatching of eggs for his experiments. It so happens that Trinity is the College at Oxford of which I have the happiness and privilege of being a member, and one may be excused the pardonable pride of being familiar with the rooms which he probably frequented, and in which his researches were prosecuted.

I do not find any allusion in Harvey's writings to the state of medical studies or teaching during his connection with that University. Had he referred to this subject, we might have learnt from him more than we now know of what has been of late in certain quarters termed the "Lost School of Medicine" at Oxford. If such a school have been lost, will not those who miss it do well to amuse themselves by looking for it in such a distant time? inasmuch as statistics relating to the numbers of medical degrees conferred by Oxford since this year, and extending as far back as 1665, give no indication of such a bereavement. In truth, though there was a School of Anatomy at Oxford in the time of Willis, Lower, and Millington, there never was at Oxford a medical school in the present and ordinary sense. For example, we learn from certain statistics produced by our late Professor of Botany, Dr. Daubeny, at the British Association meeting at Nottingham in 1866, that in no decennial period during the two hundred years following the date above-mentioned did the average of M.B. degrees exceed *three*; and in the year 1857, my friend Professor C. Pearson, then Fellow of Oriel (now a member of the Legislative Assembly in Victoria), in a pamphlet upon Oxford in relation to medicine, stated that the number of medical degrees conferred at Oxford was then two a year for the previous twenty-five years. On the other hand, I was a few weeks ago told by Professor Rolleston that at the then approaching examination for medical degrees at Oxford they had ten candidates for the first M.B., with the prospect of sixteen more in the following examination—*i.e.*, in all, twenty-six—a striking contrast to the numbers above quoted. And no fewer than forty-six men, all having passed through the *complete course of Arts* before entering on medical study, are eligible this year to go in for the two medical examinations for the M.B. degree. These figures require no comment. A correspondent at Oxford observes: "I believe our numbers for the M.B. here are nearly equal or quite to those at Cambridge, though we have not sacrificed our Arts curriculum at all." I would here call attention to an interesting pamphlet lately published by Dr. Pye-Smith on "Medical Education, Apprenticeship, and Medical Degrees", in which many hints of importance on the subject of university training in connection with medicine are noticed. I would also here refer to two pamphlets which have lately been published on the relation between the University of Oxford and medicine, but which have only just been brought before my notice; viz., one of Dr. S. West, Medical Tutor to St. Bartholomew's Hospital, entitled "The Proposed Establishment of a Medical School in Oxford"; and one by Dr. Seymour Sharkey, Resident Assistant-Physician at St. Thomas's Hospital, on "The University of Oxford and Medical Education".

The expression "Lost School of Medicine" at Oxford, to which I have alluded, by whomsoever used, must be the outcome either of gross and culpable ignorance or of a calumnious spirit.* Anyone who knew Oxford thirty years ago, and is able to compare the state of physical and biological science, as it there and then existed, with that of the present time, will reflect upon the teaching operations and advantages offered by means of lecture-rooms, laboratories, museums, etc., and the degrees in physical and natural science conferred, and on the general progress and interest in such subjects which have of late been brought about at Oxford—an interest greatly quickened, if not originated entirely, by the endeavours of the present Regius Professor of Medicine, Dr. Acland.

Of late years, the University of Oxford has made great and carefully considered additions to the means of scientific education and research. Thirty years since, there were scarce any scientific laboratories, and any means of practical work for either professors or students. It is indeed surprising that Daubeny, Buckland, Baden Powell, Kidd, and Strickland,

* A correspondent, alluding to this matter, refers to "the abominable tissue of malignity and folly which has been woven together on this subject".

were able to maintain, by their personal dignity and character, the position of physical science as they did when there was a general decay of interest in scientific studies at Oxford.

Between 1845 and 1850, a determined effort was made to add to the classical and philosophical education of this great University the means also of studying material theories in the widest way.

As regards biology, under the auspices of one college, Christ Church, a large collection was formed by Dr. Acland, with Victor Carus, Dr. Melville, and others, as assistants, on the type of the Hunterian Physiological series. The University possessed no collection and no workrooms, no apparatus of this kind. The museum, now so well known, was, under great difficulties, founded, and provided with laboratories for practical work in physics, in chemistry, anatomy, and certain parts of medicine. The physiological collection formed at Christ Church, together with the pathological collection which had been organised, and that of Van der Kolk, which had been removed from Holland, were placed there. A sanitary laboratory was commenced by Dr. Pode, and carried on for some years by Mr. Donkin, who has just now removed to St. George's Hospital as Lecturer on Chemistry.

The University has laid down that the service it can render to the medical profession and to biological study is to provide every facility for scientific education, and to *prepare men in the best way through this channel for the clinical schools of the metropolis;* and though much has to be done, what has been done is beyond expectation. The interest in medicine in Oxford has never, as far as is known, been equal to what it now is. Dr. Rolleston's workrooms of anatomy already require extension. He has added vast stores to the series of human and comparative anatomy and histology in every direction. The chemical laboratory, though excessive twenty years ago, has lately been more than doubled, and new professorships in various scientific directions are sought for and will probably be obtained. The Radcliffe Library, transferred to the Museum, has had its grants more than trebled, and £300 yearly are spent there in scientific periodicals. This noble dome has become famous as the reading-room to the Bodleian, being open from ten in the morning till ten at night, for all true students of every country. Thus Radcliffe has acquired an altogether new life and usefulness, never before contemplated.

I may add, on the best authority, that, although it is the desire and intention, as far as may be, of the authorities at Oxford to encourage by fresh measures a general and liberal education in the case of all students in medicine, by requiring them to pass the final examination for the B.A. degree at least one year before coming up for the first M.B. examination, efforts are nevertheless being made to increase still more than before the opportunities and capacities for teaching subjects cognate to medicine. This is not the opportunity, nor have I time at my disposal, for enlarging further on the plans which I have the best warrant for alluding to as impending.

In testimony that the system which has now been in operation for some years in the Lost School of Medicine has not been inoperative or unsuccessful, I may allude to the fact that the medical graduates of Oxford enjoying posts of high trust in our hospitals and schools of the land are now, and for some years have been, very considerable in number.

Before closing my remarks on Harvey's teaching, let me allude to the general tone and spirit which is conspicuous in all his writings. Like Galen, like Newton, like blind Galileo, like Faraday, he was a firm believer in, and recogniser of, the hand of the Divine Architect in the structure of the outer world of nature. In many of his most important researches, he presses forcibly the consideration of an Infinite Mind as directing, controlling, co-ordinating—a Power which brings into play those wondrous physical laws and appliances which, when summed up and in action together, constitute what we call "life".

Search for truth, and illustration of Divine will and workmanship, and not public applause or personal advancement, appear to have guided him almost entirely in his proceedings; and he perceives, as he says, in the mysteries of nature, "a kind of image in relief of the Omnipotent Creator Himself," who works with "inimitable providence and intelligence, and most admirable order". Of course, in this he fully recognises design or purpose in all such things as can be understood, though he takes care to show that fanciful and hazy ideas of design, or so-called final or teleological causes, are not, of necessity, to guide us to conclusions, and that our first duty is to inquire whether the thing "be or not, before asking wherefore it is"; and though, as he says in one place, "Respect for our predecessors and for antiquity at large inclines us to defend these conclusions to the extent that love of truth will allow", yet he pins his faith to no man's sleeve, and slily taunts those who philosophise by tradition, and are, for authority's sake, bound to see the physic of Galen, as he says, "kept in good reputr", asserting that the facts cognisable by the senses wait upon no opinions, and that the works of Nature bow to no authority, and even point out where Aristotle was mistaken. Had he lived now, he would, doubtless, have acquiesced in that teaching of evolution and adaptation in animal and vegetable life with which, originally started by Wolff in the middle of the last century, then taken up by Lamarck, we have become familiar under the name of Darwinism; not, of course, those extreme opinions on this subject by which some, indeed, out-Herod Herod.

As regards final causes as a guide or help in physiological research, much was said, in a very masterly manner, by Dr. Acland in his Harveian Lecture for the year 1865.* I do not propose here to dwell upon the subject. I quite agree with many, such as Dr. Daremberg, the most recent of the medical historians, that we cannot base our biology on preconceived notions of the utility of structure; but it does not follow that we must resist the "averment of our senses", and shut our eyes to the plain and obvious instances of design and mental purpose which surround us in wondrous and countless multitudes, and which, as it appears to me, no sane man can ignore. It is impossible to say how far our Harvey was guided to his results by considering the use and purpose of the valves in the veins. Let the principle of Design (*i. e.*, of a Designer) hold its proper position, and be received as apart from scientific research, and let there be, to use an expression which fell from the present excellent Bishop of Carlisle, a "*scientific frontier*" in this matter. The old "*à priori*", or inferential, and the more recent inductive reasoning have different functions and spheres of action,† and need not clash. Let us, if practicable, make an "*Eirenicon*". I am induced to say this as, no doubt, great harm arises from extreme doctrinaires on both sides vilifying those who do not see through their own spectacles. What possible good can come from the vehement and repulsive way in which observers like Herr Häckel assail the theologian? And again, what good can arise from that most untrue and insulting statement which a certain foreign ecclesiastic is reported in the *Times* as having last week made in a public address in London, viz., that "in our day, *in order to get rid of the idea of God*, hypotheses had been devised making one species the outcome of another," etc.?

As regards the doctrines of evolution, selection, survival of the fittest, and adaptation, etc.—doctrines widely and deeply affecting all physical science at the present time—I for one would, in all humility, agree with the Right Hon. Mr. Justice Fry, who observes that "no new difficulty whatever is introduced by Mr. Darwin's demand: there is something to rejoice at in the extension to the lower animals of the realms of morality and religion;‡ and again also with Professor Asa Gray, when he observes: "We are sharers not only of animal but of vegetable life, sharers with the highest brute animals in common instincts and feelings and affections. It seems to me that there is a sort of meanness in the wish to ignore the tie. I fancy that human beings may be more humane when they realise that, as their dependent associates live a life in which man has a share, so they have rights which man is bound to respect." As Dryden has it:—

> "From harmony, from heavenly harmony,
> This universal frame began;
> From harmony to harmony,
> Through all the compass of the notes it ran,
> The diapason closing full in man."

I can see no difficulty in considering protoplasm or slimy bathybius (if such a substance really exist, which appears doubtful) as the physical basis of life, in looking upon the living structure in plants and animals as the same. The hypothesis of natural selection, first set forth by Wells, and then developed by Wallace and Darwin, is, at any rate, a most probable and very workable one, and may account for the numberless varieties which we observe; species being evolved from species. But then it must be held that this process and progression have been from the first foreseen and arranged as much as is the progress in the growth of the heart of the fœtus through the cardiac types of the various

* Harvey left directions that the oration should be given in Latin. This was the first occasion on which the oration was properly given in English. It had been given partly in Latin and partly in English by Dr. R. Lee, whose oration was never published.

† On the relative value of the two philosophies of the ages of the old world, the following remarks are noteworthy: "Cicero thinks everything, as much as possible, must be tried by the moral standard. If the question arise between the study of morals and politics, and that of physics or metaphysics, he decides in favour of the former, on the grounds that the latter transcends the capacities of the human intellect; that in morals and politics we are under obligations from which in physics we are free; that we are bound to tear ourselves from those abstract studies at the call of duty to our country or our fellow-creatures, even if we were able to count the stars, or measure the magnitude of the universe. The above passage I quote from Browne's *History of Roman Classical Literature*.

‡ See on this subject the *Fortnightly Review* for December 1871, on the Utility to Flowers of their Beauty, bearing on one part of Darwin's argument. I would here also refer to the [illegible] completed by the late Professor Owen. *Parts essential to Vertebrates* [illegible] the *Athenæum*, September 1866.

series of animal life until that of man—the most consummate of creatures, to use an expression of Harvey—is arrived at. Quite as much intelligence and intention is implied under the supposition of gradual evolution, as if each process of development and growth were the result of incessant immediate creative acts. There is, in reality, no more dethronement of the Deity in one case than in the other; though irreverence and agnosticism, so termed, may use the argument as a tool for their own purposes. A Divine plan in nature and in man exists in either case. As Sir Edmund Beckett has tersely put it, "The first living thing of any kind, and the first egg or other seed that ever grew, wants accounting for just as much as the first tiger's claw, or elephant, or man." The difficulties in the one case, if such there be, exist in the other; only, so to say, at a stage anterior or farther back. As Asa Gray remarks, "The throwing back of design ever so in time does not harm it, nor deprive it of its ever present and ever efficient character." And as the late and revered Canon Mozley observed, quoted by the same author, "If design has once operated *in rerum naturâ*, as in the production of a first life-germ, how can it stop operating, and undesigned formation succeed it? It cannot; and nature having once existed, the test of the amount of that intention is not the commencement but the end; not the first low organism, but the climax and consummation of the whole". I do not propose to occupy further time with this subject—one, however, which as physiologists and physicians we cannot in these days set aside.

Naturally anxious to discover any particulars of Harvey's life which have not been adduced as illustrations of his character, I have made search in various directions, as no doubt all previous Harveian orators have done.

I fail to discover any positive indication in Harvey's writings of his own theological views, excepting in his will, which is most religious in tone. I find also but little indication of his political opinions. It does not appear why he parted from the service of his beloved and respected master the King.

There is an incident, however, in connection with the subject, which I found related in the Clarendon State Papers (vol. i, p. 574), and which is amusing: a letter dated May 1636, at Cologne, in which the Earl Marshal (Arundel and Surrey) speaks of a visit to the Jesuits' fine new church and college in that place, where he says, "They used me with all civility"; and goes on to observe, "I found in the college little Dr. Harvey, who means to convert them". Whether the good fathers were amenable to Harvey's assaults, the deponent sayeth not. In other letters in these papers he is alluded to. Thus, in one dated at Ratisbon, he is spoken of as "honest little Harvey", "whom the Earl is sending to Italy about some pictures for His Majesty".

Another reference to Harvey I have met with, but which I have never seen mentioned in any regular notice of him. It is well known that, at the battle of Edgehill, Harvey withdrew, as Aubrey tells us, along with the Prince and Duke of York, who had been commended to his care, under a hedge, and took out of his pocket a book and read.* But he had not read very long ere a bullet from a great gun grazed on the ground near him, which made him resume his station. Aubrey says nothing more of this passage in Harvey's life; but I find it related in Wood's *Fasti Oxonienses* (vol. iv, p. 46), that Adrian Scrope, Esq., a most valiant person, did most loyally attend His Majesty at the fight of Edgehill, where, receiving several wounds, he was stripped and left among the dead as a dead person there, but brought off by his son, and recovered by immortal Dr. Will. Harvey, who was there, but withdrew under a hedge with the Prince and Duke while the battle was at its highest. It is reported that Adrian Scrope received nineteen wounds in one battle in defence of His Majesty's cause.

This retirement of Harvey recalls to memory the history of Pliny the elder, his presence of mind and philosophic spirit in circumstances of bodily danger.†

The contemplation of Harvey's work and method of thought leads me to call to mind the names of those who have been conspicuous for their efforts after his example, in the way of direct observation and philosophical experiment, many of whom have been brought under our notice in an interesting article on the College of Physicians recently published in the *Quarterly Review*,* and were amongst the early founders of the Royal Society. Such were Glisson, Willis, Wharton, Millington, Lower, Needham, Langreish, Sir William Watson, Baker, Wells, Marcet, Young, Woollaston, Prout, Latham, Arnott, Blackall, Marshall Hall, and Bence Jones (whose personal kindness and services to myself in earlier life I am ever bound to hold in grateful remembrance), Robert Lee, etc.; and many others of the present day, as Lionel Beale, Brown-Séquard, Burdon Sanderson, Ringer, Pavy, Ferrier, Hughlings Jackson, etc.

Nor are those to be passed over who by their observation at the bedside have worked out pathological and clinical problems, and, in their trials of the operations of remedial agents, have been no less philosophically employed than those above enumerated [and which of us is not daily carrying out Harvey's method in some degree in all we do?] Such pre-eminently were Sydenham, Baker, Mayerne, Dover, Gooch, Bright, Addison, Billing, the lamented Murchison (so lately removed from us), Sir Charles Locock, Sir William Jenner, and Sir George Burrows; and last, but not least, the classical and venerable Sir Thomas Watson, the Nestor and glory of our profession, and, as the late Dr. Latham once said to me, "the greatest physician of the age", whose writings, equal to those of Goldsmith or Addison, at once charm and instruct us, and who, *plenus annis, honore, et amore*, still, we are thankful to say, lives and works among us.

Here let me beg you to realise the loss which our College and the world at large have sustained in the death of Dr. Alfred Swaine Taylor, who but quite recently was removed from among us at a ripe age, *felix opportunitate mortis*. We shall all agree, I think, in feeling that by his death we are deprived of one who had one of the highest and widest reputations (and this he fairly earned by the singular exactness of his experiments and the clearness of his methods), especially on the subjects to which his energy was chiefly devoted—toxicology and medical jurisprudence, upon which subjects he has left behind him some valuable writings. While medical science has been enriched by his labours, we must remember that the legal profession also owes him a large debt of gratitude, for his work on *Medical Jurisprudence* has become a text-book for the criminal lawyer. Engaged as he was for many years (indeed, for nearly half a century) in the most difficult inquiries connected with medical jurisprudence, it is the highest praise to say of him that there is no instance where his services were not for the vindication of truth and justice. His authority and technical knowledge were never perverted from their proper objects. Innocence could as confidently rely upon him for its vindication as crime dreaded the patient unravelling and explaining of its nefarious and often murderous operations. Those who enjoyed his more intimate acquaintance must feel that they have lost an instructive companion and a genial friend, and one whose accomplishments made his society valuable to all who take an interest in the progress of science. This College will gladly acknowledge that it owes a lasting tribute of honour and respect to the memory of Dr. Alfred Swaine Taylor as one of its worthiest Fellows. On whom will his mantle fall?

I must now fulfil the pleasing task imposed by the positive direction of Harvey, given to anyone undertaking the duty of the day; viz., the "Commemoration of all the benefactors of the said College by name, and what in particular they have had done for the benefit of the said College, with an exhortation to others to imitate those benefactors, and to contribute their endeavours for the advancement of the Society, according to the example of those benefactors, and with an exhortation to the Fellows and Members of the said College to search and study out the secrets of nature by way of experiment, and also, for the honour of the profession, to continue in love and affection among themselves, without which neither the dignity of the College can be preserved, nor yet particular men receive that benefit by their admission to the College that they might expect, ever remembering that 'Concordiâ res parvæ crescunt, discordiâ magnæ dilabuntur'."

For a great many years after its foundation, as I am told by our ex-

* The incident is charmingly depicted by my friend Mr. W. Yeames, R.A., in his picture exhibited at the Royal Academy in 1871.

† Letters of Pliny the younger to Tacitus describe the death of Pliny the elder (Ep. vi. 16-20)—"He was at Mesenium, in command of fleet. On August 24th, at 3 p.m., after bathing, etc., and whilst studying, a cloud of unusual size and shape was pointed out to him by his sister; he ascended eminence to see what it might be, but was too distant. Therefore he left, with note-book in hand, in a galley, asking his nephew (Pliny the younger) to accompany him, but who did not do so. He launched quadriremes to assist the inhabitants in getting away. He himself steered to point of danger, dictating as he went along his observations, etc. Soon ashes fell on deck and stones and pumice stone; the reflux of sea and fragments of volcano presented obstacles to progress; he hesitated whether to go on: finally, decided to steer for villa of Pomponianus—'Fortune favours the brave; steer for the villa of Pomponianus.' This was at Stabiæ, divided from coast near Vesuvius by an arm of sea. His friend there was consoled by Pliny, who, to show his unconcern, bathed and supped with cheerfulness. Meanwhile, from many parts of volcano were flames, which were heightened by darkness of the night. He retired to rest, and snored. Soon the court from which the chamber opened was choked by cinders, pumice, etc. He was awakened, and went Pomponianus. Consultation whether to go or not. Repeated shocks of earthquake. Half burnt pumice in air menaced danger. Decided to go into open fields. Tied cushions on their heads. Although now day elsewhere, the darkness here was most dense. Walked to coast, but could not embark. He spread linen cloth and lay upon it, asking for draughts of water. Then flames and sulphurous smell put his companions to flight. He arose by assistance of two staves and fell down dead, suffocated, as I imagine, by the dense vapour and the functions of his stomach being disordered, which were naturally weak, and liable to obstructions and difficulty of digestion. On third day his body was recovered entire."

* See number for October 1879, p. 351.

cellent and zealous treasurer, Dr. Farre, the Oration was always called the oration on each "in commemoration of our benefactors"; so that, as we say at the University of Oxford, this is, in fact, our "Commemoration Day".

The names of all benefactors and their good deeds, and the results achieved by Fellows and Members of the College, have been so often mentioned in this place, that it would not become me to occupy much time in alluding to them.

Imprimis, let us recall the name of the learned Linacre, our first president, who, inasmuch as it was at his suggestion that Henry the Eighth founded our College, may be considered our greatest benefactor and the establisher of our medical republic, and whose private collection of books became the germ of our first library, the chief part of which was destroyed by the great fire in A.D 1666. After Linacre come the profound scholar Caius, the first teacher of anatomy in England; Caldwell and Lord Lumley, the founders of the surgery lectureship; Gilbert, the father of English experimental philosophy, the results of whose scientific experiments were so influential on the mind of Galileo, and whose work has been so highly praised by Bacon and Hallam, and who enriched our College by the gift of his library and instruments, etc.

Following, we have Harvey himself, who, in addition to other good actions towards us, built us a library and a museum containing his books and instruments, and after his death, the exact place of which we do not know, bequeathed to us "bookes and household stuffe, pictures and apparell", including his "best Persia carpet" and "blue imbroyedyed cushion", "one pair of brass and irons with fireshovell and tongues of brass"; his preparations of the blood-vessels and nerves, which we possess, being given to us, in 1823, by the Earl of Winchelsea.

After Harvey, we have the names of Goulston, who founded the lectureship which bears his name, and for which, "if possible, a body was to be procured";* of the munificent and erudite Hamey, who, as Dr. Munk, in the College Roll, observes, vied "with his contemporary Dr. Harvey in the frequency, and rivals him in the extent, of his benefactions to the institution", opportunely rescuing the College from Parliamentary confiscation, and among other things doubling the premium to the Harveian Orators,

"Whose anniversary harp we now possess";

of the Marquis of Dorchester, who bequeathed valuable treasures to our library; of Croone, who established the lecture with which his name is associated, and also provided for a sermon in conjunction with the lecture (to the discontinuation of which I am not able to find any historical allusion); of Edward Brown, the persevering traveller; of Hall, a liberal benefactor to the College; of Baillie, who during his life gave us all his anatomical preparations; of Dr. Arthur Farre,† who has given us his portrait, and has so recently and so munificently added to our library.

Our treasurer informs me that he is daily expecting the bequest of Dr. Lambert (a Fellow of the College, who died in 1877) of £1,000.

Need I mention the numerous donors of the various valuable paintings and other works of art in our rooms, of which a complete list is published in Dr. Munk's Roll, including the portrait by J. Keenan of Sir George Smith Gibbes, a Fellow of the College (1798), and the Harveian Orator in 1817, presented to us by his grandson, Mr. Heneage Gibbes, a Licentiate of the College, which has just been varnished and cleaned?

I will here say that we, this very day, become possessed of two most valuable gifts from my highly esteemed and valued friend Mr. George Richmond, R.A., of whom with regard to myself I may say, as Harvey said of a patient of his: "He's my most particular friend, and I'm his most attentive physician."‡ Of these, one is the portrait of Sir William Butts, one of the physicians to our founder Henry VIII (mentioned by Shakespeare), painted in oils by that artist from the original Holbein in the possession of Mr. W. H. Pole Carew, of Antony House, in Cornwall, who graciously consented, at my request, to permit the picture to be made;§ the other is a crayon drawing of Dr. Mayo, our former president, from the year 1857 to 1862, taken shortly before his death in 1871.

Owing to circumstances, our College, like many other institutions at the present time, is suffering from what our Treasurer would probably term decided impecuniosity—the landed estates belonging to our College being just now much less productive than they should be. So much is this the case that, not being able to replenish our chest by giving the opportunity to Fellows and others of placing their coats of arms on our walls, or to improve our finances by the creation of honorary Fellows, as formerly have been done,* we have been this year obliged to forego our ordinary evening *conversazione*. So far, indeed, are we from having the "Convivium Harveianum", or dinner, which originally, and in accordance with Harvey's will, when the College was smaller (*dulcis comitum cœtus*), followed the oration.

I am sure I express the desire of all present that this may be the last year in which the omission of a *conversazione* may occur. May I venture, in closing my allusions to past benefactors, to hope that others among our Fellows and members and our well-wishers may be found generously imitating their good example in benefiting the College, and urging on others whom they can influence, the same generosity.

With such names of past and present times on our roll as I have a little time ago enumerated, and with many others which I could enumerate if time permitted, as remarkable for general culture and for proficiency in fine arts, in literature,† and in physics, and with such a history as we possess, may I not say that our College holds a proud and distinguished position?

Let us not forget that this position, by virtue of its dignity, is also a most responsible one; and that each and all of us, being integral parts of the whole, share the responsibility; that we are one and all bound to maintain the character of true seekers into the secrets of nature, for the interests of sorrowing and suffering humanity.

We do not, as a body of physicians, profess or arrogate to ourselves any special theory of disease. In these days, the Fellows of the College do not cite physicians before them for impugning the infallibility of Galen, as in Dr. Geyne's time, who, on his humble recantation, was admitted a Fellow (1560) in the time of Elizabeth.‡

We claim no Ariadne's Clue, no Delphic Sword, to help us in the discovery of any theory of disease of universal and necessary application. We are not more solidists than humoralists—not more for the Sorbonne than for Montpellier; and, however precise or scientific the teachings of physiology and chemistry and other cognate studies, on which we rely, may be, yet so complex, so inscrutable a matter is life, so intricate and subtle the influences by which its processes are disturbed and perverted, that we are compelled to acknowledge the practice of medicine to be but a conjectural art.

This being so, we must ever strive to follow rational indications in our competition with disease and death—not giving ourselves over to what has been termed by Sydenham "the luxury of guess-work", but, "joining hands with nature", show ourselves to be guided by observation and experience resting upon a well-trained and an ascertained power of analysis and comparison.

Our pathology and our physiology are ever emerging into brighter light, and as yet there is much which is not settled. To give one or two instances: our theories of contagion and germ-influence are yet very inchoate; our theories of fevers—to take a salient example in pathology—are still unsettled, the contest is being waged on Indian soil. Our physiology of necessity is still progressive; and even quite recently Dr. Brown-Séquard has been upsetting, by important researches, certain hitherto accepted facts connected with the nervous system. There is some truth in the observation of Kölliker's, that the life of a physiological fact was but of three days' duration. Physic is becoming daily more preventive, expectant, and eclectic in its character; and, though we have such certain arms of precision—if the term be admissible—as digitalis, opium, and other invaluable remedies, and a few, very few, resources which have somewhat of a specific nature, we must confess that he is the wisest man who knows the extent of his own ignorance, and when he may be prudently passive. As Dr. Latham on one occasion observed to me, "The art of physic consists not in the use of many remedies, but in the right use of a few."

My watch admonishes me that I have already exceeded the time allotted to me, and I fear I may have somewhat tired your patience. It only remains for me to thank you, gentlemen, for your kind attention to this my very imperfect performance; asking you to join with me in the wish so dear to us all—

"Floreat, vigeat Collegium.
Sit perpetuum."

* It was after one of the Gulstonian Lectures that Dr. Hart was knighted by Charles II. (See Munk's Roll, vol. i, page 221.)

† Dr. A. Farre's gift consisted of about one thousand volumes, among which will be found the collection which Dr. Farre was for many years occupied in forming of rare and curious works on the natural history of the embryo and fœtus in various animals, as German and other monographs. These are arranged so that they might be consulted with facility. There are also curious and rare books on midwifery, and some valuable illustrated books on comparative anatomy.

‡ "Eam enim ipse notavi in omnes affectus suos benevolentiam ut ei amicissimus et attentissimus."

§ The original Holbein was exhibited at the National Portrait Gallery some years ago, and afterwards at the Winter Exhibition of "Old Masters" at the Royal Academy, and appeared in the

* See Dr. Munk's "Roll of the College," vol. i, page 202, and ii, page 326.

† Need I call to mind the names of Freind, Pujean, Mead, Garth, Akenside, Brocklesby, Halford, etc.?

‡ Who also could require the College to give the licence to practise without any "interruption, molestation, or suite".

CLINICAL OBSERVATIONS

ON THE

INTRODUCTION OF TRACHEAL TUBES BY THE MOUTH INSTEAD OF PERFORMING TRACHEOTOMY OR LARYNGOTOMY.

BY WILLIAM MACEWEN, M.D.,
Surgeon and Lecturer on Clinical Surgery, Glasgow Royal Infirmary.

[*Concluded from page 124 of last number.*]

CASE IV.—In this case, the tracheal tube was intended to be used during eradication of an epitheliomatous tumour, this intention being frustrated by the demise of the patient whilst under the influence of chloroform, the tube, however, not being then used. The man was about sixty years of age, but looked older, probably in consequence of excessive alcoholic indulgence, which had been kept up for many years. He had chronic bronchitis with muco-purulent expectoration, in consideration of which considerable doubt was expressed to him about operating; but, as he was very anxious to have the rapidly extending disease eradicated, it was determined to do so.

Owing to the state of his lungs, it was deemed necessary to make a preliminary trial of the tube, in order to observe its behaviour under the profuse expectoration. The tracheal tube was passed, and, during its retention, considerable quantities of muco-purulent secretion were expelled—on several occasions quite clear of the tube, and even in some instances for a considerable distance beyond it—two, three, and even four feet beyond the nozzle of the tube. In order to lessen the secretion, a few days were allowed to elapse, during which remedial measures were resorted to. At the end of this time, the muco-purulent secretion had lessened, and the tube was again tried. On this occasion, the tracheal catheter was inserted, and all the purposes for which it had been introduced having been gained, it was removed at the end of ten minutes. The expectoration was much less; the tube, which the patient held with his own hand, was borne without pain or uneasiness. During the time it was retained, his respirations were easy; he pronounced the monosyllables "Yes" and "No" distinctly; he swallowed his saliva, and drank several mouthfuls of water without disturbing his tranquillity. The way now seemed clear, and it was resolved to operate.

Next morning, in the ward adjoining the theatre, the tube was introduced into the trachea, the patient as usual holding the outer end; he remained there for a quarter of an hour, breathing easily. He then walked into the theatre and lay down on the table. Chloroform was just commenced to be given him, when he rose up, withdrew the tube, handed it to the surgeon, said he would prefer to take the chloroform without it, and that it could be introduced afterwards. He then lay down to inhale the anæsthetic. A few minutes afterwards, he was asked to turn on his side, with which request he readily complied. He breathed quietly and regularly for ten minutes afterwards. He then had what was considered at the time to be the ordinary period of struggle. This ended, the house-surgeon, who was administering the chloroform, stated that for several minutes after the struggle passed off he both felt and heard the respirations going on quite regularly, and certainly his chest was heaving as if from normal respirations.

Nearly five minutes after the struggle had ceased, one of the gentlemen, who held the radial pulse the whole time, cried out that the pulse had stopped. The house-surgeon said: "That surely cannot be, as he is breathing all right." A few seconds later, the breathing ceased. The moment the breathing ceased, the tongue was instinctively withdrawn, and artificial respiration established. Bloodletting was spoken of at the moment, as it was considered that there was an apoplectic element in the case, interpreting the former struggle as a convulsion; but, the heart not responding, it was not carried out. It must be clearly remembered that the patient spontaneously withdrew the tube and handed it to the surgeon, just as he was about to be anæsthetised, and before he was under the influence of the chloroform. Fully fifteen minutes elapsed from that time till the cessation of the cardiac action. The respirations were never for a moment impeded, and actually continued for a few seconds after the cessation of the cardiac impulse.

Viewing the case as it then stood, I was inclined to believe—though a positive opinion could not be formed—that there was a primary cerebral lesion, probably apoplectic, and that the cardiac cessation was secondary.

The necropsy showed an effusion of serum under the arachnoid; and the lateral ventricles were abnormally distended and filled to distension with serum, showing the chronic nature of the affection. There was no impediment to respiration in the larynx, trachea, or bronchial tubes. The lungs were œdematous, and exhibited the appearances of chronic bronchitis and inflammation of old standing. The bronchi and bifurcation of the trachea were congested, the congestion extending for about an inch above the bifurcation. From this point, there were several inches of slight congestion, the shade becoming very slight as it proceeded upwards toward the true cords. At these isolated points, two of them above and one below the vocal cords, there were appearances of ecchymosis on the mucous membrane, each having a superficial area of about three *millimètres* in diameter (about the size of a small pea or a large barley-grain). In cutting into these, it was seen that they were superficial, extending no further than the mucous membrane. The cords were very slightly thicker than normal, probably due to some chronic action. There was also a slight thickening of the posterior part of the laryngeal orifice.

The appearances noted from about an inch above the tracheal bifurcation were such as would have passed without observation in any ordinary case; but, as the opportunity offered, it was considered advisable to take a minute note of them, and they are thus given in detail.

Death was due to the chronic cerebral affection, the anæsthetic perhaps acting as an exciting cause.

Hack's Case of Œdema Glottidis.—After having had the experience of these cases, commencing in the summer of 1878, and having shown one of these patients at the Glasgow Pathological and Clinical Society, on November 12th, 1878, it was with considerable pleasure that I read, in that valuable paper the *London Medical Record*, a reference to a case of an acute laryngeal affection, in the treatment of which one of Schrötter's bougies was introduced into the larynx through the mouth. In turning to the original, which appeared in Volkmann's *Sammlung Klinischer Vorträge* for November 1878, it is seen that Dr. Wilhelm Hack had a patient who was seized with acute œdema glottidis, superinduced on a chronic syphilitic affection of the mouth and larynx; and, when he was at the point of suffocation, Dr. Hack introduced No. 3 of Schrötter's triangular vulcanite instruments, which he retained for a short time. This man was then sent to the hospital; but, on the road thither, he became violently affected with dyspnœa, when he (the patient) took the vulcanite tube, which he carried in his pocket, and introduced it into his own larynx, and so appeared at the hospital with his hands clutching the tube, "as if clinging to his last anchor of safety". Dr. Hack continued the treatment in the Freiburg Hospital. The same evening, he introduced No. 5 of Schrötter's bougies, and, during the two following days, gradually introduced larger ones up to No. 11. He does not mention the precise time these instruments were each retained; but, in the discursive part of his essay, he says, referring to his case, the instruments were retained for almost an hour, and the patient neither complained of particular pain nor disagreeable sensation. From this, it would appear that Dr. Hack retained the instrument in the larynx for a short time only (almost an hour), and that he aims at rapid dilatation of the larynx by the introduction of Schrötter's graduated bougies. His patient ultimately made a good recovery.

History.—It may be advantageous to review briefly the few items of history obtainable concerning the introduction of respiratory instruments by the natural passages. Without stopping at Hippocrates, who is accredited with having entertained ideas on the subject which never found practical issue, we pass to Desault. (*Œuvres Chirurgicales. Exposé de la Doctrine et de la Pratique de Desault*, par Bichat; tome ii. Paris.) Toward the end of Desault's life, he endeavoured to introduce instruments through the nose into the trachea. He was induced to do so by having one day by mistake passed a tube into the trachea instead of into the œsophagus. Two hours afterwards, when he attempted to inject food into the tube, he found out his error. Reasoning from the tolerance exhibited by the trachea in this instance, he thought that the same procedure might be purposely adopted in laryngeal affections. He therefore determined to carry it out. The first observation is mentioned by Geraud, in which Desault passes a tube into the larynx of a man having a laryngeal affection, which afforded him relief, the breathing going on freely through it; though the man died the same evening from causes independent of respiration. The second observation was made on a man affected with something resembling œdema glottidis, on whom Desault passed a tube through the nose into the trachea, which was retained for a day and a half. During this time it was once withdrawn in order to be cleaned. Its reintroduction was attended with little cough; and the man at the end of a day and a half was cured. These observations are given in a very meagre way, almost as isolated statements, and the series of phenomena which attended the introduction and retention of such instruments into the air-passages are barely touched on. In some measure, this may be accounted for by the work not having been written by Desault, the facts not even being gathered from his lips, so that not

only do they lose the life and vivacity which personal description would have imparted, but much also that would have been of value to the surgeon. If these remarks apply to the facts, they are doubly applicable to the instruction which follows, for the introduction of nasal tubes into the trachea. Anyone who doubts this, has but to try to carry out the instructions given by Bichat for the introduction of nasal tubes, in order to convince himself of the correctness of my opinions. Equally erroneous and misleading are the signs given by which evidence may be afforded of the presence of the sound in the trachea.*

These observations were made at the beginning of the present century, and from that time up till 1858 there is no mention of the subject.

M. Bouchut, in 1858, brought before the Academy of Medicine (*Comptes Rendus de l'Académie des Sciences*, tome xlvii, September 1858), what he termed *le tubage du larynx*. This consisted in placing in the larynx a tube eighteen to twenty-four *millimètres* long, and from six to fifteen *millimètres* wide. This little tube was inserted into the larynx on the point of a hollow sound. The sound was withdrawn after depositing the tube on the vocal ends, resting on them by means of a couple of pads. A silken bridle was likewise fastened to this little tube, in order to withdraw it when necessary.

Whatever merit this apparently ingenious little instrument may have possessed, it was brought before the Academy under very unpropitious circumstances. First, that element of success necessary for the favourable reception of a new idea was deplorably absent in his cases; as all of them were failures, five of them having died out of seven; the remaining two only recovered after recourse had been made to tracheotomy. Again, Bouchut was so unfortunate as to fall foul of tracheotomy, which at that time not only had found favour, but was warmly espoused, by the then medical Parisian demigod, Trousseau (*Archives Générales de l'Académie de Médecine*, vol. xii, 5th ser., p. 739; vol. xiii, 5th ser.), who condemned *le tubage*, at least for cases of diphtheria. A long, animated, and somewhat personal discussion followed in the Academy. Malgaigne, Velpeau, and Larrey (*Op. cit.*, Jan. 18th, 1859; also *Bulletin de l'Académie Impériale de Médecine*, tome xxii, 1857-8, tome xxiii, 1858-9), among others favoured Bouchut, and encouraged him to proceed with his observations, the latter remarking, that the Academy ought to bear in mind, that several operations, which were at that time accepted, had been opposed at the outset by that august assemblage; instancing disarticulation of the hip, and tracheotomy itself, in support of his observations. Probably discouraged, Bouchut does not appear to have again attempted the proceeding.

Passing over the abortive attempts of Jules Roux (*Gazette des Hôpitaux*, 1856) and Deprès (*Gazette des Hôpitaux*, 1869) to introduce tubes by the mouth in chronic cases after tracheotomy had been performed, the proposal of Trendelenburg to introduce solid metal bougies into the larynx in *chronic* cases is arrived at. Though Trendelenburg (Langenbeck's *Archiv*, Bd. xiii, p. 338) realised his proposal in one case, it was left to Schrötter to perfect the idea and to practically carry it out. It must be here clearly understood that both Trendelenburg and Schrötter (Schrötter, *Beitrag zur Behandlung der Larynxstenosen*, Wien, 1876) proposed and practised dilatation of the larynx only in *chronic* cases. Weinlechner (1870) proposed the use of rounded tubes in chronic cases, instead of Schrötter's triangular or three-cornered ones. There is, however, no case recorded in which Weinlechner carried out his idea on this point. This brings us down to the present time. Dr. Hack of Freiburg published his case in Volkmann's *Sammlung Klinischer Vorträge* for November 6th, 1878, in which he adopted Schrötter's tubes and principles in an acute case of laryngeal stenosis. The date of this case is not given; but from the context it is clear that it must have been not later than the summer of 1878. In the present paper, I detail three cases, the first of which occurred in the summer of 1878, and the other two in the latter part of the same year, all of them being successful. Hack adopts Schrötter's instruments and principles (being a pupil of Schrötter's). I introduced cylindrical tubes by the mouth, retaining them *in situ* for twelve hours at a stretch, and removing them for purposes of ablution. The object in doing so was twofold: first, to enable respiration to be carried on; and, secondly, to cause absorption of the fluid by the presence of the tube exercising pressure of a slight kind.†

Historical Résumé.—There are, *first*, nasal tubes, proposed at the beginning of the present century by Desault, who in two cases passed them into the trachea. One of his patients died; the other recovered.

Second. [illegible] was proposed in 1858 by Bouchut, and practised by him in seven cases, all of them being failures.

Third. Trendelenburg and Schrötter within the last few years have passed three-cornered vulcanite tubes into the trachea in *chronic* cases, and retained these cases *in situ* for a portion of an hour at a time; Dr. W. Hack having carried out the same principles with the same instruments in one acute case during or before the summer of 1878.

Fourth. The writer introduced cylindrical tubes by the mouth into the trachea, and retained them *in situ* for thirty-six hours, removing them when required for ablution (say every twelve hours); two such cases having been treated with perfect success.

Is the Introduction of such Tubes easy?—The following is a question very often asked: Is the introduction of tubes into the trachea easy? This at all times must be a difficult question to answer for others, as the case will depend on the experience of the operator. Personally, having had considerable practice in the passage of œsophageal bougies and catheters, I would be inclined to say that the introduction of tracheal tubes would be more difficult than the passage of urethral catheters into normal urethræ; but they could be passed a great deal more easily than catheters in most cases of urethral stricture. Before passing tracheal instruments in the living, it would be well to practise on the "subject", as this helps to cultivate the touch. Given a quiet patient in health, the introduction of the tracheal tube will be found almost as easy for the operator as its passage *post mortem*. In the two cases of œdema glottidis which I have treated in this way, the introduction of the tubes was more easy than in the cases with healthy larynges. In the former, the parts were fixed, thrown further forward in the mouth, and much less sensitive, all favouring the introduction of the tubes. The first insertion is for the patient the most disagreeable, the subsequent ones being attended with comparatively few manifestations of uneasiness.

Mode of Introducing the Tubes.—The mode of introducing the tubes has already been alluded to in the remarks on the dead body. The only difference is that, if any hitch occurred at the level of the cords, it might be overcome by asking the patient to take in a deep inspiration, during which the instrument ought to be passed. The head ought to be thrown back during the insertion of the tubes.

Advantages over Tracheotomy.—Besides the superiority which the simple introduction of a tube into the trachea through the mouth has over a cutting operation, which in itself is not unattended with danger, the following points may be noted as advantages on the side of the former. The air, as it passes through the natural passages into the lungs, becomes warmed, moistened, and filtered. When a wound is made into the trachea through the neck and a short tube is inserted, the cold dry unfiltered air gets access to the lungs, and often produces fatal congestions. Every surgeon knows how difficult it is, even in hospital, to maintain for days continuously an uninterrupted supply of extraneous warmth and moisture; and how, now and again, in spite of the very best arrangements, a hitch occurs, during which cold dry air gains access. The tubes introduced through the mouth do away with the necessity of supplying extraneous warmth and moisture. A tubular instrument, passed through the mouth into the trachea, will convey heated moist air into the lungs, and to a considerable extent will filter it of its dust and organic particles. Even a tube, with one end in the trachea and the other projecting from the mouth, will attain, a few minutes after insertion, the same heat as the human body; and as a consequence will temper the air as it passes into the lungs. After a short time its interior will be covered with moisture, which will offer an extended surface for adhesion of organic particles, and so help to filter and at the same time moisten the air.

Cases in which these Tubes might be Used.—It will be observed that I do not particularise the kind of cases in which tracheal tubes passed through the mouth may be used, further than by stating, that there are obvious reasons for preferring tracheotomy or laryngotomy when foreign bodies are in the windpipe; and, on the other hand, for preferring tubes through the mouth where there are effusions of blood or serum, or collections of pus, into or about the submucous laryngeal tisssue; or when anything overhangs or threatens to occlude the laryngeal orifice. Again, it may be asked, whether such instruments might not be of very considerable service in cutting short many spasmodic affections of the cords and upper portions of the larynx such as spasmodic croup, laryngismus stridulus, and in some cases of incarceration of the epiglottis, etc. Tubes inserted in some such cases might not only relieve the spasm, but also help to cure the disease by destroying the habit.*

Cases in which the disease, or at least the necessity for using the tubes, would be of short duration, are the most suitable for this procedure. Again: where the person is too weak or objects to have tracheotomy performed, or where the practitioner does not care about perform-

Mackenzie's [illegible] of a Parisian surgeon who attempted to relieve [illegible] with polypus within the larynx. Sir Morell Mackenzie refused to introduce the catheter, but each time the instrument appeared only to produce irritation, and eventually he desisted.

† A clear distinction must be drawn between respiratory catheters and instruments used for aspirations or insufflation, such as Chaussier's tube.

* Baginsky agrees with Bretonneau, Gerhard, etc., that the dyspnœa in croup is the result of mechanical obstruction only, and does not believe in the absolute paralysis of the abductors of the vocal cords.

ing it, the tubes passed through the mouth might be used, even in the latter case, to gain time to allow an operative surgeon to be called.

The tubes must necessarily be of various sizes, so as to suit the various larynges into which they may be introduced. At present, a tube of a better shape and form than that now in use, and one which will present other advantages, is being prepared for me.

It must be obvious that the time during which the tubes are retained must depend on the case. In some, a few hours might be sufficient to dispel the œdema; in others, a much longer period is necessary.

How to recognise that the Instrument is in the Trachea.—How would one recognise the presence of the instrument in the trachea? 1. By finding the instrument pass over the first ring or two of the trachea; 2. By finding that the air flows into the tube during inspiration and out during expiration—the opposite being the case if it be in the œsophagus; 3. By the mucous expectoration being expelled from it; 4. By the negative signs that it is not in the œsophagus or stomach—*i.e.*, blowing up the stomach through the tube, etc. Before introducing the tubes, an examination by the laryngoscope ought to be made to ascertain the precise state of the parts.

Deductions.—The practical deductions which may be drawn, *tentatively* at least, from these cases are as follows.

1. Tubes may be passed through the mouth into the trachea not only in chronic, but also in acute affections—such as œdema glottidis.
2. They can be introduced without placing the patient under an anæsthetic.
3. The respirations can be perfectly carried on through them.
4. The expectoration can be expelled through them.
5. Deglutition can be carried on during the time the tube is in the trachea.
6. Though the patient at first suffers from a painful sensation, yet this passes off, and the parts soon become tolerant of the presence of the tube.
7. The patient can sleep with the tube *in situ*.
8. The tubes, in these cases at least, were harmless.
9. The ultimate results were rapid, complete, and satisfactory.
10. Such tubes may be introduced in operations on the face and mouth, in order to prevent blood from gaining access to the trachea, and for the purpose of administrating the anæsthetic; and they answer this purpose admirably.

NOTE ON HOMICIDAL MANIA.

By JAMES RUSSELL, M.D., Senior Physician to the Birmingham General Hospital.

The following particulars given me by the mother of an out-patient at the Birmingham General Hospital, and by the patient himself, explain themselves. In a forcible manner, they tell the tale of what passes in the mind of many an epileptic when driven by his disease to sudden acts of violence; and explain the homicidal tendency which sometimes springs up under such circumstances.

A young man, aged twenty-nine, has been under me, at times, for several years, a confirmed epileptic, and the son of a father equally confirmed in the same disease. His fits were kept under by moderate doses of bromide of potassium, but, after the 31st of last January, his medicine was suspended in consequence of the want of an out-patient ticket. The fits then returned with frequency; about two severe ones, with tongue-biting, occurring in a week, but very numerous slighter ones. In March, the first attack of the mental disorder, to which this communication refers, took place: it lasted for a fortnight, and yielded to medical treatment. The patient was violent for three days, and then fell into a condition of melancholy, "as though a cloud were on his brain". In a week after his recovery of mental health, the fits returned—they had been absent during the period of mental disorder (of course, I speak only from the mother's report)—but again, at the end of eight weeks, the mental affection returned, and again yielded to treatment at the termination of about a week. As before, the recovery of sanity was followed by recurrence of the epileptic fits, mostly in a slight form; and for the third time the mental disorder attacked him (May 19th), and yielded to remedies in ten days.

The mother gave the following description of the mental disorder. He had a constant fear of being dared to hang himself; he told her that, if she did not take every care of him, he would be obliged to do it; he did not like to be considered a coward by people standing before him (in imagination); they kept showing him how to do it; and he thought that if his mother took him to a doctor, he would drive the figures away. This "thought over him" lasted all the time. He wandered about, sensible in other respects, but with a sort of pitiful expression, more child-like, and with a tendency to cry. "It is ridiculous," he said, "to talk of anything else, for I have got it in my mind, but it never comes when I am right." He dared not sleep, for, if he closed his eyes, "he saw so many".

The patient himself told me that it was like a man before him; there was like a scaffold and a rope, and they kept showing him the way to do it. They said, "You dare not do it! you dare not do it!" Something felt very heavy on his forehead, and all was dark about him. "I could not bear the thought of hanging myself, but nothing else would come into my mind." When these "feelings" were passing off, something passed from the forehead, over the face, then down the arms, out at the fingers, and then he became himself again, and could think of other things.

This young man has been more or less epileptic from infancy, but he has only suffered once before from any mental derangement. He then had an idea that his mother loved his brother best, and that seemed to work on his mind. He thought he must get rid of his brother. One day his mother heard him threaten his brother, and open his knife; he was easily induced to part with the knife, observing that he thought he had better do it to himself instead.

The patient's attestation to the compulsory nature of this suggestion, and to the impracticability of his varying it by any effort of his will, and at the same time his half consciousness of the unreality of the whole, are worthy of notice. What if this countercheck be weakened or removed?

COLOUR-BLINDNESS AMONGST THE MEDICAL PROFESSION.

By B. JOY JEFFRIES, M.D., Boston, U.S.A.

In the JOURNAL for October 25th, 1879, Mr. Herbert W. Page published an article on "Colour-blindness: its Examination and Prevalence". I have commented at some length on this subject in a previous communication, and would now merely report in reference to a suggestion he then made. He proposed that the members of the British Medical Association should be most carefully tested at the Cambridge meeting in August next, to ascertain the proportion who are colour-blind "among those who neither lack education, observation, or cultivation".

To partly answer this suggestion, I have recently tested 465 of the members of the American Medical Association at the New York meeting, and of the members of the Massachusetts Medical Society, at the annual meeting here in Boston. I found, among these 465 physicians, 22 colour-blind. Of them, 14 were red blind, 2 green blind, and 6 incompletely colour-blind, using the standard of Professor Holmgren. The whole number of males I have so far tested is 17,327. Of these, 724 were colour-blind in a degree to be included in the classes proposed by Holmgren. I have also tested 13,813 females, finding only 10 colour-blind.

Unless the *whole* of a large number of people are tested, the ratio, we find, may be quite above or below 4 per cent., which seems to be the true average for males. For instance, in New York I found but 6 out of 195; here in Boston, 16 out of 270. As a general thing, perhaps, as many colour-blind, from various reasons, stay away as apply to be tested. Here in Boston none of my professional brethren whom I *knew* to be colour-blind came to me. Could I have tested the other 2,000 of the medical profession attending these two meetings, I am quite convinced that the whole would have given me the usual 4 per cent. average. If the members of the British Medical Association are tested at Cambridge, the proportion found colour-blind will depend on the number examined, and whether those thus defective apply or stay away. If 1,500 be present, they can all be tested in three days by one person working six hours each day, provided it could be so arranged as to have a steady stream before the examiner.

Now what method of testing could accomplish this with certainty and accuracy? A pretty extended experience, theoretically and practically, convinces me that such investigations can be carried out only by Holmgren's method, with which none other compares. Certainly with it, as with all methods, it depends largely on the examiner, who must be all eyes in watching the face, fingers, and *look* of the examined. The latter had far better not speak, or at least confine this to a question of what is asked of him to do. The examiner can explain what is needed, and one after another sees what is done by those before him. *It is also a test of mental and physical quickness.*

In a previous communication to the JOURNAL I have defended the accuracy of my published results. In these tests of my medical brethren, I of course had the advantage of their being desirous to appear the best, and also do as nearly as they could just what was asked of them. The bystanders constantly wondered that I did not mark as defective many who seemed so to them. This test of my friend, Professor Holmgren, when the *right worsteds are used* (a most important point), and the

examiner is practically familiar with its use and the laws of the colour-blind, yields results in no way inferior in certainty and scientific accuracy to any other method. For readiness of application none of course are comparable.

Mr. Page said, "Because uneducated and unlearned men cannot sort Holmgren's skeins is, to my mind, the very poorest evidence of their being colour-blind." Now my experience has been with children of four years of age upwards to adults and old people; and with *all classes*, from the highest to the lowest, socially and educationally, I have never found a person who could not do what is required in Holmgren's test, viz., "pick out from the bundles of worsteds all lighter or darker of the colour of the test" presented, unless they were colour-blind. I am assured Mr. Page would agree with me, could he follow my work *de visu*. I am forced to say that educated people have proved themselves as stupid in performing the task as the uneducated, and often as stupid about colours; hence the immense value of the simplicity of Holmgren's test. Almost invariably, the writer who speaks of it in opposition or in doubtful tones, shows most conclusively from what he says that he has not learned it either from Professor Holmgren's description, or *de visu* from a practised examiner. Professor Holmgren himself does not pretend that it is as easy as it looks to the bystanders, whether of the profession or the laity. But what he holds, and what my own experience fully sustains him in is, that this means of detecting colour-blindness is most practical and very certain, when conducted properly and understandingly. His long and minute description of the manner of applying the test must be studied, and his directions put in practice. When this is done with large numbers of males, I mean thousands, the result will be a ratio of 4 per cent. with defective chromatic sense, not colour-careless or colour-stupid. These we must call colour-blind, and they are dangerous as railroad *employés* or as mariners. Whether we class them by the Young-Helmholtz theory or by Baring's, does not change their defect or alter its relation to the community.

CLINICAL MEMORANDA.

CASE OF ACUTE INTUSSUSCEPTION, TERMINATING IN RECOVERY.

L. G. C., AGED eight months, was first seen on Monday, April 26th, 1880, at 5 P.M. The mother stated that the child seemed perfectly well on Saturday morning, but that on Saturday afternoon it was seized with sudden sickness, and appeared very ill and in pain. She, therefore, gave a dose of castor-oil; but the sickness continued. On Sunday, at 2 P.M., the bowels acted slightly; but blood passed. When seen on Monday, the child was semicomatose, with sanguinolent discharge from the bowel, with occasional great straining and retching. A little chalk mixture, with aromatic spirits of ammonia, was ordered. At 10 P.M., the child was again visited; the symptoms being much the same. On examining *per rectum* with the finger, a protruded invaginated portion of the bowel could be just reached, and the diagnosis of intussusception was complete. The nozzle of a small pair of bellows was introduced, and an attempt made to inflate well the bowels; but from some cause the inflation did not go on very successfully, although a considerable quantity of air seemed to enter the canal. The tube of a stomach-pump was then passed carefully up the bowel, and carried firmly but cautiously against the invaginated mass—desisting during the violent fits of straining which the passage of the tube seemed to cause. At last, after passing at least one foot of tube, air was heard to issue through it, bringing with it a little bloody mucus. The tube was withdrawn, and, on feeling again with the finger, no protruding portion of bowel could be felt. On the following morning, there was a slight decrease in the sickness. The child still lay in a listless state, occasionally twisting about as if in pain, but with no action of the bowels. No medicine was given; but on Wednesday a gruel injection, administered in the morning, came back directly, causing much straining. In the evening, another injection was administered, and brought away a small quantity of fæcal matter; and on Thursday, as the symptoms seemed to warrant it, there being no vomiting, some carbonate of magnesia with aromatic spirits of ammonia were ordered; and, on the evening of Thursday, the bowels acted, and the child progressed, without a bad symptom, and is now well. No portion of the intestine ever came away, as the motions were carefully watched.

The interest in the case lies in the intussusception being so fortunately placed as to be within something like reach, and in its early detection before any very serious adhesions had formed to cause peritonitis. Brandy was allowed all through, and apparently with benefit.

SAMUEL PEALL, M.D.

THERAPEUTIC MEMORANDA.

ON A NEW METHOD OF ARRESTING GONORRHŒA.

I READ with great pleasure the article headed as above by Mr. Cheyne, and wish to state that I have adopted his method of passing medicated bougies up the urethra for acute and chronic gonorrhœa. The bougies I used were made by Kirby and Co., 14, Newman Street, Oxford Street. The other day, I thought I would use iodoform in the shape of a bougie; I therefore ordered some containing five grains in each, and have been very gratified with the result, which has quite come up to my expectation. I have been in the habit of using iodoform, both in the form of ointment and of powder, for some years, and with marked success, in the treatment of indolent varicose ulcer of the leg, soft chancres, etc.

The method I adopt in the treatment of gonorrhœa is this: I first order the patient an injection containing ten minims of liquor plumbi and two grains of sulphate of zinc to an ounce of water; to be used frequently, until the acute symptoms have subsided. I then pass a No. 9 bougie up the urethra as far as the ulcerated spot. I then apply a piece of lint over the orifice of the urethra, under the prepuce; and tell him not to pass his urine for some hours afterwards. I order him to take as little liquid as possible, and no stimulants. I generally pass one or two bougies a day. My patients generally get rid of the gonorrhœa in a week. The only constitutional treatment I adopt is a brisk purgative, followed by tonics.

J. BRINDLEY JAMES, M.R.C.S.Eng., 47, Jamaica Road, S.E.

SURGICAL MEMORANDA.

AMPUTATION FOR DISEASE OF THE FEMUR.

I HAVE read with interest a contribution by Mr. Holmes, in the JOURNAL of the 17th instant, in which early amputation is advocated in malignant disease of the femur. There is a case now in the wards of St. Thomas's Hospital, where the thigh has been amputated at the upper third for rapidly growing sarcoma of twelve weeks' duration. The growth involved the lower third of the femur, and probably originated centrally, although upon section the expanded shell of bone, usually found in these cases, was imperceptible, this having been absorbed. The circumference of the knee exceeded that of the opposite by eleven inches; and the entire vertical measurement of the growth was eleven inches and a quarter.

When admitted, the child, who was six years of age, was suffering most acutely; the skin over the tumour was tense, red, and shining; and, although suggesting the presence of a huge abscess in connection with the knee, the nature of the disease was at once recognised. Amputation was performed on July 10th by Mr. Croft, three days after admission; since which, the patient, in spite of the severity of the operation, has recovered in her general health to a degree beyond expectation.

It is early to speculate upon the ultimate recovery of the patient; but this and other similar cases which have come under my observation, where the patient has been worn out with pain, and the growth encroaching upon or involving surrounding structures with rapid strides, would indicate that early amputation is necessary and often followed by the best results. H. PERCY POTTER, F.R.C.S., Surgical Registrar.

RUPTURED LIGAMENTUM PATELLÆ.

A SHORT account of this, as far as I know, extremely rare accident may be of interest to readers of the JOURNAL.

On December 20th, 1878, I was called to see J. J. D——, aged 39, a builder, of spare habit, who, while superintending some work on a building, fell through a scaffolding six feet high. The accident was due to a beam, which was being raised into position, falling and breaking down the scaffolding on which the man was standing. He sustained a punctured wound of the forehead, with a depressed fracture of the outer table of the frontal bone over the left frontal sinus; a lacerated wound of the left cheek; and complete rupture of the ligamentum patellæ. The rupture was transverse at the apex of the patella, but did not involve that bone in the least. The force which tore the patella from the ligament was exerted from below upwards, the knee having been firmly and tightly grasped between two or more pieces of wood as the man fell downward through the scaffolding. Although there was some swelling, the diagnosis was very easy. All possibility of doubt or error, were there any at the time, was cleared up in a week afterwards, when all effusion was absorbed. The patella was readily and easily pushed up on the femur, until its apex was on a level with the

apex of the intercondyloid notch: the finger passed down between the femoral condyles and the head of the tibia; and the ligamentum patellæ was very easily traced, *in situ*, from the tubercle of the tibia upwards. I could not discover the smallest fragment of the patella adhering to the torn ligament.

A modification of Langier's method of treating fracture of the patella was adopted. Thirteen days after commencing treatment, the man left for his home in the country, one hundred miles distant. The latest information obtained from him was two months after the accident, when he wrote saying, "The knee acts pretty much as an universal joint". What treatment, if any, was pursued after passing from my care, I cannot say.

P. O'CONNELL, M.D., Ch.M., Sioux City, Iowa, U.S.A.

SAYRE'S PLASTIC JACKET.

I HAVE a little patient, six years old, who, in consequence of Pott's spinal disease and psoas abscess, requires a jacket renewed about every three or four months. Hitherto, I have succeeded in the application by suspending from the armpits. This has been a tedious and unsatisfactory state of things, as I had no suspension apparatus, and had to rely upon an adult holding him up. After reading Mr. Davy's lecture in the JOURNAL, I determined to try his plan; and, by means of two staples driven into the wall on opposite sides of the room, and a few yards of unbleached calico, I succeeded in applying a jacket which simply exceeded my anticipations—did not fatigue either patient or operator, and, above all, placed the little sufferer in a position as upright as a dart. After the application, I left him swinging about for his amusement for about two hours, and by that time the jacket was firm. L. B. MASON, L.R.C.P., etc., Pontypool.

OBSTETRIC MEMORANDA.

REMOVAL OF AN UTERINE TUMOUR DURING LABOUR.

I VENTURE to send the history of a case of midwifery, which I believe to be interesting from its rarity.

The patient was forty-six years old, and had had five children, all of whom were alive. She is a stout, healthy-looking woman, and seven years had elapsed since the birth of her last child. On examination, I found (she being in labour at the time) that there was a tumour in the vagina, barely permitting the passage of the finger for examination of the os uteri. It was pear-shaped, with a broad pedicle, and was attached by the pedicle to the posterior half of the os. I was enabled to make out a vertex-presentation; and as the labour-pains were regular, but not strong, I decided to remove the tumour. With the assistance of Mr. Wilton (one of the consulting surgeons of our General Infirmary), I ligatured the pedicle with thin whipcord in two places, the upper ligature being as near to the base of the pedicle as was possible. This was done under chloroform. I then divided the pedicle with a pair of scissors, and removed the tumour. The labour came on strongly, and the woman was delivered of a female child. Before the placenta came away, I examined the portion of the pedicle left behind, and found that the lower ligature had slipped; but the upper one—the one nearest the os—remained firm. A very gentle traction sufficed to bring the placenta away, and the case went on very well. I saw both mother and child very lately, and both are in good health. I forwarded the tumour to Dr. Frederick Taylor of Guy's Hospital, who very kindly examined it for me. The following is an extract from his letter. "A globular tumour, measuring nearly two inches in diameter. It cuts hard and dense, and presents within a great number of cysts, from the size of a pin's head to the diameter of one-third of an inch. The solid part of the tumour consists of muscular fibre-cells and white fibrous tissue; the latter in somewhat great quantity. It may, therefore, be described as a fibro-myoma undergoing cystic change, or more shortly as a fibro-cystic polypus."

A. M. SYDNEY-TURNER, Gloucester.

TUBERCULOSIS OF THE HEART.—Herr Sanger publishes in the *Archiv des Heilkunde*, Band xix, a paper, in which he reports twenty-two cases of this disease. According to his experience, cardiac tuberculosis shows itself under several forms: extrapericardial tuberculosis, which successively reaches the pericardium and the myocardium by propagation; perimyocardiac tuberculosis; and endocardiac tuberculosis. In these different forms, tuberculosis shows itself under the various aspects of circumscribed tuberculosis, diffused tuberculosis, and myocarditis with tuberculosis.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

SUSSEX COUNTY HOSPITAL.

LOCOMOTOR ATAXY IN A BOY. BY W. AINSLIE HOLLIS, M.D.*

HARRY G., paper-boy, aged 13, was admitted as an in-patient to the hospital on November 21st, 1879. His mother was alive and healthy. His father had recently died of cardiac dropsy. The patient was the second of six children; five were living; four healthy; one girl died in infancy. There was no history of chorea, epilepsy, or mental disorder amongst his relations.

The patient, an intelligent lad, had had no illness sufficiently severe to keep him in bed, except measles and scarlet fever in childhood. He was stated to have suffered from frequent attacks of diarrhœa, passing blood in his motions. Until nine years of age, he was quite firm upon his legs. About this time, his mother first noticed a weakness in the legs and something "strange" in his appearance, as though he had had "something to drink". There was no personal history of fits, chorea, or of any mental disorder.

On admission, the boy was poorly nourished. He could not stand upright with his heels together and his eyes closed. There was always considerable swaying of the body (static ataxy) when standing unsupported. The head was held stiffly. In walking, the legs were widely separated, and the feet flapped the ground at each step. He frequently fell down, apparently from weakness of the legs, sometimes from giddiness, but he never lost consciousness. Cutaneous sensibility of the legs—tested by pricking, pinching, and the application of warm and cold sponges—was not observably impaired. There was no sensation of walking upon air-balls, etc. Patellar tendon-reflex was absent. (This reflex was only impaired about a fortnight before his admission.) There was some reflex action on tickling the soles of the feet. Muscular sensibility, as tested by the continuous current, was fairly good. The muscles responded to the action of the current, and he perceived their contraction. Muscular power was good. He complained of occasional lancinating pains along the course of the anterior crural nerves. He could not pick anything off the floor without kneeling. The upper limbs appeared to be healthy. He could write a good round hand. He readily touched the tip of his nose with either hand whilst his eyes were closed. The eyesight was normal in strength, as tested by Snellen's types. No amblyopia nor diplopia was observable. The pupils contracted naturally. There were no ataxic movements of the eyeballs upon attempting to follow a moving object with his eyes. At one period of his disease (January 1880), he suffered for some days from a pain in the left side of his head, followed by a discharge from the left ear. He frequently suffered from giddiness. There was no deafness. He spoke slowly and somewhat indistinctly. His general health was fairly good. There was no loss of control over the sphincters.

During his stay in the hospital, he was treated with iron and strychnia, cod-liver oil, and the continuous current; no perceptible improvement resulted.

REMARKS.—The above case presents several peculiarities worth consideration. First, as regards the age of the patient; among sixty-eight observations, Erb found only three to have commenced between eleven and twenty years of age. The statistics of Carré, Topinard, Cyon, and others, correspond closely with these. Friedreich has certainly noted a peculiar variety of this disorder, which is seemingly hereditary, and begins very early in life. Dr. Bradbury (BRITISH MEDICAL JOURNAL, 1871, vol. ii, page 499) narrates a case which, in many respects, resembles the foregoing. The patient, however, was eighteen years of age when he came under observation, with well-marked symptoms of ataxy. In this case, a hereditary tendency was probable; so far, it resembles the three cases mentioned by Friedreich, aged respectively fifteen, sixteen, and eighteen (Virchow's *Archiv für Pathol. Anat.*, vols. 26 and 27, 1863). In the BRITISH MEDICAL JOURNAL (June 4th, 1870), a case of locomotor ataxy, in a man aged twenty-four, is shortly recorded. The disease is stated to have commenced at the age of nine. Dr. Ryott (*Lancet*, August 12th, 1876) also sends notes of a case of this disorder in a patient aged nineteen. The above cases are all I have been enabled to meet with. Many of them are, from the scantiness of the descriptions, valueless for the purpose of comparison. I think, how-

* Read at the East Sussex District meeting. The patient was exhibited.

ever, they sufficiently show the rarity of the disease at the age of the boy G., especially if we exclude all hereditary taint.

As regards the origin of the disorder in this case, it will be difficult to ascribe it to any other cause than that of "taking cold". G.'s occupation as a newsboy doubtless gives this conjecture (for want of a better one) an aspect of probability.

Another peculiarity in the case is the rapidity with which the symptoms increased in severity during the last six months. Friedreich lays considerable stress upon the long duration of the disease in the young affected by the hereditary form, lasting as it did in some instances for upwards of thirty years. Kellogg (quoted by Erb) also gives some similar cases of long duration. On the other hand, the absence of severe lancinating pains in the affected limbs (although G. suffered from these pains occasionally, they were by no means a prominent symptom) coincides with Friedreich's observations. In Bradbury's case also the pains were slight.

The co-ordinatory disturbance of speech, the absence of any disturbance of sensibility, or only insignificant ones, are also mentioned by Friedreich as peculiarities in his cases—peculiarities well-marked in the present instance. The rapid development of the ataxic phenomena in the muscles of the eyeballs and the upper extremities, in the latter writer's and in Bradbury's cases, are singularly at variance with the course the disease has taken in the boy G. I think the above case strengthens the hypothesis lately advanced by Tschirjew, namely, that tendon-reflexes (producible in any muscle favourably situated) are due to relations existing between the muscles and the spinal cord. According to this authority, every muscle possesses not only centrifugal motor nerves, but also centripetal nerves, having their origin near the junction of the muscle to its tendon, and passing into the spinal cord through its posterior roots. This nervous arrangement serves the purpose of keeping a constant tension upon the tendons, which tension in its turn reacts as a stimulus to the muscles to preserve their tonicity. When we put into action any group of muscles, the tone of their antagonists commences at once to increase, owing to augmented tension of their tendons. If this muscular nervous system be deranged (as by disease of the spinal cord), the corrective action of the antagonistic muscles becomes lost, and the movements become jerky and uncertain. (*See London Medical Record*, 1880, page 82.)

REPORTS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

MAY 11TH, 1880.

ALEX. ROBERTSON, M.D., President, in the Chair.

Cerebral Localisation.—Dr. ROBERTSON showed a patient, aged 28, illustrative of this doctrine. The patient, four years ago, had a fall on the back of his head which stunned him, and which had since been followed by giddiness, headache, and epileptiform convulsions, gradually increasing in intensity. The convulsive seizures generally began in the left hand and extended sometimes to the elbow, when they passed off in about two minutes. At other times they involved the upper arm and the side of the neck and head; and in the more severe attacks the patient became unconscious after the arm had been affected for a minute or two. During a somewhat prolonged examination, Dr. Robertson remarked that the patient three times became suddenly abstracted, his eyeballs oscillated from side to side, and a smile passed over his face; the explanation being that the patient saw figures of women, old acquaintances, before him. These figures always came from the left side, and did not remain for more than a minute, and were known to be unreal. The pupils were unequal, the left being smaller than the right. There was no distinctly abnormal appearance of the retina. The patient could distinguish colours fairly well, but, when giddy, the vision of the left eye was much impaired. Hearing also was much impaired. The mental faculties were also somewhat enfeebled; the hallucinations of vision were sometimes so vivid that reason could scarcely correct the false impressions, and the patient was for the time being all but insane. Tapping of the skull was very painful on the right side over an area of about two inches above and in front of the ear, and extending nearly to the middle line. Dr. Robertson remarked that this case supported the doctrine of the localisation of motor centres. The convulsive movements affecting chiefly the left arm and side of head, pointed to the anterior part of the motor region of the opposite side of the brain, and the area of special pain corresponded with that indication. The hallucinations of vision, and the degree and form of deafness, showed that other parts of the brain besides the motor region were involved. The short duration and paroxysmal character of these hallucinations, and their association with nystagmus, were interesting and exceptional features. Such hallucinations might justly be regarded as convulsions in the sphere of special sense.

Eczema of Nipple and Scirrhus of Male Mamma.—Dr. R. W. FORREST showed a patient, aged 72, in whom this disease began about a year ago with a leakage on one side of the nipple, resembling milk. This formed a crust which, on being removed, left the skin red and tender. About six months ago the nipple began to be retracted, and about the same time the patient observed some hard enlarged glands along the outer border of the pectoral muscle and in the axilla. The case now presented all the appearances of an ordinary scirrhus of the mamma with a small eczematous patch near the nipple, and was interesting as being the first recorded case in which eczema was associated with scirrhus in the male breast.—Dr. JOSEPH COATS showed two specimens in which scirrhus of the mamma was associated with excoriation of the nipple, and in which the characters were not those of duct-cancer. The first specimen had existed for three years before removal and had only attained the size of a hazel-nut; the other only began a few months ago, and had invaded the whole gland. In the first case the cells were well developed, but in the second they were much smaller and more rudimentary. In other respects, the microscopic characters of the two tumours were very similar.

Medullary Sarcoma of Humerus.—Dr. MACPHAIL showed the arm of a female, aged 22, in which the entire humerus except the condyles had been replaced by a sarcomatous tumour. The disease began with slight pain about two years ago. In October, 1878, the patient received a slight blow on the left arm, which caused a fracture about the middle of the shaft of the humerus. This was followed a few weeks after by a second fracture through the surgical neck. The intermediate fragment became thickened, and quite soft and pliable. No pain was felt while the parts were kept at rest. In December, 1879, a fracture was discovered in the upper third of the right humerus, but how it was produced the patient could not tell. The right arm began to swell more rapidly than the left. The general health meanwhile remained good. Amputation of the left arm was performed on May 4th, 1880. On section of the tumour, it was found to have entirely replaced the proper structure of the humerus, with the exception of the two condyles. There were also a few spicula of bone here and there in the tumour. Dr. Coats referred the probable origin of the tumour to the medulla, from which it had grown outwards till it destroyed the dense bone of the shaft. He also had noted a cyst in the midst of the tumour near its upper part, probably due to fatty degeneration, and indicating the original seat of the tumour.

Sanguineous Apoplexy and Hæmatoma of Dura Mater in a Boy.—Dr. ROBERTSON showed the brain of a boy, aged 10; containing two sanguineous effusions, one in the substance of the right occipital lobe, and the other in the back part of the right parietal lobe, each being about the size of a walnut. There was also a false membrane lining the greater part of the dura mater on the right side, and extending to the base. This was red in colour, and could be peeled off the dura mater with ease, leaving the latter smooth and bright as usual in the young. It was considered to show well the process of formation of false membrane by the organisation of effused blood. The left ventricle of the heart was hypertrophied, and the mitral valve was loaded with vegetations. The boy had been paralytic on the left side for nine months, and died after convulsions affecting chiefly the right side. Mind had been almost entirely in abeyance during the last two months of life.

Scirrhus of Mamma.—Dr. FOULIS showed a series of seven specimens of scirrhus of the female breast, specially prepared to show the relation of the cancer-mass to the nipple. In some of these the nipple was involved, but in such a manner that there was a line of demarcation by fatty subcutaneous tissue between the cancer of the nipple and the main mass of the cancer, the communication being along the ducts. In others of the cases the cancer seemed to drag in the nipple merely by dragging mechanically upon the ducts, and the cancer-mass seemed to be quite apart from the nipple. In a third variety the cancer had infiltrated the nipple-duct and the septa of the gland far and wide; and in this variety there were several masses of cancer here and there in the breast, only united by the infiltrated septa. He placed the specimens on the table to compare with Dr. Forrest's case, in which, although the nipple was the seat of a precursory eczema, yet the main nodule of the cancer was at some distance from it.

Cystic Disease of Mamma.—Dr. CAMERON showed two mammæ affected with cystic disease, which he had removed from two unmarried women. The first mamma was removed about three years ago. The patient came to hospital with a small cyst near the nipple, which on being tapped, was found to contain a quantity of blood. As it refilled rapidly, and evidently contained an intracystic growth (which could be felt when it was emptied) the cyst was excised. The growth was a vascular cauliflower-like excrescence, and was evidently the source of the blood which the cyst contained. The patient returned in about six months with

numerous cysts in the mamma, and the whole gland was removed. The second specimen also showed very numerous cysts, varying in size from a split pea to a small orange. This cystic disease implicated every part of the gland, and the whole breast was removed. Both patients remained alive and well.

MANCHESTER MEDICAL SOCIETY.

ADJOURNED MONTHLY MEETING, JUNE 9TH, 1880.

DAVID LITTLE, M.D., President, in the Chair.

Anophthalmus.—Mr. CHARLES E. SMITH showed a child, aged 2 months, otherwise quite healthy and free from any malformation, the subject of congenital deficiency of the left eyeball. The father and mother were quite healthy, and their family history was perfect. The mother was a multipara, but the other children died of infantile convulsions. In her last pregnancy, she had a fall on the pavement during the seventh month, but from which she apparently experienced no bad results. The child was healthy and fully developed. The right eye was natural, and the lids and appendages of the left eye were quite normal. There was not the slightest trace of the globe of the eye, the orbit having the appearance as if excision of the bulb had been performed. The interest of the case lay in its rarity; and Mr. Smith was unable to detect any cause for such an arrest of development in a child otherwise healthy, and which had every probability of being reared.

Infantile Paralysis.—Dr. EDGE mentioned a case of infantile paralysis, which occurred in a boy aged 10. The paralysis involved both lower extremities, the muscles of the back, and the muscles of the back of the forearms, producing dropped wrist on both sides. The faradic contractility of the affected muscles was diminished, the cutaneous sensibility of the legs was impaired, and there was some wasting of the hands. There was no loss of power over the bladder and rectum, and no tendency to bedsores. The case rapidly improved; extension of the wrists was possible in a fortnight; in five weeks, the patient was able to walk well, and entire recovery ensued. Reference was made to the anterior cornua of the spinal cord as the admitted seat of the lesion in this affection, and to its occasional occurrence in adults as well as in children. Dr. Edge made some remarks on the presence, in this instance, of some amount of anæsthesia (which was referred to implication of the central grey matter of the cord), and on the unusually satisfactory termination of the case.

Tubercular Ulceration of the Large Intestine.—Dr. ASHBY showed a specimen of tubercular ulceration of the colon, which had caused death from hæmorrhage. The patient, aged 4, was the subject of general tuberculosis of an acute character, and had passed into a semi-comatose condition from the meningitis before the hæmorrhage occurred. The hæmorrhage occurred on three occasions during the last twenty-four hours of life. At the *post mortem* examination, tubercle was found in the membranes of the brain, lungs, peritoneum, small and large intestines. The latter was full of clot, and contained transverse jagged irregular ulcers.

Pathological Specimens of Intra-ocular Tumour.—Dr. MULES showed some mounted pathological specimens of human eyes. Amongst a series of intra-ocular tumours were two leucosarcomata, one small round-celled, the other spindle-celled; also sections of the vitreous body, in which the concentric and radiating arrangement was plainly seen as separate layers.

Ovarian Cysts.—Dr. LLOYD ROBERTS showed an ovarian cyst, which he had removed five days previously from a woman aged 31, in St. Mary's Hospital. The patient was healthy, had never shown signs of catamenial irregularities, and only discovered the presence of the tumour six months previously, at which time she was confined of her fourth child; but her abdomen did not resume its normal dimensions. The tumour had rapidly increased since then, and the girth of her abdomen at the umbilicus measured thirty-three inches. Little or no pain had been felt. The tumour was globular, elastic, and fluctuating throughout. Operation was performed under the carbolic spray. The abdominal incision measured three inches. No adhesions existed, and the cyst was rapidly emptied of its contents and withdrawn. The pedicle was long and slender; it was ligatured with silk, and returned into the abdomen. The next day, the temperature reached 100.2°, but for two days had been normal. The sutures were removed on the third day. The fluid measured six pints and a half; its specific gravity was 1012, and it was of a light brown colour. The patient made a good recovery.

Parovarian Cyst.—Dr. LLOYD ROBERTS showed a parovarian cyst about the size of a Jargonelle pear, with a stalk about six inches long, which was attached to the Fallopian tube of a patient from whom he had removed a multilocular ovarian tumour. The cyst had very thin walls, and its contained fluid appeared limpid.

Mitral Disease.—Mr. EWART showed some recent preparations from a patient with mitral disease of the heart.

Mediastinal Tumour.—Dr. LEECH mentioned a case of mediastinal tumour, and exhibited the specimen.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FLEXIBLE SPRAY-PRODUCERS.

SIR,—In the JOURNAL for July 17th, under the heading of New Inventions, you describe the new Flexible Spray-Producers, and give Messrs. Arnold and Sons the credit of being the sole makers. We beg to inform you that the spray-producers in question are manufactured in Germany, and, no doubt, are imported by other respectable instrument makers besides ourselves.—We remain, yours faithfully,

MAYER AND MELTZER.

MEDICAL AND SURGICAL BED-DRESS.

SIR,—When writing some suggestions for a "Medical and Surgical Bed-Dress", I was not aware that Dr. Thomas Joyce of Cranbrook had previously made a similar suggestion for "a new form of bed-gown for sickness" in the *Practitioner*. So far as the principle of our two communications is concerned, the original idea was clearly due to Dr. Joyce, and I hasten to acknowledge this. Had I known of Dr. Joyce's communication in time, I need hardly say I should have referred to it in my own "suggestions".—I am, etc.,

H. CRIPPS LAWRENCE, L.R.C.P.Lond., etc.

49, Oxford Terrace, W., July 22nd, 1880.

PUBLIC HEALTH.—During last week, being the twenty-ninth week of this year, 3,483 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 21 deaths annually in every 1,000 persons living. The annual death-rate was 20 in Edinburgh, 23 in Glasgow, and 30 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Nottingham 14, Plymouth 14, Newcastle-upon-Tyne 14, Hull 16, Bradford 17, Brighton 18, Portsmouth 18, Bristol 18, Birmingham 19, Manchester 19, Sheffield 20, Leeds 21, London 21, Oldham 22, Norwich 22, Salford 23, Sunderland 23, Leicester 24, Wolverhampton 25, and the highest rate 26 in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 4.4 per 1,000 in the twenty towns, and ranged from 0.7 in Plymouth to 7.3 and 7.6 in Brighton and Leicester. The deaths referred to diarrhœa in the twenty towns, which had steadily increased from 51 to 258 in the five preceding weeks, further rose to 337 last week, of which 202 occurred in London and 135 in the nineteen provincial towns; the death-rate from this disease showed the largest excess in Brighton, Leicester, and Salford. In London, 1,482 deaths were registered, which were 154 below the average, and gave an annual death-rate of 21.1 per 1,000. The 1,482 deaths included 3 from small-pox, 32 from measles, 53 from scarlet fever, 12 from diphtheria, 36 from whooping-cough, 16 from different forms of fever, and 202 from diarrhœa—being altogether 354 zymotic deaths, which were 98 below the average, and were equal to an annual rate of 5 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 171 and 176 in the two previous weeks, fell to 101 last week, and were 2 below the average; 91 were attributed to bronchitis, and 42 to pneumonia. Different forms of violence caused 34 deaths; 27 were the result of negligence or accident, including 8 from fractures and contusions, 9 from drowning, and 7 of infants under one year of age from suffocation. Seven cases of suicide were registered.—At Greenwich, the duration of registered bright sunshine in the week was equal to 38 per cent. of its possible duration. The recorded amount of ozone showed a considerable excess, especially on Sunday and Monday.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 31ST, 1880.

GUY'S HOSPITAL.

WE published last week a full text of the report of the Committee at Guy's Hospital on the long continuing disorganisation, which has been brought about by the election of the present matron, and the persistent obstinacy of Mr. Lushington in supporting her and her system against the authority and wisdom of the medical officers of the hospital. We had already pointed out, in noticing the appointment of the Committee, a radical defect in its composition; viz., that it consisted entirely of lay governors, and that none of the medical staff had seats on it. We feared from the outset that so anomalous a composition of a Committee intended to probe to the bottom the advantages or disadvantages of a system of nursing, and the constitution and organisation of a hospital, could not but lead to defective results; and the text of the report bears ample evidence of the weakness of the constitution of the Committee. An attempt was made to remedy this original error by taking the evidence of the staff; and, when we saw the names of several members of it on the first page of the report as having appeared before the Committee, we naturally concluded that their opinions had, in some degree at least, influenced the decision which was so unanimous; but, from communication with the staff and from subsequent events, we find that the malady is as great as or greater than before. We will examine the report in detail.

The Committee inquired into the changes introduced by the new matron in November 1879. They inform us of their satisfaction in finding them, "on the whole, advantageous to the *nurses*". This is quite in accordance with the letters and remarks that have appeared from time to time in our columns. We see no mention of the changes affecting the *patients*, to which the staff have strongly objected. We refer to the changing of the nurses from ward to ward every three months; the allowing the nurses to leave the wards for recreation at the time of the doctor's visit; the turning of the patients out of their beds an hour and a half before breakfast, in order that the night-nurse might make the beds; the leaving the wards during tea-time; the washing of the backs of patients without due reference to their diseases; etc. These are not referred to, although they were the causes of the profound disturbance of the hospital.

Some of these things have been stopped, after the protestations of the staff; but the manner in which they were introduced by the authority of the treasurer, under the suggestion of the matron, is adverted to [illegible] of the report. It is said that he "was under the impression that the changes contemplated would be acceptable to the medical staff". If we are correctly informed, he was soon disabused of this impression; for a deputation of the staff waited upon him very shortly after the matron came into office.

We are told that the nursing in former times was conducted "by capable persons", though not "wholly satisfactory"; and that they "attended to the sick with kindness, intelligence, and sympathy". Surely it was a pity not to retain such services, for nothing more can be needed to carry out the doctor's directions. We read further that "there has been an exaggerated estimate of the effects of these changes on the sisters and nurses". Yet the governors admit that many left who were much valued by the staff; and it is not possible for so large a number of nurses to be removed without seriously interfering with the wellbeing of the hospital.

We are informed that, "from the evidence of the sisters, it appears that in two-thirds of the wards there is no dissatisfaction". Perhaps, if the inquiry had been made a little more deeply, if the patients and the doctors had been asked, the answer might have been of a different kind. Again, it is said, "the matron would not directly interfere with the orders of the medical staff"; but her regulations to the sisters and so-called lady-pupils have had that effect. "We believe that the matron has desired to provide efficient nursing both during the day and the night"; but her attempts have been made in a manner that has been most offensive to the staff, and of questionable utility.

It would seem to have been scarcely necessary to refer to the notorious article in the *Nineteenth Century*, unless the governors had considered it worth while to give their own opinion on the unjust imputations cast upon the staff. It could not matter whence the statements came, as it did not alter their character; and a lady coming to the hospital and writing after one month, must have had an inspiration from others of greater authority and longer residence, unless we are to regard them as dreams. The staff, we are well assured, do not heed these imputations now. They are more injurious to those who made them.

As to the removal of the matron, the governors do not see, "in the present state of feeling, any just ground for calling upon her to abandon her post." The opinion of the staff, unanimous though it is, and repeated to the governors by protest upon protest, appears as nothing to those who have appointed her, and whose word must be considered as law.

The staff "desire that no rules affecting their patients should be issued without their knowledge". This is most natural; but surely it did not require the labours of a Committee to state what every medical man would demand; it is, however, an indication that the staff have had some reason for the complaints they have made.

And at the close of the report we read the following proposition: "That once a month or oftener, if necessary, two members of the medical staff be invited to attend the Committee (Taking-in Committee) with the view of deliberating on any matters relating to the medical and nursing arrangements." Would it not be better to allow them to form part of that Committee? To attend a Committee is one thing; to form part of it is another. The patients are taken in about eleven o'clock in the morning, and the Taking-in Committee meets about that hour, when the seniors are engaged.

Such, however, is the report, and all who are interested in the public weal and who have known Guy's Hospital in its days of prosperity and glory, would hail with satisfaction any measure that would avert disaster and ruin. We cannot see how such can be effected by the proposal now suggested.

Since the publication of the report, the public mind has been startled by a most serious incident, which throws a light upon the darker places which the report does not illuminate. An inquest has been held which reveals a mode of treatment of one of the patients, which seems to belong to a past age and to a criminal discipline. A patient suffering from early stages of tubercle has, according to the evidence, been subjected to a punishment bath of an hour's duration, which was followed quickly by acute disease and death. The nurse has been committed for manslaughter, and we abstain from comment; but there can be little doubt that this distressing result of a "new system", which puts nurses above doctors, and which instigates conflict where there should be implicit obedience, will show very clearly the radical defect of such a system. We trust that the governors will lose no time in reinstating the authority of the medical staff and curtailing that of the matron.

THE VACCINATION BILL.

We believe we are not far wrong in asserting that, after the unmistakable expression of opinion which has been shown against the Bill, it will not be pressed, though it is, of course, necessary that Mr. Dodson should officially justify it. We give, in our present issue, a long report of the influential deputation which attended on Mr. Dodson last Monday to protest, on behalf of our Association, against the Bill; and we now learn that Mr. Dodson has fixed Monday next, August 2nd, for the attendance of a joint deputation from the Royal College of Physicians, the Royal College of Surgeons, and the Royal Society, upon a similar errand. Meanwhile, it is important to note that nearly every day petitions against the principle of the Bill are being addressed to Parliament or the Local Government Board by various public bodies. Amongst the authorities who have made the Bill the subject of protest are the boards of guardians for the City of London, Camberwell, Whitechapel, Kensington, Hackney, St. George's, Chelsea, and Poplar, together with numerous country boards of guardians, such as Birmingham and Penzance; the vestries of Chelsea and Kensington; the Limehouse Board of Works; the Town Council of Bristol; and the Metropolitan Asylums Board. The action of the latter body must be regarded as of singular importance, in view of the very large experience of small-pox in the metropolis which they possess. There are other indications that the Bill is regarded with strong disfavour by those who are responsible for, and cognisant of, the actual working of the Vaccination Acts; and we trust that the President of the Local Government Board may, in view of all these facts, see fit to withdraw his measure. We hardly see how, in his answers to the various authorities that have petitioned him on the subject, Mr. Dodson can justify his assertion "that the Bill in question is designed to *promote* the object of the Vaccination Acts", by preventing "the prejudice against them which arises from the infliction of an excessive number of penalties on the same person without any prospect of ensuring obedience to the law"; nor can we see how, as he alleges, it is "a misapprehension to suppose that, after the Bill passes, it will be open to any person to purchase immunity from vaccination by the payment of a penalty of twenty shillings". Certainly this will be the actual, if not the intended, effect of the Bill; and the objections to such a vicious proposal need not be again repeated.

DR. TANNER'S FAST.

This sensational performance continues to attract considerable attention, both in America and in this country. Although we consider the experiment an absurd one, nevertheless, if trustworthy, it is one of very considerable scientific interest. If trustworthy, the experiment obviously involves considerable risk to life; and it is the more to be regretted that it is made under such circumstances that it will not be universally admitted by medical men to be trustworthy, which might have been the case had Dr. Tanner accepted the more accurate conditions under which the Neurological Society of New York would have consented to superintend the arrangements for his fast. Their terms being, to his mind, too exacting and stringent, Dr. Tanner refused, and substituted "watchers" selected by himself. When he began to fast, his weight was 157½ lbs. For the first fourteen days, he tasted, it is declared, no food or drink of any description. During that time, he, on an average, lost about 2 lbs. in weight per day. Finding that he was becoming rapidly weak, he is said to have allowed himself some water, and for some days drank more than a pint daily. Upon this alleged diet, he recovered 4½ lbs. The water relieved the symptoms of anæmia of the brain, from which he had suffered most during the previous part of his fast. After twenty-five days' fast, his pulse was 75; respirations 15; temperature of the mouth 98.4° Fahr.; and his weight 132 lbs., having lost 1½ lbs. in the twenty-four hours previously to the making of the report. No physical examinations of the lungs or heart have been reported, except the sphygmographic tracings of the heart, which indicate a decided decrease of the heart's impulse. The elimination of phosphates is normal, but accounts regarding the elimination of urea and other salts have not reached us. Up to last Tuesday afternoon, the thirtieth day of his performance, his loss in weight has been at an average rate of 1 lb. per day, though there seems to be some doubt as to the correctness of the weight on the last day. His pulse is reported 84, slightly more regular; temperature 98.8°; respirations 14; generally, he was weaker than on any previous day; he talked and walked less. During the earlier days of his fast, he slept well; but latterly, he has been restless, and has suffered from cramp of the stomach on one occasion, and from nausea and gastric irritability. This caused him to try a reduction in the amount of water drank daily, and also sometimes to drink warm water instead of cold. According to the latest news, however, the gastric disturbance is much less. On the twenty-ninth day, two of the experts attending him reported that there was no material alteration in the vascular pressure indicated by the heart's impulse, while its volume was scarcely less than in health. There was no sign of atrophy or of reabsorption of the muscles to be traced; on the contrary, the deposit of adipose tissue was still considerable upon the connective tissue and sheathing of the muscles of the limbs and trunk. The dynamometer registered a pressure of 80 *kilogrammes* with his right hand. Drowsiness is not now regarded by his attendants as an unfavourable sign. During the fast, his temper seems to have been variable, he being by turns taciturn, gloomy, dispirited, peevish, or savage. These are the reports which have reached this country from time to time regarding Dr. Tanner's condition.

The human body has hitherto been regarded as only capable of existing from eight to ten days when all supplies have been cut off. No doubt much will depend upon the amount of waste going on in the body during the time, the amount of oxygen in the air, and the surrounding temperature. During cold weather, oxidation takes place more rapidly than in warm weather. In some circumstances, human beings have been known to pass into a condition somewhat similar to the hybernating state of some animals, when the amount of waste going on in the body is reduced to a minimum. Thus, Indian Fakirs, under the influence of opiates or Indian hemp, have remained in a state of trance for even six weeks. With a supply of water, life may be prolonged for a considerable period; and it is an undoubted fact that an animal will live longer upon water alone than on any proximate principle of food in a dry state. It is interesting to note that, during the first period of the fast, when Dr. Tanner is said to have allowed himself neither food nor water, he lost weight rapidly; but after he began to drink water he gradually increased in weight. The explanation is, probably, that the fluid of the tissues was, in the first instance, being used up; but, whenever he allowed himself water, this was reabsorbed by them, and weight was thus regained. This, however, was only transient; and a gradual but steady diminution has continually been going on. Surmises are constantly being made as to how long Dr. Tanner shall be allowed to keep up his fast. It has been shown on animals that death may not take place from starvation till a little more than half the weight of the body at the commencement has been used up; but the limit of loss which can be endured with safety to life is one-fourth of the original weight. A fourth of Dr. Tanner's original weight is thirty-nine pounds and three-eighths; so that in about forty days from the time of beginning his fast he will have reached the limits of safety. It is possible, however, that during the next few days his weight may decrease more rapidly; especially is this probable should there be any return of the gastric irritation. His brain-symptoms also will doubtless be carefully watched by his attendants, as indications for preventing him from carrying his experiment so far as to render his recovery hopeless. Regarding the trustworthiness of the experiment, we do not express any opinion; although his being able to live during the first fourteen days without water or food is extraordinary, to say the least, when his strength at the end of the time is considered. Doubtless, there will be an account of the whole case published shortly in some of the American medical journals; after reading which, we shall be better able to form an impartial judgment on the matter.

INSANE OFFENDERS UNDER COMMITMENT.

THERE can be no doubt that our correspondent Mr. H. Terry, whose letter we publish to-day in another column, ought to be paid his fees; but by whom they ought to be paid is not so certain, and his letter opens a much more important question than the liability of the solicitor. The relations of a gaol surgeon to a prisoner charged with crimes, whose mental competence and responsibility are doubtful, are as unsettled as they are important. Frequently, no other medical man sees the prisoner between his commitment and his trial; and in all cases the gaol surgeon must be present at any medical examination. Not every gaol surgeon has the vast experience and sound judgment of the surgeon of Newgate; and, even if every such officer were competent to make a satisfactory examination of every doubtful case, it would not appear that it is his duty to do so. If the symptoms of insanity are obvious, no doubt the very respectable men who hold prison-appointments would observe them. But if, after his offence, an insane prisoner, as often happens, becomes calm and quiet and reticent, it may well happen that he will appear to be quite of sound mind to any gaol surgeon who has not taken the trouble to make careful and skilful examination into the state of the man's mind; and thus it comes to pass that, according to the investigations of Dr. David Nicolson, a large proportion of offenders are found to be insane after conviction; and even that no little danger arises that from time to time an irresponsible lunatic may suffer the extreme penalty of the law.

We are inclined to think that it should be incumbent upon every officer charged with the medical supervision of persons awaiting trial to make careful examinations of the state of mind, when there is the least ground to suspect the existence of insanity; and that the defence should have the power of insisting upon such officer being called by the prosecution, and therefore cross-examined for the defence; and that adequate remuneration for such additional and difficult services ought in all cases to be made by the Crown. The law no doubt is, that an offender is bound to prove himself a lunatic, if the plea of insanity be set up; but, from the time an offender is in custody, the action of the law itself tends to exclude that observation upon which such proof would depend; and so far, therefore, it would appear to be just and reasonable that the proof of insanity, if it exist, should be provided by the prosecution.

THE Grocers' Company have voted a sum of £150 in aid of the funds of St. George's Hospital.

SMALL-POX last week caused 41 deaths in Paris, and diarrhœal diseases 506 deaths in Berlin.

DR. MATTHEWS DUNCAN has accepted the invitation of the Council to deliver the Inaugural Address of the Midland Medical Society for the ensuing session.

THE Earl of Derby has sent a contribution of twenty guineas to the funds of the London Temperance Hospital, to mark his lordship's interest in that experiment.

THE nineteenth Italian Medical Congress will take place this year at Genoa, from the 13th to the 20th of September. All information respecting the proceedings can be obtained from Professor Luigi Ageno, Genoa.

WE observe that women are employed as public vaccinators in France. Amongst the list of vaccinators to whom medals have been awarded for successful vaccinations in 1878, two gold and thirty-six silver medals have been gained by women.

THE Council of the Royal College of Surgeons has just acquired, by purchase, the fine portrait painted by Sir Martin Archer Shee, a former President of the Royal Academy, of Sir Anthony Carlisle, who was elected President of the College in 1828, and again in 1837. It was engraved for Pettigrew's *Medical Portrait Gallery*.

WE are requested to announce that the full-sized clay model of the statue of Harvey, which is to be erected at Folkestone, has nearly approached completion; and that the sculptor, Mr. A. B. Joy, invites the subscribers to the Harvey Tercentenary Memorial Fund to a private view of the model (upon presentation of address cards) on Wednesday next, August 4th, from 11 to 5.30 o'clock, at his studio, No. 8, The Avenue, 76, Fulham Road, S.W.

DR. BERTILLON notes, in his weekly bulletin of the vital statistics of Paris for the week ending July 22nd, a sudden rise in the mortality-rates. The mortality, which had decreased since the middle of May, suddenly rose to its former high proportions, and, instead of 908 deaths registered in the previous week, increased last week to 1,130. The increased number of deaths is made up from all ages and all diseases, but the majority is found to be amongst young persons under fifteen years of age. Athrepsia and measles have been the most fatal diseases, the former counting 73 more victims than in the preceding week—188 against 115.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund was held on Monday at the Mansion House, under the presidency of the Lord Mayor. The report of the Committee of Distribution stated that the sum available for division was £29,689 13s. 4d., and they recommended that awards be granted to 130 institutions, showing an increase of three on the number submitted in 1879. The sum of £300 was set aside for the purchase of surgical appliances during the next twelve months. The report was adopted, with the exception of an item of £525, which was awarded to Eastbourne Convalescent Hospital, and this was ordered to stand over until an investigation had been made into an allegation that one of the "sisters" had been guilty of Ritualistic proselytising.

GUY'S HOSPITAL.

AN inquest was held at Guy's Hospital on July 26th, concerning the death of Louisa Morgan, a patient in that institution. The deceased woman, the wife of an engineer's labourer, living in the Old Kent Road, was admitted to the hospital for consumption. Morgan, the woman's husband, said his wife had complained to him of the conduct of a nurse named Ingle, who had charge of her. He saw bruises on her body. A nurse in the same ward said she saw Ingle drag the deceased across the room and put her into a cold bath, where she was left about an hour. She subsequently saw Ingle drag her back again to her bed. The deceased afterwards complained that she could not get warm again. Dr. Pavy, Physician to the hospital, said the woman's death was hastened by the effect of the bath, and he complained that the nurses under the new rules were allowed to act in many things without the authority of the medical men. Ingle was called, and denied that the water was cold, but admitted that the patient was left in the bath nearly an hour. The jury returned a verdict of manslaughter against Ingle.

SCURVY IN THE BOSNIAN ARMY.

THE Vienna medical journals announce the reappearance of scurvy in the Bosnian army of occupation. This disease, due to the monotony of the diet and the dampness of the encampment, makes rapid strides, especially amongst those troops which have been in Bosnia since the beginning of the campaign; the officers suffer as well as the rank and file. The soldiers, whose duty is very hard, have had no rations but beef and rice; no vegetables of any description; the preserved vegetables, which have been distributed on several occasions, were, it appears, of so bad a quality that they could not be used. In these circumstances, the appearance of scurvy is scarcely to be wondered at.

THE CONTAGIOUS DISEASES ACTS.

THE Select Committee of the House of Commons appointed to inquire into the operation of the Contagious Diseases Acts held a private sitting on Monday last, when it was decided that the examination of witnesses should not be proceeded with during the present session. The Committee will not meet again before the prorogation of Parliament.

THE BRITISH DENTAL ASSOCIATION.

THE first general meeting of this body, as an incorporated association, was held on Monday, with a very full attendance. The by-laws, which are drawn on the lines of those of the British Medical Association, both as to the publication of a journal and the formation of branches, were determined on. The Chairman stated that it was a matter of notoriety that many persons, without sufficient justification, had caused themselves to be registered in the *Dentists' Register*. Letters had been addressed from the Board to many such persons, advising their voluntary withdrawal, and the advice had in numerous instances been adopted. Others had disregarded the letter, and cases (to the number of three hundred and sixty) of incorrect registration had been brought before the Medical Council, and subsequently referred to the Dental Committee of the Council—the determination of which body, as to the facts of cases of alleged incorrect registration, the Act directs shall be conclusive. Should the Medical Council act up to the opinion of counsel, published some months since in this JOURNAL, and read (in private) at its last meeting, the *Dentists' Register* will, one way or other, and, it is hoped, before its issue in 1881, be cleared of nearly five hundred persons, very many of whom are the unqualified and unregistered assistants of chemists and druggists, whose right to be upon the *Register* has never for a moment been admitted by the legal advisers of the Association. The report further suggests that there are others who have, in various ways, offended against the Dentists' Act in placing their names upon the *Register*, especially those who, on mere colourable grounds, have declared themselves to have been in *bonâ fide* practice at the passing of the Act. To these and other cases the Representative Board will, it was understood, now direct its attention. The progress of the Association appears to be steady and assured; and the determination the Executive has shown, and is showing, in insisting by all justifiable means upon the expurgation of the *Dentists' Register*, will meet with encouragement and very general approval. In the afternoon, Mr. A. Coleman delivered an interesting address upon the Progress of Dental Surgery. The day's business terminated in the usual manner in a dinner, which was attended by the majority of those present at the meeting.

MR. COOKE'S ANATOMICAL SCHOOL.

THE sanitary authorities of St. Pancras met on Saturday to consider the complaints made as to a nuisance caused by the existence of a private dissecting-room in the disused burial-ground of St. George-the-Martyr, in the rear of the Foundling Hospital. Mr. Hawkins, from the Home Office, said some of the statements made as to the nuisance were not borne out by facts. The position of the dissecting-room could not be better, provided sanitary arrangements were carried out, which ought to be looked after by the Medical Officer of Health of the parish. Mr. Cooke, the proprietor of the room, denied many of the statements made as to its management, and said he would conform to the wishes of the Medical Officer of Health in respect of sanitary matters. After a discussion, a resolution was adopted to the effect that further grounds of complaint should be reported to the Home Office; members expressing themselves satisfied with the explanations given, and being of opinion that there was no nuisance from the dissecting-room in question.

HOSPITAL PATIENTS AFTER THEIR DISCHARGE.

A MEETING in connection with the Order of St. John of Jerusalem was held on Wednesday, July 21st, at 13, Bolton Row, Mayfair, to hear a lecture by Dr. E. H. Sieveking, physician to the Queen, on the subject of "The Employment of the Hospital Patient after his Discharge". Sir E. A. H. Lechmere, M.P., presided; and amongst those present were Sir James Bourne, Bart.; Major-General and Mrs. Lowry; Surgeon-Major Cuffe, C.B.; Major and Mrs. Duncan; Major Fortescue; Captain Perrott; Mrs. E. Howley Palmer, and a number of medical gentlemen. Dr. Sieveking said few things were more distressing to the thoughtful physician in his hospital ministrations than the knowledge that many of his patients, after their discharge from his immediate care, are compelled to return to a calling for which their illness has permanently incapacitated them. The lecturer read letters from the President of the College of Physicians; Mr. Holden, late President of the College of Surgeons; and other eminent medical men, who expressed sympathy with his desire to see the evil remedied. A discussion followed, in which the Chairman, Mr. Steet, Dr. Broadbent, Dr. Stewart, and Major Fortescue took part; and, on the motion of Major Duncan, seconded by Mr. F. P. Fellows, the meeting passed a resolution approving Dr. Sieveking's efforts, and remitting the subject to a Committee of the Ambulance Department of the Order of St. John. On the proposal of the Chairman, a hearty vote of thanks was passed to the lecturer, and the proceedings closed.

CONVALESCENT HOMES.

MR. C. LOCH, the zealous and most able Secretary of the Charity Organisation Society, writes to communicate briefly the results of a recent committee on this subject, of which Mr. Russell Barrington, Mr. Wilkinson, and Mr. Ernest Hart have been active working members. He says:

"Three evils have been more particularly brought to light. There is an evident want of information on the part of the public as to the accommodation available; and thus, while some homes are always full, others, even in the summer—at the time of the greatest pressure—have vacancies. The modes of admission are extremely various, and thus valuable time is lost in ascertaining particulars before convalescents are sent. Lastly, owing to want of information regarding the class of cases dealt with by the several homes, cases for which the arrangements of the homes were not devised, are sent to them. To remedy these evils, the following scheme has been agreed upon. A special standing committee has been formed, which will for the present, at least, meet at the offices of the Council of this Society. Information regarding vacancies in homes, the modes of admission, railway fares, etc., will be furnished to all inquirers. The homes have been asked to send each week to this office a post-card notifying the number of their vacancies, and for what class or kind of case the vacancies are available. Twenty-eight homes are already co-operating on this plan. The report of the Special Committee (which touches on many points beyond the scope of this letter) has been published. It forms the preface to a detailed catalogue of about one hundred and sixty homes. Copies can be obtained (price one shilling) at the office, or of Messrs. Longmans, Green, and Co., Paternoster Row, and will be kept in type and published periodically. Care has been taken to make it serviceable to persons engaged in charitable work; and any suggestions for its improvement with this object will be gladly received. The Standing Committee will, amongst other work, endeavour to make the provision of convalescent accommodation more complete and accessible in reference to hospital organisation, and generally. A large number of homes besides those referred to above have cordially approved the proposals of the Special Committee of the Society, though at present difficulties of detail have in many instances to be overcome."

The classified and detailed catalogue of Homes forms a document of very great value, and one which many medical men will be glad to possess.

DEATH DURING THE ADMINISTRATION OF CHLOROFORM.

THE following is an account of a case of death, on May 18th, at Buffalo, from the effects of chloroform during its administration previously to an operation, which is said to have excited an unusual amount of interest among both the profession and the general public. The deceased was a man aged about forty; the operation was for stone in the bladder, though one physician, who examined him five or six weeks previously, found a large stone in the urethra, where one was found at the necropsy. The patient was nervous, and anxious in regard to the operation, and expressed fear of taking chloroform, and requested ether; this request was made to others, but not to the operator. The heart was examined by the surgeon a day or two before the operation, and also by another physician several weeks before, both of whom declared the organ normal. The chloroform (which was Squibb's, and was carefully examined by a chemist after the operation and pronounced pure) was first administered by the operator, and after about ten minutes handed to an assistant; it was poured from a small bottle, about thirty minims at a time, on to a folded napkin. Before becoming totally unconscious, the patient sprang from the table, and struggled violently with those holding him; suddenly his strength gave way, and he said he would get back to the table, then

sank on to the floor and ceased to breathe; artificial respiration was immediately begun, and continued half an hour without avail. It appeared that both principal and assistant were accustomed to give chloroform, and that the drug was administered with care. A necropsy was made, and the brain and organs, except the heart, found to be healthy; "the muscles of the heart seemed a little pale; on pressing, it pitted and tore as easily as wet blotting paper; there was fatty degeneration of the heart; the muscular fibres were filled with what is called fatty granules; there was slight disease of both valves, but in all probability not sufficient to be detected during life."

IRRIGATION OF SEWAGE.

THE city of Paris has practically tested various chemical and other means of dealing with its sewage, and is now irrigating about a thousand acres of land within five miles of the Tuileries. It is therefore interesting to find that, on June 23rd last, the Municipal Council of Paris resolved, among other things, "To approve, firstly, the continuation of irrigation in the fields of Gennevilliers, and the carrying of the sewage to the lower north-western part of the peninsula of St. Germain and adjoining farms, and the delivery of sewage from the conduits to persons on their routes, who shall be willing, by agricultural, chemical, or other means, to cleanse it at their own expense and risk, for the sake of what they may be able to get out of it, subject to rules to be prepared; secondly, to ask the Government, in case the 1,500 *hectares* (3,700 acres) should be insufficient for the purification of the sewage without annoyance to the neighbourhood, to take into immediate consideration the extension of the present proposal and the irrigation of other districts in the valley of the Seine."

HYDROPHOBIA.

M. MAURICE RAYNAUD inoculated a rabbit with the saliva of a hydrophobic patient, and the rabbit took the disease in five days. Two other rabbits inoculated with hydrophobic saliva also became hydrophobic. The conclusion drawn is that the saliva of hydrophobic patients is virulent, and that this fact merits more attention than is now generally given to it.

KINDERGARTEN.

REAL Kindergarten, or children's gardens, have recently been instituted at Amsterdam for the reception of the children of artisans between school-hours, so as to take the children from the influence of bad companions in the streets. These gardens are under a beneficent supervision, and contain every kind of game and gymnastic apparatus fit for young people, likely to make them strong and healthy. The success of the first Kindergarten, which was opened in June, has been so great —15,800 children having made it their resort—that others on the same model are being established in Amsterdam, and other Dutch cities are following so excellent an example.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE directors of this Society held their usual quarterly court on Wednesday, the 14th instant. The President, Sir George Burrows, was in the chair. Fresh applications were made from one widow and three orphans, and relief was granted to them. The amount to be distributed for the half-year among the sixty widows and sixteen orphans now on the list of recipients was £1,317 10s. The expenses of the quarter amounted to £44 9s. Only one new member was elected. The directors take this opportunity of announcing that, under the new by-law, all registered medical practitioners living within a radius of twenty miles from Charing Cross are eligible for election as members. This new rule will greatly increase the sphere of usefulness of the Society, especially on the south side of the Thames; and it should lead to a large increase in the number of members of this provident association.

DIARRHŒA IN LONDON.

THE deaths in London referred to diarrhœa, which had steadily increased from 16 to 105 in the six preceding weeks, further rose to 202 last week; these were, however, 64 below the corrected average number in the corresponding week of the last ten years. No fewer than 162 of the 202 fatal cases were infants under one year of age; 28 were of children aged one year and under five; and nine were of persons aged upwards of 60 years. The annual death-rate from diarrhœa, which averaged 2.9 per 1,000 in London (against 1.8 in the 19 provincial towns), again showed the largest excess in East London. The deaths of eight infants under one year of age and of one male adult in Rotherhithe were referred to simple cholera or choleraic diarrhœa.

MR. GEORGE POLLOCK.

MR. GEORGE POLLOCK, Senior Surgeon to St. George's Hospital, has, we are informed, after thirty-five years of faithful service at the hospital, tendered his resignation of the active duties of surgeon to the institution. In thus retiring to a well-earned rest from onerous public duties, Mr. George Pollock will carry with him into his private work and private life the affectionate regard and sincere respect of a host of old pupils and friends. Few men have exercised a more wholesome influence, or set a better example of life, principles, and of manners than he has; conservative in principles, he has always shown himself thoroughly liberal in the application of those principles to the ordinary affairs of professional life. An accomplished surgeon, a careful operator, a sound teacher, and alike judicious and successful in his teaching and practice, Mr. Pollock, as Senior Surgeon to St. George's Hospital, has done no discredit to the post which has been occupied by so many great surgeons. He will, however, be especially remembered at the hospital for his sweetness of character, his affectionate kindness to all students, his thorough sincerity, and honest independence. It is much to be regretted that a characteristic scruple has forbidden him from ever allowing himself to be nominated to the Council of the College of Surgeons, owing to his objection to the system of canvassing which is more or less inherent in all public elections of the kind. There is no man better qualified to exert an important influence over a body such as the College of Surgeons, and there are few who have not felt his absence in that Council a public loss. His influence with the Government of India, with the Home Office, and other public departments has always been great, and has invariably been exercised with sound judgment and singleness of purpose; happily, these influences will probably long continue to be exercised; but the moment of Mr. Pollock's retirement from the hospital work, with which he has been identified through so long a series of years, seems to be a fitting one for paying a just tribute to a man whose modest and retiring life has not allowed any such public recognition of his singularly good work as it has always amply deserved.

"NARCOLEPSY."

UNDER the name of Narcolepsy, M. Gelineau describes, in the *Gazette des Hôpitaux*, a rare form of neurosis, characterised by an irresistible desire to sleep, sudden in its onset, lasting but a short time, and recurring at more or less prolonged intervals. This neurosis has some analogies with somnolence and catalepsy. It was described for the first time, in 1862, by Dr. Casse, who referred it to a serous and passive congestion of the meninges and of the brain. The persons suffering from it fall asleep any moment; their sleep lasts for a few minutes, and they then recover their consciousness. The patient whose case is reported by M. Gelineau fell asleep in this way four or five times during his dinner, letting his knife or fork fall, and breaking off in the middle of a sentence he was uttering. Up to the present time, the most varied kinds of treatment have not given any good result.

ST. JOHN'S AMBULANCE ASSOCIATION.

THE Bishop of Ripon has accepted the post of president of a centre shortly to be opened at Halifax. An inaugural public meeting, presided over by the mayor, has been held at Southampton, attended by Major F. Duncan, R.A., Surgeon-General T. Longmore, C.B., and Captain Perrott, as a deputation from the Central Executive Committee, and classes for instruction in first aid to the injured will be commenced forthwith.

THE METRIC SYSTEM IN MEDICINE.

THE following resolutions were adopted at the last meeting of the American Medical Association. 1. The Association recommends the teaching and practice of the metric system in medical colleges, clinics, dispensaries, etc. 2. It charges the Executive Metric Committee with the duty to report annually on the above institutions which teach, and those which do not teach, the metric system. 3. It authorises said Committee to enter into communication with the Metric Committee of the British Medical Association, in order to concert such plans as may render the use of the metric system simultaneous and uniform in both countries.

"HYPOTHESES NON FINGO."

AT a meeting of the Tiverton Guardians last week, a singular proposition was made, but fell to the ground for want of a seconder. Mr. John Lake proposed, "That a memorial be sent to the Legislature asking for a commission to consider the cause of the decaying of the teeth of the children in the present day." The proposer had examined the whole of the children in the Tiverton Workhouse, and was of opinion that decayed teeth were attributable to vaccination.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIS Association will hold its ninth congress at Reims, from the 12th to the 19th of August. Amongst the papers to be read, we note the Hygiene of Reading, by M. Javal; Natural and Induced Sleep, by M. Richet; and two lectures: one on Transformism, by M. Perrier; and the other on Radiant Matter, with experiments, by M. Gariel. Anyone desiring further information as to the excursions and visits to the scientific and industrial attractions of the neighbourhood, can obtain all information from the Secretary of the Association, at 76, Rue de Rennes, Paris; or from Dr. Langlet, at Reims.

THE INFANT LIFE PROTECTION ACT.

THE necessity, to which we have repeatedly called attention, for an extension of the provisions of this Act, was again shown in an inquiry conducted by Mr. Hull this week, respecting the death of William Henry Bates, aged one year and eight months, the illegitimate child of a domestic servant. At the previous hearing, the mother deposed that the child was born in Kensington Workhouse Infirmary; and, on her leaving there, she was taken with her child into Miss Merington's home for infants and young women at Notting Hill. She afterwards went into service, and left the child at the home, paying twelve shillings a month for its maintenance. The home was subsequently removed to 3, Bridge Road, Battersea, where the child died on the 12th inst. It had always been a delicate child. A nurse at the home said that every day deceased was fed on bread and milk, sago, beef-tea, mutton broth, white of egg, and other things. He was taken ill on Sunday, the 11th inst., with diarrhœa, but she did not think it was serious. He died on the Monday morning. Dr. Kempster, surgeon and medical officer of health for the district, deposed that he had visited the home several times officially. The children, from their appearance, did not seem properly fed—he did not mean insufficiently fed, but not fed with proper food or at proper times. The state of deceased, and of two or three of the children there, was disgraceful. He had made a *post mortem* examination of deceased. The body only weighed nine pounds and a half. Many a newly born child weighed more than that, and the average weight of a child of the age of deceased would be eighteen pounds. The cause of death was atrophy from mesenteric disease. The food the child had taken had not been absorbed. Beef-tea and mutton-broth would have been the best of food for deceased; but, from appearances, he should think very little of such food had been given deceased. Miss Martha Cranford Merington was sworn at her own request, and said she was a lady of independent means, and the home was at present under her sole control. Dr. Elizabeth Hoggan was the doctor to the home, but it was too far away for her to attend regularly. It was going to be removed nearer to Kensington. Dr. Hills of Battersea was called in when any of the children wanted a doctor. Mr. Spencer, who attended from the Metropolitan Board of Works, said an effort was being made to extend the provisions of the Infant Life Protection Act. The jury returned a verdict of "Death from atrophy", and at the same time desired the coroner to write to the Home Secretary to convey their opinion on the advisability of an extension of the provisions of the Infant Life Protection Act, 1872. Mr. Ernest Hart, Dr. A. S. Taylor, Mr. Curgenven, and Dr. Wiltshire had an interview with the last Home Secretary on this subject, on behalf of the Parliamentary Bills Committee. It will probably be necessary to renew these representations during the recess to Sir William Harcourt, and, we may hope, with good effect.

UTILISATION OF SEWAGE.

ON Monday last, July 26th, a demonstration was given, at the Aylesbury Drainage Works, of the system of utilisation of sewage, with the most recent improvements, as pursued under the local authorities of that town. A special train brought down a large company of over one hundred gentlemen, among whom were Mr. Bazalgette of the Metropolitan Board of Works, representatives of several corporations, and several members of Parliament, as well as the Hon. W. F. B. Massey Mainwaring and the Board of Directors of the Native Guano Company (Limited), to whom the works belong. The system, known as the A. B. C. process, consists in the admixture of clay, blood, and charcoal with the sewage-water, which is thereby completely deodorised; this purified water is then conducted along a series of tanks, where it i mingled with a stream of sufficient sulphate of aluminium to precipitate the organic matter, which, together with the disinfecting elements, subsides to the bottom of the tanks. The water flows from the tanks perfectly pure, and the precipitated residue is collected, pressed, dried, and sold under the name of "Native Guano". By this system, rivers are preserved from contamination and the evils of sewage-irrigation are avoided; for the native guano applied in its dry state to fields acts as a first-rate manure, and does not cause multiplication of slugs, nor risk of harbouring typhoid germs. The method has already gained the approval of Professors Crookes and Wanklyn, Dr. Angus Smith, and other chemists, and the manure is largely exported to the continent. At the luncheon which followed the inspection, Mr. W. C. Sillar, a director, demonstrated practically the precipitating power of the A. B. C. compound. Whatever may be the general merits of the system, it is much to be desired that it should be employed to prevent the fearful amount of contamination to which rivers like the Irwell and others running through large manufacturing towns in the north are continually subjected.

THE TRANSMISSIBILITY OF TUBERCULOSIS BY MILK.

M. PUECH, having recognised the existence of phthisis in a cow which was sold for killing, and yet continued to yield three or four *litres* of milk daily, fed with the milk two sucking-pigs and two rabbits. He has communicated the following results to the Académie des Sciences. The animals, when killed, showed tuberculous lesions in strict proportion to the length of time the milk had been administered. These facts, according to M. Puech, show that phthisis is transmissible by milk direct from the cow. It remains to be determined whether this liquid loses its contagious properties when it is boiled. M. Bouley afterwards submitted to the Academy a jar containing fragments of the lung, liver, spleen, the phrenic centre of the diaphragm, and the bronchial and submaxillary glands of a pig, five months old, killed sixty-seven days after an inoculation of two cubic *centimètres* of meat-juice, pressed with an hydraulic press out of a fragment of the ischio-tibial muscles of the tuberculous cow mentioned in M. Puech's note. This experiment was made at Toulouse by M. Toussaint of the Veterinary College. Examination of the fragments in the jar showed tuberculous lesions in a very advanced condition. M. Bouley said that these facts, which demonstrate beyond doubt the transmission of tuberculosis from the cow by the alimentary use of unboiled milk and the inoculation of the juice of uncooked meat, should not pass unnoted. In addition, they are not unique, since, in Germany, experiments of the same kind have been made, and have yielded identical results, to which, however, it does

not appear that sufficient importance has been attached. The danger is, according to M. Bouley, indubitably a real one; and it is well that the public should be warned of it, so that they may take proper precautions, especially as the use of raw meat is now often prescribed as a remedy for anæmic disorders. The outcome of these facts is, that inspection in regard to phthisis occurring in cows should be extremely strict in the slaughter-houses, and that it would be prudent to make use of boiled milk, especially for the feeding of infants, when the source whence it is derived is not beyond suspicion. Cooking, which destroys cellular and parasitic life, should render both milk and meat harmless.

SCOTLAND.

PORTRAIT OF PROFESSOR SPENCE.

AT a meeting held at Edinburgh in May last, a number of professional friends of Professor Spence determined to show their deep appreciation of his talents as a teacher and surgeon by presenting him with his portrait. It was at the same time proposed to offer a replica to the Royal College of Surgeons of Edinburgh, to be hung on their walls as a memorial of one who had rendered distinguished services to surgical science, and well worthy of being commemorated. The subscription-list is still open, in order that as many of Mr. Spence's friends as possible may have the opportunity of contributing; the subscriptions are limited to one guinea. The Committee hope to be able to present each subscriber with an etching of the portrait by Durand of Paris.

RECTORSHIP OF EDINBURGH UNIVERSITY.

THE Earl of Rosebery has consented to stand as candidate for the office of Lord Rector in the University of Edinburgh. It will be remembered that Sir Wm. Vernon Harcourt consented to stand, but it was found that his Professorship at Oxford debarred him.

SCOTTISH METEOROLOGICAL SOCIETY.

AT the half-yearly meeting of the above Society, held in Edinburgh on the 21st instant, it was reported that there are at present 637 members, and that the number of stations of the Society is 102. Sir Robert Christison read a paper on a proposed inquiry into the relation of climate in Scotland to the growth of trees, and he advised a methodical investigation into the effects of weather on tree-growth. The subject was remitted to the Council for consideration. Mr. Buchan also read a paper on the relation of the weather to deaths from scarlet fever and whooping-cough, prepared by Dr. Arthur Mitchell and himself; and from it it appears that, with few exceptions, scarlet fever reached its maximum in the end of the year. The exceptions were in towns between Manchester and Hull, across the country, the difference being greatest in the case of Hull, where the maximum of scarlet fever was in February. In the English and Irish towns, the maximum of whooping-cough was in the spring months, and in the Scotch towns in the early summer.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending July 17th, it appears that the death-rate in the eight principal towns was 18.6 per 1000 of estimated population. This rate is 2.0 above that for the corresponding week of last year, but is 1.8 below that for the previous week of the present year. The lowest mortality was recorded in Greenock—viz., 12.5 per 1000—and the highest in Leith—viz., 30.2 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.4 per 1000, being 0.5 above that for the previous week. There was an increase in the number of deaths from measles in Glasgow. A female aged 18, who died in Glasgow from small-pox, was stated to have been vaccinated, but no mark was visible. Acute diseases of the chest caused 58 deaths, being 32 less than the number recorded for the previous week. The mean temperature was 58.0°, being 0.2° above that of the week immediately preceding, and 3.7° above that for the corresponding week of last year.

LOCH KATRINE WATER.

THE monthly report of the quality of Loch Katrine water has been issued by Professor Mills. The results are returned in parts per 100,000: Total solid impurity, 2.88; organic carbon, 0.136; organic nitrogen, 0.016; ammonia, 0.000; nitric nitrogen, 0.006; total combined nitrogen, 0.022; chlorine, 0.61; hardness, 0.95. The water, which was sampled on July 15th, was light-brown in colour, and contained suspended matter.

PROSECUTION UNDER THE CONTAGIOUS DISEASES (ANIMAL) ACT.

THE first prosecution under an Order in Council regarding dairies, in virtue of the above Act, took place at Ayr on the 22nd inst. A farmer in the neighbourhood was charged with a contravention of the Council Order, in that he had failed to register himself as a cowkeeper in the district, and had sold milk to the general public. He pleaded guilty, and was fined in a modified penalty with expenses.

OPENING OF A CRÈCHE AT PAISLEY.

A VERY excellent step has been taken at Paisley, with the sanction of the Burgh School Board, in establishing a *crèche*, or day-nursery, as a means of securing the better attendance at school of children whose parents are obliged to be from home at work the whole day. Through this institution, parents will be enabled to leave their infants, free of cost, in charge of competent nurses during the day, and thus relieve the elder children from the too early imposed domestic cares of nursing, and allow them to be in more regular attendance at school.

IRELAND.

IT is stated that Mr. Jacob of Limerick, who within the last few months has been fined on several occasions for refusing to allow his child to be vaccinated, has determined to leave the country very shortly, and reside with his family in Philadelphia.

DUBLIN SANITARY ASSOCIATION.

AT last week's meeting of the Executive Committee of this Association, the subject of notification and registration of infective diseases having been brought under the notice of the Committee, the following resolution was adopted: "That the Executive Committee hereby express a general approval of the principle involved in the proposal to establish a system of early and compulsory notification of infective diseases to the sanitary authority, and of subsequent official registration of the same, as they believe that the information so obtained, as to the origin and spread of epidemic disease, cannot fail to be of great value in aid of the effort to improve public health."

THE NORTH DUBLIN UNION.

THE half-yearly report of the Medical Inspector of the Local Government Board, Dr. McCabe, for this institution has just been presented. Respecting the sanitary condition of the workhouse, it is observed that the increased numbers resident during the past six months led to overcrowding in some of the departments, and, as a result, there were an unusually large number of cases of fever and other infectious diseases transferred to the Cork Street and Hardwick Fever Hospitals. The transfer of the children from the Glasnevin sheds to a new building in the workhouse grounds, which at the period of their taking up their residence had only for a few days passed out of the builders' hands, appears also to have exercised an unfavourable influence on the health of the school-children; several cases of continued fever of an ill-defined type having occurred. The fever (typhus?) which prevailed amongst the adult women seems to have been originally imported from outside, the first case having been that of a woman who was admitted convalescent from fever to the workhouse. The total number of cases of fever in the six months under review amounted, including 10 cases of scarlatina, to 155; of these, 30 cases might not be considered as having originated in the workhouse, as the patients manifested symptoms of

fever in less than ten days after their admission. Of the remaining 125 cases, 51 occurred amongst the school-children, 73 amongst the female adults, and only one on the male side of the house. Of small-pox, nine cases occurred in the workhouse—five men and four children. Amongst a population averaging 2,258, the total mortality has been 423. During the six months, 43 children were born in the workhouse, and, of these, 9 died, a mortality at the rate of 20 per cent. for the six months, which shows an improvement on the rate of infant mortality recorded in the last two half-yearly reports. The total number which, in the opinion of the medical staff, the workhouse can accommodate is 2,062; and, as the average number resident during the past six months has been 2,258, it is evident that some department must have been over-crowded. As no additional buildings can be erected on the workhouse grounds, Dr. McCabe suggests that the guardians should remove the school-children to a small farm in some rural portion of the union. This proceeding would considerably increase the accommodation afforded by the workhouse buildings, and would have the additional advantage of removing the children to better air. By a recent arrangement, observation-wards have been provided on both sides of the workhouse, a provision which will tend to prevent the spread of infectious diseases in future.

DUBLIN ARTISANS' DWELLINGS COMPANY.

ATTENTION having been called to the high death-rate and to the occurrence of several cases of infectious disease among the occupants of the houses lately erected by the Company, the Public Health Committee of the corporation, being the sanitary authority for the city, have requested the Company to keep a census of the number of cases of infectious diseases in these houses, and to furnish the same periodically to the Committee. Although these dwellings are infinitely superior in every respect to the wretched tenement-houses, to the condition of which so large a share of the high death-rate of Dublin is due, yet they would appear, in some districts at least, to be not altogether satisfactory buildings. Thus a medical officer of one of the North Dublin dispensary districts, in the report which we noticed last week, states that he does not consider the artisan buildings in his district as at all healthy dwellings. The rooms in the lower tier, he says, are below the level of the street, and are dark, and in some cases damp; and the closets in the lower buildings have no water to carry off the soil, so it remains several days before it is taken away. We trust that the Company will see to these matters, and not suffer what has elsewhere proved, when well-managed, an undertaking of marked sanitary and even pecuniary success, to be injured at its beginning by lack of proper supervision.

LOCAL GOVERNMENT BOARD FOR IRELAND: ANNUAL REPORT.

FROM the eighth annual report of the Local Government Board, which has been lately issued, we learn that the average daily number of persons receiving in-door relief during the year amounted to 51,946, being 3,952 more than in the preceding year. The outdoor lists show an increase of 3,355 in comparison with the corresponding return of 1878-79; while the returns up to the 28th February last, in regard to the workhouse inmates, show an increase of 5,891 over the number relieved at the same time last year, and in regard to those in receipt of out-door relief, an increase of 15,401, being a total increase of 21,292. This increase in the number of those relieved does not indicate the full extent of the distress which existed in various parts of Ireland during the past winter, a large number having been supplied and provided with clothing and bedding from the various charitable committees which were formed for that purpose. The commissioners observe that unquestionably there has been much suffering and exceptional distress in many parts of Ireland, but they are gratified to be able to state that that condition did not reach starvation in any union; that they caused careful inquiry to be made by their inspector into every case where it was alleged that death had been occasioned by want, and that they found that it resulted from other causes which were arly ascertained. During the year ended 24th January last, the total number of deaths in the various workhouses was 13,144, showing an increase of 355 deaths as compared with the number last year. Of these, fever caused 705, against 645; lung disease, 2,742, against 2,274; and deaths by small-pox 112, against 254 in last year. There were for the twelve months ending September 29th, 58,583 admitted into workhouses for sickness, being an increase of 4,542 as compared with the previous year; also an increase of 47,081 in the number admitted who were not sick; an increase of 175 in those suffering from fever and other contagious diseases; and an increase of 55,967 in the total number relieved. In the various dispensary districts, the medical officers during the year attended 471,277 cases at the dispensaries, and 200,979 patients at their own homes, or a total of 672,256, and vaccinated 126,911 persons. The vaccination returns show a decrease of 6,134 as compared with the preceding year, but an increase of 9,232 on the year 1877. Of these 126,911 persons vaccinated, 95,062 were under on year old when vaccinated, 23,365 above one year old, while 8,484 were revaccinations. During the year ending 24th January last, small-pox caused 112 deaths in workhouses, being less than one-half of those recorded the previous year, while the number of cases treated in dispensary districts were slightly in excess of those recorded for the twelve months ending 30th September, 1878; the total mortality in the whole of Ireland during 1879 amounting to 661, or a decrease of 195 from the preceding year. Recourse was frequently had during the year to the provisions of the Public Health Act, section 141, authorising the removal of persons to hospital, where the patient was without proper lodging or accommodation, or lodged in a room occupied by other persons not so suffering; and the practice of holding "wakes" in houses where persons had died from infectious disease has been checked to some extent by the enforcement of the provisions in section 142 of the Act, prohibiting the practice under a penalty of £5. There cannot be a doubt that infection is spread in this way, and that danger ensues to persons lodged in a room occupied by other parties than the patient, as well as to the patient himself, by his non-removal to hospital, where the best means of recovery are provided; for the continuance and prevalence of infectious disease is undoubtedly encouraged by neglect of any or all of the precautions against it. As regards fever, there were 2,683 deaths from the disease, including private patients as well as dispensary cases. Scarlatina was more prevalent than in 1878, there being 3,008 cases treated by the medical officers of dispensaries in 1879 against 2,118 in 1878, or an increase of 821. The disease was not very prevalent in Connaught, there being only 169 cases, while the other 2,839 cases were fairly distributed between the three other provinces. The medical charities' expenditure amounted to £146,030, under which heading is included the cost of medicines and medical appliances, salaries of medical officers and apothecaries, vaccination fees and other expenses, showing an increase of £1,118 over that of the preceding year. The commissioners have recommended loans amounting to £292,824 to various towns in Ireland, principally for sewerage and water-supply; while the amount of sanitary expenditure in rural sanitary districts came in the year ending 29th September, 1879, to £50,767, in comparison with £48,157 in the preceding year.

CORK DISPENSARY COMMITTEE.

AT a meeting of the above Committee held last week, Dr. Crowley, in reporting four additional cases of scarlatina in his district, stated that it was almost impossible to eradicate the disease, as the infection was so powerful. He considered that strict supervision ought to be exercised over the sale of cast-aside old garments; and that all should be disinfected and fumigated before being sold. This could be done at a nominal cost by the sanitary authorities, who have a disinfecting apparatus; and he believed it would greatly tend to wipe out the disease. Several cases of inveterate disease, to his knowledge, were communicated by the wearing of such garments; one being a case of anthrax, one of diarrhœa, and one of fever. Reference having been made to the spread of small-pox in Dublin, owing to non-vaccination, Dr. Golding remarked that he was sorry to see that, when prosecutions were instituted, the entire number of defaulters were not summoned

before the Court, but only a certain number, so as to give a mere semblance of carrying out the provisions of the Act of Parliament; also that, when convictions were obtained, the magistrates merely imposed a nominal fine, which was not at all sufficiently severe to deter people from infringing the law. Further, it was his opinion that, in vaccinating, the maturation of one vesicle was not a protection against the contagion of small-pox; and that, unless three vesicles had matured, no medical practitioner should certify that a child was vaccinated.

THE COMPULSORY NOTIFICATION AND REGISTRATION OF ACUTE INFECTIVE DISEASE.

A SPECIAL meeting of the Council of the Irish Medical Association was held in the Royal College of Surgeons of Ireland, on Tuesday last, to consider a letter from the Honorary Secretary of the Dublin Branch of the British Medical Association, asking the aid and co-operation of the Association in the endeavour now being made by the Branch to obtain for Dublin the advantages of an efficient system of epidemic disease notification and registration. Dr. J. W. Moore, Chairman of the Council, occupied the chair; and the meeting was largely attended, the President and Vice-President of the King and Queen's College of Physicians, and the President of the Irish Medical Association being among the members present. The Committee of Council had prepared a report, in the form of certain resolutions, which was laid before the meeting; and these resolutions, with certain additions made by the meeting, as follows, were unanimously adopted:

1. That this Association fully recognises the advantages of an efficient system of early and compulsory notification and subsequent registration of acute infective disease.

2. That, as regards notification of infective disease, the duty of the medical attendant shall consist alone in informing the head of the family or the occupier of the infected house what the nature of the disease is, to the best of his knowledge and belief, and that it is infectious.

3. That the duty of notifying the presence of infection to the sanitary authority shall devolve solely upon the head of the family or the occupier of the infected house.

4. That in the case of the illness of a person who has not been attended by any medical practitioner, it shall be incumbent on the head of the family or occupier of the house to notify to the sanitary authority the presence of infective disease in his house as soon as he becomes aware of its nature, and, if in doubt, to obtain the opinion of a duly registered medical practitioner thereupon.

5. That, as regards the registration of infective disease, the Association is emphatically of opinion that the duty of such registration should not be compulsorily imposed upon the Registrar of Births and Deaths.

6. That, in the case of large urban districts, it seems desirable that the registration should be effected by means of a special organisation in connection with the General Register Office.

7. That, for every case of infective disease registered by a duly registered medical practitioner, a fee of not less than half-a-crown shall be paid to said medical practitioner.

OBSTRUCTING SANITARY OFFICERS.

TWO men were find forty shillings each at one of the Dublin Police-courts last Monday, for obstructing a sanitary officer, a sergeant of police, in the removal of a child to hospital, suffering from scarlatina. The officer was acting on a magistrate's order, which had been granted on the certificate of Dr. Purcell, a dispensary medical officer, stating the nature of the disease. It was also shown that several healthy persons occupied the same room as the child. The mother and grandmother of the child refused to allow it to be taken to hospital; and the men, who appear to have had no relationship to the child, violently opposed its removal. Ultimately, on the arrest of one of them, the mother went with the child to hospital.

ACUTE POISONING BY IODIDE OF POTASSIUM.—M. Auger reports in the *Praticien* a case under his care in the Tenon hospital, in which the administration of two grammes (thirty grains) of iodide of potassium brought on a condition characterised by fever, considerable tumefaction of the eyelids, lips, and gums, and profuse sweats. All these symptoms disappeared when the iodide was withheld.

BEQUEST.—The late Miss Jessie Gordon has bequeathed £1,000 to the Paisley Infirmary.

THE VACCINATION ACTS AMENDMENT BILL.

DEPUTATION TO THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

A NUMEROUS and highly representative deputation from the Parliamentary Bills Committee of the British Medical Association, accompanied by many influential members of the Association, waited upon Mr. Dodson, the President of the Local Government Board, on Monday last, to put before him statements of objections to his Vaccination Acts Amendment Bill, as representing the feeling of the medical profession and the country generally. Among those present were Mr. G. W. Hastings, M.P., Dr. Farquharson, M.P., Dr. Lyons, M.P., Sir John Lubbock, M.P., Colonel Alexander, M.P., Sir Thomas Watson, Bart., Sir Trevor Lawrence, Bart., M.P., Mr. Erasmus Wilson, F.R.S., Mr. Rivington (London Hospital), Dr. Francis Bernard, Dr. Bartolomé (Vice-President of the British Medical Association), Dr. Habershon (President of the Metropolitan Counties Branch), Mr. F. J. Butler (Winchester), Dr. Ord (St. Thomas's Hospital), Dr. Charles Chadwick (Vice-President of the British Medical Association), Surgeon Myers (Coldstream Guards), Mr. Robert Ceely (Aylesbury), Dr. Robert Martin, Mr. Sydney-Turner (Gloucester), Dr. W. C. Grigg, Dr. Lee, Dr. Sharkey (St. Thomas's Hospital), Dr. H. C. Bastian, F.R.S., Dr. Guy, F.R.S., Dr. Quain, F.R.S., Dr. Playfair (President of the Obstetrical Society of London), Dr. Laidlaw Purves, Dr. A. Vintras, Mr. C. E. Prince, Mr. J. Astley Bloxam, Dr. Broadbent, Dr. Norman Kerr, Mr. Bernard Walker, Mr. John Marshall, F.R.S., Mr. Ernest Hart, Mr. W. Morrant Baker, (St. Bartholomew's Hospital), Mr. Howard Marsh (St. Bartholomew's Hospital), Mr. C. Macnamara (Westminster Hospital), Mr. E. J. Hardy Booth (St. Thomas's Hospital), Dr. E. Hart Vinen, Mr. David Everett, (President of the Worcestershire Branch), Mr. Wickham Barnes (Secretary of the Poor-law Medical Officers' Association), and many others.

Mr. HASTINGS, M.P., introducing the deputation, said that, in company with his friends Sir John Lubbock, Dr. Lyons, and Dr. Farquharson, he had been asked by the British Medical Association to introduce that deputation, numerous as one could see, and one certainly quite as influential as it was numerous. Mr. Dodson would find among those present the names of Sir Thomas Watson, Mr. Erasmus Wilson, Dr. Quain, Dr. Ord, Mr. Marshall, Dr. Broadbent, Dr. Chadwick of Leeds, Dr. Playfair, Mr. Ceely of Aylesbury, and many others whom he could mention, and representing a body of medical men upwards of 8,000 in number—a body, he would venture to say, whose knowledge of science, and whose eminence and influence in all the walks of the medical profession, were known not only in this country but throughout the whole civilised world. He (Mr. Hastings) felt in many respects very much out of place in introducing such a deputation as this, but it was his lifelong pride to know that his name—humble as far as he was personally concerned—would, through his father's memory, be connected with the British Medical Association. The Bill on which they desired to say a few words had, of course, two aspects. It had its medical aspect, and he should leave the medical members of the deputation to say all that need be said on that subject, as they knew vastly more about it than he could profess to know, and were much more capable of expressing their views on it than he was. On the legislative aspect of the Bill, on which, he knew, not only himself but many members on both sides of the House felt very strongly, he would say a few words. He could not approve of the principle on which the Bill appeared to be framed, and that was the principle of allowing any one subject to the laws of the realm to escape his incidence by making a money payment in order to do so. He had heard it asked why, if a person were allowed to escape the obligations of the Vaccination Act by paying one fine of twenty shillings, a person who had once paid a fine for drunkenness in the street should not be allowed to be drunk in the streets with impunity. There were many cases under the present administration of the law which were justly analogous to that of a person who refused to have his child vaccinated. He would take only one. Under our sanitary Acts, there was a provision that every householder should be compelled, on a requisition from the lawful authority, to connect the drains of his house with the sewer; and, if he failed to do so, he would be brought before a magistrate, and fined severely. It could not be that a man, by paying a single fine, should be allowed to place his house in an unsanitary state, and thereby, perhaps, breed fever in the locality. They saw that one unvaccinated child was not only unprotected from the contagion, and in danger to itself, but it was also a source of danger to other people, and likely to lead to a considerable outburst of the disease of small-pox. He was only presenting the legislative question—the question of principle, that those who did not like the provisions of Act, should be allowed to purchase exemp-

tion from them. The principle seemed to him most dangerous; and he greatly feared that, if it were allowed to appear on the Statute Books, there would shortly be agitations on other subjects. It seemed to him that the question was a simple one: if vaccination were an error, if all were of opinion, not only the medical profession, but a large portion of the public, that vaccination was not a prophylactic against small-pox, then the proper course would be to repeal the law—(*hear, hear*); but so long as the Vaccination Act remained on the Statute Book, it ought to be enforced—enforced no doubt justly, but with moderation. But this Bill opened a way by which the law could be evaded if people thought fit to do so. Perhaps he might be allowed to say that he had heard a great deal said about the strong feeling against vaccination; how much of it was well founded he knew not; he himself had been wholly unable to ascertain that any such feeling existed; that was a matter, however, of which he had very limited knowledge and experience. He would mention two facts. For many years he had been chairman of the magistrates for the division of the county in which he lived, and, until he had the honour of representing the same county in Parliament, he believed he never missed being present at the petty sessions, and during that time he never had one case brought before his notice under the Vaccination Act. Again, the constituency which he had the honour to represent was a tolerably numerous one; certainly it was not so numerous as many, but at the recent election there were 12,000 voters on the register; it seemed to him that, if, throughout that wide district, two-thirds of which perhaps was agricultural and the remaining one-third urban, there had been any strong feeling against the Vaccination Act, it must have shown itself. The number of people who, during his personal canvas, spoke to him about the Vaccination Act and hoped he would vote against it, was three; and, so far as was known, throughout the whole of the Midland districts, there is a singular absence of any opposition to this Act; but his knowledge was limited, and it might be different elsewhere. He ventured to believe that this outcry against vaccination had been greatly exaggerated, both as to its extent and its intensity; the deputation, on the other hand, ventured to think that they not only represented the opinion of the medical profession in this country, but the opinion of medical men in all other civilised countries; and he was the more impressed in that belief by a singular circumstance which came to his knowledge only the other day in Switzerland. A popular vote had been taken on the question, owing to an outcry which had been raised against compulsory vaccination, and by an enormous majority the adult males of the country were in favour of compulsion, and he believed the result would be same in this country.

Mr. DODSON: Can you tell me whether compulsory vaccination exists in any other continental country?

Mr. HASTINGS said that the opinion of the medical profession in all parts was in favour of vaccination, believing it to be a prophylactic against disease. He should be sorry to occupy their valuable time further, but would simply say that he hoped Mr. Dodson would believe that the deputation which he saw present was, in truth, as he knew it to be, a real representation of the medical opinion throughout the United Kingdom. The whole body of the profession desired that the laws in respect to vaccination should be maintained; they did not for a moment say that their opinion should override all other, but that it should be taken fairly into consideration. He felt bound to say what he knew from letters he had received, that, on both sides of the House, both on the Opposition and the Ministerial sides, a very strong feeling existed that this Bill should not, if possible, be permitted to pass into law.

Dr. LYONS, M.P., said he thought that, after the able and exhaustive statement he had just heard, it was quite unnecessary for him to go deeply into the question. He wished to say, with regard to the division of the kingdom which he had the honour, in an humble way, to represent as sitting for the City of Dublin, that there was a very strong feeling in regard to this Bill now before the House. It had been his duty to present to the House a petition from the Irish Medical Association against the Bill; that body represented a large number of practitioners in Ireland, and as he (Mr. Dodson) was probably aware, they had recently had in Ireland a rather unhappy experience, a re-lighting up of that disease (small-pox) which for some time the authorities had believed to be stamped out. For a considerable time, there had been a remarkable absence of small-pox; and the security thus obtained by the operation of the Vaccination Act led to considerable laxity of practice, and it was feared that the practice of vaccination fell greatly into disuse. During the years 1871-2, the epidemic sprang up; and during the last two years, there had been a very severe visitation in Dublin and some other districts, and the feeling of the population was very strong on the subject, and not only the medical profession, but the public at large, viewed with very much alarm any relaxation of the laws for enforcing vaccination, and viewed with like dismay the proposed legislation on this subject. The Irish feeling was greatly in favour of the extension of vaccination in Ireland, and it was only through that neglect which arose from over-security that laxity had occurred. The number of prosecutions for offences against the law had been very small, and could be counted on the fingers of one hand. He believed he represented fully the feeling of that country when he said they apprehended very serious consequences indeed, if this Bill were allowed to pass without very considerable modification in its provisions.

Dr. FARQUHARSON, M.P., said he would not say one word on the general subject, which would be put forward more fully by Mr. Ernest Hart. Sitting on the Liberal benches, he should be obliged to vote against the Bill, though it was a matter of great pain to go against the party with whom he had the honour to act.

Mr. ERNEST HART, Chairman of the Parliamentary Bills Committee, said Mr. Hastings, Dr. Farquharson, and Dr. Lyons, representing the three divisions of the United Kingdom, had each of them put before Mr. Dodson the political aspect of the subject, and that would relieve him from the necessity of entering into many details. He should like to say, on behalf of the deputation, that he believed it would be difficult to assemble in one room any number of gentlemen more eminently representative of that kind of knowledge and that kind of deliberative power which would command an equal amount of respect in dealing with this subject, for they had there not only representatives from all the leading metropolitan hospitals, but also representatives of the leading sections of the country. Sir Thomas Watson, the Nestor of British Medicine, was there. Dr. Chadwick, who had filled the high office of President of the Association, would speak for a large section of provincial practitioners; they had Dr. De Bartolomé of Sheffield, who was equally respected and equally well acquainted with the opinions of the profession throughout his part of the country, they had Mr. Ceely of Aylesbury, Mr. Everett of Worcester, and a great number of gentlemen from distant parts of the country, who, at great pains, had come thither to represent the feeling in their neighbourhood. He had too a list of upwards of 400 gentlemen, who had written to him during the last twenty-four hours to express their sentiments on the subject, and very many of them to announce their regret that the hour which had been fixed, and the short notice they had received, would prevented them from attending. There were some letters which he would ask permission to read. One was from Sir William Jenner, who wrote:—

"I regret extremely that I cannot attend on the 26th. The Bill is so absurd that I can scarcely conceive it will become law. Instead of a fine of 20s., if Mr. Dodson determine to carry his measure, would it not be better that anyone should have a licence from the Inland Revenue Office to go unvaccinated? Then one could get a licence at the same time that one got licences for dogs, horses, etc. This certainly would be more simple, and would in time prove a source of revenue to the State. Licences also might be granted for a suitable sum for drunkenness, and then people would not be fined as often as they now are, five shillings, I think. If a man paid 20s. at the beginning of the year, he would have a season-ticket for drunkenness, and a season-ticket for spreading small-pox."

Dr. George Burrows, a former President of the College of Physicians, and a physician to the Queen, had written, from his residence in the country:

"I much regret that I cannot attend the deputation to the President of the Local Government Board. My strongest feelings and convictions go in accord with the deputation; and I can hardly suppose the Government can persist in such an ill-advised measure, which, in my opinion, is fraught with serious future mischief to the nation."

He (Mr. Hart) had also letters from Sir James Paget and other eminent men to a similar effect, as well as many letters from members of Parliament, in which they expressed a like opinion. On behalf of the deputation, he would say that he believed the whole of the medical profession regarded this measure with extreme alarm and regret, and they thought that the Government had not adequately appreciated the results of the Bill. Mr. Dodson had stated to a former deputation, that it was not in the least his intention to decrease vaccination, but just the contrary; and he had justified the measure on the ground of political expediency. Political expediency was a question of which the medical profession was not specially qualified to judge; but there was a political maxim, *salus populi suprema lex*, and they thought it particularly applicable to the present circumstances. For, if the health of the population required that any members of it, and especially the infant members of it, should not be left to become sources of danger to the whole nation, they thought that political expediency required that they, their guardians, should be prevented from allowing them to become sources of danger. If a man could have small-pox all to himself, he might fairly claim to be allowed that privilege, and the State need not interfere; but he could not do so,

unless he consented to quite exceptional quarantine arrangements for himself and family, which, in our complicated society, were practically impossible. Mr. Hart believed that a stronger case was made out, inasmuch as the particular objects of the vaccination laws were mostly infants, who could not decide for themselves. He would call Mr. Dodson's attention to the fact that, since compulsory vaccination had been in force, however imperfectly, the mortality from vaccination (which, prior to that time had been chiefly among infants) was increasingly small in proportion among that class, and the mortality had been greater among the adult population who had neglected revaccination. The present measure was brought forward in the House of Commons, subsequently to a speech by Mr. Peter Taylor, and a short speech by Mr. Hopwood. Mr. Hopwood brought it forward as a great grievance that there should be so many martyrs to the cause. Now, out of about three-quarters of a million infant-vaccinations annually, the number of prosecutions under the 31st clause, which it was now proposed to repeal, had never amounted to more than two hundred or three hundred. That was a contemptible minority—contemptible in numbers and contemptible in intelligence. If the Government thought any case had been made out against vaccination, they could understand the Government bringing in a Bill to abolish compulsory vaccination; and if they thought the question of compulsory vaccination required reconsideration, they could appoint a Committee of the House of Commons to consider and discuss that question. What the deputation could not understand was, that they should introduce a measure which said, with one breath, that people should not be allowed to prevent their children from being vaccinated, and so becoming sources of danger to others; and, with the other breath, that they could purchase indulgence by a money payment of twenty shillings. It had been said that this measure had been worked without compulsory clauses in Scotland. He (Mr. Hart) had applied to the very best authorities, and prepared a report on the subject [a copy of this report was handed to Mr. Dodson], and it resulted from these inquiries, from the letter of the law, and from the statement of the most eminent authorities, that the full power of compulsion existed both in Scotland and in Ireland.

Mr. DODSON: In Scotland, there are multiple penalties, but not in Ireland; there is a power of compulsion, but not the same power of multiple penalties.

Mr. ERNEST HART: The persons from whom he had received letters in Ireland included the Registrar-General, Dr. Grimshaw, and others; and they, like the deputation, were one and all of opinion that compulsion was necessary. The mere introducing of the Bill he regarded as an inexpressible injury. It had given a sort of official sanction to the idea that there was something to consider in the matter. He knew there were persons who would consider that the axioms of Euclid required argument, and who, at the end of the argument, would deny them; there were persons who were ready to deny that two and two made four. There were people who would still make a bet that the world was flat and not round, but he did not think those people should be supported by special legislation in their fancies. Mr. Hopwood assured the House of Commons that, in the most highly vaccinated countries, small-pox most prevailed, and that especially it did so in the highly vaccinated armies of Prussia and France. He was surprised that, in answering Mr. Hopwood, he (Mr. Dodson) did not refute that statement, which was not only not the fact, but was exactly opposed to the fact. The events which had occurred in the last few months showed, during the occasion of a severe epidemic of small-pox in Paris, which had spread through Paris and caused a very great mortality, that the only persons who had been exempt were the soldiers, who had been revaccinated.

Mr. DODSON asked Mr. Hart if he would recommend an Act for revaccination.

Mr. HART said he would much rather support an Act for enforcing revaccination than one for lessening vaccination; he was not present, however, to propose any new Act, but to oppose the weakening of the present one. Mr. Dodson had asked, was compulsory vaccination enforced in any other country than in England? It was originally enforced, but in an indirect way; and that way being found insufficient, a Bill was then under discussion in France for direct compulsion, both as to vaccination and revaccination. At present, in France and in Germany, no child was admitted to a public school without full vaccination-marks; and, whereas the whole population now passed through the army, every recruit was revaccinated. He would only add to this short statement, that it might very probably be said by the few persons who raised an outcry on this question in so noisy a manner, that this was the deputation of "a trades-union", a deputation of persons who were more or less interested in the maintenance of vaccination. [Mr. DODSON: No, no.] He was sure that would have no weight with him (Mr. Dodson); and it was obvious that, if the medical profession were, in this, or in any other matter of public health, guided by their own interests, it would be to allow those diseases to rage; for, if they had a recurrence of the old small-pox pestilence, with its annual forty thousand or fifty thousand victims, the professional fees arising out of such vast outbreaks of sickness would be immense. He ventured to appeal to Mr. Dodson, whether it was not the fact that this great Association, and the profession which it represented, had never come before the Government, and never before the public, except to advocate measures which were for the public good, and in pursuance of the principle that the prevention of disease was a nobler object than the curing of diseases. [*Hear, hear.*] No other motives than those would have induced them to appear that day; and they believed that the Bill which he (Mr. Dodson) had introduced, would have the most injurious effect throughout the country, encouraging careless and negligent persons to neglect precautions which would protect their children and the surrounding population from infection. They believed it would tend to create throughout the country those disastrous results which existed now in a few unions where the law was only partially carried out. Otherwise, they (the deputation) would not have been there; but they did feel that, if that Bill passed, a state of things would exist which probably Mr. Dodson did not contemplate, and it would leave a large portion of the population exposed to many dangers; and they contended, on the other hand, that the voices that called for it, though noisy, were few, and that the outcry was utterly unworthy the attention of statesmen.

Dr. CHADWICK (Tunbridge Wells) said that it was about fifty years ago since he first performed the operation of vaccination, and his later course had separated him from that practice; but he had never ceased, as a physician to three large hospitals, and as a magistrate, to take an active interest in the question. He believed as close an approximation to exact results had been arrived at by experience and experiment as was possible in any matter that concerned the human constitution and the diseases that affected it; and the result was this, that vaccination, improved, as it was capable of being, by greater care, was capable of as nearly as possible arriving at the complete extinction of small-pox. If they had a remedy so universally admitted to be a remedy for this particular disease, should they, for any supposed political interests, throw that away, and sacrificè the health of the community?

Dr. DE BARTOLOMÈ (Sheffield) said that the political, statistical, and legal aspects of the question had been sufficiently dwelt upon, and he would confine himself to a few words. He had been connected with a large hospital in Sheffield for twenty-three years, and this had necessarily thrown a great deal of practice into his hands, chiefly among the poor who lived in courts, in ill-ventilated and insufficiently lighted rooms; and he could scarcely believe his recollections as he took a retrospective view at the dreadful ravages of small-pox which he had formerly seen, and expressed a hope that an Act so destructive would never be allowed to become law.

Dr. QUAIN said he was afraid he could add nothing to what had been so admirably said; he would rather give the opinion of the College to which he had the honour to belong. He (Mr. Dodson) was to have received a deputation from that College on the following day, which, however, was unavoidably postponed; and he would give them the opinion of the Royal College of Physicians of London, which, he need hardly say, was one of the most distinguished bodies of medical men in the world. It was expressed in their petition, of which he held a printed copy in his hand, that they believed that the Bill in question would, if it became law, be certain to cause the spread of small-pox, to the great detriment of the public; and they expressed the belief that, by ensuring a more certain performance of the compulsory provisions of the present vaccination law, small-pox might be exterminated. After giving that opinion from the highest authority in the kingdom or the world, he could hardly suppose that Mr. Dodson would conscientiously undertake to carry the Bill further; he certainly thought it would be extremely rash to do so. In regard to one other question, the mathematical accuracy with which certain arguments could be supported, if there were any certainty at all in the relations of experiment to organised nature, there was almost a certainty that vaccination was a preventive of small-pox; and if it were an absolute and perfect preventive, it was because having once had the disease did not render one proof against a second attack. There was a case reported from India where a man died from the fourth attack. It was not to be supposed for a moment that vaccination was a failure for not doing that which small-pox itself did not do. At that moment most important investigations were being made, which showed inoculation to be a preventive of animal diseases. With regard to revaccination, he was of opinion that it was of almost as great a necessity as vaccination in the first instance. A lunatic was prevented by the law from injuring those about him, and he regarded a sufferer from small-pox to be as dangerous as a lunatic; and he was of opinion the time would come when the law would interfere to prevent such a person from spreading this disease among his fellows.

He therefore hoped that, instead of weakening the law, he (Mr. Dodson) would apply himself to strengthen it.

Mr. ERASMUS WILSON (speaking as a Vice-President of the Royal College of Surgeons) said that the College felt very seriously with regard to this Bill, and considered it their duty, as guardians of the public health, to interpose, as far as their powers were capable of interposing, against any interference in that which they regarded as essential to the health of the community. [*Hear, hear.*] As representing a particular section, he would say that the statements and exaggerations which had been made public with reference to the injury done to the constitution and to the skin by vaccination, had no foundation whatever. Their true knowledge and comprehension of the skin and its functions showed that vaccination operated most beneficially upon the human constitution; and when difficulties did occur, they did not originate in the vaccine lymph, but in other circumstances quite distinct from that, generally in the constitution of the individual who was being vaccinated. In regard to the College of Surgeons, they were all of one mind, that this Bill ought not, in the sense it was intended, to become law.

Mr. CEELY (Aylesbury) said he had been in practice for fifty-nine years; he regarded the Bill, by which it was intended to mitigate penalties, as an encouragement to avoid vaccination. He was of opinion it would be a sad blow, a great discouragement to vaccination, and a very serious and sad prospect. They were compelled by habit, by feeling, and by principle, to take care of the public health; and if they did not protest against this attempt to deprive the present Act of its value and its force, they would certainly be very much to blame. He sincerely hoped it would not pass into law; however, if it did, he was of opinion, first of all, there should be compulsory isolation of small-pox; there should be compulsory measures to deal with it, as it really was a public injury. Before any measures were taken to mitigate penalties, an Act should be passed to make it compulsory to separate and to isolate small-pox cases.

Sir JOHN LUBBOCK said, in reference to the state of political feeling on the subject, he had had six elections during the last few years, and he could truly say that never, at any public meeting, or in the course of house-to-house canvass, had he ever met with a single person who questioned the advantages of vaccination. Of course there was no question on which they could expect a perfect unanimity of feeling, and he believed that if this Bill were allowed to pass into law, it would create a very profound feeling of dissatisfaction. He earnestly hoped that Her Majesty's Government would reconsider the matter, and take into consideration the arguments which had been brought forward that day, not only from their own force, but in consequence of the very eminent authorities by whom they had been put forward.

Mr. DODSON wished first of all to remove any misapprehension which might exist that he had any feeling, or, as far as a layman might speak, any doubt as to the value of vaccination; and the best proof he could give was in his own person, for he had been repeatedly revaccinated, and he and his whole household were revaccinated a few years ago, when the epidemic was raging. But he would not attribute the introduction of the Bill to any feeling of his own. He perfectly agreed with Sir John Lubbock and other gentlemen that the prevalent feeling in the country was decidedly in favour of vaccination, and he heartily rejoiced that it was so. The question, however, before them was whether the law as it stood promoted vaccination, or whether it acted the reverse way; and that was a question of experience. He thought it was scarcely fair to attack the Bill on the ground that people would be allowed to escape the operation of the law by a money payment, and that that would be the effect of the Bill. That was the law as it stood. Any one might escape the operation of the law by a money payment; and the anti-vaccinators, instead of going to prison, escaped the law by money payments. The law was that if a man did not really bring his child for vaccination, he might be fined, and there was no further power to compel him. It had been asked whether you would allow a drunken man to purchase an indulgence for drunkenness by money payment. But if a man got drunk he was fined for his act. The cases were not absolutely parallel. It was said that a man was compelled to drain his house whether he thought it necessary or not. That was perfectly true; but they would allow that there was an essential difference between a man being compelled to do an act with reference to his house and requiring a man to submit his child to a particular operation which he might think, perhaps wrong-headedly, injurious to him and to the child upon whom it was proposed to be performed. The letter of Sir William Jenner was a very short way of turning the Bill into ridicule—

"Ridiculum acri
Fortius ac melius magnas plerumque secat res."

Ridicule was a very powerful weapon, but it might not always be the best guide to truth. When a man took out a licence to do a thing, he purchased the privilege of doing a thing which might be otherwise condemned; but as the right was treated as a privilege, it required the payment of a specific money payment. Taking out a license was not, however, the same thing as submitting to a penalty. The Bill said that, if a person had had the full penalty of twenty shillings once inflicted upon him, he should not be fined again; but if the full penalty were not inflicted in the first instance, he remained liable under another clause to be brought up by the vaccination officer before a magistrate and fined. Under one clause, a man was liable to a penalty if he did not bring his child to be vaccinated. If the full penalty was not inflicted, he might be asked to show cause why an order should not be made for his child to be vaccinated. He was liable to be fined twice and brought before the magistrates. He was reminded that compulsory vaccination was established in 1853. In 1867, it was provided that neglect to take the child for vaccination within three months, or, in scattered districts, a longer period, was an offence for which the parent could be proceeded against summarily, and for which he was liable to a penalty not exceeding twenty shillings. The proposition of the Bill was not a new one. In the Bill of 1871 appeared the very proposition made in the present Bill, when the clause containing it was passed in the House of Commons. He could not call to mind, but he did not think that any strong and organised opposition on the part of the medical profession was then made.

Mr. HART: The Bill came on late in the House of Commons, and the opposition was made in the House of Lords.

Mr. DODSON: The Bill passed through the House of Commons, and the clause was thrown out in the House of Lords. At all events, the proposition, which seemed to have stirred up so many members of the medical profession, was not put before the country for the first time. He might say that his predecessor in that office, who represented the late Government, though he did not bring in a Bill, felt as much as he (Mr. Dodson) did the difficulties that were caused by the injudicious infliction of multiplied penalties; and he issued a circular letter in which he strongly recommended the exercise of great caution in the infliction of penalties, and directed that the vaccination-officer should not proceed in the way of multiplied penalties until he had brought the circumstances of the case under the notice of the board of guardians. The question was, which was the best expedient for securing the greatest amount of vaccination. It appeared to him that where they had cases in which the same man had been fined thirty times and more, and yet the child remained unvaccinated, and would remain unvaccinated, probably, if the parent were fined thirty times thirty times, this was not advancing the law. That was only making a martyr of a man. As to imprisonment, a man was liable to imprisonment if he did not pay the fine now. The opinion of many gentlemen was, that compulsion ought to be direct, and not indirect. Many arguments went on the supposition that vaccination was compulsory; whereas, if the child were not vaccinated, the parent paid the penalty. His own desire was to see vaccination promoted and rendered as universal as possible throughout the country. The question was one of expediency as to the execution of the law. The deputation might be sure that their arguments would not be treated by him or any of his colleagues with any degree of slight, but would receive the attention which they deserved. He might remind the deputation, as further evidence that he was anxious to promote vaccination, that he had undertaken that facilities should be given for obtaining animal lymph in the same manner as the humanised lymph could now be obtained. The right honourable gentleman concluded by protesting that this grave question should not be treated as if it were a political matter.

Thanks having been accorded to the right honourable gentleman for the courtesy with which he had received them, the deputation withdrew.

The following gentlemen have communicated to us their desire to have their names added to the petition against the Vaccination Acts Amendment Bill: Dr. Tidy; Mr. W. Powell, Public Vaccinator, Bromyard; Mr. A. B. R. Myers, Coldstream Guards, London; Dr. A. Mercer Adam, Boston; Dr. Webb, Wirksworth; Mr. E. W. Jollye, Spalding; Dr. R. Bruce Low, Helmsley; Mr. T. D. S. Paradise, Leigh; Mr. Alfred Ashby, Grantham; Mr. Samuel Keetley, Grimsby; Dr. Leonard Cave, Peterborough; Mr. Henry Raven, Launditch Union; Mr. L. Hanson Wheatcroft, Litcham, Norfolk; Mr. Alfred Freer, M.R.C.S.E., Stourbridge; Mr. George Birt, M.B., Stourbridge; Mr. H. Hammond Smith, M.R.C.S.E., Stourbridge; Mr. Edwin Turner, M.R.C.S.E., Wordsley; Dr. Robert L. Bayley, Stourbridge; Dr. Jas. P. Fennell, Stourbridge; Mr. G. J. Muriel, Whitehaven; Mr. Thomas Drapes, M.B., Enniscorthy; Mr. A. E. Livsey, L.R.C.P., Liverpool; Dr. Alex. Baird, Perth; Mr. Wm. Milligan, Medical Officer of Health, Wirksworth; Dr. Norman Kerr, London; Dr. Thompson, Leamington; Mr. Arthur Jackson, Smethwick; Mr. Wm. Jackson,

Smethwick; Mr. Richard Gravely, Lewes; Mr. Charles Williams, Llanbedr; Dr. Robert Elliot, Carlisle; Mr. Clement Palmer, Burton-on-Trent; Mr. G. Ernest Alford, Weston-super-Mare; Dr. George Fletcher, Framlingham; Mr. T. C. Beatty, M.R.C.S., Seaham Harbour; Mr. T. C. Beatty, junr., F.R.C.S., Seaham Harbour; Mr. J. B. Brereton, L.R.C.P., Seaham Harbour; Dr. Peter Tytler, Manchester; Mr. H. F. Marshall, M.B., Physician to Children's Hospital, Birmingham; Dr. Robert Saundby, Birmingham; Dr. James Scanlan, Trowbridge; Dr. David Bower, Bedford; Mr. W. E. Luscombe, L.R.C.P., Newark; Mr. Alex. D. H. Leadman, L.R.C.P., Boroughbridge; Mr. James Crocker, M.R.C.S., Bingley; Mr. Herbert E. Wright, M.R.C.S., Bootle; Mr. L. H. Hughes, L.R.C.P., Droitwich; Mr. James Parette, L.R.C.P., Beaufort; Dr. Dunbar Dickson, Great Marlow; Mr. Charles Maclean, M.B., Fort Augustus; Mr. F. W. O'Connor, L.R.C.S.I.; Dr. Thomas J. Gelston; Mr. J. Holmes, L.R.C.S.; Dr. Robert R. Gelston; Dr. Massey, Nottingham; Mr. T. J. Eames Brown, Llanbister; Mr. W. G. Owen, M.B., Carnarvon; Dr. Spencer T. Smyth, F.R.C.S., Forest Hill; Dr. J. Styrap, Shrewsbury; Dr. James Donaldson, London; Mr. S. G. Sloman, junr., Farnham; Dr. Wm. C. Lucey, Southampton; Dr. Edward Williams, Wrexham; Mr. Joseph Hinton, Warminster.

INTERNATIONAL MEDICAL CONGRESS, 1881.

At a meeting of the General Committee of the International Medical Congress in 1881, held at the College of Physicians, it was announced that the Queen and Prince of Wales would honour the Congress by their patronage, and that funds to the amount of £1,200 had been subscribed, and a guarantee fund of nearly an equal amount, although as yet no circular had been issued, and in all other respects the prospects of the Congress were most favourable. Already a considerable number of eminent persons in medicine and surgery in the various capitals of Europe had expressed their intention of attending the Congress. A proposition from the Executive Committee to expressly indicate in the letters of invitation that only male members of the medical profession would be eligible for attendance at the Congress was brought up, and, somewhat unexpectedly, a smart discussion arose. After the discussion, a vote was taken on the proposition, twenty-seven voting in favour of it, and nineteen against it, many members of the Committee present abstaining from voting. The proposition was therefore declared to be carried, and the Congress will accordingly be limited to male practitioners. At previous Congresses held in foreign capitals, lady physicians have been eligible to attend and have attended. The name of Dr. Bucknill, F.R.S., on the proposition of the Committee, was added to the list of vice-presidents of the Congress, and that of Dr. Braxton Hicks to the list of vice-presidents of the Obstetrical Section. Invitations will now be issued to foreign countries, and the necessary steps be taken to request the editors of foreign journals to make known the preliminary arrangements thus far made on behalf of what promises to be a highly important and interesting international medical gathering.

PUERPERAL FEVER AT QUEEN CHARLOTTE'S HOSPITAL.

The annual report of Queen Charlotte's Lying-in Hospital for 1879 contains an interesting account of an outbreak of puerperal fever in that institution, of which we can only spare space for a summary. Those interested in the subject will find full details in the report itself. It appears that a severe outbreak of puerperal fever occurred in the hospital in the spring of 1879, necessitating the closure of the hospital from April 21st to September 20th of that year. Careful investigation failed to show that either overcrowding, defective sanitation or ventilation, had any influence in the production of the fever; the midwives were attending their private cases in the district with impunity, nor was there a single case of fever in the out-patient department of the hospital, nor, so far as could be ascertained, in the district, during the whole time of the outbreak. On April 10th, the porter was stricken down with erysipelas, of which he almost died in the Westminster Hospital. On questioning him about his illness, it was elicited that, upon the removal of certain batches of linen from the disinfecting apparatus, for some time past he had felt ill, with violent headache, sore-throat, and sickness. This circumstance directed attention to the linen as a possible factor in the spread of the disease, and, on inquiry being made in this direction, it was found that the temperature in the disinfecting apparatus could be raised only to 180°, 70° below the proper standard. It also transpired that the porter did not know how to work the apparatus, and that his predecessor had been equally ignorant. Consequently, from October 1878 to April 1879, the apparatus was practically useless for the purpose of disinfection. It is here noted in the report that it was no part of the house-surgeon's duty to attend to the disinfection of the linen. Thus the disinfectant stove became a propagator of disease, as the linen was kept for several hours in a close, moist, warm atmosphere, and the bulk of the linen came out of the stove feeling damper than when it was put in. In this condition, it was sent upstairs, and, frequently without being aired, distributed to the patients. The linen, when it came from the laundress, was too damp to be disinfected. This arose from the shortness of the supply not allowing a sufficient time for drying and airing, and from a mistaken notion on the part of the laundress that the disinfecting apparatus was a drying stove. The outbreak of fever finally culminated in the deaths of no fewer than seven women out of twelve patients delivered in the hospital from March 27th to 29th, of whom ten came in within twenty-six hours. Extended investigation also revealed the following facts, which, coupled with the above, led to the conclusion that the fever was conveyed by, and probably originated, in the linen.

1. The periodical outbreaks of fever, as far as could be ascertained, appeared to correspond with the returns of certain batches of linen from the wash.

2. Mothers and infants supplied with brand new linen did perfectly well.

3. Women who were doing well suddenly developed marked feverish symptoms, which corresponded with the change of linen.

4. Cases suffering from puerperal fever, and convalescing most favourably, appeared to be restricken; and this occurred more than once in the same patient. Some of these cases recovered, and some died. This necessitated latterly the use of brand new linen for infected cases, in order to give them a chance of recovery.

5. Infants were attacked with local erysipelas (nates et genitalea) after the application of certain linen which had been used by infected mothers.

6. None of the nurses who slept in the wards with their patients were affected. The linen supplied to them was household linen, and was not used by the patients.

In the course of the investigation, several circumstances were brought to light which probably had some bearing on the outbreak and spread of the disease.

1. Certain articles of linen were used by mothers and infants alike.

2. The linen had been habitually distributed damp and unaired, particularly on one floor, during the last six months.

3. That injunctions from the medical officers to return for stoving all linen sent up from the stove damp, were disregarded.

4. Infected and uninfected linen were sent to one and the same laundress.

5. The linen in use in the labour-wards was the same as that used by the patients generally.

6. There was no inventory made of the linen before it was sent to the wash, only on its return.

7. For several months, the soiled linen from the labour-wards was mixed with the impure linen from the lying-in wards, and was kept together in closed cans for many hours. The labour-ward linen became so "heated through fermentation, that it could hardly be touched". It is believed that this, amongst other things, was a most important element in the spread of the disease.

8. Disinfection with the ordinary disinfectants, even boiling and prolonged baking at a temperature of above 250°, do not destroy the germs of mischief in linen highly charged with septic impurities. This fact has been more than once observed by the medical officers. Each baking and boiling, it is true, they say, lessens the virulency of the poison; the attacks caused by it become milder, but still some germs of mischief remain. This was remarkably the case on the reopening of the hospital in 1877, after the outbreak of fever in 1876. Although the hospital had been closed for three months, nearly every patient admitted on its reopening was stricken with feverish symptoms, and erysipelas soon showed itself. The number of admissions kept on increasing, the patients attacked became fewer, and the type of the disease milder, until it finally disappeared. During this time, the greatest care was taken to have the linen properly stoved, and the apparatus was in perfect working order. A consideration of these facts renders it surprising that the outbreak did not occur earlier. The precautions taken since the reopening of the hospital in September 1879 have hitherto had the happiest results, every patient being treated on antiseptic principles.

A lecture was delivered by H. R. Silvester, Esq., M.D., on "The Art of Resuscitating the apparently Dead", on Thursday last, at the Society of Arts, John Street, Adelphi, in connection with the Royal Humane Society.

SMALL-POX HOSPITALS.

At a recent meeting of the Society of Medical Officers of Health, Dr. Collie, of the Homerton Fever Hospital, who has on more than one occasion reflected honour on the medical service directed by the Metropolitan Asylums Board, contributed a valuable paper on the construction and management of small-pox hospitals from a public health view. It is extremely important that the valuable opportunities for study which the metropolitan asylums afford should not be lost for the benefit of humanity, and it is a matter of congratulation that among the medical superintendents of the asylums are to be found men who take their work not only in its dry and administrative sense, but throw their heart and mind into it, and carefully study all those points from which may be deduced valuable lessons in sanitary science, hospital management, and medical treatment. The paper did not deal with the details of any particular hospital, or discuss the management of any special institution, but aimed at describing an ideal hospital in reference to minutiæ of site, management of construction, and sanitary principles. It is in this way that progress may be most hopefully anticipated, since it is by deductions from existing data, with the accumulation of condensed desiderata, that the most perfect types may ultimately be attained. Dr. Collier inclined to the view that small-pox is a disease which ought to be treated by isolation, and that this isolation should be as nearly absolute as such a thing is possible; and further he referred to the very contagious nature of the disease. This he thought so great, that he believed the same block or set of hospital buildings should never be allowed to be used at the same time for the treatment of the fevers as known in this country and of small-pox. In the course of the paper he referred to the visible nature of small-pox poison, and to the way in which it sticks to articles of furniture and bedding, and spoke from his own experience of the peculiar order in which small-pox cases crop up in a hospital which contains at the same time general and fever patients, and also cases of small-pox. Probably no one would care to treat small-pox in the open ward of a general hospital; but in the case of typhus, enteric, or scarlet fever admitted into such ward, Dr. Collie stated that they rarely spread even to patients in adjoining beds. He then said that the first and most important question is that of site, not in relation to soil but in relation to patients, and he laid it down as a self-evident proposition that a small-pox hospital ought to be where the patients are likely to be found. He thought, "to bring a healthy and uninfected neighbourhood into daily and hourly contact by means of the infected sick, by means of visitors who travel by road and rail, seems to be wholly unjustifiable, except on the plea of necessity". He said, "I should establish my hospital where the disease is likely to be most frequent and most severe, that is, in the crowded parts of large towns; and I should prefer small hospitals, to meet the needs of local outbreaks, to large ones at a distance from the homes of the sick. To what extent this may in particular instances be practicable, it is no part of my purpose to inquire. What I wish to point out is, the ideal which in all circumstances we should aim at; and that ideal, as regards site, is the isolation of the disease on the spot, or as near thereto as may be practicable." He pointed out the danger to the patient likely to arise from his being removed to a hospital at a distance from home; and referred to possible objections, either on the part of the patient or of his relatives, to his being removed at all, because of expense incurred in going to visit him or inquire after his condition. He thought that it is at the beginning of epidemics, when cases are mild, that local hospitals would be found most beneficial, and stated that it is advisable that these mild cases should be promptly isolated, and that no opportunity should be given to allow the patient's friends to assert that he is not bad enough to be sent from home. He thought, moreover, that danger may be increased by having to remove a patient to a distance, a danger arising from the possible introduction of the disease into intervening districts, either from the ambulance, the patient, or his friends. He also suggested the advisability of utilising the spaces created by the destruction of "fever-dens" as sites for local small-pox or isolation hospitals, because they have previously been the scene of the disease; and since it is unlikely that the hospitals, when properly managed, should cause offence in such neighbourhoods.

He then proceeded to give his reasons for suggesting a plan of building for an isolation hospital, the chief points being a proper boundary wall, and a sufficient "separation" space (100 ft.), which was to be used as residences for hospital officers, who might have access to them without passing through a general hospital gate. Special stress was laid on the construction of the hospital gate (or porter's lodge) and suggestions were made as to who and what should be admitted at that gate. Having admitted his case into hospital, he proceeded to discuss the steps suitable for its management to recovery or death. He thought fault may be found with the present system of admission in so far as it seems likely to keep the infected from being admitted or from applying for admission, and he implies that this is especially likely to occur in very mild cases. He pointed out that in London there is much formality prior to the admission of a patient, and thought it advisable that this should be diminished. Formality takes time, and in all cases where time is of moment it is advisable to take time by the forelock. If a man have the disease, he ought to be admitted at once. Dr. Collie spoke of the ambulances used in the removal of patients, and appeared to favour centralisation, and would like to see them properly organised.

On the question of the visiting of patients Dr. Collie said: "Visitation ought to be confined to the nearest friends; and in special circumstances, when these come from the country, they should be warned of the risk they run, and be advised what precautions they should take in the event of their becoming infected. Beyond this I would not go, but I think that in no circumstance ought the husband to be prevented from seeing his wife, or the wife her husband, or either from seeing their children. They may sometimes risk their lives, but this is often a duty". He stated, in conclusion, that with efficient vaccination, and revaccination at a suitable age, persons might live with safety not only near but inside a small-pox hospital; and added, that it is to vaccination that we must look for protection from small-pox.

SPECIAL CORRESPONDENCE.

MELBOURNE.

Diphtheria.—Measles.—Lunatic Asylums in Victoria.—Treatment of Mining by Galvanism.—Presentation to Dr. Neild.

In the first days of April our community was greatly startled by the alarming intelligence received of a sudden and serious outbreak of diphtheria in one of the provincial towns. It appears that, shortly after a picnic, a number of persons who had taken part were simultaneously seized with the complaint, and in a very short time eleven died. At a meeting of the Victorian Branch the subject was prominently brought forward by Mr. Rudall, and a resolution was unanimously passed that the attention of the Government should be called to this matter, and an investigation asked for. The Central Board of Health at once instituted vigorous measures, beginning by appointing a small number of their members to visit the district, to hold an inquiry, and to issue such directions as they might think fit to stop the further spread of the disease. No satisfactory reason as to the etiology of the outbreak was elicited, but a great deal of good was done by proper isolation of patients and improvements of sanitary defects.

Almost contemporaneously with this, we were visited with an epidemic of measles, which assumes in this colony a somewhat malignant character. The origin of this outbreak was easily traced to direct contagion with passengers from the steamer *Kent*. On the voyage to Melbourne thirty-two cases of measles were reported on board; but, although our quarantine regulations are very strict, and under the very efficient direction of Dr. Williams, there seemed nothing to warrant a detention, and the vessel was allowed to proceed into port. Both measles and diphtheria appear to be subsiding.

A deputation, consisting of the council of the Victoria Branch, waited on the Chief Secretary of the colony last week in order to present him with a memorial in reference to the future administration of the lunatic asylums of Victoria, and a scheme for their future management. The whole of the Council attended, and were well received. The memorial in appropriate terms pointed out that the Council, after visiting the Yarra-Bend and Ker asylums, had come to the conclusion that the time had arrived when a complete change in the administration of the asylums ought to take place; that the present political system under which these institutions have hitherto been directed is the cause of the defects, and that it is impossible for the Chief Secretary, with his multifarious duties, to take an active interest in the administration of this department. The memorial winds up by suggesting to the Government to amend the lunacy statute, and to place the asylums under the control of the commissioners, who shall perform the duties pertaining to the lunatic asylums which are at present divided between the Chief Secretary's office, the Master in Lunacy, the Inspector of Asylums, and the official visitors. Appended to this is the scheme, which in point and pith is a copy of the English law in lunacy, namely, the appointment of paid and honorary commissioners, who shall form a "board", and have full powers of administration, etc. The Chief Secretary promised, in the course of a conversational discussion that followed the reading of these papers, to give this subject his earnest attention. It appears, however, that the Government are in noways anxious to allow the reins of this department to be taken out of their hands; they rather encourage the idea of selecting one of the present asylums as a distinct hospital

for the treatment of the insane, filtering all patients through this hospital, and placing only the incurables in the larger establishments; they also favour the appointment of a lay inspector. The Council offered no objection to this latter appointment, providing that he shall be under the medical superintendent; and they also draw the Minister's attention to the difficulty of these two officers acting harmoniously, if otherwise. Our community is under great obligations to Dr. Graham for the active and energetic interest he has devoted to this subject.

Dr. Browning, who is devoting his time principally to electrotherapeutics, has been most successful in treating a case of albugo with leucomatous patches in both eyes by galvanism. The patient, a little girl of about fourteen years, had been suffering about twelve months. The *modus operandi* consisted in using a small current of four cells, the negative theophone, attached to a sponge, being applied over the closed eyelid, the positive placed behind the ear, the continuous current lasting from two to five minutes. This treatment was continued twice a week for about three months.

The cup to be presented to Dr. Neild by some of his medical friends is now finished. The workmanship does credit to the colony. The cup rests on two stalks of the plant named in honour of Dr. Neild, by Sir Ferdinand Baron von Müller, *Darwinia Nieldiana* (Sect. *Genetyllis*). On the cup the plant appears to be in full blossom. Both cup and stem are ornamented with suitable verses. The whole is in mosaic gold representing the value of 100 guineas.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-EIGHTH ANNUAL MEETING.

THE Forty-Eighth Annual Meeting of the British Medical Association will be held at Cambridge, on Tuesday, Wednesday, Thursday, and Friday, August 10th, 11th, 12th, and 13th, 1880.

President: DENIS C. O'CONNOR, A.B., M.D., Professor of Medicine in Queen's College, Cork.

President-elect: G. M. HUMPHRY, M.D., F.R.C.S., F.R.S., Professor of Anatomy in the University of Cambridge; Senior Surgeon to Addenbrooke's Hospital.

An Address in Medicine will be delivered by J. B. BRADBURY, M.D., F.R.C.P., Physician to Addenbrooke's Hospital; Linacre Lecturer in Physic.

An Address in Surgery will be delivered by TIMOTHY HOLMES, M.A., F.R.C.S., Surgeon to St. George's Hospital.

An Address in Physiology will be delivered by MICHAEL FOSTER, M.D., Hon. M.A., F.R.S., Prælector in Physiology in Trinity College, Cambridge.

The business of the Association will be transacted in Eight Sections.

SECTION A.: MEDICINE.—*President:* George Edward Paget, M.D., D.C.L., F.R.S., Cambridge. *Vice-Presidents:* George Johnson, M.D., F.R.S., London; P. W. Latham, M.A., M.D., Cambridge. *Secretaries:* W. B. Cheadle, M.A., M.D., 2, Hyde Park Place, London, W.; D. B. Lees, M.A., M.D., 2, Thurloe Houses, Thurloe Square, London, S.W.

SECTION B.: SURGERY.—*President:* William S. Savory, M.B., F.R.S., London. *Vice-Presidents:* William Cadge, F.R.C.S., Norwich; John Wood, F.R.C.S., F.R.S., London. *Secretaries:* John Chiene, F.R.C.S.Ed., F.R.S.Edin., 21, Ainslie Place, Edinburgh; George E. Wherry, M.B., M.C., F.R.C.S., 63, Trumpington Street, Cambridge.

SECTION C.: OBSTETRIC MEDICINE.—*President:* W. S. Playfair, M.D., London. *Vice-Presidents:* H. Macnaughton Jones, M.D., Cork; Henry Gervis, M.D., London. *Secretaries:* R. N. Ingle, M.D., F.R.C.S., 21, Regent Street, Cambridge; C. E. Underhill, M.D., 8, Coates Crescent, Edinburgh.

SECTION D.: PUBLIC MEDICINE.—*President:* Henry W. Acland, M.D., LL.D., F.R.S., Oxford. *Vice-Presidents:* Arthur Ransome, M.A., M.D., Manchester; Thomas Pridgin Teale, M.A., F.R.C.S., Leeds. *Secretaries:* William Armistead, M.B., St. Mary's Villa, Station Road, Cambridge; Thos. J. Walker, M.D., 18, Westgate, Peterborough.

SECTION E.: PSYCHOLOGY.—*President:* J. Crichton Browne, M.D., LL.D., F.R.S., London. *Vice-Presidents:* G. F. Blandford, M.D., London; P. M. Deas, M.B., Macclesfield. *Secretaries:* G. M. Bacon, Hon. M.A., M.D., Lunatic Asylum, Fulbourn, Cambridge; Henry Sutherland, M.A., M.D., 6, Richmond Terrace, Whitehall, S.W.

SECTION F.: PHYSIOLOGY.—*President:* William Rutherford, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Arthur Gamgee, M.D., F.R.S., Manchester; Robert McDonnell, M.D., F.R.S., Dublin. *Secretaries:* W. H. Gaskell, M.A., M.D., Grantchester, Cambridge; William Stirling, D.Sc., M.B., Marischal College, Aberdeen.

SECTION G.: PATHOLOGY.—*President:* Sir James Paget, Bart., D.C.L., LL.D., F.R.S. *Vice-Presidents:* Samuel Wilks, M.D., F.R.S.; W. Howship Dickinson, M.D. *Secretaries:* W. S. Greenfield, M.D., 15, Palace Road, Albert Embankment; Charles Creighton, M.A., M.D., Anatomical Museum, Cambridge.

SECTION H.: OPHTHALMOLOGY.—*President:* William Bowman, F.R.C.S., F.R.S., London. *Vice-Presidents:* Henry Power, F.R.C.S., London; Henry R. Swanzy, M.B., Dublin. *Secretaries:* W. A. Brailey, M.A., M.D., 38, King's Road, Brownswood Park, London, N.; David Little, M.D., 21, St. John Street, Manchester.

A Subsection of Otology will be formed, of which Mr. W. B. Dalby, F.R.C.S., of London, will be Chairman, and Dr. James Patterson Cassells of Newton Terrace, Sauchiehall Street, Glasgow, and W. D. Hemming, F.R.C.S., honorary secretaries.

Treasurer: R. M. Fawcett, M.D., 3, Scrope Terrace, Cambridge.

Honorary Local Secretaries: Bushell Anningson, M.A., M.D. (Hon. Medical Secretary), Walt-ham-sal, Barton Road, Cambridge; A. P. Humphry, Esq., M.A. (Hon. Reception Secretary), Corpus Buildings, Cambridge.

Letters relating to the strictly medical work (Sections, Museums, etc.) of the meeting should be addressed to Dr. Anningson; other letters to Mr. A. P. Humphry.

TUESDAY, AUGUST 10TH, 1880.

2 P.M.—Meeting of Committee of Council at the Guildhall.
2.30 P.M.—Meeting of the Council of 1879-80 at the Guildhall.
4 P.M.—Short service, with sermon by the Bishop of Ely in King's College Chapel; after which a collection will be made for the British Medical Benevolent Fund.
8 P.M.—General Meeting in the Senate House. President's Address; Annual Report of Council and other business.
10 P.M.—Tea and coffee in the Hall of Caius College (close to the Senate House).

WEDNESDAY, AUGUST 11TH.

9.30 A.M.—Meeting of Council of 1880-81 at the Guildhall.
11 A.M.—Second General Meeting in the Senate House. Address in Medicine.
12.30 P.M.—Conferring Honorary Degrees in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
9 P.M.—Soirée in the Fitzwilliam Museum and grounds of Peterhouse by the Reception Committee.

THURSDAY, AUGUST 12TH.

9.30 A.M.—Meeting of the Committee of Council at the Guildhall.
10 A.M.—Third General Meeting in the Senate House. Reports of Committees.
11 A.M.—Address in Surgery in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
6.30 P.M.—Public Dinner in the Hall of Trinity College.

FRIDAY, AUGUST 13TH.

10 A.M.—Address in Physiology in the Senate House.
11 A.M.—Sectional Meetings in the New Museums and Lecture Rooms.
1.30 P.M.—Concluding General Meeting in the Senate House. Reports of Committees and other business.
4 P.M. Garden party in the grounds of King's College by the President.
9 P.M.—Conversazione in St. John's College and grounds.

Ladies will be admitted to the Soirée, Garden Party, and Conversazione.

SECTIONAL ARRANGEMENTS.

A complete statement of the discussions and papers in the several Sections will be given in next week's JOURNAL. The following communications are promised in addition to those already mentioned.

GOODHART, H. F. A., M.D. A Case of Softening of the Pons Varolii, with Thermometric Observations.
HAGUE, JOHN, M.D. Milk Pathology.
JACCOUD, V., M.D. The Curative Influence of Koumiss in Pulmonary Consumption and Diseases of Emaciation.
LITTLE, J. Pitcher, Esq. The Treatment of Chronic Rheumatoid Arthritis by Oil-rubbing, Russian Baths, and Electricity. 2. The Treatment of Sleeplessness by Sitz-baths, etc.
MANBY, Mair R., Esq. On Remuneration by Clubs.
ROY, C. S., M.D. On a New Rapidly Freezing Microtome.
RUSSELL, C. S., M.D. The Comparative Value of Various Mechanical Aids to Hearing.
TURNBULL, Lawrence, M.D. Syphilitic Affections of the Ear.
WILSON, J. M., M.B. Suggestions for the Better Controlling of Infectious Cases among School Children.

DEMONSTRATIONS.

The following demonstrations will take place.

SECTION A.—MEDICINE. Dr. GOWERS: Clinical Measurement of

the Corpuscles and Hæmoglobin of the Blood.—Mr. BALMANNO SQUIRE: A Demonstration of Typical Case of Skin-Disease by Aid of the Dissolving-views Apparatus.

SECTION F.—PHYSIOLOGY. Demonstrations will be given by M. Ranvier, Dr. Weber, Dr. Preyer, Dr. Arthur Gamgee, Mr. Langley, Dr. Roy, Mr. Gaskell, Dr. Hamilton, and Mr. Gaule.

COLOUR-BLINDNESS.

It is hoped that *all* members attending the meeting will present themselves for an examination of their colour perception, and thus assist in settling the much disputed question of the percentage of colour-blind persons. Holmgren's tests will be in readiness in a room adjoining the place of meeting of the Ophthalmological Section during the times of sitting. Directions for finding the room will be duly posted up.

PATHOLOGICAL COLLECTION.

The following contributions have been already promised.

Microscopic Specimens: by Dr. Stephen Mackenzie, Dr. Charlewood Turner, Dr. D. I. Hamilton, Dr. Byrom Bramwell, Dr. Dreschfeld, Dr. Leech, Dr. Thin, Dr. Lauchlan Aitken, Mr. Malcolm Morris, Dr. Vandyke Carter, Dr. Osler (Montreal), Professor Klebs (Prague), Mr. Greig Smith.

Drawings: by Dr. Reginald Thompson, Mr. James Startin, Dr. Hoggan, Dr. R. J. Lee, Dr. Greenfield, Dr. Creighton, Dr. Mercer (New York), Dr. Osler, Mr. Jonathan Hutchinson.

Other Preparations: by Dr. Alexander Ogston, Dr. T. Barlow, Dr. Dreschfeld, Dr. Creighton, Dr. Elliot (Carlisle), Mr. Lawson Tait, Professor Busch (Berlin), Dr. D. J. Leech.

ANNUAL MUSEUMS.

The Pathological Collection will be in the Anatomical Museum.

Honorary Secretary to the Pathological Collection: C. Creighton, M.D., Anatomical Museum, Cambridge.

The Exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetic and Sanitary Appliances, will be in connection with the Reception Room in the Guildhall.

Honorary Secretary: G. Wallis, Esq., Corpus Buildings, Cambridge.

Honorary Secretary to the Sanitary Collection: W. Armistead, M.B., Station Road, Cambridge.

EXCURSIONS.

On Saturday, August 14th, there will be excursions to Ely, Peterborough, and Audley End.

Honorary Secretary to the Excursion Committee: G. Wallis, Esq., Corpus Buildings, Cambridge.

ANNUAL DINNER.

The number of persons that can be accommodated in the Hall of Trinity College is limited to 350. Tickets for the annual dinner will be reserved for members who make application, accompanied by payment of one guinea, to A. P. Humphry, Esq., Corpus Buildings, Cambridge.

NOTICE OF MOTION.

Dr. Norman Kerr hereby gives notice that he will move that the following words be added to Regulation [illegible] of the proposed Regulations for the conduct of annual meetings—viz., that the price of the dinner-ticket shall not include a charge for intoxicating liquors.

A complete programme, containing the latest available information, will be issued in next week's JOURNAL.

FRANCIS FOWKE, *General Secretary*,
British Medical Association.

161A, Strand, London, July 15th, 1880.

NORTH WALES BRANCH.

THE thirtieth annual meeting will be held at Beaumaris on Tuesday, the 31st day of August.

Special arrangements are being made for the latter part of the journey (across the Menai Straits), and for visits to the various objects and places of interest in the neighbourhood.

Further particulars will be announced by notices in the JOURNAL, and by circular to the members on an early day.

J. LLOYD ROBERTS, *Honorary Secretary*.

Denbigh, July 20th, 1880.

EDINBURGH BRANCH: ANNUAL MEETING.

THE annual general meeting of this Branch was held at 5, St. Andrew Square, Edinburgh, on Tuesday, June 29th; Dr. D. WILSON in the chair.

Medical Education.—After the transaction of the formal business, a letter was read from the General Secretary enclosing resolutions of the Metropolitan Counties Branch, and inviting, in the name of the Committee of Council, the opinion of the Branch thereon. After some discussion, the Secretary was instructed to acknowledge the receipt of the letter of the General Secretary and the resolutions, and to enter them upon the minutes.

Medico-Ethical Committee.—Dr. P. A. YOUNG proposed that a small committee be appointed to consider the advisability of forming a medico-ethical section. This was seconded by Professor ANNANDALE, and carried; and a committee of five members was appointed.

After a vote of thanks to the chairman, the meeting separated.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in Manchester, on Wednesday, June 30th, under the presidency of EDWARD LUND, Esq. There were present 115 members and 9 visitors.

President's Address.—The PRESIDENT delivered an address, in which he referred to the loss which the Association had incurred by the death of one of its most promising and conspicuous members—Mr. Samuel M. Bradley, a man personally known to many of those present, and certainly known by renown to others in far distant parts of this kingdom, either by his voice or by his pen: for there was scarcely a subject in the category of medicine or surgery which he had not touched upon, so universal was his genius. The President proceeded to read a paper upon *Palliative Medicine and Palliative Treatment in Surgical Cases*, in the course of which he endeavoured to show that where medical men cannot cure, it is their duty to seek to mitigate suffering and to prolong life by measures purely palliative in their nature.

Report of Council.—The Honorary Secretary (Dr. A. DAVIDSON) read the annual report, which congratulated the members upon the continued prosperity of the Branch. The past year had been a comparatively uneventful one; and, from various causes, no intermediate meetings had been held, although two had been arranged for. This the Council regretted, as they believed it was to the advantage of the Branch that intermediate meetings should be held. In 1867, there were 233 members; in 1875, 460; in 1877, 615; in 1878, 711; and in 1879, 740. During the year, a considerable number of names had been removed from the list of members. Sixteen had resigned or left the district; eight had been struck off the roll for non-payment of subscriptions; and five had died; making a total of twenty-nine. There had also been twenty-nine new members; so the number of members this year was still 740. The only matter of public interest in which the Council had taken any part since the last annual meeting was the discussion of the subject of medical education, which was initiated by the Metropolitan Counties Branch of the Association. The Metropolitan Counties Branch drew up a series of resolutions upon the subject, which the members of this Branch considered, and in the main agreed with.

The financial statement, as read by the Honorary Secretary, showed that the Branch had a balance in hand of £33 1s. 10½d.

Office-Bearers for 1880-81.—The following were elected: *President:* E. Lund, Esq. *President-elect:* J. B. Gilbertson, M.D., Preston. *Vice-Presidents:* D. J. Leech, M.D., and J. Atkinson, Esq. *Vice-Presidents-elect:* C. Johnson, Esq., and W. H. Fitzpatrick, M.D. *Honorary Secretary:* A. Davidson, M.D., Liverpool. *Local Secretaries:* C. J. Cullingworth, Esq., Manchester; R. Brown, M.B., Preston; W. Garstang, M.D., Blackburn; W. Hall, Esq., Lancaster; and J. Taylor, Esq., Chester. *Representatives in the General Council:* J. Atkinson, Esq.; F. J. Bailey, Esq.; G. Barron, M.D.; L. Borchardt, M.D.; H. Briggs, M.D.; C. J. Cullingworth, Esq.; W. Macfie Campbell, M.D.; W. Carter, M.D.; J. Dreschfeld, M.D.; J. H. Ewart, Esq.; J. Farrar, Esq.; W. H. Fitzpatrick, M.D.; A. Godson, M.B.; J. Hardie, M.D.; J. Harker, M.D.; R. Harrison, Esq.; F. A. Heath, Esq.; W. R. Heath, Esq.; R. Hopwood, Esq.; J. Howie, M.B.; L. Jones, M.D.; D. J. Leech, M.D.; C. E. Lyster, M.D.; F. B. Mallett, M.D.; H. Colley March, M.D.; G. W. Mould, Esq.; J. Parks, Esq.; Chauncey Puzey, Esq.; E. Rayner, M.D.; D. Lloyd Roberts, M.D.; T. L. Rogers, M.D.; J. Ross, M.D.; H. Simpson, M.D.; A. T. H. Waters, M.D.; F. P. Weaver, M.D.; C. White, Esq.; W. Whitehead, Esq. *Ordinary Members of Council:* J. T. W. Baird, M.B.; Essex Bowen, M.D.; C. E. Glascott, M.D.; T. R. Glynn, M.D.; J. Haddon, M.D.; James Hall, Esq.; J. B. Hughes, Esq.; J. Lambert, M.D.; D. Little, M.D.;

J. Dixon Mann, M.D.; W. Mathews, Esq.; M. G. B. Oxley, Esq.; Rushton Parker, Esq.; A. Ransome, M.D.; C. D. Shepherd, Esq.; A. W. Stocks, Esq.; G. Thomson, M.D.; C. Thorp, Esq.; E. Waters, M.D.; J. W. Watkins, M.D.

Papers were read by Mr. Farrar, on Poisoning by Gelseminum; by Dr. Ll. Roberts, on Extra-Uterine Pregnancy; by Dr. W. Carter, on Syphilitic Tumours of the Brain; by Dr. Dreschfeld, on the Morbid Anatomy of Bright's Disease; by Dr. Haddon, on Rötheln; by Dr. Glynn, on Changes in the Lung from Bronchial Compression; and by Mr. W. Whitehead, on Cystic Tumours of the Neck.

Luncheon.—Through the hospitality of the President, the members were provided with lunch at the commencement of the meeting.

The Dinner took place at the Queen's Hotel, when eighty-two sat down, including Principal Greenwood, the Rev. J. Henn, and several other guests.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held on July 6th, at the Grand Hotel, Birmingham, under the presidency of Mr. R. Prosser, upwards of seventy members being present.

Report of Council.—The report showed that twenty-two new members had been elected during the year; eight had resigned, and the loss of three by death was lamented—namely, Mr. Adkins, Mr. Arthur Bracey, and Mr. Shaw—the numbers now standing at three hundred and sixty-three. Six ordinary meetings and one adjourned meeting had been held during the session, and the work of the Branch had been actively maintained.

New Members.—The following new members were elected: John A. Aitkens; H. Gilbert Barling, M.B.; Henry R. Leech; Robert Rees, M.B.

The Report of the Pathological and Clinical Section was read, and various votes of thanks to officers passed.

Officers and Council.—The following were elected. *President-Elect:* T. H. Bartleet, M.B. *Honorary Secretaries:* E. Malins, M.D.; E. Rickards, M.D. *Treasurer:* Arthur Oakes, Esq. *Council (Country Members):* E. Dewes, M.D.; W. C. Garman, Esq.; F. E. Manby, Esq.; J. Manley, Esq.; C. A. Newnham, Esq.; J. Thompson, M.D.; J. Tibbits, M.D.; T. Underhill, M.D. *(Town Members):* J. S. Gamgee, Esq.; J. Greene, Esq.; J. Hunt, Esq.; L. Owen, Esq.; T. Savage, M.D.; J. Sawyer, M.D.; W. Thomas, Esq.; W. F. Wade, M.B.

Representatives in the General Council of the Association.—The following were elected: T. H. Bartleet, Esq.; B. Foster, M.D.; J. S. Gamgee, Esq.; John Greene, Esq.; J. Johnston, M.B.; H. R. Ker, Esq.; F. E. Manby, Esq.; J. Manley, Esq.; Hugh Morgan, Esq.; C. A. Newnham, Esq.; Lloyd Owen, Esq.; O. Pemberton, Esq.; N. Solomon, Esq.; James Thompson, M.D.; T. Underhill, M.D.; W. F. Wade, M.B.; T. W. Williams, Esq.; J. F. West, Esq.

Dinner.—The members and their friends afterwards dined together.

NORTHERN COUNTIES OF SCOTLAND BRANCH: ANNUAL MEETING.

THE annual meeting was held at Forres, on the 14th July; Dr. AITKEN, President, in the Chair. There was a large attendance of members.

New Members.—The following gentlemen were admitted as members of the Association and Branch, viz.: Dr. Adam, Dingwall; Dr. Finlayson, Munlochy; Dr. Murray, Inverness; Dr. Hay, Forres.

The late Dr. J. Wilson.—The following minute (drawn up by Dr. Ross of Inverness, at the Secretary's request) was ordered to be engrossed: "The members of the Northern Counties' Branch of the British Medical Association desire to record their sense of the loss which they have sustained since their last meeting by the death of their fellow-member and former President, Dr. John Wilson of Inverness. While he possessed the love and confidence of his patients, and the esteem of society, his advice and assistance were largely sought by his brethren, whom his straightforwardness and honour inspired with the fullest conviction that, in all their consultations and communications with him, their professional character and interests were safe in his hands. He had formed for himself a high ideal of the dignity of his profession, and, by acting uniformly up to this, he contributed to raise its status throughout the large community with which he was connected, and so aided one of the great objects which this Association was formed to promote.

"The members further wish to express, in common with all the friends of the late Dr. Wilson—their deep and sincere sympathy with his widow and relatives in the heavy blow inflicted upon them by his sudden death; and they request the Secretary to forward a copy of this minute to Mrs. Wilson, that she may at least have the satisfaction of knowing the high regard entertained for her husband by them, not only as an association, but by each one of them singly and individually."

Papers.—The following papers were read:

1. Case of Rupture of Aorta. By Dr. Vass, Dingwall.

2. On the Best Means of Treating Wounds of the Palmar Arch. By Dr. Bruce, Dingwall.

3. The Causes of Puerperal Fevers and Inflammation. By Dr. Alexander Ogston, Aberdeen.

The latter was illustrated by diagrams of bacteria, bacilli, and micrococci in different stages of development, and was much appreciated by the members as an able, lucid, and masterly exposition.

The Vaccination Bill.—It was resolved to petition Parliament against the Vaccination Bill of 1880.

Officers and Council.—Dr. Bruce of Dingwall was appointed President for next year; Dr. Aitken, of Inverness, and Dr. Cameron, of Bawtry, Yorkshire, representatives to the General Council; and Dr. Mackay, of Elgin, Secretary and Treasurer.

Luncheon.—The members then adjourned to luncheon in Charleson's Hotel, and spent a very pleasant afternoon.

CORRESPONDENCE.

THE HISTORY OF OVARIOTOMY.

SIR,—Allow me to make some remarks on Dr. Clay's letters, and on the history of ovariotomy. Dr. Clay is mistaken in saying that I witnessed his operations long before I operated myself. I have not had the pleasure of ever meeting Dr. Clay. I performed ovariotomy eleven times before seeing it done by another; that was in 1864, when I was present at Mr. Spencer Wells's eighty-first operation at the Samaritan Hospital.

The question is again raised, "Who was the first in this country to give the profession confidence in ovariotomy?" If any one have a doubt, let him compare Mr. Wells's published work in 1864 with what was written up to that time by Dr. Clay, Mr. Baker Brown, or by anyone else, or by all of them put together. Confidence was destroyed. Mr. Wells restored it. He reported every case of operation, whether completed or not, and he gave the name of the medical attendant. In this I was only too glad to follow him, and the after-history of every one of our cases operated on during the last eighteen or twenty years could now be easily traced, or the patient got hold of within twenty-four hours.

Yet Dr. Clay must not imagine that his early work, performed under such difficulties, is not appreciated, or that the example he gave us of earnestness and perseverance has not borne its fruit, Dr. Clay was unfortunate in his method of operating by the long ligature to the pedicle. The best results to be got out of this method gave a mortality of one in every two, or at most three, operated on. The principle was wrong, and he might have gone on for ever with but little improvement. The principle of the extraperitoneal treatment practised by Mr. Wells commended itself to the profession, and the death-rate became one in four, or perhaps one in five. This was a great advance; but here, too, as in Dr. Clay's method, there was a limit. Simple experience with the clamp alone did little to diminish this mortality; for, of Mr. Wells's published eight hundred cases, the death-rate in the last three hundred was greater than in the preceding three hundred. His results by the dropped ligature were even worse—38 per cent. All over, the frightful mortality of one in four still continued.

For some time past it has seemed to me that, had Baker Brown lived, the history of this operation since 1864 would have been different. His own method of dealing with the pedicle by the cautery at once lowered the mortality to one-half of that with the clamp, and it was becoming practised in London when illness came to him, and death. The man and his method were quickly forgotten; no one would have the lesson his work gave. All were strangely blind in those days to its value. Should I not rather say, we were all strongly prejudiced? In truth, there is no more startling page in surgical history than that in which his latest results are given. On one page we have almost nothing but failures; on the other, by a simple change in the method of operating, an almost uninterrupted line of successes. During the whole of his professional life he seems to have tried hard to cure ovarian disease. From 1851 to 1864 he made many efforts, and tried many ways, all in vain, till he adopted the cautery. His published results show a mortality of less than one in ten in completed cases. I have read somewhere that he lost but four of his last fifty operations. Some years afterwards unable to get my mortality much under the one in five, for I was then ignorant of

drainage—I took to Mr. Brown's method in a sort of despair. For a time it was used irregularly, and only in the worst cases, or in those not favourable for the clamp. The results of the first fifty cautery cases, published in the *Lancet*, gave a mortality of less than one in twelve—8 per cent., and the results that followed were much better. Mr. Wells and Mr. Thornton have lately given their statistics of cases performed under careful antiseptic treatment, and with all the other improvements of these later years, and the mortality is nearly eleven per cent.

So much for Mr. Baker Brown's as compared with the other methods. But, after all, what most concerns us now is, by whose method may ovariotomy be performed with the least risk to the patient? Surely the one that gave us a death-rate of less than eight per cent., long before antiseptics were heard of, is the one to trust to now—such, at least, is my experience. The cautery alone gave the best results of all the methods before. It gave better results fifteen years ago than any other method can yet show with antiseptics. Helped by drainage—for where would the antiseptic system be without drainage? it gives the best of all results with them. Ninety-eight of my last hundred cautery operations have recovered, and in one of the two fatal cases the tumour was malignant with cancerous masses in the pelvis, practically an incomplete operation.

Have I not reason, therefore, for saying that, had Mr. Baker Brown lived, the history of ovariotomy since 1864 would have been changed; and that, in making his calculations, Lord Selborne would have had to add three times the number of years to the lives of women saved by ovariotomy?

As to the other point in Dr. Clay's letter, of which so much has lately been written—the uniting of the peritoneal surfaces in closing the wound—little or no importance need be attached to it as affecting the mortality.—I am, yours truly, THOMAS KEITH.

Edinburgh, July 25th, 1880.

SIR,—A few words on your last statements. The operations of Mr. Jeaffreson, Drs. Granville, Crisp, King, and West, which preceded mine, were not the operation I claim as my own. My operation was extirpation by the large incision; theirs was not, and one totally different in character. My cases, as long as there was any great novelty attached to them, were published in the medical journals of the time. Dr. Granville's case was published in the *Ladies' Magazine* of the period. The operation never fell into disrepute after its introduction into England, and I call upon all early ovariotomists to prove this. The *critique* you so fondly hug, in the *British and Foreign Medical Review*, was one like your own (one-sided), not written by the editor, but by a reviewer (a near neighbour of mine), and who, I believe, was afterwards ashamed of it. Let me put in, as a contrast to it, the editorial opinions of the *Edinburgh Medical Journal* of 1867 (*vide* page 110 in your last number of July 17th).

You say nothing of Mr. Wells' writing to Dr. Clay for permission to be present at an operation *which he had never seen*, of his coming to Manchester for that special purpose, of the pleasure he expressed before medical witnesses, and of his letter of thanks afterwards to Dr. Clay for his kindness and hospitality.

You say nothing of the large number of medical men of repute and position that followed my example with fair success. But you conclude by quoting a sentence from the review above alluded to: "That the operation may excite the astonishment of the vulgar, but that it neither calls for the knowledge of the anatomist nor the skill of the surgeon". Hear ye this, all ye medical men, members of your great Association! Hear the opinion sanctioned by your editor!! What will the ovariotomists throughout the civilised world say to this? How complimentary, even to Mr. Wells.

You say Dr. West at first discountenanced ovariotomy, and afterwards approved. What does this prove? but that he had drawn his conclusions too hastily.

You blame Dr. Clay for not publishing all his cases. He did publish all he thought necessary whilst it was a novelty.

You say Dr. Clay continued his operations *in and near Manchester*, meaning to infer that my labours were of a very limited character. Perhaps it will surprise you to learn that I have operated in many towns in both Great Britain and Ireland—more than you give me credit for altogether—in and near Manchester included.—Yours, etc.,

CHARLES CLAY, M.D.

Manchester, July 21st, 1880.

*** We have omitted from Dr. Clay's letter some passages which appeared to us to be unduly irritating, and unnecessary to the discussion of the matter under consideration.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

SIR,—The meeting, in March 1870, of 156 members of the medical profession, presided over by Sir William Ferguson, and the Committee and Subcommittees appointed by it, have at last found their appropriate outcome in the formation of the above-mentioned association, and the promulgation of its rules. The professional agency which commenced the movement was powerfully seconded by lay support during ten years of patient obscure labour; and the end was at last attained by inviting the co-operation of the great corporations of the Foresters, Oddfellows, Hearts of Oak, and other friendly societies, which represent the better half of the working classes.

A large proportion of the population of London, occupying the wide interval between the paupers who are provided for by the Poor-law and the well-to-do classes who pay the usual professional fees, obtain gratuitous medical attendance and medicines at free dispensaries and at the out-patient departments of hospitals. The evil consequences which flow from this practice, in the concentration of the sick in unmanageable masses on a few central points, and the break-down of their habits of self-respect and independence, are well known; but sufficient attention has not been paid to the depressing effects of this state of things upon the medical profession itself. Upon this point, I would refer to Dr. Fairlie Clarke's able article on the Limits of Unpaid Service, in the *Medico-Chirurgical Review* of January 1875, republished in the appendix to my paper on Metropolitan Medical Relief.

The Metropolitan Provident Medical Association may be described as a final effort to decentralise this congestion, and to bring this middle portion of our population into practical effective relation with the medical profession. As they belong to the classes who live by weekly wages, or by the precarious profits of small trades, they are soon broken down by doctors' bills; but it is possible for them to make a small continuous payment, in health as well as in sickness, on the principle of mutual assurance. At this point, the provident dispensary comes to the rescue, and arranges a *modus vivendi* for both parties. As the payments are made, not to the doctor direct, but at the dispensary, there are no bad debts, and no small bills to collect, while opportunities are afforded of acquiring valuable experience, especially in the domiciliary treatment of disease, as well as professional reputation. Compare this with the shifts to which young medical men are often put to make themselves known and to establish a practice; and it will be admitted that the Council of the Association has said that "the popularity and usefulness of the medical profession will be increased, and its general position will be improved, by the proposed arrangements".

The payments are higher than those under the "club doctor" system, and they have a *bonâ fide* character given to them by several subsidiary regulations. All payments have to be made in advance; applicants actually suffering from illness requiring medical treatment, pay a special entrance fee of ten shillings; and ordinary members are not entitled to medical treatment until one month after admission. Besides midwifery fees and a contingent interest in any net surplus there may be after the annual accounts are made up, the medical officers are to receive at the end of every quarter or half-year a fixed proportion of the amounts paid by the members registered under their respective names; and two representatives of the medical officers are to be on the managing committee. Only self-supporting dispensaries are to be admitted into union with the Association. In a mutual-assurance society, self-support depends upon numbers. Four thousand members, of both sexes and every age, would give an income of at least £1,200 a year. If the alliance with the friendly societies, which has been happily commenced, is steadily developed, and the members of the lodges in each dispensary district join the institution with their wives and children, the success of the undertaking is assured.

As this is not a charitable, but a commercial system, there is no ground for drawing fine distinctions between the applicants for admission to it. If a preliminary investigation into the circumstances of applicants had been insisted upon, the friendly societies would have refused all co-operation, and would probably have established friendly societies' medical institutions, which are merely associated club-doctor systems, after the example of the central and northern towns. During the five long meetings occupied in the consideration of the rules, various proposals were made for allowing applicants to enter under different scales of payment, according to their presumed means, but they were all open to the fatal objection that an inquisition into private circumstances would have been necessary; besides the temptation to deception, and the sanction which a slightly higher rate of contribution would have appeared to give to persons who could afford, but grudged to give, the usual professional fee. But it would be a mistake to suppose that no check is intended. Although every person residing within a dispensary district, who is willing to make the prescribed payments, and to comply

with the other rules, is "eligible" as a member, his actual admission is "subject to the approval of the managing committee of the dispensary"; and "to decide upon the admission and removal of members" is elsewhere stated to be one of the functions of the Managing Committee. After all, the line between those who avail themselves of the mutual-assurance system, and those who pay professional fees, must be drawn by the state of social feeling and local public opinion; and the managing committees could usefully interpose only by making an occasional example of a more than usually flagrant case. However this may be, there will be some check, whereas at present there is no check at all; and the laborious and deserving portion of the medical profession, whose interests are concerned, may feel assured that their cause was maintained to the last point by several members of their own profession, as well as by non-medical members of the Council; and that the compromise finally arrived at is the best of which the circumstances admitted, and will certainly result in great benefits to all concerned if it is cordially supported by them,—I am, etc.,

C. E. TREVELYAN, Honorary Secretary to the Metropolitan Provident Medical Association.

London, July 17th.

SIR,—In an article which recently appeared in your JOURNAL referring to the proposed provident dispensaries, you stated that "it is hoped that measures would be taken to protect the interests of the medical profession against any attempt on the part of well-to-do persons to obtain cheap medical advice under the guise of friendly co-operation"; and the report of the committee to which you alluded also contained the following paragraph.

"A liberal construction has been given to the rule regarding the admission of members to the Derby Medical Association, which practically opens it to all who are not paupers. Prior to admission, no questions are asked as to the earnings of the husband or family, the committee being of opinion that, as there is no charitable element in the matter, they have no right to do so. The benefits are great, but they are obtained solely by the power of co-operation".

In a letter which in April 1879 I wrote to the *Charity Organisation Reporter* I explained that, as under the proposed rules the committee of management was to be elected by a general meeting of all the adult members and the subscribers (the former of whom would number, say, 2,000, or 3,000, and the latter perhaps 100), the power of the subscribers would practically be *nil*, and the whole management would be in the hands of the provident members; that, consequently, there would be no uninterested persons to prevent the provident members from making the institution a simple club—to get medical advice at the cheapest possible rate, for the greatest possible numbers, irrespectively of the means of such numbers.

I consider that, if provident dispensaries are to be connected as much with the lower as with the upper sections of the working classes, this must be prevented. I think that, in the interests of the medical profession, it is undesirable that provident dispensaries should be totally supported by the periodical payments of the provident members; total self-support will entail total self-management, and, in thus making the dispensary a large club, the members will have the power on the one hand of dictating terms to the medical profession, and on the other hand of refusing to allow the old and the infirm in health to join or continue in membership.

We avoid this in Gloucester in the following manner. The committee of management consist of—

(*a*) Five provident members elected at an annual meeting of their own body:

(*b*) Five honorary members elected at an annual meeting of their own body:

(*c*) *Ex officio* members, *i.e.*, the president, vice-presidents, and medical officers, and honorary officers.

Consequently, on any question the honorary and *ex officio* members can command a majority of votes, but such fact has never in our case raised any difficulty or jealousy, and in ordinary working the provident members (being most regular in attendance) are managers, and the class from which they come are our most enthusiastic supporters.

We have now been established eight years, and our constitution has succeeded wonderfully, and the provident members are thoroughly satisfied with it.

In support of our policy I may remark that, notwithstanding that there exists in Gloucester a hospital which provides gratuitous out-door medical relief, we in 1878 received £425 from our provident members, and paid £343 to our medical men.

I would suggest that, to further protect both the objects of the institution and the proper interests of the medical profession, power should be given to the managing committee (of which the medical men should be members) to erase the name of any member who, through improved circumstances, is no longer properly eligible.

I beg to send you a copy of our rules and of our card of membership, and to remain your obedient servant,

GEORGE WHITCOMBE, Hon. Sec. Gloucester Prov. Dispensary.

Gloucester, June 24, 1880.

SIR,—When in your leading article on Provident Dispensaries in the JOURNAL of May 1st you were good enough to invite contributions on the subject from your readers, I anticipated that there would be a large response, and watched with some eagerness for the discussion that would follow. I have, therefore, been disappointed and surprised at the apparent lack of interest in the question amongst general practitioners, whose position must surely be affected for better or worse by the development of the scheme. Especially will this be the case in the Metropolis, where we are threatened with such a plethora of provident dispensaries that I fear there is some danger of their becoming organised institutions for "dishing" the doctors. That there is some reason for this fear will be seen, I think, if I quote the second of the proposed rules of the Metropolitan Provident Medical Association. It runs thus: "Membership to be open to all persons residing in the district. Every person residing within a dispensary district, who is willing to make the prescribed payments, and to comply with the other rules, shall be eligible as a member, subject to the approval of the Managing Committee."

In any district, therefore, where the committee may choose to hold a loose rein it will not be very difficult for well-to-do people (such as your correspondents, Dr. Sheen and G. F. allude to) to obtain the committee's approval, and hence would result that "grievous injury to the general practitioner", which, as you remark, "may be brought about by providing medical advice at a nominal cost to those who are well able to pay for it at its proper value."

This rule seems to be diametrically opposed to the "strict wage limit" insisted upon by Dr. Fairlie Clarke and Dr. Sheen, and there ought to be some guarantee that the Managing Committee will exercise a wise discretion in their "approval" of applicants. It is to be hoped also that medical officers will be firmly and amicably agreed to resist all cases of imposition coming under their notice, for that will be after all the most effectual check; and if they have not sufficient *esprit de corps* to assist each other in safe-guarding their own interests, they need not look for much aid from the public.

There is one other rule of the Association to which I would direct attention, viz., that "the children of members will be vaccinated without charge." This would certainly operate *most unfairly* to all medical men, for the public vaccinators would be robbed of a large proportion of their fees, and work for which they would be paid will have to be done gratuitously by the dispensary medical officers. For this very reason I have always refused to vaccinate here, and I believe the same practice obtains in the neighbouring dispensaries at Battersea and Wandsworth. I hope there will be a strenuous resistance to the passing of such a law.*

I quite agree with Dr. F. Clarke, that "this provident movement is something more than a fashionable scheme", and I regret to note that the new Metropolitan Association appears to ignore the existing provident dispensaries, several of which have been long established, and are doing good work; but I trust that when "the area of the Metropolis shall be divided into districts, for the purpose of establishing providen dispensaries", there will be no vexatious attempt to rival or supplant such of the present institutions as are thriving and well managed.—I am, Sir, yours truly, JOHN H. GRAY, M.B.

Bolingbroke House, S.W., June 28th, 1880.

THE WELBECK POISONING CASES.

SIR,—I had fully determined, as you know, to abstain from writing upon this painful subject while it remains *sub judice* and Dr. Ballard has not made his report; but a baseless assertion in an editorial paragraph, at page 130 of the BRITISH MEDICAL JOURNAL of July 24th, compels me to break my silence in self-defence.

In the paragraph above referred to, it is stated "one case has been diagnosed by Dr. Bartolomé of Sheffield as one of undoubted cholera". This assertion I most emphatically deny, as I never thought it so; and I certainly have never said so; and I should like to know from you when, where, and to whom I ever made the statement.

While in consultation with Dr. O'Connor upon Wilkinson's case—the

* This rule was struck out in the final revision. On other points treated in this and the other letter, see the explanations furnished by Sir Charles Trevelyan.

only one I saw—I distinctly and unequivocally said that I considered the case one "of severe *English* cholera, evidently produced by food either improper of itself, or improperly cooked, *or both*; probably assisted by an over-heated and foul atmosphere, and one most certainly shortly to prove fatal". I entered fully upon the subject, and told Dr. O'Connor that I have seen several similar, though isolated, cases caused by eating veal, pork, mussels, and other articles of food, either improper of themselves, or improperly cooked and greedily eaten.

This opinion I repeated to Dr. Ballard, and afterwards to Mr. Allen, and I have never spoken upon this subject to any other being.

It is notorious that neither bacon nor hams are, now-a-days, half so well cured as they used to be a score of years ago; and it is equally notorious that neither of them is half so well cooked—because it is the prevalent fashion simply to simmer instead of boiling food; and, as a natural consequence, the food so cooked (whether flesh or fish) has the tenderness of raw flesh or raw fish, but not that of sufficiently cooked food; and when put away in "the safe", it is apt to "give again", as cooks call it, because the heat has not thoroughly traversed it, and consequently the albumen it contains has not been thoroughly coagulated. Meat and fish so under-cooked is very ready to absorb moisture and noxious gases, and to run quickly into putrefaction, and in this way frequently becomes unfit for human food, even when but a short time before—while recently cooked and still hot—it may have afforded a wholesome and relished meal.

The importance of the subject will, I hope, excuse the length of this letter; for I very much fear that, unless we retrace our steps and replace our present style of curing and cooking our food by the old method, "the Welbeck catastrophe" will not long stand alone.—I am, sir, yours faithfully,

M. MARTIN DE BARTOLOMÉ.

Sheffield, July 27th, 1880.

DAVOS PLATZ.

SIR,—Will you allow me to correct one or two statements in Dr. Henry Bennet's article on Davos Platz? I have spent winters in various health resorts, the south of France, amongst others, and received little or no benefit, until I wintered in-doors in 1879-80, when a marked improvement took place.

1. With regard to the stove-heated rooms, and the time spent in them, the patients themselves seem to be the first to object to any heat above 60° during the day and 50° during the night. The rooms in the good hotels are well ventilated, and as a rule windows are open all day in the sitting-rooms, and all night as well as all day in the bed-rooms. Davos is the only place where I have been able to sleep throughout the winter with open windows without taking cold.

2. Dr. Bennet gives five hours as the longest time that can be spent daily in the open air, or rather, I should say, in which pure air can be breathed. As I said before, windows are usually open all day and all night, and streams of fresh air are constantly pouring in. Almost all invalids in almost all weathers can and do take out-door excercise with impunity; indeed, walking exercise early in the morning or late in the evening, appears to be of benefit to many.

3. As to wind, one peculiar feature of Davos is the almost total absence of wind in the winter.

4. I heard of very few of the inflammatory affections of the throat, etc., mentioned, certainly nothing approaching to an epidemic.—I am, etc.,

C. C. CARTER, M.A.

P.S. It is but fair to mention that during the summer, before going to Davos, I had been getting rapidly worse, having had hæmoptysis several times.

THE NEW OPHTHALMOLOGICAL SOCIETY.

SIR,—I feel that it would not be just to Mr. Vose Solomon that those ophthalmic surgeons who are of his opinion respecting the metropolitan exclusiveness of the new Ophthalmological Society should remain silent; and I therefore trespass upon your columns to say that I entirely concur in the view expressed by him and by Mr. Andrew, that it is greatly to be regretted that an attempt at scientific fraternisation amongst British ophthalmologists should be marred by the deliberate exclusion of the profession outside London. Without venturing upon so audacious an assertion as that the ophthalmic specialists of the large towns throughout the kingdom are as well worthy of confidence and consideration as their London *confrères*, I think that at least they hold generally a scientific position which should entitle them to toleration; and I am sorry that the majority of those present at the inaugural meeting of the new Society have thought it desirable or necessary to record a contrary opinion.—I am, sir, yours, etc.,

ARCHIBALD HAMILTON JACOB, M.D.Dub., F.R.C.S.I.,
Oculist in Ordinary to His Excellency the Lord Lieutenant.

Dublin, July 1880.

EXCURSIONS AT THE CAMBRIDGE MEETING.

SIR,—As an excursion is to be made to Audley End during the forthcoming annual meeting at Cambridge, I may suggest to intending visitors that Hempstead (where the immortal Harvey is buried), is within easy distance of Saffron Walden, which is also near to Audley End. A visit to the Harvey chapel and vault in Hempstead Church would repay any trouble in getting there; to a good pedestrian this would be a pleasant afternoon's outing.—Yours truly,

W. EASBY, M.D.

March, Cambridgeshire, July 10th, 1880.

ASYLUMS WITH UNCLOSED DOORS.

SIR,—Being to a considerable extent responsible for what is termed the "open door" system of asylum management, I feel myself compelled to reply to the comments of your article on the subject in your issue of the 26th ultimo. Before going further, I would beg to say that neither I, nor those superintendents who have worked their asylums under this system, have ever "vaunted" it in a manner to reflect on those who do not see their way clear to adopt it; we have simply recorded in our reports what we have done. Nor would I have said anything about it now, were it not that your article somewhat insidiously implies that there is an element of pretence in the working of the system.

You state, however, the system is not new; that it has been carried out to some extent in certain English asylums for the last twenty or thirty years. Reading this alongside of your subsequent remarks, are we to infer that you doubt it has been truly worked in those English asylums in which you state it has existed for so long? If not, why should you doubt that what has been carried out in part cannot be carried out in full?

Permit me to give a short history of the initiation of the system. When I was superintendent of the Fife and Kinross Asylum, I was gradually led to the conclusion, by the observation of patients resident in separate farm-buildings and in the laundry block, that only a very small proportion, at the outside 10 per cent., of all my patients required to be locked up; and accordingly, in 1871, I threw open all the doors of the establishment, with the exception of those of two wards, and found, as I had expected, that I could work the place under these conditions with perfect ease, without any increase of expense, and without any danger to the public. Dr. Rutherford has gone further, and has succeeded at Lenzie in abolishing the use of the lock altogether. My successors in the Fife Asylum, Drs. Fraser and Joseph Brown, have continued my system, and have borne testimony to the benefits derived from it. We have also the testimony of the Commissioners in Lunacy for Scotland, and a large number of visitors, who have inspected the Lenzie and Fife Asylums, that the system is honestly worked. It is a simple fact, which no one can gainsay, that the inmates of these two lunatic establishments are unrestrained by the use of locks and keys, and it is open to anyone to satisfy himself by visiting and inspecting them. I cannot see the force of your argument that, if this system be feasible, the asylum is unnecessary. Let me ask you, do you consider that the patients who have been detained in the open blocks of English asylums, as you say, for twenty or thirty years, did not require detention, and, therefore, that these buildings were unnecessary? The Fife and Lenzie patients know that their liberty is restrained; but is that any reason why the restraint should be made harsher than necessary? If the superintendents of those asylums can manage their patients without locking them up, would they not be very wrong in imposing an unnecessary restriction? My object was, and that of those gentlemen is, to endeavour to assimilate our asylums as much as possible to ordinary hospitals, and to make the method of confinement as little irksome as possible. I would ask you to remember that the very arguments you adduce against the system are identical with those brought forward against the abolition of mechanical restraint. We all know how earnest were the protests against its abolition, and how many the prophecies that evils would result from its abandonment, both to the patient and the public. And we know that, even at the present moment, many foreign alienists deny that the non-restraint system is honestly worked in Great Britain. You, in fact, employ one of their arguments when you, by inference, assert that we employ an extra number of attendants in order to carry out the open door system; for, as you know, foreigners state that we in Great Britain have imposed the restraint of thews and muscles for that of the strait jacket. Your inference as regards us is not correct; for, when I adopted the system in Fife, the number of servants was not increased; and Dr. Rutherford informs me that, since he has opened his doors, he has actually reduced the number of his staff.

You say it may be comparatively easy to carry out the system amongst

an industrious and law-abiding race. In this, you are inferentially rather hard on the people south of the Tweed. But I am sorry to say that the basis of your argument is incorrect. The system, perhaps, could not have been subjected to a more severe test than amongst an asylum population derived from Glasgow, a great manufacturing centre, the second most populous city in the empire, and one which, if we judge from criminal statistics, does not bear the highest character for being law-abiding. The Barony parish of Glasgow, the parish for which the Lenzie Asylum was built, besides its resident population, has a constant stream of English, Irish, and Scotch passing through it. I freely admit that Dr. Rutherford has carried the system far further than I ever expected to do, and amongst a class of patients fully as bad as presents itself in any asylum in the kingdom.

I think you will admit that, if it be possible to manage an asylum without locks and keys, it would be better to do so. Drs. Rutherford, Fraser, J. Brown, and myself, assert that we have succeeded in so doing. Our assertion is supported by the reports of the Scotch Commissioners in Lunacy, and of the boards of management of the two asylums above mentioned. It is for those who doubt the feasibility of carrying it out to produce positive evidence that it is not carried out, and at least, before inferentially discrediting the statements of others, to take what appears to me the necessary preliminary step of obtaining personal knowledge of the establishments in which the system is said to be practised.—I am, sir, your obedient servant,

Gaughton Hall Asylum, Edinburgh, July 4th, 1880. JOHN BATTY TUKE.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION FOR 1881.

SIR,—It would appear that the International Medical Congress and the annual meeting of the Association for 1881 will be held at or about the same time. This must have a prejudicial effect on both. There are, I think, obvious reasons why the British Medical meeting in 1881 should not assume anything of the nature of a scientific gathering. First: the International meeting is one in which the character of our profession in the United Kingdom is at stake. When we inaugurate so important a movement as the Congress, which can but rarely happen, it should be the object of all to ensure as successful a meeting as possible, both in point of scientific matter and of the numbers present. Secondly: there is the certainty, that, coming immediately after the Congress, when scientific sittings and social reunions have, at the close of the season, had their natural effects on those who attend the latter, the annual meeting will be poorly attended, and most of the prominent members of the profession will be absent. A week of hard work just at the holiday time, and breaking into it, is as much as most men are willing to indulge in; nor is even a mostattractive programme, whether scientific or social, likely to detain them from the Alps, the Italian lakes, or their accustomed yachting trips. Surely there can be no difficulty in abandoning scientific work in the meeting in 1881. The business work of the Association might be all transacted either immediately before, during, or after the Congress. Is there anything to prevent this? The town inviting the Association has also to be considered; and it is no small thing to undertake the expense of inviting the Association, and then to find that the chances of ill success are great. This consideration has apparently induced Liverpool, whose resources and public spirit are great, to withdraw the invitation for 1881 which it was prepared to give. On the other hand, the meeting in 1882, wherever held, will be all the more numerously attended, if there be not too great a strain put on the members in 1881. It is in reality but a transference of the scientific work of the annual meeting to the Congress, held at the same time, and attended by the members of the Association. The British Medical Association cannot separate its interests from those of a British Medical Congress of an international character. Apologising for intruding this suggestion on the members through the medium of the JOURNAL,—I am, sir, yours faithfully,

Cork, July 23rd, 1880. H. MACNAUGHTON JONES.

CUTANEOUS AFFECTIONS FOLLOWING VACCINATION.

SIR,—It appears to be the general opinion in the profession that some of the morbid conditions which are believed by many, particularly among the working classes, to be due to vaccination, are merely coincidences independent of that cause. Those common forms of cutaneous disease, for example, which occur in infancy, are more often referred to vaccination than any other maladies; and though the parents may be assured that the eruptions have really nothing to do with vaccination, yet the fact that the child was in good health up to that time, makes it difficult for them to remove the idea from their minds.

It occurred to me several years ago to give some attention to this popular belief, in order to be able to offer an explanation of that appearance of an eruption on the skin of a child recently vaccinated, where nothing of the kind had existed before.

Now I am perfectly satisfied that there is some reason in the popular belief, and that we are not accurate when we say that vaccination has nothing to do with cutaneous eruptions in children. It is probable that others have made similar observations to mine, and will bear me out in venturing to differ from general professional opinion on this point.

It must have occurred to them to have observed that, after the application of one of the caustics used for the treatment of nævi, a sore has sometimes resulted, which has been followed by the appearance of ecthymatous pustules in different parts of the body; or by the more common form of inflammation of the skin of the head or face of a child. Or what is the same thing, a sore has been caused by a fall or wound, and from want of care and cleanliness, suppurative action has resulted, and been followed within a few days or weeks by dermatitis in distant parts of the body.

Many cases of this latter class have come under my observation in hospital out-patient work, and some well-marked instances of the former. With these facts constantly repeating themselves among the children of the poor, it naturally occurs to one to inquire whether a focus of infection may not be produced when the vaccine sore, from want of care or other causes, assumes unhealthy characters, and becomes really the source of subsequent cutaneous affections. It is not my desire to discuss the pathology of these conditions, though I think they may be classed among what are generally known as secondary infective processes. In acknowledging that cutaneous affections in children subsequent to vaccination are not merely coincidences, but that any sore or wound on the surface of the body, whether caused by vaccination or injury, may, if not attended to with cleanliness and care, induce various cutaneous affections, differing in character according to constitutional tendency, we shall not only have removed one of the commonest objections to vaccination, but shall have done much to establish the absolute importance of careful treatment of all kinds of injury to the skin of young children, and thus diminish, in some measure, the frequency of cutaneous disease among the children of the poor.—Yours, etc., ROBERT LEE.

TYPHOID FEVER IN NEW ZEALAND AND AUSTRALIA.

SIR,—I believe that it is by the publication of such papers as the one by Dr. Ryley, in your JOURNAL of the 3rd instant, that the vexed question of "typhoid" fever in foreign countries can best be decided. In that paper, Dr. Ryley appears to take as his standard of the form of fever, so-called, those of Drs. Budd and Murchison, namely, "a plurality of poisons in the case of continued fever, and the specificity of the poison of typhoid fever". He relates that a party of surveyors in New Zealand, prosecuting their duty in a district covered by dense scrub and undergrowth, constantly wet, living upon scanty fare, and with little shelter at night, suffered from fever, dysentery, rheumatism, and inflammatory chest-affections; that is, from the diseases incidental to fatigue and exposure generally. Many cases of simple fever, and a few of bilious fever, occurred in the early days of the "rush"; and he saw also a few cases of ague in those who had suffered previously from the latter in South America.

Dr. Ryley describes the occurrence in large numbers of cases described as of "Colonial fever." The history, symptoms, course, complications, and intestinal lesions discovered after death, were those of typhoid or enteric fever. The persons attacked were chiefly the miners, new arrivals prospecting in the bush or working in their claims, and came not from any one part of the district, but from a circuit of fifty miles or more around, being nearly all miners or others working in the bush—that is, persons most exposed to fatigue, hardships, bad food, exposure—in fact, the usual causes of disease usually looked upon as idiopathic and non-specific.

With reference to these cases, Dr. Ryley asks, What was the proximate cause of the fever? He replies: It could not be contagion; it could scarcely be excremental matters in a state of fermentative putrefaction, nor animal matter in a state of decay. But, he observes, the water everywhere was loaded with vegetable matter in a state of more or less decay; this water was used by the miners as their ordinary beverage, and for making their tea, etc.; and to this cause he attributes the fever. He expresses his opinion that enteric fever may be produced independently of contagion; that it may arise from contamination of drinking water, and perhaps also of air, by decaying vegetable matter; he has seen it also arise apparently from contamination of drinking water by human excretal matter. He has found that it breaks out everywhere where a large population, as in the case of a gold rush, comes to occupy virgin soil. Notwithstanding crowding of sick in hos-

pital, inattention to sanitary matters, cases of fever distributed among others, using the same night-stools, no patient or nurse of the hospital was attacked with the disease.

With reference to the discussion now taking place regarding "typhoid or enteric" fever, there are several points in the above narrative which, I think, illustrate some of those regarding which difference of opinion exists. Thus, taking them in their order, I note the following. *a.* There appears to me nothing in the history of the disease among the miners in New Zealand sufficient to identify that outbreak with either of the standards adopted by Dr. Ryley from Drs. Budd and Murchison respectively. *b.* I am unable to perceive clearly the precise sense in which the terms *typhoid* and *enteric* are respectively and synonymously applied to the "Colonial" fever, which forms the subject of the report; at the same time that I think a definite statement on this point is very desirable. *c.* All the usual causes of depressed *physique*, and of the diseases incidental to persons under fatigue and privations, being present and obvious, the circumstance is left somewhat obscure as to why these are passed over, and the single item of water contaminated with vegetable matter accepted. *d.* Do not the cases alluded to in New Zealand illustrate the remark by Dr. Armistead quoted at page 97 of my second special report on Typhoid or Enteric Fever, which I sent to you last year from Madras, namely: "Where cases appear to arise *de novo*, the question should always be asked, Are the cases really typhoid, or only some febrile typhoid-like condition?"—I am, etc.,

C. A. GORDON, Surgeon-General.

70, Cambridge Gardens, W., July 3rd, 1880.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, July 22nd.

Fever in Mayo.—In reply to Mr. O'C. POWER, Mr. W. E. FORSTER said his attention had been called to the report of Dr. Sigerson and Dr. Kenny in reference to the districts in Mayo in which fever existed, and to their suggestions for checking the progress of the fever. Steps would be taken in reference to those suggestions by the Local Government Board, who were doing the utmost in their power in the matter. It should be remembered that the sanitary condition of the cabins in those districts had been very bad for generations, and it was a matter which could not be remedied in a day.—Mr. O'C. POWER gave notice that on an early day he would call attention to the subject.

The Underground Railway.—Sir TREVOR LAWRENCE asked the President of the Board of Trade whether his attention had been called to the foul and unwholesome state of the atmosphere throughout the greater part of the underground railway, whether he would take steps to have air drawn from the tunnels subjected to chemical examination, and whether, in any scheme for the completion of the Inner Circle, he would take care that efficient ventilation was adequately provided for.—Mr. CHAMBERLAIN said:—The attention of the Board of Trade has not been directed, otherwise than by the question of the hon. baronet, to the condition of the atmosphere throughout the underground railway. The Board of Trade have no authority in the matter and no responsibility, and, in addition, have no funds which could be directed to make experiments in the manner suggested by the hon. baronet.

Tuesday, July 27th.

Bronze Printing.— Mr. A. PEEL informed Mr. MACDONALD that a youth, named Wm. Ball, had died from the effects of poison inhaled when following his employment as a copper bronze printer. There was no provision in the Factory Act to prevent the employment of youths in bronze printing works, but the Home Secretary would direct the inspectors to call attention to the dangerous nature of the employment, and to suggestions made by Dr. Tidy for avoiding the danger.

OBITUARY.

JOHN ELLIOTT, M.R.C.S.E.,

DEPUTY INSPECTOR-GENERAL, ROYAL NAVY.

DEPUTY Inspector-General John Elliott died on June 30th, at Bury Grange, Gosport. He entered the navy as an acting assistant-surgeon in January 1846. His first service afloat was on the ill-fated *Snake* (sloop), which, after a twenty months' commission on the Cape and East African coasts, was lost in the Mozambique Channel on August 12th, 1847. No lives were lost on that occasion, and the officers and crew of the brig were carried in safety to the Mauritius by the French brig-of-war *Voltigeur*. Mr. Elliott served next in the *Castor*, flagship of Commodore Wyvill, on the Cape station during the Kaffir war, for which he received the medal. His services at the Cape were recognised by his promotion to surgeon in June 1853; and in the following month he joined the *Arab*, Commander Graham Ogle, and sailed with her to the North American and West Indies Station, where he served until 1857. In November 1859, he went out to China, for duty as Medical Storekeeper at Hong Kong, where he served during the latter part of our last war with China (medal). Mr. Elliott was afterwards on duty at Portsmouth in the *Royal Sovereign;* and was staff-surgeon of the *Narcissus* throughout her commission, under the late Lord Dalhousie, on the South-east Coast of America from December 1866 to 1869. In June 1870, he was appointed to do duty with the Royal Marines at Deal. He was afterwards fleet-surgeon in the *Bellerophon* during her commissions, under Sir George Wellesley and Sir Astley Cooper Key, as flagship on the North American Station. His promotion to deputy-inspector took place in August 1877, and since then he had been employed as chief medical officer to the Chatham division of Royal Marines.

S. B. GWYNN, F.R.C.S.

SAMUEL BETTON GWYNN, whose death occurred very suddenly on Sunday, July 11th, was a son of Edward Gwynn, and grandson of Edward Gwynn (senior), surgeons, of Wem. He was born in December 1822, and received his early education at a private school at Grinshill and at Wem Grammar School. He was apprenticed to his father, and proceeded to Edinburgh, where he was a student under the celebrated Professor Syme. He afterwards removed to King's College, London; took the M.R.C.S.Eng. and L.S.A. diplomas in 1844; and then commenced practice with his father at Wem, where the name of Betton Gwynn was for more than thirty years a household word for many miles round. He obtained (by examination) the Fellowship of the Royal College of Surgeons in 1853. He was a member, and at one time President of the Shropshire and Mid-Wales Branch, of the British Medical Association.

Mr. Gwynn was very successful in practice; for, in addition to being a skilful surgeon, he was a true friend, an upright man, and held in high esteem by all classes. Besides having a large private practice, he was for many years medical officer to the Wem Union and to several friendly societies, and for twenty-seven years surgeon to the North Shropshire Yeomanry Cavalry—a post he was recently obliged to resign owing to ill-health. His very sudden death was due to dilatation of the heart consequent upon emphysema of the lungs. He married his second wife, a daughter of the late Rev. W. Boulton, M.A., in 1865, and leaves a family of nine children, by whom his loss is deeply felt.

MILITARY AND NAVAL MEDICAL SERVICES.

THE INDIAN MEDICAL SERVICE.

SIR,—The *Gazette of India*, brought by the last mail, contained the following announcement, which is deserving the consideration of young medical men who may be anxious to select one of the public services as a career.

"Simla Military Department, No. 360, dated 18th of June, 1880.—Surgeon-Major Henry Cookson is permitted to retire from the service upon a pension of £220 *per annum*, with effect from the 20th of May, 1880, subject to Her Majesty's approval."

Dr. Cookson entered the Indian Medical Service on January 20th, 1860. He served in the Butan and Umballah campaigns, as also from the commencement of the present Afghan war. Sickness, caused by exposure in the field, compelled him to take furlough on several occations; and, as sick-leave does not reckon as service, he is only entitled to the lowest grade of pension. Had he been fortunate enough to select the Army Medical Department in 1860, his retiring pension would now have been £365 *per annum*.

Comment on the above is, I conceive, superfluous.—I am, sir, yours faithfully, INDICUS.

E. I. United Service Club, S.W., July 19th, 1880.

THE GUERNSEY MILITIA AND THEIR INSPECTOR-GENERAL.

ALTHOUGH military as well as civil authorities are ready enough to avail themselves of the services of medical men, all are not so prompt in acknowledging them as the present Lieutenant-Governor of Guern-

sey. The annexed General Militia Order was issued immediately after the breaking up of the temporary militia camp at L'Ancresse Common.

"G. M. O. Militia Office, Guernsey, 29th June, 1880. The Lieutenant-Governor has been much gratified by the perusal of Lieutenant-Colonel Guerin's satisfactory report as commandant of the temporary militia camp at L'Ancresse. His Excellency was also greatly pleased with the prevailing good order and regularity manifested in each department throughout the camp. Major-General Nelson, therefore, expresses his thanks to Lieutenant-Colonel Guerin, Inspector-General Corbin, and to all the officers, non-commissioned officers, and men, who assisted in carrying out the camp duties.—By order, JAMES MCCREA, Assistant Adjutant-General, Royal Guernsey Militia."

THE INDIAN MEDICAL SERVICE.

SIR,—Kindly allow me space to warn candidates against competing for admission into the above service, until Government declares the steps they propose taking to remedy the grievances created by the late orders of the Government of India.

Let me also warn your readers against being misled by the *Lancet* in England, and the *Pioneer* in India on this subject. A more unfair and unjust article than that in a recent *Lancet*, commenting on letters received from officers of the Indian Medical Service, while suppressing the letters, I have never before seen in that paper—in fact, it is simply a caricature of the matter—and the profession may be absolutely certain that such men as Dr. Lyon Playfair, M.P., Dr. Lyons, M.P., Sir Trevor Lawrence, M.P., Sir Joseph Fayrer, Surgeons-General Irving, Beatson, Cockburn, Smith, Hunter, &c., would not lend themselves to the support of such sham grievances as the *Lancet* would make out ours to be. I would also beg most strongly to deprecate the evident intention of these two papers to rouse a feeling of jealousy and antagonism between the Army Medical Service and our own; and to point out that this is entirely of their creation and not ours. Not a word has been said by the Indian Medical Defence Committee to show the slightest feeling of the kind on our part, and I speak the general feeling of our service, when I say that whether we succeed in obtaining regulations for ourselves or not, none of us consider that the sister service is in any way too well treated by their late warrant.

The recent orders of the Government of India have reduced our department to a state of disorganisation hitherto unparalled in its history. No man can say what his prospects are, or what his position is. He may be senior to-day, but may be superseded to-morrow by a man 10 or 20 years his junior. His being a senior of unblemished character, and acknowledged superior ability, does not in any way guarantee his promotion, unless he possesses the faculty, rather rare in the service, I am glad to say, of being able to propitiate the powers that may happen to be.

Let me state, briefly as I can, the position of the service as regards promotion. Our service, an essentially military one, has been made subordinate to the Army Medical Department in every military particular. Our Surgeons-General and Deputy Surgeons-General, except three, have been abolished; and these are made subordinate to the Army Medical Department. This may seem a small matter, but the working of it as regards honours and distinctions may be seen in the history of the Afghan campaign, which has been under the Army Medical Department solely (the late Surgeon-General of Bengal, who, having served 37 years in India with distinction, might be supposed to know more of the requirements of native troops, having been practically set aside), and the result of seven Principal Medical Officers with the forces, only *one* belongs to the Indian Medical Department; although about two-thirds of the troops engaged are native troops. In the first despatches, if I remember rightly, not an Indian Medical Officer was even named, and it was only when the Indian papers (with the exception of the *Pioneer*) cried "shame"—metaphorically speaking, that the Government recollected there was such a service under them. I cannot call to mind a single officer of the Indian Medical Department who has received a decoration during this campaign, or a word of special thanks even. Let intending candidates then remember that practically, under existing rules, all chance of distinction and promotion in the military department is denied them. Further, the two "Penal Settlements" of Bengal have been told off for our Deputy Surgeons-General, the third being Calcutta (few of us would take a Deputy Surgeon-Generalship on condition of serving five years in Assam). So inside, the two most notoriously unhealthy places in Bengal. In the two latter there also, all the miscellaneous work of the Government gaols, sanitary, vaccination, &c., are thrown on his shoulders as well as the civil dispensaries; and these departments in other circles having their own proper departmental officers. In the third circle left to us, viz., Calcutta, the Deputy Surgeon-General has the whole of the dirty work of the Presidency to do, sick certificates, native subordinates, &c. So much for the Military Department. In the Civil Department there has been created one Surgeon-General and four Deputy Surgeons-General, one of the latter holding the local rank of Surgeon-General; and to one not acquainted with the way things are managed in India, there, with the grant of the privileges, &c., of Deputy Surgeon-General to the three Sanitary Commissioners, might be supposed to be a set off against the gross wrong done us in the Military Department; but the new principle of favouritism introduced in the selection of candidates, deprives them of all value except to the individuals elevated on them. No one can tell who will be the next Surgeon-General or Deputy Surgeon-General in the Civil Department. A Surgeon-Major [illegible] over the heads of the whole administrative staff as the first Civil Surgeon-General with the Government of India. The legality of this appointment questionable, while the unfairness of passing over such men (among others equally good) as Deputy Surgeon-General De Renzy and Christison, the latter being eldest son of Sir Robert Christison, Bart. Again, the civil Deputy Surgeon-General of Bengal proper, Dr. Payne, has been promoted over the heads of the whole administrative staff, in like manner from the junior grade of Surgeon-Major.

The selection in Dr. Cunningham's case was apparently due to two causes. 1st. He was 12 years in Simla with the Government; and 2ndly, the Government wanted to abolish the Sanitary Commissionership, and thus save £250 a month, a little fact omitted by the *Lancet*. And further, in both these cases, the officers in question, had refused promotion years ago (to the grade of Deputy Surgeon-General) in their turn, for pecuniary reasons, and it had hitherto been an invariable rule in the service that any man refusing promotion was not to be offered it again; a rule never before broken to my knowledge.

I have now only to expose the mockery of the prospective Sanito-Deputy Surgeons-General. The order is that, on attaining 26 years' service, the Sanitary Commissioners (three in number) are to have the rank, pay, and after five years the pensions of Deputy Surgeons-General, and to estimate the full value of this concession, I have only to say that, not one in Bengal can attain that dignity for another year and a half or so, and then two of them will be qualified for it; the third will not have 26 years service until 1884, and then will supersede some 50 of his seniors! Let me also point out that the Sanitary Commissioner's pay is at present the same as the Deputy Surgeon-General's, so that the great concession for which the service has to be grateful and which has been repeatedly paraded before the profession by the *Lancet*, is, in the case of Dr. Planck that, after serving 18 years as Sanitary Commissioner, he will receive an extra pension of £250 a year. In Dr. Belham's case, the term of service as Sanitary Commissioner will be something less, and in Dr. Tiddersdale's, that he will have served nine years. It must be borne in mind that the Local Government can put in any man they choose as Sanitary Commissioner. Dr. Planck was appointed in 1868, and there is nothing to prevent a junior of 12 years' service, if he had passed the lowest examination in the native languages, from being appointed a Sanitary Commissioner in any part of India. I think you will agree with me that we have substantial grievances to complain of, and that we are not acting factiously in bringing them to the notice of the profession and Parliament.

The remedies we ask for this state of things are these.

1. All appointments in the military administrative grades should be made alternately from the British and Indian Medical Departments, all distinction of stations being abolished. If a man be fit to be a Deputy Surgeon-General in Assam or Calcutta, he is fit for the Umballa or Allahabad circles.

2. The rule should be made absolute, that no officer refusing promotion to Deputy Surgeon-General, be eligible for that grade in future.

3. All promotions to the administrative grade should be made as heretofore by seniority and selection combined, and not by favouritism.

4. The Sanitary Commissioners should be chosen from amongst the Deputy Surgeons-General. At present anyone, as well as a medical man, may be appointed a Sanitary Commissioner.

5. Favouritism should be placed in the same class as bribery, and made equally penal.

6. Pay and pensions, and rank, should be equitably adjusted in a due ratio to those of the Army Medical Department, due consideration being given to the fact that the whole of our service must be spent in tropical or sub-tropical climate.

7. As in the Army Medical Department all sick leave should count as service.

Should Government not feel inclined to carry out our wishes in these respects, then we ask for complete amalgamation on equitable terms; while preferring our own service, we would all rather belong to the sister service than occupy an inferior and subordinate position separately. All we ask is *equality*, nothing more; we cannot see the justice of subordinating 354 Bengal officers to 185 officers of the British Medical Department serving in that Presidency. The numbers are taken from the *Army List* of January last; and when peace prevails the disproportion will be much greater. In Madras the numbers are: Indian Medical Department, 172; British, 70. In Bombay: Indian, 143; British, 66; or a total in India of 321 British Medical Officers, to 669 Indian Medical Officers.

That such is the feeling in our service, is clearly proved by the fact that the men who took the highest places at the Indian examinations during the past two or three years, have petitioned to be transferred to the Army Medical Department. This is a fact which students ought to record, and which tells strongly against the position the department now occupies. Apologising for the length of this letter.—I am, sir, yours faithfully.

SWINDLED.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

TENURE OF OFFICE BY NON-RESIDENT DISTRICT MEDICAL OFFICERS.

IT has been the rule, under the general orders of the Poor-law Commissioners (now Local Government Board), that, in order to secure permanent tenure of office, it is requisite that any gentleman appointed to a district of an union or parish, should reside within the district to which he is appointed; and, if non-resident, then he was subjected to annual re-election. This regulation has been attended with considerable inconvenience, and at times positive injustice. We are happy, therefore, to note that, by a general order issued on the 14th instant, this absurd restriction, so far as the metropolis is concerned, has been rescinded. The terms of the general order are as follows. "As regards any district medical officer now or hereafter appointed, the guardians may, with the consent of the Local Government Board, previously obtained, but not otherwise, dispense with the condition above referred to, with respect to residence within the district; and, in any case in which such condition has been so dispensed with, the medical officer shall be entitled to hold office for the same term as he would have been entitled to hold it under the regulations applicable to his appointment if he had been resident within the district at the time of his appointment, and had so continued." In issuing this order, it is to be regretted that a like concession was not made in the interests of the non-resident workhouse medical officers. Surely they are entitled to the same measure of relief.

SMALL-POX AND VACCINATION.

DR. MORDEY DOUGLAS (Sunderland) writes:—The small-pox epidemic of 1870, which was more fatal in Sunderland than in any other

town in the kingdom, afforded me an opportunity of judging for myself of the protective and modifying influence of vaccination. Of the 211 cases which came under my own care, and of which careful records were kept, 180 were amongst the vaccinated, and 31 amongst the unvaccinated. Of the vaccinated, only 4, little more than 2 per cent., died; whilst 15, or nearly 50 per cent., of the unvaccinated succumbed. The four vaccinated who died had all been very badly vaccinated. I was particularly struck with the way in which the disease showed itself in one family. A fine, strong, healthy young man, aged 23, unvaccinated, developed the most loathsome dreadful case of small-pox I have ever seen. Both he and his equally strong sister, aged 21, also unvaccinated, both died; whilst their two little brothers (9 and 11), who presented evidence of having been fairly well vaccinated, took the disease in a very mild form. There were also other cases which impressed me. For instance, I had three cases in which, whilst the vaccinated mother presented perhaps a dozen or twenty pocks, her unvaccinated infant was literally covered with eruption, and of course died. For any one to deny the value of vaccination is but to show his ignorance. Although ten years have elapsed since the epidemic, I do not remember to have seen, amongst the thousands of children which have passed through my hands at the Sunderland Hospital for Sick Children, a single vaccinated child pitted with small-pox during the whole of the time.

TYPHOID FEVER AND POLLUTED WATER.

Dr. THORNE THORNE has presented to the Local Government Board a very perspicuous report on a remarkable epidemic of typhoid fever at the ancient village of Prittlewell, near Southend. Towards the end of September of last year, the first case occurred; and before the end of February, a total of eighty-seven cases, as to which information could be obtained, had been recorded, the chief stress of the epidemic falling in January 1880. Inclusive of certain mild cases, for which no medical aid was sought, the total number of attacks did not fall far, if at all, short of 110, out of a population estimated at somewhat over 600. Thus, no less than a sixth of the entire population suffered from the disease; and the manner in which the infection became thus widely disseminated is not a little curious. Prittlewell, it appears, lies upon an extensive bed, consisting partly of brick-earth and gravel, but mainly of sand: this bed varies in depth from about eighteen feet to somewhat over forty feet in thickness, and overlies the London clay. With the exception of the vicarage well, to be presently referred to, all the wells in the village are sunk through this porous bed just into the London clay, where a small reservoir is formed in which the water is held. The surface of the London clay exhibits beneath the gravel and sand an extensive hollowing out; and in the direction of this hidden valley the principal springs flow—these springs being formed by soakage from the surface of the porous sandy and gravelly bed. From this description it will be obvious that, unless the greatest care were exercised in freeing the surface-soil in Prittlewell from all sources of contamination, there would be constant risk of pollution to the porous water-bearing bed owing to soakage of filth. Examination of the circumstances likely to effect the fouling or otherwise of the surface-soil in the line of the springs afforded convincing proof that the danger thus arising was of the most serious character. Indeed, following the line of the springs, cesspools and privy-pits, some of which were twelve feet and eighteen feet deep, cowyards and farmyards having no means of drainage except into the surface soil, and drains, some of which received the overflow of cesspools, and were admittedly of imperfect construction, were found almost everywhere to alternate with the wells. It is noteworthy that the great stress of the epidemic fell upon the consumers of water from sources in the centre of the hidden valley, and that the east end of the village, which would appear to be out of the line down which surface soakage of filth would be washed by the springs, almost entirely escaped. The part which this hidden valley played in the epidemic, seems to have been that it held up the underground reservoir of water, into which the excremental and refuse matters from the surface had been washed to a larger extent than usual by the heavy rains of last summer, and that in these polluting matters there was the infection of enteric fever. A striking circumstance in this regard is the fact that the vicarage well, which is sunk at the western end of the village through somewhat over forty feet of surface-soil, brick earth, gravel and sand, to a great depth through the London clay into the lower London tertiaries, did not escape propagating the infection, several cases of enteric fever being associated with the drinking of water from it. The well is lined with brickwork and cement to a depth of about one hundred and twenty feet; and hence it was at first difficult to account for the apparent part which the use of its contents had played in causing the fever outbreak. But when the well was thoroughly examined, it was ascertained that at a depth of forty feet —*i.e.*, where the superficial sandy bed rests on the London clay—there was an oozing into the shaft of the well. The water usually derived from this well is soft; but it had been noticed that, on several occasions after long continued rainfall, it had become hard, and this hardness was again observed as the result of the exceptional rainfall of last summer. There can, indeed, be but little doubt that, owing to a gradual filling up of the valley in the London clay, through the heavy rains, the body of water usually contained in it spread in a westerly direction, and so found its way into the vicarage well through the defective brickwork.

EXAMINATIONS IN STATE MEDICINE.

WE receive so many questions concerning the nature, scope, and best mode of preparing for examinations in State medicine, that we believe we shall render an acceptable service in publishing in this column, as a specimen, the existing regulations of the University of Cambridge.

An examination in so much of State medicine as is comprised in the functions of officers of health will be held yearly in Cambridge, beginning on the first Tuesday in October, and ending on the following Friday afternoon. Any person whose name is on the *Medical Register* of the United Kingdom may present himself for this examination provided he be in his twenty-fourth year at least when he presents himself for Part I, and have attained twenty-four years of age before he presents himself for Part II.

The examination will be in two parts.

Part I will comprise: Physics and Chemistry; The principles of chemistry and methods of analysis, with especial reference to analyses of air and water; Application of the microscope; The laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; Statistical methods.

Part II will comprise: Laws of the Realm relating to Public Health; Origin, propagation, pathology, and prevention of epidemic and infectious diseases; Effects of overcrowding, vitiated air, impure water, and bad or insufficient food; Unhealthy occupations and the diseases to which they give rise; Water-supply and drainage in reference to health; Nuisances injurious to health; Distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The examination in both parts will be oral and practical as well as in writing. Candidates may present themselves for either part separately or for both together at their option; but the result of the examination in the case of any candidate will not be published until he has passed to the satisfaction of the examiners in both parts. Every candidate will be required to pay a fee of four guineas before admission to *each part* of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health. All applications for admission to this examination, or for information respecting it, should be addressed to Professor Liveing, Cambridge. Candidates who desire to present themselves for examination in October next must send in their applications, and transmit the fees, to Professor Liveing, Cambridge, on or before September 18th. Cheques should be crossed "Mortlock and Co." No fees can in any case be returned. The applications of candidates whose names have not been on the *Register* three years should be accompanied by a certificate of birth or other proof of age.

The following suggestions have been drawn up by the Syndicate for superintending the examination in State medicine as some guide to candidates preparing for that examination.

Part I.—The principles of chemistry are sufficiently set forth in any of the ordinary manuals. Candidates will be expected to understand the application of the general laws to such cases as occur in the practice of an officer of health, but will not be expected to show an acquaintance with those details of chemistry which have no direct bearing on sanitary questions. No importance will be attached to the use of any particular chemical notation. It is not expected that officers of health will in general be able to act as public analysts, but that they will know the methods of analysis and be able to interpret correctly the results of professional analysts. The kinds of applications of the several sciences of which the candidates are expected to show a competent knowledge will be best understood by a perusal of Parkes's *Manual of Practical Hygiene*. In the actual analysis of water and air, candidates will not be expected to make complete quantitative analyses, but to know how to apply ordinary chemical methods for the detection and discrimination of mineral and organic substances in the samples.

Part II.—Candidates will be expected to show an acquaintance with the sanitary laws in force in England; but if any candidate have information respecting alternative laws in force in the metropolis or in Scotland or in Ireland, opportunity will be given him, alternatively, of

showing his acquaintance with such laws. The rest of Part II, besides the subjects expressly mentioned, is to be understood as including those of vaccination; disinfectants; the management of outbreaks of infectious diseases, with the construction of hospitals temporary or permanent; endemic diseases; birth-rates and death-rates; the qualities and suitableness of various waters used for domestic purposes; the inspection of factories, mines, workshops, and common lodging-houses.

The following list of works, with the names of the publishers, will probably be found valuable to some of the candidates, but the necessity of reading all or any one of them is not urged upon them. Books marked thus (*) are books of reference.

On Parts I and II.—Parkes's *Manual of Practical Hygiene* (Churchill); G. Wilson's *Handbook of Hygiene* (Churchill); Grimshaw, and others, *Manual of Public Health for Ireland* (Fannin, Dublin; and Longmans); Cameron's *Manual of Hygiene* (Hodges, Foster, and Co., Dublin; and Baillière, Tindall, and Cox); Seaton's *Handbook of Vaccination* (Macmillan); *Army Medical Reports; Parkes's *Reports on Hygiene* (Eyre and Spottiswoode); *Reports to Privy Council and Local Government Board by their Medical Officer (Eyre and Spottiswoode).

On Chemistry. General principles.—Fowne's *Manual of Chemistry* (Churchill); Bloxam's *Chemistry* (Churchill); Roscoe's *Lessons in Elementary Chemistry* (Macmillan); Attfield's *Chemistry* (Van Voorst).

On Practical.—Bloxam's *Laboratory Teaching* (Churchill); Bowman's *Practical Chemistry* (Churchill); Sutton's *Systematic Handbook of Volumetric Analysis* (Churchill); Frankland's *Water Analysis for Sanitary Purposes* (Van Voorst); Wanklyn and Chapman's *Water Analysis* (Trübner); Hartley's *Air and its Relations to Life* (Longmans).

Physics. Tomlinson's *Natural Philosophy for Beginners* (Macmillan); Ganot's *Physics* (Longmans); Deschanel's *Natural Philosophy*, by Everett (Blackie).

Microscopy.—Carpenter's *The Microscope and its Revelations* (Churchill); Macdonald's *Guide to Microscopical Examination of Drinking Water* (Churchill); *Hassell's *Food and its Adulterations* (Longmans).

Sanitary Engineering, Water-Supply, Sewage, etc.—Eassie's *Sanitary Arrangement for Dwellings* (Smith, Elder, and Co.); *Latham's *Sanitary Engineering* (Spon); *Bayles's *House-Drainage and Water-Service* (Williams, New York); Tomlinson's *Warming and Ventilation* (Lockwood); Corfield's *Treatment and Utilisation of Sewage* (Macmillan); *Report of Committee appointed by President of Local Government Board on Modes of treating Town Sewage (Eyre and Spottiswoode); *Reports of Royal Commission on Pollution of Rivers, especially the Sixth, on Domestic Water-Supply (Eyre and Spottiswoode); Report from Select Committee on Public Health Act (1875) Amendment Bill (Eyre and Spottiswoode); *R. Angus Smith's *Air and Rain* (Longmans); *Ure's *Dictionary of Arts, Manufactures, and Mines* (Longmans).

Laws of the Realm relating to Public Health.—For England: Public Health Act, 1875, and the Acts of Parliament relating to the various subject-matters within the domain of hygiene passed since that date (Elen's or Fitzgerald's); Artisans' and Labourers' Dwellings Acts (Elen's); Vaccination Acts. For the Metropolis, or for Scotland, or for Ireland: Laws dealing with the same subject-matters as the above, and having application to the particular part of the United Kingdom.

Statistics.—Lewis's *Digest of the English Census* (Stanford); the article on Statistics in the *Cyclopædia of Anatomy and Physiology* (Longmans); *Dr. Farr's letters to the Registrar-General in the early reports of the Registrar-General; *Reports of the Registrar-General (Eyre and Spottiswoode); *Deaths in England: Average Annual Proportion of Deaths, etc., 1861-70. Parliamentary Paper C. 874, Session 1873 (Eyre and Spottiswoode; and may be had also of Hansard, or of King, King Street, Westminster).

Construction of Hospitals.—Miss Nightingale's *Notes on Hospitals* (Longmans); Oppert's *Hospitals, Infirmaries, and Dispensaries: their Construction, Interior Arrangement, and Management* (Churchill); Galton, *On the Construction of Hospitals* (Macmillan).

* The Examination Papers set at former examinations can be obtained at the Cambridge Warehouse, 17, Paternoster Row, London, price 1s. each set, or by post, 1s. 2d.

REGISTRATION OF INFECTIOUS DISEASES.

I have before me, the letter which appeared in the *Freeman's Journal* of July 22nd, signed "One Sufferer out of Many," and I had an opportunity of seeing it, with that [illegible] which have recently appeared in the *British Medical Journal*, on the [illegible] of July 24th, before the Sanitary Committee of the [illegible] Council, the Rev. [illegible] at a meeting specially held for the purpose [illegible]

At this meeting the Chairman of the Sanitary Committee being present with eight other members of the Committee, including two members of the medical profession, [illegible] which the Town Clerk was instructed to forward to you for publication, and which no doubt will appear with this letter in next Saturday's JOURNAL.

I now desire, sir, to ask "One Sufferer out of Many" to send to the following issue of the JOURNAL a signed apology for having written the letter complained of. I refrain, at present, from making any further comment on his letter, as I wish to facilitate rather than throw any obstacle in the way of his making the only reparation which can be acceptable to me.—I am, sir, your obedient servant,

LESLIE H. JONES, M.D.,
Member of Council British Medical Association, and ex-President of the Lancashire and Cheshire Branch, Medical Officer of Health for Blackpool.

SIR,—I send you a copy of a resolution passed at a meeting of the Sanitary Committee of this Borough, held to-day, which I shall be glad if you will insert in your next issue. Yours truly,

HENRY BARRETT MAW,
Blackpool, July 27th, 1880. Town Clerk.

(Copy).

Resolved—That this Committee, having read various anonymous letters tending to injure the professional character and disparage the official work of the Medical Officer of Health, which have recently appeared in succession in the *Blackpool Gazette*, the *British Medical Journal*, and the *Sanitary Record*, regards these letters as unjust, and unanimously agree that the imputations contained in them cannot be substantiated.

SIR,—The public vindication of Dr. Leslie Jones's professional character and honour by his brother-practitioner, Mr. Anderson, is ample, and leaves little to be desired.

Dr. Leslie Jones is well known to many of the leading practitioners of the metropolis, and is especially well known to the leading men of Liverpool, Manchester, and the large towns of the North, as a highly accomplished practitioner and a most honourable man; and, surely, there is no more crucial test of a man's professional integrity than his conduct with regard to patients of other men, most frequently under circumstances that prevent the conventional personal consultation. Thus, resting on the high opinion entertained of him by men who have come into professional relations with him, Dr. Jones could well afford to treat the aspersions of his reviler with silent contempt, and leave the vindication of his character to his friends.

There is, however, one point I wish to submit to notice. It is only just two years since Dr. Jones founded the Lancashire and Cheshire Branch of the Association. If one member be injured, the whole body suffers. I trust the Council of the Branch will in due season give the matter their earnest attention, [illegible] I should have to fear in predicting.

I remain, yours truly,

JAMES W. WATKINS, M.D. Lond., a Medical Officer of Health, and another Member of the B.M.A.

Newchurch-in-Rossendale, Lancashire, July 27th, 1880.

THE COMPULSORY REGISTRATION OF INFECTIVE DISEASE AS A SUBSTITUTE FOR COMPULSORY NOTIFICATION.

SIR,—Dr. Quinlan's letter in the JOURNAL of the 24th inst., in which he suggests the [illegible] of infectious disease as a substitute for compulsory notification, might [illegible] the subject of the discussion at the meeting of the Epidemiological Section of the Congress at Cork. The [illegible] the point for discussion [illegible] Local Government Board, would be the first to welcome it. It is not [illegible] that the expression "notification" and "registration" [illegible] with the same meaning by the public generally, so that as I suppose Dr. Quinlan's suggestion is that the registration of infectious disease should [illegible] say a word or two on the question of its existence, was first put forward in a paper read by Dr. J. W. Moore at the last annual meeting of the Dublin Branch, and subsequently published in this JOURNAL. In this paper Dr. Moore recommended [illegible] carrying into effect [illegible] that [illegible] exactly the same machinery as that which Dr. Quinlan suggests would [illegible] registration system under the Registrar-General.

Many [illegible] system of disease-registration to be [illegible] would take the place of [illegible] that [illegible] Some have [illegible] disease can be [illegible] [illegible] special cases that [illegible]

[illegible]

F. L.

Hon. Secretary [illegible]

[illegible], July [illegible], 1880.

POOR-LAW MEDICAL APPOINTMENTS.

[illegible] M.D. & C.M., [illegible] appointed Medical Officer [illegible] James W. R. Mackie, M.D., [illegible]

[illegible] M.D. [illegible] appointed Medical Officer [illegible] J. W. [illegible], M.R.C.S., [illegible]

PUBLIC HEALTH MEDICAL APPOINTMENTS.

[illegible], F.R.C.P. Edin., [illegible] appointed Medical Officer of Health for the [illegible] District.

YELLOW FEVER. Intelligence has been received at Southampton that the Royal Mail Company's cargo steamer *Dee*, Captain Hanslip, from the West Indies, has arrived at Havre, with yellow fever among her crew. The chief officer, Mr. Way, and two seamen have died. Eighteen in all are sick, but they are reported convalescent. The steamer has been placed in quarantine, but it is to receive *pratique* in three days if no further cases occur.

THE delegates of the combined Bromyard, Hereford, Leominster, Ledbury, and Weobley Rural Sanitary Authorities have, at an adjourned meeting, passed a resolution for reducing the salary of the Medical Officer of Health to £400 *per annum* for the ensuing three years. It was at first £500 *per annum*, and afterwards increased to £550. We shall be curious to learn what the Local Government Board will say to the proposed reduction to £400.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Board of Examiners on the 15th instant, and, when eligible, will be admitted to the pass-examination.

Messrs. Herbert H. Williamson and Frederick E. Pearse, students of University College; John F. Molineux and William J. Murray, of the Charing Cross Hospital; Ernest W. Benson and Sidney E. Craddock, of King's College; Hospital; John J. D. Vernon and James J. Prendergast, of Guy's Hospital; Arthur N. Clarke, of St. Bartholomew's Hospital; and Henry J. Prangley, of St. Thomas's Hospital.

Ninety candidates out of the 192 examined were rejected.

The following gentlemen, having undergone the necessary examinations, were admitted Members of the College on the 19th instant.

Messrs. Thomas Colbourne, Dudley, Thomas L. Hall, Ludlow, Edward C. Johnston, Birmingham, and Charles Brown, Dudley, of the Birmingham School; Arthur Thomson, Edinburgh, Howard Bendall, Perth, and George W. W. Ashdown, Isle of Man, of the Edinburgh School; Henry S. Bott, Bury, and Armand J. McC. Routh, Montagu Square, of University College; William F. Chadwick, Royston, of the Manchester School; Algernon A. Cohen, Clarence River, New South Wales, of the Aberdeen School; Griffith J. Jones, Liverpool, of the Liverpool School; Edwin P. Pickersgill, Leeds, of the Leeds School; Newton Bentham, Hackney, of St. Thomas's Hospital; and Bertram Spencer, Toronto, of St. Bartholomew's Hospital.

Eight candidates were rejected.

The following gentlemen passed on the 20th instant.

Messrs. David J. Thomas, Rhyl, Richard Bredin, Liverpool, and Nicoll F. Searancke, Rhyl, of the Liverpool School; William P. Dester, Clifton, Bristol, George E. Twynam, Blandford Square, and Robert W. Winstanley, Crowborough, Sussex, of University College; William M. Roscroft, Wigan, and Robert Maguire, Salford, of the Manchester School; David Harris, Leeds, and Godfrey Carter, Leeds, of the Leeds School; Edwin A. Neatby, Barnsley, of the London Hospital; Charles J. Morgan, Barnsbury Park, and John Wilson, Wrexham, of St. Bartholomew's Hospital; Harry W. Shettle, Wimborne, and William W. Pope, Exeter, of St. George's Hospital; Stephen H. Moore, Peckham, of Guy's Hospital; Edwin Godson, Chipping Camden, of the Birmingham School; James W. Fraser, Hull, of the Edinburgh School; Thomas A. P. Marsh, Bristol, of the Bristol School; and Joseph P. B. Wills, St. Mary's Terrace, W., of St. Mary's Hospital.

Seven candidates were rejected.

The following gentlemen passed on the 21st instant.

Messrs. Roger W. Barron, Liverpool, Richard Honeyburne, Liverpool, and Alexander Barron, Southport, of the Liverpool School; George C. R. Bull, Stafford, Thomas E. Noding, Trinidad, and Arthur H. Proffitt, Rugeley, of St. Mary's Hospital; Charles B. Parker, Cleveland, Ohio, Thomas G. Stonham, Rye, Sussex, and Jonathan Hutchinson, Cavendish Square, of the London Hospital; Richard H. Wolstenholme, Manchester, and Israel J. E. Renshaw, Sale, Cheshire, of the Manchester School; John Garey, Glasgow, of the Glasgow School; James A. Potts, Broseley, Shropshire, of the Edinburgh School; Ernest H. Wagstaff, Leighton Buzzard, of King's College; Thomas L. Laxton, Bedford, of St. Thomas's Hospital; Denis W. Donovan, Caledonian Road, of University College; Alexander B. Payne, Deal, of St. Bartholomew's Hospital; Charles R. Crane, Guildford, of the Charing Cross Hospital; and Charles J. Parke, Hougham, Lincolnshire, of Guy's Hospital.

Six candidates were rejected.

The following gentlemen passed on the 22nd instant.

Messrs. Charles J. Stansby, Hoxton Street, Horace Wakefield, Alwyne Place, N., Rickard W. Lloyd, Wood Green, John L. Hindley, Dover, George T. Hockin, Beckenham, Charles A. James, Plymouth, and Edmund A. Savage Elliot, Kingsbridge, Devon, of St. Bartholomew's Hospital; George H. Taylor, Lewisham, Arthur C. B. Jones, Lavender Hill, and Lewis F. Ford, Highgate, of St. George's Hospital; William H. C. Newnham, Wolverhampton, John F. Briscoe, West Hackney, and Augustus P. Hills, Battersea, of Guy's Hospital; William Clark, Hampstead, and Edgar Freeman G. Morris, Hereford, of University College; George W. Steeves, Liverpool, of St. Thomas's Hospital; Henry F. Corbould, Thornton Heath, of the Charing Cross Hospital; and Alton R. Hoets, Adelaide Road, of the London Hospital.

Six candidates were rejected.

The following gentlemen passed on the 23rd instant.

Messrs. Alfred F. Street, Whittlebury, Towcester, Daniel E. Coronado, Bogoto, Colombo, Sinclair Westcott, Plymouth, Edgar E. A. Phipps, Husbands, Bosworth, and Edmund J. E. Risk, Plymouth, of St. Bartholomew's Hospital; George J. Wilson, Brixton, George F. P. Pizey, Clevedon, Somerset, and Alexander Lane, Bishop's Castle, Salop, of Guy's Hospital; John W. Batterham, Haverstock Hill, of the Westminster Hospital; George H. Milnes, Turnditch, Derbyshire, of St. George's Hospital; Joseph Tucker, Chulmleigh, N. Devon, of St. Mary's Hospital; and Theodore D. Acland, Oxford, of St. Thomas's Hospital.

Thirteen candidates were rejected.

The following gentlemen passed on the 26th instant.

Messrs. Duncan Duncan, Buckingham Palace Road, Alfred G. Chitty, Colchester, of University College; George F. Barnes, Weymouth, and Henry G. Terry, Frome, of St. Bartholomew's Hospital; Frederick W. Lerew, Maida Vale, and Herbert A. H. Fenton, Cumberland Street, S.W., of St. Thomas's Hospital; George E. Weston, Bognor, and Arthur Grayling, Forest Hill, of St. George's Hospital; Richard T. Richardson, Hackney, of the London Hospital; William H. Quicke, Brixton Road, of the Westminster Hospital; Edward A. Wood, Marlborough, of St. Mary's Hospital; and John F. W. Silk, Gravesend, of King's College.

Nine candidates were rejected.

The following gentlemen passed on the 27th instant.

Messrs. Frederick P. Nichols, Norwich, Thomas P. Taylor, Bocking, Essex, Walter H. H. Jessop, Vernon Street, W.C., James W. Field, Chesham, and Ernest Clarke, Hampstead, of St. Bartholomew's Hospital; Heaton C. Howitt, Devonshire Road, S.W., and Robert W. Doyne, Seymour Street, W., of St. George's Hospital; Ronald Volkmann, Upper Norwood, and Gabriel S. Dobrashian, Constantinople, of the London Hospital; T. Percy Woodhouse, Pontefract, and Melville R. H. Jay, Adelaide, S. Australia, of St. Thomas's Hospital; William J. Clarke, St. Augustine's Road, of the Charing Cross Hospital; and Mark Jackson, Great Torrington, Devon, of the Middlesex Hospital.

Eleven candidates were rejected.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 22nd, 1880.

Barnes, Henry John, Thornhill Terrace, N.
Brown, James Grierson, Liverpool.
Dresser, Arthur Kinnaird, St. Oswald Road, West Brompton.
Hughes, Thomas William, Royal Infirmary, Glasgow.

The following gentlemen also on the same day passed their primary professional examination.

Annesley, William Oliver Tyndall, St. Thomas's Hospital.
Blampied, John William, St. Bartholomew's Hospital.
Fletcher, Howard Bennett, Sheffield School of Medicine.
Pocock, Alfred George Clarke, St. Thomas's Hospital.
Quadros, Michael Anthony de, Grant Medical College, Bombay.
Seon, Greville Ewing, St. Thomas's Hospital.
Shaw, John Alexander, University College.
Thomas, George Trevor Harley, St. George's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

BUCKINGHAMSHIRE GENERAL INFIRMARY — Resident Surgeon and Apothecary. Salary, £80 per annum, with annual increase of £10 up to £100, with board. Applications, etc., with testimonials, to the Secretary, on or before August 3rd.

DUNFANAGHY UNION—Medical Officer for Gweedore portion of the Cross-roads Dispensary District. Salary, £100 per annum, with £10 yearly as Medical Officer of Health, registration and vaccination fees. Election on August 4th.

GLENTIES UNION—Medical Officer for Carrick Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on August 4th.

GLENTIES UNION—Medical Officer for Dangloe Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on August 4th.

MARTLEY UNION—Medical Officer of the Knightwich District.

*NATIONAL HOSPITAL FOR THE DEFORMED, Great Portland Street — Registrar. Applications to the Honorary Secretary before August 2nd.

*NORTH KENSINGTON AND KENSAL TOWN PROVIDENT DISPENSARY—Resident Surgeon. Salary, £80 per annum, with apartments, etc. Applications, with testimonials, to the Honorary Secretary not later than the 14th of August.

*NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with apartments, attendance, coals, gas, etc. Applications, with testimonials, to the Secretary on or before September 1st.

*NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—Registrar. Applications, with testimonials, not later than September 1st.

PRESTON RURAL SANITARY AUTHORITY—Medical Officer of Health.

SHEFFIELD FRIENDLY SOCIETIES' MEDICAL INSTITUTION—Junior Medical Officer. Salary, £120 per annum. Applications to the Secretary.

SOUTH STONEHAM UNION—Medical Officer of Health to the Sanitary District of the Union. Salary, £250 per annum. Applications, with testimonials, on or before August 2nd.

STOW UNION—Medical Officer to the First District and Workhouse, and Public Vaccinator.

*SWANSEA HOSPITAL—Resident Medical Officer. Salary, £100 per annum, with board, furnished apartments, etc. Applications, with testimonials, to the Secretary, not later than August 4th.

THETFORD UNION—Medical Officer to the Northwold District.

UNIVERSITY COLLEGE, Bristol—Registrar and Secretary. Salary, £400 per annum.

*WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary on or before the 9th of August.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BENHAM, F. L., M.B., appointed Resident Clinical Assistant to the West Riding Asylum, Wakefield.

LLOYD, David, M.R.C.S.Eng., appointed Medical Officer to the Newcastle-Emlyn Union, *vice* James Thomas, M.R.C.S.Eng., resigned.

MOORE, Herbert Cecil, M.B., appointed House-Surgeon to the Lancaster Infirmary and Dispensary, *vice* R. W. Collis, L.K.Q.C.P.I., resigned.

POWELL, H. A., M.A., M.R.C.S.E., appointed Resident House-Surgeon to the Western General Dispensary, *vice* J. E. Bullock, M.D., resigned.

*SPOFFORTH, John, M.R.C.S., elected Surgeon to the Kidderminster Infirmary.

SUTHERLAND, J. Francis, M.B., appointed Surgeon to Her Majesty's Prison, Duke Street, Glasgow, *vice* Dr. Leishman, resigned.

*WILKINS, G. H., M.R.C.S.Eng., appointed Visiting Medical Officer to the St. Michael's District of the South Lambeth, Stockwell, and North Brixton Dispensary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

COUPLAND—POTTER.—On July 27th, at St. Andrew's, Bath, by the Rev. Prebendary Anderson, A.M., Sidney Coupland, M.D., F.R.C.P., of Weymouth Street, Portland Place, third son of the late W. N. Coupland of Streatham, to Bessie, youngest daughter of the late Thomas Potter, of Great Bedwin.

HOBSON—ARMITAGE.—On the 27th instant, at St. Martin's, Scarborough, by the Rev. James Hope, M.A., of Holy Trinity, Halifax, assisted by the Rev. C. G. Foster, M.A., Lewis John Hobson, M.B.Lond., B.S., F.R.C.S., of Scarborough, to Frances Vernon, youngest daughter of the late George Armitage, Esq., J.P. and D.L., of Milnsbridge House, Huddersfield and Nunthorpe, Yorks.

DEATH.

GREIG.—At Sunnyside, Fyvie, on July 18th, Alexander Fiddes Greig, M.R.C.S.E.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—On July 14th, under the presidency of Lord Watson, the prizes awarded to students in the Charing Cross Hospital Medical School were presented in the Board-room of the Hospital. The winner of the Llewellyn Scholarship of £25 was Mr. Charles Rout; Mr. W. B. C. Treasure was the winner of the Golding Scholarship; Mr. C. W. G. Burrows of the Governors' Clinical Gold Medal; and Mr. Lyster, of the Pereira Prize. Mr. Hird read a report as Dean, and spoke of the increasing prosperity of the school. The number of entries was almost equalled by the number of passes at the Examining Boards—21 having passed out of 22 entered; and the school stood second of all the schools in London as regarded the averages. The report also referred to the new school which the hospital would shortly possess. The chairman, in the course of an address which he made at the conclusion of the presentation, referred to the ancient treatment of disease by blood-letting, and remarked that the legal profession was charged with bleeding the purse; but at the same time he thought that both professions—those of law and medicine—had improved of late years. The medical students had a large field before them, and he urged them to obtain as much knowledge as they could in every department—not a mere smattering, but to make solid and substantial progress in every field in which they chose to enter. In medical jurisprudence they would have to encounter questions relative to diseases of the mind, upon which lawyers and medical men had not quite made up their minds. He wished that medical men knew a little law, and that legal gentlemen, especially the Judges, knew a little about medicine. This hospital was the means of remedying distress both of body and of mind; it also afforded means for students to acquire practical benefit from studies which would prove useful and advantageous to them. In conclusion, his Lordship urged the students to persevere in their work, in order that they might achieve distinction in the noble profession to which they belonged. Upon the motion of Sir Joseph Fayrer, a cordial vote of thanks was passed to the chairman for presiding, and the proceedings terminated.

GROWTH OF LONDON.—An interesting paper has been handed to the Select Committee on the London water supply, giving details of the increase in the number of houses from January, 1873, to December, 1879. It appears that the total number of houses in the districts of the eight London water companies at the end of last year was 573,792, being an increase of 81,787 from the commencement of 1873. The years showing the largest increases are 1879, 1873, 1878, when the numbers increased respectively 21,720, 14,980, 14,954; in 1876 the increase in the number of houses was 8,763; while in 1874, 1875, and 1877 the increases were only about 7,000. The districts in which the increase is largest are Lambeth, where, during the last seven years, the number has increased by 17,829; East London, where the increase has been 17,267; and the district supplied by the Southwark and Vauxhall Company, where the increase has been 11,002. The remaining portions of London have increased by about 8,000 during the last seven years, with the exception of Chelsea, where the increase is only 1,791, of which number 1,390 were added to the district in October of 1879.

TREATMENT OF ACUTE ECZEMA.—M. Guibout, in the *Gazette des Hôpitaux*, thus describes his plan of treatment. He applies a poultice of potato-flour three times a day, makes his patients wear Colson and Hardy's India-rubber garments, and uses baths either of plain water, or water with some starch in it. All ointments should be avoided. The general treatment should be in relation to the diathetic origin of the disease. Generally arsenical medication is required.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 1.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 2; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30 Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 1; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 2; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS who are vexed are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT. We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

R. W. T. asks: What are the apparatus necessary for the examination of water and milk (for sewage matter and other deleterious ingredients), the probable cost of them, and also the latest books on the subject?

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

[illegible] COMMITMENT.

SIR,—I shall be glad if you [illegible] case. Recently, a solicitor [illegible] neighbourhood [illegible] my opinion as to the mental condition of a prisoner under my charge in Her Majesty's Prison, Northampton, who at the assizes was instructed to defend [illegible] charge of felony. The prisoner being, in my opinion, insane, I wrote to the solicitor, who was personally unknown to me, that I would give my evidence at the trial respecting the insanity; that the reply to this was that there was not sufficient time for him to procure a subpœna; and he would be glad to pay me the usual fee of one guinea if I would attend the Court, and give evidence of his knowledge that the prisoner was insane. I declined, and stated that the prisoner, in my opinion, was of sound mind when the offence was committed; at which he was somewhat surprised, and told the jury that he had been instructed differently. I may add that [illegible] a few days after the trial. I wrote a civil note to the solicitor referring to his note to me, and requesting payment of my fee. To this note I have had no reply. I may also add that the prison authorities were aware of the defence about to be set up, and did not call me at the trial. I am afraid I have been "done" (to use a familiar expression), and that after a pretty long experience in assize courts. The object of my letter, however, is to ask what other course of action I should have taken? I presume I might have declined giving my evidence until my fee was secured. I presume that it was from the solicitor's letter. Yours truly, H. TERTIUS [illegible], Surgeon, H. M. Prison, Northampton.

Northampton, July 17th, 1880.

MORBID SENSATION OF SMELL.

SIR,—Can any of your readers kindly suggest treatment of the following case? The patient is a well developed young man, in good general health, but constantly complains of the smell of something burning, not being able to smell anything else. He states his friends have also detected it, but I have failed ever to appreciate it. The mucous membrane of the nostril appears only little darker in colour than normal, with little moisture, but no real discharge, no polypus or other growth. In the early part of last year, he contracted syphilis, and was treated with mercury for some months. Towards the end of the year, this smell in the nose appeared, but no treatment was directed to it until he consulted me last April, when I prescribed iodide of potassium, and used various stimulating and disinfectant lotions. There are now no manifestations of syphilis, but the smell continues the same. Can this be due to the amount of mercury previously taken?—Yours, etc., M.D.

NITRIC ACID AS A CAUSTIC.

SIR,—Will you allow me to call attention to a simple and efficient mode of using that, in many cases, unmanageable caustic fuming nitric acid? Doubtless it has occurred to, and has been put in practice by, others; but I have not seen it mentioned. It is also another testimony to the value of that handy little pocket urinary test case, made for Dr. Batten of Gloucester by Messrs. Salt of Birmingham. The ready portability of the acid in capillary tubes in this case having suggested to me its use in several cases of small nævi and moles on exposed portions of the body, I have adopted it with unfailing success; in one case quite close to the eye.

Having charged a fairly long tube, of the diameter of the portion of tissue requiring to be destroyed, with the acid, keeping the latter as nearly as possible in the centre of the tube (if previously charged and sealed, the ends are broken off for discharging), I press one end of the tube firmly on the flesh, passing my finger, armed with grease or oil (as an extra precaution) round it. By blowing, I bring the acid into contact with the part to be destroyed with exactitude. Before removing the tube, I again gently suck the acid to the centre of the tube; and it may again be sealed for future use, as long as sufficient length of tube remains to watch the behaviour of the contents when in use. The operation is almost painless, I presume from the circumferential pressure producing anæsthesia. I have used it to destroy a mole on my child's cheek, about one-eight of an inch diameter; she felt no pain at all. By the use of an India-rubber exhausting bottle on larger tubes, the principle might be extended to larger surfaces; but the gratitude evinced for the easy and painless removal of these trifling, but unsightly, deformities, has hitherto contented, yours faithfully, C. H. MASSIAH,

Medical Superintendent Grenada Lunatic Asylum, West Indies.

PRIVATE DISPENSARIES.

SIR,—The enclosed circular issued by [illegible] in Brighton is in my opinion, unique in its way, and worthy of notice by the profession. I consequently take the liberty of sending it to you for your editorial remarks.—Believe me, yours truly, A MEMBER OF THE BRITISH MEDICAL ASSOCIATION.

Brighton, July 12th, 1880.

"North Brighton Dispensary, 122, Islingword Road. Medical Officer, Dr. Rugg. To be opened on Monday, June 28th, 1880. This dispensary has been formed to meet the requirements of this large and increasing section of the community in time of sickness, and to prevent those who compose the middle and working classes from incurring heavy doctors' bills and the unpleasant necessity of being dependent on charitable institutions.

"Dr. Rugg offers his large experience at the following low fees: Advice and medicine, 6d.; visit and medicine, 1s.; midwifery, 12s. and 15s.; vaccination, every Wednesday morning, 1s. Hours of attendance: Mornings, from 8.30 till 10; evenings, from 4 till 6. Also on Saturdays, from 8 till 10 P.M. Sunday evenings, from [illegible]. Messages to be sent [illegible] every before [illegible]. N.B.—Patients to bring their own bottles, or One Penny will be charged."

HYPERIDROSIS.

SIR,—Would any of your numerous readers give me a hint as to how I should treat an aggravated case of hyperidrosis? The sweating is almost completely confined to the hands. It is of acid reaction. The patient's health is good: all the functions regular. It is purely a nervous affection, for when in the presence of strangers matters are much worse. Dr. T. Fox, Mr. J. L. Milton, and others, are silent as to the best means of treatment.—Yours, etc., HYPERIDROSIS.

[illegible] HAIR.

SIR,—My old master Chelius [illegible] to rub in daily a drachm containing one grain of tartar emetic to an ounce of fresh [illegible] for "all purposes." Yours truly,

[illegible] Fulham Road, S.W., July [illegible] V. P. WILLIAMS.

UNPROFESSIONAL CONDUCT.

SIR,—A young man has commenced practice in a small watering place [illegible] where I reside. He has [illegible] a room [illegible] which I am [illegible]. I [illegible] legal notice enough [illegible] I [illegible] professional [illegible] I [illegible] of the Journal. I [illegible] forward [illegible] of my patients. I am, [illegible] truly, M.R.C.S.

Such a practice [illegible] to be unprofessional.

UNPROFESSIONAL ASSISTANCE AT CHARITABLE HOSPITALS.

N. Y. Z. asks: By [illegible] titioners of the neighbourhood can attend cases in the hospital. Is it proper for [illegible] occasional superintendence by his principal?

It is certainly unprofessional [illegible] assistant should attend and prescribe for patients in cottage hospital wards. It was a strong point in favour of the establishment of cottage hospitals that, by their means, the medical attendant would be able to give more direct personal attention to his [illegible] to attend to the patients he may send to the cottage hospital, it is best for him to place the case under the care of one of his colleagues with more leisure. An unqualified assistant might dress a case now and then, in the absence of his principal, but he should not be allowed to prescribe, or to order special diet, etc., for a patient. This is the rule at all well managed cottage hospitals.

DR. HOWARD MARTIN ON RESUSCITATION. PATIENT AWAKENS DRUNK.

The [illegible] plan tried lately by a man
In America, much renowned,
To give back breath, and snatch from death
A body apparently drowned.
Those who are the standers by
Off his wet things now must take,
Must rub him very warm and dry,
And of his clothes a bolster make.

The first step is to make him sick,
So turn him on his face;
Your roll beneath his stomach stick,
And the corresponding place
Upon [illegible] press thrice [illegible];
Each time you press count slowly four.
The next thing is to make him breathe.
Therefore turn him round,
Put your roll a bit beneath
Where the shoulder-blades are found;
Then place [illegible] arms above his head,
Here [illegible] your knees;
Your hands upon his ribs you spread,
And his sides together squeeze.

With elbows steadied on your hips,
You sudden forward press;
The weight [illegible] body as it tips
Will make this labour less.
Backwards [illegible] forwards now you go,
Eight or ten times per minute, slow,
At the [illegible]
If the [illegible]
[illegible]
But [illegible]
Quicken it you may.
When he breathes the standers by,
With [illegible]
Put [illegible]
With [illegible]

J. H. P.

BIRTH OF A CHILD WITHOUT INSTRUMENTAL AID.

SIR,—Having recently seen in the JOURNAL cases of monster birth, I have thought it might interest some of the readers were I to relate a case that occurred in my practice, showing how an immense child may be born without instrumental aid.

On July 11th, I was sent for by a midwife, who was attending the case under notice; and I found, on my arrival, that a large head was born (fifteen minutes previously), but there matters stood, as far as she, the midwife, was concerned, and also Nature. Having made a preliminary examination, and satisfying myself that the [illegible] found the funis was not encircling the neck, and also, from appearances, etc., that the [illegible] uterus, and pressure externally by the nurse. I then succeeded, after a great deal of trouble, in extricating the left arm; but even with the help afforded by the hold of the arm and head enveloped in a towel, I found no progress made, as far as traction was concerned, compatible with safety to the mother. I then proceeded to make an examination of the right shoulder, and found it hitched on the top of the pubes, and which I set free by revolving the thorax from right to left, and which enabled me to set free the right arm, and eventually the whole body, which proved to be a female child, weighing *seventeen pounds*. The mother is an average [illegible] since her confinement [illegible] Yours truly,

EDWARD T. THOMPSON, L.K.Q.C.P.

Wolston, Warwickshire, July 14th, 1880.

PROVINCIAL M.D.—We are much obliged by the letter, but think it desirable, as far as possible, to avoid discussing in these pages the course pursued by contemporary journals. Our correspondent might perhaps usefully exercise his influence and power of argument by writing to the editor of the journal in question.

MR. F. T. LAFFAN would probably be able to obtain the required information on application to Dr. Broadbent, Upper Seymour Street, London. We are not in possession of the references for which he asks us, or we should be happy to furnish them.

MR. [illegible]—Many thanks [illegible] your communication, of which [illegible] taken [illegible] which we shall hope to refer. We fear it will be [illegible] many other interesting communications [illegible]

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE CONJOINT SCHEME.

SIR,—In your leading article in the JOURNAL of the 19th June, on the English Conjoint Scheme, I carefully looked to see if I had not, up till the present time, been mistaken as to your opinions on the subject of medical reform. I do not find that I have been so. Still I am unable to understand of what good to the profession, or to the public, the carrying out of your levelling system can be; it may be a levelling up, but it seems to me to be much more like a levelling down; and as such, to be repudiated by every properly educated practitioner, and especially to be objected to by the public. The idea of a conjoint scheme for a minimum qualification to enable a person to become a legally qualified medical and surgical practitioner, entitled as such to be upon the *Register* as M.S.P. (Medical and Surgical Practitioner), is a good suggestion; but the idea of his being entitled to any of the honorary diplomas of colleges or universities, merely because he is a legally qualified practitioner, with the qualification of a conjoint board, however practical it may be, is a very levelling down proceeding. The minimum qualification should be sufficient to ensure the safety of the public from pretenders; and it should be sufficient to enable its possessor to take public medical and surgical appointments, such as can now be held by the M.R.C.S. and L.S.A. The M.S.P. should be the general practitioner—the old-fashioned apothecary, in fact, if it be desirable to save the Society of Apothecaries from extinction—with the right of dispensing medicines, and with all the rights and privileges of a licentiate of that Society—rights not to be conferred by the diploma, or degree, or licence of any other body. Thus qualified and registered, it seems to me to be absurd to suppose that the M.S.P. should have the right to appropriate by affiliation the degree, or licence, or diploma, according to his choice, of any College or Society, for which he might please to pay, without an additional examination; his power to do so would be so degrading to the Colleges selected, as to bring their diplomas into well deserved contempt. The M.S.P., or legally qualified practitioner, with his minimum qualification only, should not be allowed to call himself Doctor, or Surgeon, or Physician; he should first of all obtain the honorary degree, or diploma, or licence, of an University, College of Surgeons or Physicians, by undergoing such farther examination than that of the conjoint scheme as such corporation should require, before conferring its honorary distinction upon him. The only reform then required would be for a short Medical and Surgical Titles Bill to be passed by Parliament, prohibiting anybody from using or assuming a title to which he has no right, and fixing their titles by law to the different grades of practitioners, all being, before being allowed to practise at all on their own account, M.S.P.'s of the Conjoint Scheme. There must be, and ever will be, different grades in the profession; and the higher qualifications, with their honorary distinctions, should be open to all who have the patience, perseverance, and ability to obtain them legitimately, but not by affiliation. Let us not have a levelling down, but an elevating reform, if any.—I am, sir, yours truly,

Bewdley, June 23rd, 1880. JOHN GABB.

P.S.—I have no doubt the honorary diploma of the College of Surgeons would be obtained by as many by choice as it is now by compulsion, for it would then be a greater distinction that it is now; and the same result would be seen in the desire to obtain physicians' diplomas and university degrees of real value as honorary distinctions, instead of mere legal qualifications to practise.

*** Our correspondent cannot have read the article on Conjoint Examinations with ordinary attention. Had he done so, he would have seen that the proposed arrangements amount to this: that the College of Physicians, the College of Surgeons, and the Apothecaries' Society, find that it will be for their convenience and advantage of themselves and the candidates seeking their several diplomas, that, in place of a person being examined three times, in three different places, and by three different sets of examiners—for example, in Anatomy—the several corporations can arrange that one and the same examination shall be made sufficient for all three. So, likewise, with all the other subjects of medical and surgical examination. The examinations can thus be rendered more thorough and complete, at the same time that the candidate is spared the worry of being examined over and over again in the same subject. The Colleges and Hall being satisfied with the result, will confer on the candidates the diploma and licence as at present. There will be no special separate examinations, such as was contemplated in some of the Bills that have been brought before Parliament. The title of "Medical and Surgical Practitioner", objected to by our correspondent, will be unnecessary, and was never thought of. There will be no levelling down; all persons will be thoroughly examined in every subject, and all will be justly entitled to the medical and surgical diploma which they will receive. The participation of the Universities in this system is an advantage to which it is needless to refer again.

HONOURS AT THE BRUSSELS UNIVERSITY.

SIR,—I have received a large number of letters containing inquiries as to the manner in which honours are obtained at the Brussels University. Not having the time to answer all individually, and as some misconception on the subject appears to exist even among graduates, may I trespass upon your valuable space to make a few brief remarks on a subject attracting a good deal of attention at the present moment.

I am frequently asked to name the subjects which are specially valuable in the eyes of the examiners. On this point, I cannot speak positively; but I am inclined to think that pathology, the physiological and therapeutical actions of drugs, surgical anatomy, operative surgery, and clinical medicine and surgery, are of the most importance.

There are three tests or doctorates, and, at the conclusion of each, the examiners are always pleased to confer distinction on special merit in any subject or subjects, but no certificate is now given; and I am assured by one of the university professors that, even if one were given under such circumstances, it does not entitle the recipient to attach honours to his name. When the series of examinations are concluded the entire court of examiners assemble on a given day, and if, on a review of his marks in all three doctorates, the candidate be deemed worthy, they have inscribed on his degree "avec distinction", honours in all three doctorates being implied thereby. It will thus be evident to my correspondents that, although special knowledge in one or two departments will have great weight, the dead level of uniformity will have better chance of a grateful recompense. I have the honour to be, sir, your obedient servant, RICHARD CRLAN.

6 Bury New Road, Manchester, July [illegible].

RÖTHELN.

SIR,—It is so difficult to get rid of objectionable words when once they have been admitted into a language, that we ought to be very careful to oppose their first introduction. Just now, I see several papers in the JOURNAL treating of what the Germans call "rötheln". What a word for Englishmen unacquainted with the German language to pronounce! I dread to hear it. Surely it has a Latin equivalent. If not, the sooner one is devised the better. Meantime, why not stick to "German measles"?—Your obedient servant, D.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Paget, Cambridge; Dr. Playfair, London; Mr. Holmes, London; Mr. F. Wallace, London; Dr. Duffey, Dublin; Dr. L. Jones, Blackpool; Mr. H. Fox, Bristol; Mr. J. F. Whipp, Manchester; Mr. Joseph Hinton, Warminster; Mr. C. E. Winckworth, Shefford; Dr. Robert Lee, London; Mr. F. T. Le Tall, Woodhouse; Mr. Charles Steele, Clifton; Our Edinburgh Correspondent; Mr. W. J. Miller, London; Dr. E. Williams, Wrexham; Mr. P. Martin, Abingdon; Dr. A. S. Currie, Lydney; Mr. J. R. Stedman, Guildford; Dr. W. C. Grigg, London; Dr. J. Lightburne, Newry; Dr. W. Rutherford, Edinburgh; Mr. A. Cooper, London; Mr. W. Y. Veitch, Middlesborough; Our Dublin Correspondent; Dr. Clay, Manchester; Dr. A. P. Stewart, London; Dr. F. B. Lee, Heckmondwike; Dr. J. Styrap, Shrewsbury; L.R.C.P.E.; Dr. H. D. Foote, Sunderland; Mr. N. Porrett, Leeds; Dr. J. Donaldson, London; Our Glasgow Correspondent; Dr. J. Watkins, Newton-le-Willows; Dr. Martin de Bartolomé, Sheffield; Mr. W. Ewart, London; Mr. J. Brindley James, London; Mr. Francis Mason, London; Mr. M. R. J. Behrendt, Burringham; Dr. Rabagliati, Bradford; Dr. Davey, Bristol; Mr. F. A. Maciver, Edinburgh; Mr. H. P. May, Blackpool; D. A.; Dr. W. S. Greenfield, London; Mr. H. C. Lawrence, London; Dr. J. M. Sutton, Oldham; Dr. J. Broom, Clifton; Mr. Kelly, Walsall; Mr. Paradise, Leigh; Mr. W. Wallace Auld, Edinburgh; Mr. H. G. Howe, London; Dr. H. D. Ellis, Eastbourne; Mr. J. Farquharson, Stockton-on-Tees; Mr. J. H. Hughes, Droitwich; Dr. Thomas Keith, Edinburgh; Mr. S. Wilson Hope, Petworth; Mr. Mark S. Wade, Sheffield; Dr. H. Kennedy, Dublin; Mr. James Parette, Sirhowy; Mr. M. Douglas, Barnard Castle; Dr. R. B. Low, Helmsley; Dr. E. T. Tibbits, Bradford; Dr. Heywood Smith, London; Mr. Samuel Temple, Bootle; Mr. A. Graham, Plumtree; Dr. David MacEwen, Dundee; Dr. P. Rice, Galway; Dr. J. Scanlan, Trowbridge; Mr. A. H. Leadman, Boroughbridge; Mr. James Crocher, Bingley; Dr. Munro, Manchester; Mr. T. Dutton, London; Messrs. Fairless and Beeforth, London; Mr. W. J. Wheeler, Dublin; Mr. James Startin, London; Dr. Crothers, St. Leonard's-on-Sea; Mr. J. R. Wittecombe, London; Dr. D. W. Eshelby, Stonehouse, Gloucester; Mr. George Gosset, Abingdon; Mr. H. W. Sharpin, Bedford; Dr. R. W. Foss, Stockton-on-Tees; Mr. J. Churchill, Chesham; Mr. W. J. Brown, Hartlepool; Mr. Charles Hartley, Lynton; Mr. W. Owen Jones, Bowdon; Mr. W. G. Copestake, Derby; Mr. Robert Birch, Newbery; Dr. E. T. Wilson, Cheltenham Mr. Lawson Tait, Birmingham; Mr. E. Carver, Cambridge; etc.

BOOKS, ETC., RECEIVED.

Practical Lithotomy and Lithotrity. By Sir Henry Thompson. New Edition. London: J. and A. Churchill. 1880.

The Dissector's Guide. By D. J. Cunningham, M.D. Edinburgh: Maclachlan and Stewart. 1880.

Anatomy, Descriptive and Surgical. By Henry Gray. Ninth Edition, by T. Holmes, F.R.C.S. London: Longmans and Co. 1880.

The Nature and Treatment of Syphilis. By C. R. Drysdale, M.D. London: Baillière, Tindall, and Cox. 1880.

Report of the Third Congress of the Sanitary Institute of Great Britain, held at Croydon 1879; edited by C. H. Burdett and F. De Chaumont, M.D., F.R.S. London: 1880.

Professional Book-Keeping. By W. J. Gordon. London: Wyman and Sons. 1880.

Contributions of Orthopædic Surgery. By J. C. Hutchison, M.D. New York: J. P. Putnam's Sons. London: Trübner and Co. 1880.

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AN ADDRESS
ON THE
ORIGIN AND OBJECTS OF THE BRITISH MEDICAL ASSOCIATION.

Delivered at the first meeting of the Worcestershire and Herefordshire Branch.

By DAVID EVERETT, F.R.C.S.Eng.,
Consulting Surgeon to the Worcester Ophthalmic Hospital, President of the Branch.

Gentlemen,—By your favour, I have the honour of being the first president of this new Branch of the British Medical Association. I offer my congratulations to you on its formation, and desire for it a prosperous career.

Though it is not for me to anticipate what may, and must, be said on the jubilee anniversary of the Association itself, I cannot but revert with satisfaction to the fact that forty-eight years ago, in this very city, the Provincial Medical and Surgical Association was instituted. Its progress since that first meeting held in our Infirmary, on July 19th, 1832, has been during that long period an uninterrupted success.

To the late Sir Charles Hastings, a man in whom enthusiasm and generosity were associated with sound sense and high professional rank and eminence, belongs the undisputed honour of being its founder. He seems to have been the first to perceive that the time had arrived for the provincial members of the profession to assert for themselves a position, and to co-operate, in a confederation of their own, in the development of its power for good, as affecting the interests of society at large, the profession generally, and specially those of their number who practised in the provinces.

The practitioners of medicine in the great metropolis had all the advantages of associated action, and had well utilised their power of combination; while provincial surgeons and physicians suffered from their comparative isolation. Dr. Hastings and many others felt the disadvantageous position of the latter class, and discerned the means by which it could be remedied. There were men of great eminence in various parts of the kingdom—bright lights indeed, in their several localties; but they lacked the stimulus enjoyed by their London *confrères* to promote their investigations and practice, and to stimulate them to further efforts under the approving and sympathetic observation of their fellows. That was not to continue; the hour had arrived, and the men also, who knew how to raise the provincial profession to a higher platform.

Since that time, and after a lapse of many years, in which good work had been done, the metropolitan physicians and surgeons claimed to stand side by side with their provincial brethren, and together with them, under the name of the British Medical Association, to pursue those objects to which with unquestionable success the Provincial Society had directed their efforts. And this grand and honoured institution now presents itself as a marvel and model for every medical community in the world.

But to revert to the period when the Provincial Association was founded, allusion must be made to the then existing profession here; for there were men of marked ability, and all of them were active in establishing the institution. Among those practising here at the time of the formation of the Provincial Association were Sir Charles Hastings, Dr. Malden, Mr. Sheppard, Mr. Thomas Carden, and Mr. Hebb, now all deceased. These had been preceded by men whose names were honourably known throughout the scientific world, such as Dr. Wilson Phillip; and others connected with the "faithful city", among whom may be mentioned Dr. Wall, who first introduced the porcelain manufacture into Worcester; Dr. Mackenzie, who was instrumental in founding our Infirmary in association with Drs. Cameron and Attwood; and Dr. Johnstone, who died at the early age of 33, a victim to gaol-fever contracted in visiting the gaol in this city, in pursuance of a request from the justices to make an examination and report on the result. And then a correspondence was conducted between medical men in various parts of the country, and the promoters of the institution here.

These men were asking themselves what might result from bringing men of eminence into occasional conference, persons known to each other in many instances only by repute, who would thus be led to interchange thoughts in friendly association. What might not be indeed anticipated, that would exalt our profession in public estimation and usefulness?

At length their labours resulted in the inauguration of the Association under the presidency of the late venerable Dr. Johnstone of Birmingham.

Since that time, the increase from about 200 members to more than 8,000 to-day, bears its own grand testimony to the accuracy of their confident predictions.

Nor were their conceptions less clear as to the objects they contemplated; nor less distinct their expression of them in the programme they laid before their brethren.

I have been much impressed, in reading some of the earliest statements of their views, with the prescience they manifested in indicating the means and course needed to render the Association generally advantageous, and adapted to secure the ends they sought to compass. They are condensed into a formula, than which nothing wiser after the lapse of half a century can be desired. The lines on which they proposed to advance are just those which have had the sanction of their successors through many years. The objects are thus stated:—

1. Collection of useful information, whether speculative or practical, through original essays, or reports of provincial hospitals, infirmaries, or dispensaries, or of private practice.

2. Increase of knowledge of the medical topography of England, through statistical, meteorological, geological, and botanical inquiries.

3. Investigation of the modifications of endemic and epidemic diseases, in different situations, and at various periods, so as to trace, so far as the present imperfect state of the art will permit, their connections with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.

4. Advancement of medico-legal science, through succinct reports, of whatever cases may occur in provincial courts of judicature.

5. Maintenance of the honour and respectability of the profession, generally, in the provinces, by promoting friendly intercourse and free communication of its members; and by establishing among them the harmony and good feeling which ought ever to characterise a liberal profession.

The record of the works of the Association in its Journal and its volumes of *Transactions*, show how, in following their indication, the interests and progress of the profession have been forwarded.

But the necessity of constituting numerous centres of action was soon perceived, and provided for by the formation of branches, such as we this day are doing for the counties of Worcester and Hereford.

Reference to the agenda prepared by the parent institution shows them to be well worthy our adoption. We cannot, however, dwell on them all. No. 5 seeks to promote good fellowship in the profession, in order to increase an *esprit de corps* among us, so essential to secure the noble aims of our vocation. We have often heard it said, that the social status of our profession is not that to which it is fairly entitled. But our work as a whole is of so elevated a character, that, if we must admit any justice in the complaint, we have to ask whether or not we have fallen short of our own ideal of its demands.

It is true, that, unlike the clerical and legal professions, in which the highest honours are often given by the State to those who derive their consideration from the offices they fill, our position must be accorded to us for the work we do and the way in which we do it. And these have compelled the elevation to titular rank of many members of our body. Even peerages have in two or three cases been offered, though declined. It would be a wise provision that secured life-peerages here and there.

But we look through the marks of public honour to the worth and merit of those who have obtained them. In ours, as indeed in all professions, high distinction and fame are the lot of the few. Its honour and dignity, as a whole, must largely depend upon the work and worth of the rank and file. The leaders may add the grace of the capital to the pillar; but the column must consist of the many, though on it may be inscribed the names of every worker; as those of soldiers who, in battles which have secured for their country honour and glory, have had their names and conduct engraven on imperishable monuments.

Gentlemen, ours is no ignoble calling. Have regard to the extent of ground our profession covers: a knowledge of the human frame in all its wonderful structure; the physiology of function, and the varied changes of structure and deviations from normal action; the remedies and mode of treatment of all its innumerable departures from health—it is ours to try to understand. We have to meet the exigencies of mankind under all emergencies, as they may occur to us in surgery, obstetrics, and diseases.

In daily life, we have to pursue sometimes a monotonous, often wearying, but always anxious and responsible, work; while it is the lot of some, in cool devotion to their vocation, to tend the wounded on

the battle-field and ship, at whatever risk, amid the roar of artillery and the rage of the fight.

Think, too, of the eminent professors of medical science who, by arduous work and laborious research, bring before the learners of our profession the results of their investigations, and direct their studies; and, as teachers, send out year by year pupils who, having availed themselves of their opportunities for study, go forth on their grand mission, to mitigate, or cure, or to avert the ills to which flesh is heir.

Nor have the science of medicine and its professors failed to mingle with the literature and science of the age. Is it not true that a host of honoured names of the living and the dead are enrolled among those who have ennobled humanity in respect of literature and poetry and art, and all the loftiest flights of intellectual enterprise? In what better than in ours can he who seeks for his mission some ennobling work find a more enviable sphere?

It is a very main object of this Branch to keep a just view of the dignity, requirements, and responsibility of our profession before our minds as incentives to corresponding aims and purposes. If so, you will not think I have dwelt too long upon this subject. The mere mention of the subjects which this Branch and the Association at large must consider is enough, doubtless, to ensure the attention of our members. There have been several topographical reports presented in various numbers of the *Transactions*, and also some in the Midland Counties Medical Society; and these investigations ought to be pursued by our Branch. Then there are subjects of special interest which will, I know, have our early attention—such as the causes of infantile mortality, to which Dr. Strange has devoted much attention. Then we shall have to consider the politics of our profession, and the measures which should be supported in Parliament.

I congratulate you on the fact that Mr. G. W. Hastings, the son of the founder of our Association, already an honorary member of the Association, and elected to-day an honorary member of this Branch, will be able to promote beneficial legislation in Parliament. He has already done much good in furthering the interests of the profession, and the extent of his efforts deserves more than passing thanks and recognition. In the future, I do not doubt we shall be laid under still further and more important obligations.

Various circumstances, which the limit of time forbids me to specify, demand special vigilance, and will claim it at our hands.

What shall be the policy we approve as to hospitals in our large towns and cities? And now, in rural districts, what have we to say about clubs, dispensaries—free and provident? Our hospitals are among the glories of our land. They supply the highest medical and surgical talent in it; but still, while they are of vast advantage to the profession as a whole, and even to those who are not upon their staff, are they not somewhat too much of monopolies? As to dispensaries, free and provident, the danger is lest they too much favour the few, and stop the junior members from gaining the first round of the ladder. These also have been universally handed over to lay control and election. The fees are fixed and the rules framed by a committee with just enough of professional sanction to give colour to their regulations. And who can complain if some, smarting under the injustice of exclusion, set on foot private ventures, under a scale of published charges, without a list of governors?

Then there is the work, literary and scientific, undertaken in all branches of the healing art. How much this may be promoted by association, I will not stop to inquire. That it is essential, needs no argument to prove. Look at the state of the profession to-day; compare the attainments of those who entered its ranks fifty years ago with those who have just joined them, and those who in future will do so. Occasional conference among medical practitioners, strongly desired as it is now, will, in consequence, be yet more needed in the future; and this we are wisely providing for these counties by the proceedings of to-day.

On the ethics of our profession, after all we might say on the subject, the golden rule of "Do unto others as ye would that they should do unto you" supplies the surest guide to the right road on which to pursue our professional course.

Nor shall we disregard at all the social gatherings. I need not dwell, however, on this subject, as we are enjoying a practical demonstration of it to-day, and will improve our opportunities as the days go on.

OUTBREAK OF SCARLET FEVER. Scarlet fever has broken out in an alarming form at Heath End, in the parishes of Rushall and Pelsall, in the county of Stafford. Several cases have terminated fatally. The inspector of nuisances has reported to the local authority the very defective sanitary arrangements of the place. Numbers of new houses have been erected within the last eighteen months, the sanitary arrangements of which have been continually condemned by the Medical Officer of Health.

REMARKS

ON A

CASE OF SIMPLE STRICTURE OF THE COMMON BILE-DUCT, CAUSING JAUNDICE AND ASCITES.

By GEORGE JOHNSON, M.D., F.R.S.,

Professor of Clinical Medicine, Senior Physician to King's College Hospital.

THE following case, which recently came under my care in the hospital, presents some points of unusual clinical interest.

Mary Ann N., aged 38, was first admitted on July 9th, 1879. She is married; has had seven children, the youngest a year old. Habits temperate. In December 1878, four months after her last confinement, she noticed that her skin was becoming yellow, and her urine high-coloured. These symptoms had continued until the time of her admission. She was then jaundiced, and the urine was deeply bile-tinged. The liver-dulness extended from the fifth rib to two inches below the costal margin. The lower edge of the liver was thin and firm. There was some evidence of liquid in the abdomen.

After remaining three weeks in the hospital, she was sent to the convalescent home on August 2nd; readmitted on September 25th. The jaundice had continued since her discharge, and the abdomen had greatly increased in size, the measurement at the level of the umbilicus being forty-three inches. Fluctuation was distinct, and dulness on percussion everywhere except at the epigastrium. The feet were œdematous.

On September 27th, 344 ounces of bile-tinged liquid were removed by tapping, with great relief from pain and distension. The margin of the liver could be felt as before described, and below the margin a distended gall-bladder was sometimes distinctly felt. The fluid reaccumulated, and again caused great pain and distress. On October 28th, a second operation removed 284 ounces of fluid, and afforded much relief. After the second tapping, the urine gradually became lighter-coloured, and the skin was less deeply jaundiced; but the abdomen again enlarged; and on November 26th, 271 ounces of liquid were removed by a third tapping. Again she was much relieved by the operation, and the fluid did not reaccumulate. The abdomen now measured only thirty-five inches. The urine gradually lost its bile-tinge, and the skin and conjunctivæ nearly regained their normal colour. She recovered her appetite and strength, and was discharged apparently convalescent on January 10th, 1880.

She was readmitted on June 21st, 1880. After leaving the hospital, she had remained quite well until six weeks ago, when she noticed that her skin was again becoming deep yellow; and a month ago her abdomen again began to enlarge. On admission, the skin and eyes were deeply jaundiced; the urine contained an abundance of bile; the abdomen was much distended, measuring forty-four inches and a half at the navel. She had pain and dyspnœa from abdominal distension. On the 24th, 303 ounces of liquid were withdrawn by paracentesis, after which the liver was felt with its thin edge two inches and a half below the ribs, as before noticed. Great relief was afforded by the tapping; but, four days after the operation, she had a rigor. Temperature 102.3°; abdomen tender, and again becoming distended. There was occasional vomiting; the pulse became rapid and feeble, the tongue dry; and she died on July 4th, ten days after the last tapping.

Inspection by Dr. Barnes forty-four hours after Death. The abdomen contained a large amount of dark turbid liquid. The peritoneum was intensely congested; the intestines covered by recent yellow lymph. The liver was stained of an olive-green colour, somewhat enlarged; the lower margin was thin, moderately firm. The gall-bladder, distended by dark bile to the size of a turkey's egg, extended some distance below the margin of the liver. The cystic and hepatic ducts were much dilated; the dilatation of the hepatic ducts extending into the interior of the liver, sections of which showed the ducts in the portal canals large enough to admit a middle finger. The common duct, just below the junction of the cystic and hepatic ducts, was obstructed by a fibrous thickening of its coats. Very firm pressure on the distended gall-bladder caused only a slight oozing of bile through the common duct into the duodenum. The omentum was thickened, folded upwards, and adherent to the under surface of the diaphragm. The capsule of the spleen was thickened. The kidneys were soft and

stained yellow. A cyst, of the size of a small cocoa-nut, was connected with the left ovary.

REMARKS.—Until the inspection of the body revealed the true nature of the pathological changes in this case, it was impossible to refer the symptoms to their true cause. The main phenomena were, deep jaundice, followed by great ascites; the disappearance of both the jaundice and the ascites after the third tapping; the reappearance of jaundice and ascites after an interval of about five months.

The first link in the chain of morbid processes resulting in jaundice and ascites was evidently the constriction, amounting to almost complete obliteration, of the common bile-duct. The exciting cause of the inflammatory process which resulted in this stricture of the gall-duct is not apparent. There was no indication of syphilis. There was no history of gall-stones, the passage of which might have caused ulceration and subsequent stricture of the duct. But, starting from the obstruction of the duct, the resulting phenomena are sufficiently intelligible. The impeded escape of bile caused the jaundice and the gradual dilatation of the hepatic ducts. The dilated ducts compressed the portal veins within the canals, thus obstructing the whole portal circulation, and causing the ascites. The jaundice was a direct mechanical result of the constricted gall-duct; the ascites an indirect result. The temporary passing away of the jaundice and ascites after the third tapping is explained by supposing that, in addition to a permanent constriction of the duct by inflammatory exudation, there was a congested and swollen condition of the lining membrane, which, after removal of the dropsical pressure by tapping, subsided, thus allowing the accumulated bile to escape, and removing the pressure from the portal veins. In like manner, we have seen that, in cases of simple stricture of the sigmoid flexure of the colon, temporary obstruction of the bowel may result from congestion and swelling of the mucous membrane at the constricted part. The swelling of the mucous membrane subsiding under the sedative influence of opium, the fæces again pass, and the bowel unloads itself. Then, after an interval of weeks or months, from the irritation of indigestible food or a drastic purgative, congestion and swelling of the mucous membrane with complete obstruction of the bowel again occur, with perhaps a fatal result.

The liver, unfortunately, was not weighed; but there was evidently a combination of enlargement, resulting from dilatation of the hepatic ducts, with some degree of atrophy of the glandular tissue; and some sections which my friend and colleague Dr. Barrow was good enough to make for me showed atrophy of the lobules, with an increase of connective tissue in the interlobular spaces. These atrophic and hyperplasic changes are exactly analogous to those which occur in the kidney in consequence of an impeded escape of urine from the gland, whether resulting from obstruction in the urethra, in the neck of the bladder, or in the ureter.

It is interesting to note that, although the last tapping, when her strength had been much impaired, was followed by fatal peritonitis, the previous three tappings not only afforded great immediate relief, but unquestionably prolonged her life in comfort for several months. This satisfactory result is an encouragement to repeat the operation of paracentesis in cases of recurring ascites, when other means have failed to remove the dropsy.

CASE OF INTRA-UTERINE SMALL-POX, WITH COMPLICATED PRESENTATION.

THE two cases of intra-uterine small-pox, published in the JOURNAL of the 10th inst., remind me of a case which occurred in my practice, during the small-pox epidemic of 1873-74, in which the presentation was also abnormal. The following is a short history of the case. I was asked to attend Mrs. P. in her tenth confinement; and at the full time, when I arrived, the uterus was fully dilated, but the presentation rather puzzled me at first. I found the head presenting, and, on the one side, considerably in front of the head, a hand could be made out; while on the opposite side, and immediately behind, I could, with some difficulty, make out a foot. The fluvis also presented, which, on account of the breadth of the pelvis, I found to be still pulsating. By pressing back the arm and head, I readily got at the foot, and, with comparative ease, turned and delivered.

The sequel is the point to which I particularly wish to draw attention. I observed, immediately after birth, a rash covering the body and face of the child. This eruption quickly developed into confluent small-pox, of which the child died on the sixth day.

The mother made a good recovery. One of the family was at the time recovering from small-pox, and had been through her illness nursed by the mother.—I am, etc., JOHN B. MACLEOD, M.D.

Windsor, July 19th.

THE TREATMENT OF ASTHMA.

BY J. B. BERKART, M.D.,

Senior Assistant-Physician to the City of London Hospital for Diseases of the Chest, etc.

IV.

WITH the relief of the paroxysm, however rapid and successful it may be, the task is only partially performed. There remains the peculiar disposition—the asthmatic tendency—in virtue of which an exciting cause, even the most trifling in appearance, is at any time capable of producing a fresh attack of dyspnœa. To confine the treatment to the suppression of this symptom, each time it returns, may be satisfactory to the patient who, disheartened by the failures of many systems and of many remedies, has at last resigned himself to his affliction, and desires, when seeking advice, no more than some means wherewith to mitigate and to abbreviate his periodical sufferings. But that is a practice which, for obvious reasons, does not commend itself; and it is one, moreover, which, I venture to assert, is neither requisite nor justified. Nothing, so far as the pathology and the pathogeny of asthma are concerned, is in any way opposed to the adoption of the more rational course, viz., the prevention of the paroxysm. The characteristic feature of the disease—the intermission of the dyspnœa—shows that the predisposition, whatever it may be, is compatible with complete freedom of respiration; and all that, in the circumstances, appears to be needful is, on the one hand, to detect and avoid the causes of the occasional disturbances; and, on the other, to reduce the susceptibility to their influence.

Under the guidance of the prevailing theory of the disease, such rational treatment has been, and must always be, impossible. On this point, there can be no doubt. The experience of those who have most faithfully applied it is conclusive in that respect. But such painful demonstration is scarcely necessary to prove what is obvious at a glance. The mysterious derangements of the nervous system, alleged to form the predisposition to asthma, cannot possibly be the object of deliberate therapeutic measures; at any rate, all attempts to suppress, by smoking stramonium or by the internal administration of the drug, what is fancied to be the exaggerated contractility of the bronchial muscles, have hitherto had not the slightest effect. So also as regards the supposed causes of asthma: amongst them, there are such as cannot well be avoided, because they elude detection; while others that are recognised, as mental emotion, inscrutable differences of air and of places, etc., are so subtle and so insidious in their approach, that they cannot be guarded against; and there remains this remarkable peculiarity, that what at one time provokes asthma, cures it at another. The results of the treatment hitherto obtained fully correspond to the basis on which it is founded. But, in reality, that theory is a myth; transmitted from generation to generation, it has repeatedly found warm advocates in those to whom, themselves sufferers from the disease, it afforded much consolation. The semblance of scientific support which they brought to it has procured its ready acceptance on the part of practitioners, while the patients cling to it for the pleasing idea that their affection is purely nervous. The consequences of that theory have been the most mischievous; and not the least amongst them is that it is necessary first to combat the prejudices of the patients, before it is possible to adopt rational measures for their benefit.

Reliable indication for treatment can be obtained only by the sober consideration of facts. The present state of the patient, his previous history, and the nature and origin of the supposed complications, which invariably appear in the course of time, indicate the nature of the predisposition to the disease; while a knowledge of the provocatives of the dyspnœa, which in every individual differ with almost each paroxysm, can be obtained only by observing the habits of the patient, his exposure to certain injurious influences, subtle, but therefore not the less substantial and demonstrable.

In following the plan here briefly delineated, we are enabled to take timely measures for preventing even the development of the asthmatic tendency. It is a matter beyond question that with few, if any, exceptions, asthma always proceeds from inflammatory changes of the lungs. In the vast majority of instances, it arises in childhood as the direct continuation of catarrhal pneumonia, complicating whooping-cough, measles, and typhoid fever. In the comparatively rare cases, in which the dyspnœal seizures appear, for the first time, at a more advanced period of life, they are invariably the sequel of a bronchitis, which, by the severity of its symptoms, and by its protracted course, shows that the adjoining lobules have been implicated in the process. I need not here enter into a description of the well known histological changes which

distinguish catarrhal pneumonia; for the present purpose, it is enough to recall the fact of their existence. Recovery being incomplete, inasmuch as the pneumonia is followed by paroxysms of dyspnœa, therefore, the inference is not unfounded, that permanent injury had been inflicted upon the lungs. The physical signs may be ambiguous, but their negative condition is no cogent proof that the injury is absent. Another serious consequence is that, after severe forms of the pneumonia, deformities of the spine and of the thorax invariably manifest themselves both in children and in adults. Doubtless, pre-existent rickets favour, in children, the origin of the pulmonary inflammation; but it is not the less certain that this may be, at all periods of life, the starting-point of changes in the capacity and in the shape of the chest. I have every reason to believe that, besides the mechanical element—collapse of the lungs and atmospheric pressure—nutritive disturbances in the bones themselves contribute towards them. The effect of these deformities upon the lungs of the growing child and of the grown up man will be readily understood. Hence it is of the utmost importance to prevent, especially in children and in feeble adults, the extension of the inflammation from the bronchi to the parenchyma of the lungs.

Now, catarrhal pneumonia occurs with the greatest frequency in crowded hospitals and ill-ventilated rooms, and at present the prevailing opinion is that it is mainly due to the weakness of the patient and to the aspiration of irritating matters from the larger into the smaller air-tubes. If that be so, I know of nothing more apt to produce pneumonia than the treatment adopted on the appearance of an inflammatory process in the air-passages. The patient is kept in bed, wrapt up in flannel, and, if possible, in cotton-wool, notwithstanding the high fever, by which he consumes himself. Doors and windows are tightly closed; every crevice capable of admitting air is stopped; the bronchitis kettle freely plies; and when the nervous system rebels against such ill-usage, then the cough is suppressed by narcotics or by chloroform, as in the whooping-cough of children. If the inflammation were to occupy a limb instead of a bronchus, I have no doubt that the most scrupulous antiseptic dressing would be applied; but because, as in the present case, the affected organ is hidden from sight, all and every precaution is neglected. It is unnecessary for the present to decide whether a particular fungus or any other irritant be the exciting cause of whooping-cough or of bronchitis; whatever it be, we have to deal with inflammation accompanied by exudation—a process in every way the same, whether it occurs on the surface of the bronchus or on that of the hand. The experience of modern surgery has abundantly shown the beneficent effect of pure air upon wounds, and the baneful consequences to them of a vitiated atmosphere. The open sore that festers and spreads in an ill-ventilated room, rapidly heals if exposed to the open air, even without antiseptic dressing. The experience of physicians tends in the same direction; yet the adoption of the most obvious hygienic measures is frustrated by the inordinate fear of cold. "Catching cold" is supposed to be the deadliest enemy to guard against, and the special cause of diseases of the lungs. It is, I am aware, a dangerous thing to touch prejudices, but I would only ask whether there is a shadow of reliable evidence that abstraction of heat—unless it be prolonged exposure to a temperature below freezing-point—has ever produced inflammation of any organ. I have no doubt the fear of a fancied danger, and the anxiety to avoid it, are productive of much mischief, inflicting in many instances injuries that cripple patients for life. I can only urge that, if henceforth catarrhal pneumonia is to be prevented, the first principle of treatment should be *non nocere*.

When asthma has declared itself, there are always pathological changes at the root of it, differing in nature and extent, but invariably exerting the same influence upon the functional activity of the lungs. The most constant amongst them are deformities of the spine and of the thorax, also presenting an almost infinite variety. Some patients exhibit, not only by the shape of their chests, but also by that of the head and the limbs, unmistakable traces of rickets, from which they suffered in childhood; in some, the thorax is relatively too narrow for their stature; in others, tall adults, the whole bony framework has retained childlike proportions; in others, there are curvatures and twistings of the spine in all directions, or depressions and projections of the sternum and the costal cartilages. In the obese the deformities are often not visible until, in the progress of the disease, emaciation has set in; but in many cases it will be found that if from the radius of the thorax be deducted the thickness of the layer of fat, and if its vertical diameter be measured, their chests are, whether deformed or not, relatively too small for their stature. A similar variety of changes exists in the lungs; there may be general atrophy and dilatation of the bronchioles, and of the air-vesicles—emphysema; or induration of the parenchyma, which, although lobular at the commencement, has invaded almost entire lobes, occasionally extending even to the mediastinum; there may be peribronchitis, with dilated bronchi, splenization at one place, emphysema at another, etc.; while the healthy portions of the lungs are always more or less in a state of congestion. Necessarily, the entire organism becomes involved in those changes. The right side of the heart is the first to suffer, and in due course there is marked stasis in all the systemic veins, affecting not only the skin and all the mucous membranes, but, occasionally to a marked extent, the thyroid gland and the kidneys.

It is the presence of these changes that constitutes the "relative insufficiency", as it were, of the lungs, and produces the increased susceptibility to exciting causes. It is to them that treatment is above all to be directed; and though they themselves are irremediable, yet much may be done to resist their progress, and to counteract their influence upon the healthy portions of the organ.

ON SCARIFICATION AS A NEW REMEDY IN SKIN-DISEASE.

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In few departments of medical science is the advantage of the modern system of specialisation more apparent than in the study of diseases of the skin. Under the old system, this large and important class fell entirely into the domain of the physician, and in consequence lotions and local remedies were alone applied, and on their failure cases were abandoned as incurable; but now that dermatology is being regarded as a specialty, surgical methods have also been used, one of which I am about to discuss.

My attention was first drawn, early in 1878, to a pamphlet by Mr. Balmanno Squire, published in 1876, on *Port-wine Mark, and its Obliteration without Scar*, advocating scarification as a new remedy. My sympathy was excited by his account of the universal failure of all the remedies hitherto applied to remove this prevalent deformity, and the confidence with which he recommended his method determined me to try it. His new plan was, shortly, to freeze by means of ether-spray the part in question, to scratch it in parallel lines with an ordinary cataract needle, and then to press a piece of blotting-paper firmly on it for five minutes. This operation was to be succeeded at intervals by series of oblique or transverse scratches, and, within a fortnight, the port-wine mark was, to quote Mr. Squire, "to vanish, as if charmed away by incantation, and the patient cured absolutely and certainly for the rest of his life." The seeming simplicity and promised efficiency of this method of treatment made me quite enthusiastic, and I determined to follow it out exactly; but my enthusiasm soon diminished when I discovered that the operation was not so easy to practise as it seemed to be from the description. To begin with, I found that, though on paper the reasons given by Mr. Squire for the use of ether-spray, namely, the absence of pain and bleeding, seemed incontrovertible, considerable difficulties arose out of its use, for the hardness induced by freezing made it impossible to scratch parallel lines at an eighth or one-sixteenth of an inch from each other. To check this difficulty, I had made for me a multiple scarificator, the numerous blades of which were fixed at the stipulated parallel interval; but, nevertheless, the extreme hardness of the skin, and the ice itself produced by the ether-spray, clogged the instrument, and made it practically useless, so that, after repeated failure, I continued to perform the operation without previously freezing the part.

It will, I think, be well here to describe three of the cases kindly sent to me by Mr. Jonathan Hutchinson for the express purpose of trying this new method.

Case I.—Miss P., aged 28, was sent to me in the beginning of 1878 by Mr. Hutchinson, with her right forehead, cheek, neck, arm, and hand affected, and also with a large patch on the left cheek, which Mr. Hutchinson had repeatedly cauterised. It was a typical case of superficial capillary nævus, or port-wine mark. In no part was it raised above the level of the surrounding skin. I commenced by treating a patch of two inches by three on the right forehead, and one beneath the right eye, with every detail prescribed by Mr. Squire in his pamphlet, making the scratches every few days, and in different directions. I soon found the inconvenience of freezing, of which I have just spoken; and about the tenth time began operating without previously freezing the place, and with the new multiple scarificator, with great advantage. After the operation, the blood was soon stanched by means of firm pressure with blotting-paper, and in two or three days there was no sign left of what had been done, while the patient suffered only from slight soreness of the affected part. The pain at the time of the operation was severe, but only lasted for a few moments after the bleeding ceased. I continued operating for upwards of a year, and used the method one hundred and thirty times, eighty times on the patch on the forehead,

and oftener on one below the eye, but with no further result than a small keloid growth, half an inch long, on the former. As regards the colour, my own impression led me to believe it was slightly paler, but from so constantly seeing the part I was really unable to judge correctly. At the end of the year, after the conclusion of my operations, I took the patient to Mr. Hutchinson, who, it will be remembered, had, previously to my attempt, cauterised the left cheek; he warmly congratulated me on my success on the left cheek, which I had not touched, but remarked that there seemed to be no improvement on the right side of the face, the part on which I had expended all my labours.

CASE II.—Miss F., aged 35, had been treated at the Skin Hospital, Blackfriars, for eczema of the leg, and was sent to me in April 1878 by Mr. Hutchinson to be treated for a port-wine mark, which spread in patches from the nose to the left ear. This case was rather different from the last in the character of the nævus. It was more raised, and darker or purple in colour; in fact, it was a venous nævus. Ten years previously, she had tried treatment by means of strong acid, but with no improvement. I operated on her thirty-two times in all, six times with ether-spray, and on five occasions applied tincture of iron after the scarification; but, as in the first case, with absolutely no alteration; so that the patient abandoned the method in disgust.

CASE III.—Miss H., aged 16, was sent to me by Mr. Hutchinson in July 1878, with a port-wine mark on the right half of the face. This nævus was more arterial in character than that described in Case II, but more raised than in Case I. I selected a small piece about the size of a crown, or rather larger, situated on the malar bone, and operated on it most thoroughly sixteen times, at intervals of a week; but, at the end of that time, the patient refused to go on, as there was not the slightest sign of improvement.

From these cases it will be seen that the operation, as recommended by Mr. Squire, in so far as port-wine marks are concerned, is practically a failure; and I shall not, I hope, be accused of hastiness in coming to this conclusion, when it is considered that I operated in the first case no fewer than one hundred and thirty times. I am sorry to be obliged only to record failures, or in any way disparage a treatment which in Mr. Squire's hands is so efficacious; but it is clearly our duty to publish results, whether they be favourable or not, in order that others who may be induced to try the method may be prevented from giving too positive a prognosis at the commencement of the treatment. However, I trust Mr. Squire may be able to give from his own experience some proofs of his success which will more than counterbalance the unsatisfactory results I have just described; and, at all events, I feel sure, now that attention has been directed to surgical interference, some effectual remedy will be developed for the cure of these unsightly deformities. For my own part, I am not surprised that the method fails in port-wine marks, when their structure is taken into consideration. The whole mass is composed of a minute network of vessels; these vessels divide into numerous branches, all of which unite, so that a complete anastomosis is formed. The consequence is that, when a clean incision is made in any part, the blood finds its way, in consequence of the inflammation, through the other vessels; but, as the wound heals rapidly by first intention, the continuity of the vessel or vessels is restored; the blood returns as before; and the result is, that the vessels in the line of the incision are not destroyed, and therefore there is no alteration in the colour on the surface.

Feeling that this was probably the explanation of the failure, I determined to try multiple linear scarification in cases where larger blood-vessels were apparent, and where the anastomosis was less complete. My first attempt was upon the severer form; that is to say, the later stage of acne rosacea. In this disease, the vessels are seen to stand out above the level of the skin, more especially those leading to the affected part. It will be remembered that Hebra recommends destruction of these larger vessels by means of a single scalpel, and the after-application of tincture of iron or nitrate of silver.

I will now give brief notes of three cases in which the treatment by multiple linear scarification was successful after all other means had failed.

CASE I.—J. M., aged 29, had been a lighterman, and from exposure to the weather had suffered for eight years from severe acne rosacea of the nose. Extremes of temperature caused him much pain, and eventually he had to adopt an indoor occupation. He was under care for two years and a half at the Blackfriars Skin Hospital, during this time using various remedies with little or no benefit. Last summer, through the courtesy of Mr. Tay, I began to treat the condition by scarification. I operated upon him in all twenty-six times, at intervals varying from a week to a fortnight or longer. After the first few operations, there was marked improvement; and when I last saw him, a short time since, the disease was practically cured; there were no vessels to be seen, no perceptible heat to the touch, no redness, and no pain from exposure to heat or cold. As in the cases of port-wine mark, I dispensed with the use of ether, as the pain was comparatively slight, owing to the rapidity with which the operation was performed. There is no necessity to waste time in describing the various details of the operation; it will be sufficient for my purpose to say that it was done in a manner similar to what I have before mentioned, with the one exception that I encouraged bleeding, sometimes to the amount of one ounce or more. After it had stopped, the nose was carefully sponged with cold water, and the patient allowed to go home.

CASE II.—J. H., aged 23, also under Mr. Tay's care at the Blackfriars Hospital (to whom I am indebted for the opportunity of trying the treatment), a draper's assistant, had suffered from acne since sixteen; during the last two years, the nose had become considerably worse, both as regards size and colour. It was swollen and red, mostly at the tip, with large inflamed acne spots scattered here and there. There were dilated vessels around the spots. Mr. Tay expressed the opinion that acne lupus would probably be a better name than acne rosacea, in consequence of the severity of the disease in so young a person. I operated twelve or thirteen times, very thoroughly on each occasion—the result being a total disappearance of all redness. The acne spots were touched from time to time with acid nitrate of mercury.

CASE III.—C. F., aged 28, was sent to me by my friend Dr. Sangster, who has kindly furnished me with the following notes. She was a dressmaker by occupation, working twelve hours a day, much crippled by rickets. She menstruated first at fifteen, and had always been regular. She suffered from dyspepsia. When first seen, the nose was swollen and fiery red, except at the end, which was blue and cold to the touch. Congested capillaries could be seen. The redness extended along the cheeks to the angles of the mouth. The skin over the affected region was thick and papular. The above described condition commenced six or seven years ago as a flushing after meals. The disease improved somewhat under medicinal treatment, but the nose still remained red and swollen. I scarified ten times, on every occasion in a different direction. After the tenth operation, the nose resumed its normal size, and was pale in colour.

There is another disease similar in some respects to this severe stage of acne rosacea, lupus erythematosus, which I believe can be cured in many cases by the same treatment. I have, indeed, seen real improvement even in a short period effected by Dr. Besnier, at the St. Louis Hospital in Paris; and, though I myself am unable at present to record any complete successes, yet I hope to be able to do so at some future period.

It will be seen, from what I have said, that scarification deserves more notice, as a remedy in certain forms of skin-disease, than has yet been bestowed upon it. In so far as concerns the new application of it to port-wine marks, suggested by Mr. Squire, I have found it to be practically valueless, owing to the length of time required to produce any visible alteration or improvement; nevertheless, in the other diseases I have just mentioned, his system of multiple linear scarification shows an advance on the old method of operating with a single scalpel, advocated by Hebra and Volkman.

ON THE APPLICATION OF THE ELECTRO-MAGNET FOR THE CURE OF ANÆSTHESIA.

By JULIUS DRESCHFELD, M.D., M.R.C.P.,
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SINCE the appearance of Professor Charcot's investigations on hystero-epilepsy, the electro-magnet has become a recognised therapeutic agent for cases of anæsthesia due to other causes than hysteria; and the important fact that the cure it effects in the non-hysterical forms is of permanent nature, is being verified by many independent observers. Its remarkable effects in anæsthesia due to lead-poisoning, and in anæsthesia due to organic cerebral lesions, have been the subject of separate publications by Debove, Proust, etc., in France; and in many of the Paris hospitals the electro-magnet forms an important item of the medical *armamentarium*. I am not aware that any observations on this subject have as yet appeared in the literature of this country;* and, with the view of drawing attention to this subject and inducing further trials, I beg to be allowed to give briefly the results of my own observations, especially as two of the three cases which I wish to relate are in themselves of rare occurrence and clinical interest.

* Since this was written, a case of hystero-epilepsy in which the electro-magnet was applied, has been reported by Dr. Stone in the *Medical Times and Gazette*, July 14th, 1880.

CASE I. *Hysterical Anæsthesia affecting both Sides of the Body and also the Special Sense Organ.*—Ann H., widow, aged 43, came to see me on November 20th, 1879, complaining of excessive weakness in both upper and lower extremities, which had been coming on for some months. Examination showed loss of power in both upper and lower extremities, with complete anæsthesia of the whole body; also contracted vision in both eyes, with achromatopsia of the left eye; loss of smell and taste on both sides, and deafness of both ears. There was no ovarian tenderness. A few days after the first visit, I had an opportunity of showing the patient to my colleagues Drs. Leech and Ross, and to Mr. Cullingworth, who satisfied themselves as to the genuineness of the observations. With the view, therefore, of systematic treatment, the patient was admitted into the infirmary on November 28th, 1879.

As the case, owing to the bilateral nature of the affection, is of very rare occurrence, I may be excused for giving a fuller abstract from the notes taken by Messrs. Challiner and J. K. Milne than I otherwise should have done.

Previous History.—The patient was mother of six children, all healthy. She had herself always enjoyed good health, but for the last two years had undergone many troubles, owing to the lingering illness of her husband, whom she constantly nursed up to his death, which took place five months ago, and which caused her much mental distress. She found herself becoming very weak; and occasionally, in walking, her legs would give way and cause her to fall. She likewise noticed numbness of her limbs.

Present Condition.—The patient looked fairly well nourished. The organs of the chest and abdomen were perfectly normal. There was no ovarian tenderness. The tongue was clean; the appetite good, but she could not taste her food; bowels regular; menstruation normal. Muscular power was diminished in both upper and lower extremities, but more on the left than on the right side. Tactile sensibility was considerably diminished all over the body, particularly over the feet, legs, arms, chest, face (except the nose and chin), and scalp. The tips of the fingers, outer parts of the thigh, nose, and chin, were sensible to touch. Sense for pain was completely abolished over the whole body except the tips of the fingers. Pricks made with a needle did not bleed except on the finger-tips. Sense for temperature was quite lost in the lower extremities, trunk, and face. The patient could distinguish heat from cold on the forehead, in the axilla, and on the arms. Muscular sense was abolished from both upper and lower extremities. The mucous membranes were sensible to touch, but not to pain.

Special Sense-Organs.—Vision. The field of vision was very much contracted on both sides, but more on the left. Central vision was normal in both eyes. There was no colour-blindness in the right eye; but with the left eye the patient could only distinguish red. She mistook blue for green; mauve she called black. The optic discs, pupils, and oculo-motor muscles were normal. *Hearing.* She was deaf on both sides; more so on the right than the left. (The patient had suffered from right-sided deafness for years, but could hear well with her left ear previously to her attack.) *Taste* was completely absent from both sides. *Smell* was very much diminished on both sides, especially on the left.

The first series of experiments consisted in the application of different metals to the anæsthetic skin, with the well known results. Gold and silver were found active; copper and iron inactive. It was interesting to observe that, with the return of sensibility over the whole body after the application of gold, the left achromatopsic eye became normal, while the right eye became colour-blind. This was the only transfert observed. Internally, the patient was treated with chloride of gold (five minims).

On December 4th, the electro-magnet was used for the first time. One pole was applied to the outer side of the right leg. The apparatus was so arranged that the current could be made and broken without the patient being made aware of it. Careful examination of the patient, previous to the application of the electro-magnet, showed that the anæsthesia was as perfect as on the first day; the achromatopsia, however, had disappeared, and the muscular power had a little increased. Five minutes after the application of the electro-magnet, the sensibility was returning on the inner side of the right leg; in ten minutes, it had extended considerably; and, after twenty-five minutes, the whole of the right and left side, with the exception of the head, was acutely sensitive to the touch, except the upper part of the face and the whole of the scalp. The points pricked (except one in anæsthetic scalp) bled now freely. The special sense organs underwent no change during the passage of the current. Soon after the removal of the electro-magnet, the anæsthesia returned.

On December 6th, the electro-magnet was again applied, with no current passing. For more than one hour, there was no effect. After the electro-magnet had remained near the anæsthetic leg for two hours, there was slight, but very perceptible, return of sensibility on the outer side of the leg. This unexpected result was afterwards easily explained, as it was found that the electro-magnet had been used for a considerable length of time in the physical laboratory of Owens College, and the iron had retained enough magnetism to magnetise a needle, even if no current passed; and thus the simple application of the magnet, when not in contact with the battery, sufficed to bring back the sensibility, though it did so very slowly, and only after being applied for a long time.

The magnetic experiments were now continued almost daily for an hour, and the patient at the same time began markedly to improve, so that, after a few days, the sensibility had returned, and remained permanently in both upper and lower extremities and trunk. The scalp was still anæsthetic, and the special sense-organs (excepting the achromatopsia) were in the same state as on admission.

On December 15th, the electro-magnet was applied to the scalp with very decided effect, so that, fifteen minutes after the application, the whole skin of the head became sensitive, and the points touched bled freely. The special senses also underwent improvement during the application. The improvement continued, though the sensibility was somewhat diminished, even after the removal of the electro-magnet, which was only once more applied (on December 17th) and again to the head.

The patient now rapidly improved, and was well enough to be discharged on December 24th. She found herself well enough to follow her work; her muscular power had increased; the sensibility had returned over the whole of the body; the field of vision had improved; smell and taste had become normal; and the hearing on the left side was much better. She continued to take the chloride of gold internally during the whole of her stay in the hospital, and persisted with its use some time after her discharge. I have seen the patient repeatedly since, and she has remained perfectly well.

CASE II. *Partial Epilepsy, most probably of Syphilitic Nature: Anæsthesia.*—Matthew C., labourer, aged 25, married, came to the out-patients' room on February 6th of this year. The patient had had gonorrhœa, but did not admit having had any other venereal disease. Except periodical nocturnal headaches, he had enjoyed good health till three weeks before admission, when, while at work, he had an epileptic fit (ushered in by loss of consciousness, and accompanied, according to the evidence of some fellow-labourers, by tonic and clonic spasms); since then, he had had numerous attacks of partial epilepsy, characterised by clonic contractions of the right arm and right side of the face, lasting only a short time and not accompanied by any loss of consciousness. The attacks had become of late so frequent that he was obliged to give up his work. Whilst in the out-patient room, the patient had one of these attacks; it commenced with muscular weakness in the right arm, lasting a minute or two, followed by tremor, going on to clonic movements in the right hand, arm, right side of the face, and then passing down and affecting the right leg slightly; after a few seconds, the movements subsided, and the patient felt quite well again. Fifteen grains of iodide of potassium, three times daily, were prescribed.

February 13th. There was no great change in the epileptic attacks; the headache was much better. The dose of iodide was increased to twenty grains.

February 20th. The attacks had been much less numerous, but the patient had been prevented from working by numbness of his right arm, which had now lasted several days. On examination, it was found that the whole of the right arm, the upper right half of the trunk, and right side of the face, were insensible to tactile impressions and to pain, but not to heat and cold. There was no affection of any special sense organs. The ophthalmoscopic examination showed both fundi oculi normal. In the presence of some students and of Dr. Wilkinson, one of the assistant medical officers of the Infirmary, the electro-magnet was applied to the right forearm. Fifteen minutes after the application, the whole of the anæsthetic side became normally sensitive; no transfert was noticed except on one point of the left forearm, symmetrical with the point of application of the electro-magnet on the right forearm; even this, however, was of very transient character.

February 24th. There had been no return of the anæsthesia; the epileptic attacks occurred now at rarer intervals; there was very little pain in the head; but the patient suffered occasionally from vertigo. The antisyphilitic treatment was continued.

February 27th. The epileptic attacks had ceased.

March 12th. There had been no further attacks since February 24th. The patient complained of occasional headache and vertigo; sensibility was normal. He now ceased attending, but continued to take the iodide of potassium for some time longer, and was asked to present himself if any change occurred. I have, however, heard nothing more of him since.

CASE III. *Left Hemiparesis, with Involuntary Movements of Arm*

and Leg; Left Hemianæsthesia: Left Hemianopsia: Mental Disturbances.—The patient was seen by me for the first time on April 3rd of this year, at the Convalescent Hospital at Cheadle. For the notes, I am indebted to Mr. Stanwell, resident clinical clerk at the Cheadle Hospital.

History.—A. H., aged 40, a joiner, married, with no history of syphilis, gout, rheumatism, or alcoholic excess, had been ill for two years, and unable to work during the last eighteen months, suffering from giddiness, headache, double vision, with numbness, weakness, and trembling of the left side. He had not suffered from vomiting; the bladder and rectum had not been affected. A week before admission, he had, one morning before rising, three fits, which, according to his wife's account, were of distinctly epileptic character; his memory had recently become impaired, and he suffered from occasional attacks of violent headache, associated with febrile symptoms.

State on Admission.—The patient was strongly built, sallow, fairly nourished; he had an anxious expression and a hesitating manner; the left side of the forehead was relatively smooth, whilst the right was habitually wrinkled; the left palpebral fissure was slightly the larger (he could, however, close the left eye). The left angle of the mouth was rather lower than the right; the movements of the muscles on the left side of the face were less extensive. The left upper limb was colder and paler, and the left forearm measured a quarter of an inch less in circumference, than the right. The grip of the left hand was weaker, and the whole limb was involuntarily and frequently jerked about. These spasmodic movements affected the forearm and arm, but not the hand or the fingers; they were increased by effort or attention, and especially when any movement was attempted by the right hand (as in writing), or by any reflex excitement of the right side (such as tickling the right foot). The movements ceased during sleep. The left leg was weaker than the right; it felt cooler, and measured somewhat less in circumference, than the right; it also was the seat of involuntary spasmodic movements, less in extent, but of the same character as in the left arm, and equally increased by exciting reflex contractions. The patient could walk, but dragged the left leg in walking. The tendon-reflex was considerably increased on the right side in both the upper and the lower extremity. The electric contractility was normal on both sides.

Sensation.—There was total left hemianæsthesia, exact in extent both before and behind; the sensibility to contact, to pain, and to temperature, was much diminished. The muscular sense was normal on the left side, and the patient distinguished well different weights on the supported left hand; he could stand and walk with closed eyes. The pin-punctures on the left side bled the same as on the right. The pupils were equal and active. There was no nystagmus or ocular palsy, but there was exact and total left hemianopsia of each field of vision. The central vision was normal; the fundi were normal; the veins of the fundus were large, and in the left eye somewhat tortuous. Smell and taste were normal. The tick of a watch was heard only when the watch was in contact with either ear (the deafness was, however, of old date). His urine was normal.

Progress.—During the first week of his stay in the hospital, the condition of the patient remained the same; he had an attack of frontal headache, which was very violent, and accompanied by anorexia and a rise of temperature to 101°, lasting two days.

On April 24th, I tried the effects of the electro-magnet in the presence of Drs. Noble and Lindemann, who were good enough to see the patient with me. The magnet was applied to the left arm; on trying the sensibility about an hour after its application, it was found that sensibility had returned to the left side of the head and neck, but not to any other of the anæsthetic parts. The night after the application, the patient had again a violent attack of headache, with rise of temperature. The anæsthesia gradually returned to the left side of the head and neck, and for a time the repeated applications of the electro-magnet were not followed by any results, nor did the headache return. The mental condition of the patient gradually grew worse; he got up at night, and wandered about the wards, and he was, therefore, removed to the infirmary on May 26th. The electro-magnet was now daily applied for an hour; and, though the general condition grew gradually worse, the anæsthesia improved.

A few days ago (June 10th), Dr. Noble was kind enough to see the patient again with me; and, comparing his condition with that on April 24th, it was noted that the patient's mental condition had grown worse (he had immoderate fits of laughing, his memory was impaired, and he attempted to get up at night and wander about the wards); the hemianopsia was still the same, the loss of power on the left side had increased, while the spasmodic involuntary movements had diminished, and could not be so easily produced by reflex stimulation; his anæsthesia, however, had improved; he now felt the needle-pricks acutely on the left side, though not so acutely as on the right.

The symptoms in this case are so typical and well marked, that there can be hardly any doubt that we have to do here with an organic lesion (most likely tumour, with softening of the surrounding parts), implicating the thalamus, the posterior third of the internal capsule, and the optic tract on the right side of the brain. (Similar cases, with *post mortem* accounts, have been published by Gowers, Hughlings Jackson, Hirschberg, myself, and others.)

I have no desire to lengthen this communication by a detailed review of the cases given, or by theorising on the probable mode of action of the electro-magnet. I merely wish to corroborate the results already obtained by other observers. The immediate effect of the electro-magnet in all the three cases was very striking; and, while in the third case there can be no doubt of the presence of an organic lesion, and while the second case closely resembles cases of circumscribed meningeal syphilitic inflammation, the method of application in the first case was so conducted, that there could be no deception on the part of the patient. It is quite possible that, in the second case, the prolonged administration of the iodide of potassium would have cured the anæsthesia; and that, in the third case, the gradual diminution of the anæsthesia might have taken place, as it does sometimes in these cases, without the help of the electro-magnet; but, from a physiological point of view, the sudden effect produced by the magnet is certainly interesting.

I have tried the electro-magnet in two cases of progressive muscular atrophy accompanied by analgesia, without anæsthesia, one of which was very much improved by subcutaneous galvanisation, according to Dr. Morgan's method (*Lancet*, 1879), but in both, the magnet failed to give any results. Equally negative results were obtained in lesions of peripheric sensory nerves; and it seems, therefore, that the electro-magnet is only of use in cerebral cases, and it would thus be of diagnostic help in doubtful cases.

The effects of the magnet are, perhaps, best explained by assuming ready anastomoses between the several channels along which peripheric sensory impressions are conducted to the cerebral centres. For a further exposition of this view, I refer the reader to Debove's monograph. I merely wish to add that, after Vulpian's observations (*De l'Influence de la Faradisation Localisée*, etc), localised faradisation acts exactly like the electro-magnet.

ON MOVEMENT AS A THERAPEUTIC AGENT.

By JOHN K. SPENDER, M.D.Lond., Bath.

THE therapeutic doctrine of Rest has had so many prophets and bards, that it may seem daring to ask the question, whether it has not been pushed a little too far, or always used with discretion. The service done in this matter by the late Mr. Hilton cannot be overvalued, because, before 1861 (or thereabouts), there was no distinct appreciation of the physiological reasons of rest. It had been often applied without precision, and still more often in a halting and imperfect way. The enthusiasm which was the fruit of Mr. Hilton's teaching carried us almost out of the domain of pure unemotional science. The theory was not new, but it was put in the most attractive guise. Rest is first cousin to sleep; and if sleep can refresh and restore the healthy body, why may not rest undo some of the bad doings of disease? My present argument is not to disparage rest, but to plead for its more rational application. A remedy may be too benign, too quiet, almost too agreeable. It may be potent to subdue the slow workings of an insidious malady, but the healthy nutritional forces of the body require stir and exercise, anything but too much rest. Herein lies the danger—the real danger—that rest may not be left off at the proper time, and normal movement begun. I venture to ask, therefore, whether the therapeutic pendulum of rest has not swung rather too far.

It is indeed remarkable that there was no formulated doctrine of either rest or movement until within the last twenty years. As therapeutic agents, the words are not found in the index of Dr. J. Mason Good's *Study of Medicine* (1840); nor in that of Dr. Copland's *Dictionary of Practical Medicine* (1858); nor in that of Dr. J. Hughes Bennett's *Principles and Practice of Medicine* (1859). There is no index to South's *Translation of Chelius' Surgery* (1847), but I can find no allusion to the subject in this really grand work. It is admitted that, in an empirical sense, rest and movement have been employed since medicine became an art; but the scientific grounds for either the one or the other were not always clearly grasped or opportunely carried out. The boundaries between the conditions which demand such opposite lines of treatment are sometimes not easily traced. How are we always to know when local symptoms have become so quiescent, that it is safe to undo the fetters of immobility and restraint, and tell a lame man that he may try to walk, or let a crippled hand

begin to work? Pain is not an unerring guide. It is a fact in clinical medicine, that rheumatic neuralgia is sometimes worst when muscles are most rested; for a rheumatic person may awake after a night of good sleep with limbs stiff and painful, which symptoms distinctly pass away after moderate exercise and warm food. In like manner, surgical rest may continue too long.

Take the case of an acutely inflamed joint. Under the discipline of enforced rest, the synovial effusion becomes gradually absorbed; the classical signs of inflammation pass away; and when all danger of relapse has finally subsided, an organ of locomotion ought surely to be allowed gradually to return to its duty. But it is the fashion to confine an injured joint so long in wrappings and encasements of an immobile kind, that there is a risk of *quasi*-fibrous ankylosis, relaxation of ligaments, rigidity of tendons, and commencing atrophy of neighbouring muscles. Now, in order to prove that these are not imaginary evils, I will relate in the briefest manner three cases selected from several more of a similar kind.

(*a*) In March 1869, an elderly lady showed me her right knee, enveloped in splints and bandages. Towards the end of 1868, there had been an injury, the nature of which was obscure. She thought that she had struck or twisted the knee. There was little effusion into the joint, but the lower end of the vastus muscle seemed lifted from the femur as by a distended bursa. Hence this muscle acted at a disadvantage, and could not properly extend the leg. There was no sensation which could be called pain; but the stiffness and general uneasiness in the knee disabled her from walking, and [illegible] The leg was wasted, and there was a general weakness of the whole limb.

(*b*). In October 1877, a gentleman under thirty years of age consulted me, and gave the following history. In July 1876, while "walking almost at a run in the dark, he fell into an iron harrow, the two knees fitting into a square of the harrow, so that the iron missed the knee-joint and met the limbs on the muscle above and on the bone below". He was not conscious of any immediate symptoms, and walked about as usual; but in a few days there came on stiffness, and then pain, the latter being never of great severity. Local means gradually subdued local troubles; and then followed a long period of "irritability" (to use my patient's own word), for which the professional treatment was that the foot was for nine months supported in a sling, the other end of which went round the neck; and at night the knee-joint was packed in splints to prevent movement during sleep. For several months he carefully abstained from bending the leg upon the thigh, because he was emphatically told that continued rest was necessary. One result of this management was that, on the least strain or blow, the joint suffered from new attacks of "irritability" and pain.

(*c*). The wife of a tradesman fell down some steps at the Bristol Railway Station on July 25th, 1878, and fractured the radius of the right arm. The fracture was properly set, and the splints were removed at the end of August. A bandage was then applied for three weeks. On November 1st, a starched immobile apparatus was put on, and allowed to remain for four months. When this patient first came to me, at the end of last May, the hand was nearly useless, simply from atrophy of the muscles. The hand had been imprisoned too long, and no directions had been given to arouse functional activity after its liberation from imprisonment.

Now the memory of some of my readers may recall the practice of the late Mr. Hutton, and the lessons gathered from it by Dr. Wharton Hood. The various conditions of joints which came under Mr. Hutton's treatment were easily classified, and included a large number which were stiff and painful from injury, or had been kept at rest for the avoidance of pain either after some injury to themselves or to the soft parts around them. Summed up in a few words, Mr. Hutton's principle was the rupture of adhesions by manipulative force, guided by skilful leverage. We learned from him that the joints will bear much rougher usage than is sanctioned by professional tradition; but this is not the point now at issue. The sort of case which I have just illustrated stands apart from those which are treated with sudden and violent flexion and extension. In dealing with a joint which has not been materially damaged by inflammation, is not much enlarged, but is now weak [illegible] the muscles are weak which ought to move it, a thorough and scientific shampooing (or *massage*) is our therapeutic watchword. The physiology of the joint has to be studied more than its anatomy. The joint is afraid of itself because it is not used; its volitional energies are "hidden under a bushel"; and the owner of it has, perhaps, been scared by the terror of what may happen if he presumed to walk even with the help of crutches. It is satisfactory to know that Dr. Sayre, who is the designer of such an ingenious plan for supporting and resting a diseased spine, distinctly says that, in the case of ankylosed limbs, there is "a time for motion as well as a time for rest".*

First, then, we satisfy ourselves that the joint-ends of two bones are not mortared together, and do not require any forcible methods for their separation. A patient may be put partially under the influence of chloroform if necessary, and the capability of a joint to be bent or extended will then be fairly tested, and we shall discover what checks there are to healthy movement. The passive play of a joint tells us that its mechanism is sound; but the question is, What are its vital activities? What can the patient do with it, and how far can he use it? In the three cases which I have briefly delineated, I could see nothing to hinder the limbs from being actively employed. They needed to be brought out of the prison in which they had been immured by professional swathes and bands, and stirred into a more quickened life. They were suffering just as the whole body would suffer if, when clearly recovered from acute disease, it were still compulsorily confined to the bed or the bed-chamber.

The simple plan of treatment which I have for years adopted is as follows. Imagine the knee to be the affected joint, and the foot should rest on a stool or block of wood just within a large shallow open bath, so that the knee is over nearly the centre of the bath. A jug, holding about a pint of fluid, is filled with tepid water, and is turned upside down about three feet above the knee, so that the water falls with a splash on the joint; and this is repeated from six to twelve times. An attendant, sitting in front of the patient, then plants a hand on each side of the knee; and, with the thumbs meeting in front, the hands should be moved firmly up and down for eight or ten minutes. The pressure used should be equal and well sustained, not causing any uneasiness, not in the least rough, but such an union of firmness and gentleness as a practical manipulator will easily understand. The thumbs, while agents of moderate pressure themselves, may be made the fulcra for pressing and rubbing the back of the joint. At the end of the shampooing process, the whole joint ought to be dry and warm, and to be immediately wrapped in a covering of oiled-silk lined with wadding, which should be securely fastened and kept on for some hours.

By this easy plan, carried out regularly once or twice a day for several weeks, there is seldom any difficulty in restoring the torpid functions of non-ankylosed joints. Now and then it may be desirable to suspend the friction for two or three days, if the skin show signs of irritation; and in warm weather the impervious pad is scarcely necessary, and might cause an eruption of pustular acne. Medicated lotions or liniments are rarely prescribed; but now and then I introduce under the oiled skin wrap a piece of folded flannel soaked in a mixture of tincture of iodine (half an ounce), glycerine (half an ounce), and soft water (seven ounces). The early douchings are best done with tepid water; but this should be exchanged for cold water as soon as possible, on account of the greater glow and reaction which are afterwards obtained; and, during the summer months, cold water may be used from the first. In all cases, the local treatment should be supplemented by regular passive movements carefully and coaxingly executed, and never exciting pain and fatigue. Sometimes it is only timidity which hinders a patient from (say) pronating and supinating a hand, or flexing and extending an elbow; a group of muscles have to be taught anew. As the lower limbs bear the weight of the body, their voluntary exercise must be deferred until the patient regains confidence and acquires strength.

The next stage of treatment consists in the application of uniform and gentle support. A weak joint requires support when it no longer requires rest. This seems to be the key of the new and important devices of the American surgeons [illegible] The *principle* is not at all new. Fifty years ago, my father was curing chronic ulcers of the leg by means of firm equal pressure with a domette flannel bandage, telling his patients to walk about as usual. His practice was opposed to the almost universal surgical teaching of the day, reiterated since with with a loudness and constancy almost overpowering;‡ such surgeons as Dr. Underwood and Mr. Chapman being rare exceptions to the rule. And yet it ought to have been clear that to lay up a limb in idleness admits of the healing of an ulcer by a

[illegible]

‡ Take at random such a sentence as the following: "Rest is Nature's own remedy, for the application of which she takes no charge; and the practitioner of the healing art takes as little trouble as possible. If he have [illegible] on the leg to cure, he enjoins rest, and lays up the limb [illegible]" (*Lancet*, October 19th, 1872).

degree of vital action, which is unable to maintain the permanence of that healing when the limb is restored to use. Similarly, when we have to treat a weak joint, the principle ought to flash upon us with unerring instinct; here is a case, we should say, for applying firm pressure and allowing moderate exercise. For the *ankle*, there is nothing better than an India-rubber bandage, put on from the base of the toes to the upper part of the leg. The bandage is far better than a so-called elastic anklet, because it supports all the muscles which move the ankle; it should make a gentle uniform pressure, without any sensation of squeezing, each fold slightly overlapping the previous one all the way up the limb. The *knee* should be enclosed during the daytime in an elastic support, *which should always be laced*, and which need not cost more than four or five shillings. The lacing allows the degree of support to be varied, according to the feelings of the patient and the amount of exercise he has to undergo. Equipped with this simple apparatus, the lower limb enjoys, as far as the upper part of the knee, a gentle and uniform pressure, which permits useful locomotion within restraining and salutary conditions.

The application of this principle to the *upper limb* is not difficult. A hand and wrist, when embraced by an elastic glove extending a little way up the arm, is competent to perform various feats of dexterous workmanship, which would otherwise soon cause aching and powerlessness. But what need is there for illustrating further such an obvious point of practice? If to be at work is the part which a healthy organ has to play, it is clear that too much rest cannot contribute to the perfection of that work, either in quantity or quality. That special condition which is called the "hysterical joint" is peculiarly amenable to the vigorous and helpful treatment of douching and pressure. For the douching, the use of the Bath waters is much to be commended, as the dynamic stimulus of their heat maintains an after-glow, which is a sign of more vital energy. And hysteria, if it mean anything, means a lack of this energy—a crippled volition, a sluggish blood-stream, and a general under-tone of life. The combination of firm pressure and moderate exercise fulfils, in this case, exactly what we ought to aim at: support to the mechanical apparatus of locomotion, and arousing and sustaining of vital function.

I heartily agree with what Mr. Roth has written about the importance of muscle-rubbing in infantile paralysis.* He insists that the superficial and deeper layers of muscles should be acted upon successively: firm circular friction is made on the same spot with the ball of the thumb, from left to right and from right to left, about ten times each way; pressure should be used at the same time with the thumb—the thumb being helped, if necessary, with the other hand. The fact is, however, that we ought to vary our manipulations according to the age and sensitiveness of the patient, and the duration of his malady. Thus, we use in one case stroking *(effleurage)*, and in another kneading *(pétrissage)*; sometimes percussion *(tapôtement)* is most beneficial; and, now and then, it is best to trust to passive motion. The last three methods are particularly adapted to chronic inflammations. Hard kneadings crush and break up old hyperplastic tissue, and the detritus is passed into the lymph-stream; vascular congestions are emptied, and the vaso-motor nerves are mildly irritated. The infriction of medicated substances may be an occasional aid, and among the best are mild iodine ointment and the liniment of iodide of potassium.

Rest and movement are, therefore, complementary to each other, both in physiology and in therapeutics. The analogy is as close as possible. Alternation of work and rest is the law of the human organism in health, and health could not be preserved without it. Disease may call for a prolongation of the element of rest; but it is a note of clinical insight to discover when the disease ends, or when sufficient health returns to justify the usual alternate rest and work. Continued work without rest could not be; rest continued too long is not only conceivable, but it is the object of this paper to illustrate it as one of the present dangers of therapeutic surgery.

THE TREATMENT OF GUINEA-WORM.

By FORBES DICK, M.D.,
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At a time when the existence of filariæ in the blood and tissues is being laid before us as a possible cause of, or at least frequently associated with, elephantiasis, beriberi, and many tropical cachectic and local diseased conditions of the body, and when a discussion on the treatment of *filaria Medinensis* has taken place, it may not be inopportune to offer a short experience of the treatment necessary to the removal of this parasite. The general impression as to the entire available method of surgical procedure for riddance of the worm would seem to be fairly summarised as regular winding and the application of antiseptic moisture. Before mentioning two other methods of extirpation, some impressions as to the behaviour of the worm, which may enable one the better to judge as to the most suitable method to adopt and mode to proceed, may be noted.

The worm is almost invariably found marching to the extremities, so that its anterior end is most distant from the heart. Should it be interfered with or naturally obstructed, as by the tissues surrounding joints, it may temporarily turn; but it prefers to double inwards to backwards. The worm is able to lay hold of the tissues with its anterior extremity, but not by its posterior. This can be easily seen if extraction on the double is for a moment delayed when all but completed, when the skin will show a puckering and drawing inwards opposite the channel through which the anterior extremity passes, which, on their catching hold, will rather break than yield; whereas this does not occur on withdrawal of the posterior extremity.

Preparatory to the formation of the vesicle, when the worm begins to pierce the true skin, in addition to local sensations, there is usually general cutaneous itching, and not unfrequently a roseolar rash.

The distensibility of the worm is considerable, and the process of winding is not necessarily the displacing of the entire worm, but only the coiling of so much of its extension as can be safely taken in before it gives way to the resistance offered by its vitality and the mechanical impediments of its length and the tissues surrounding it. It would seem as if an injured worm readily, if not immediately, exercises its powers of contractility to resist mechanical means of extraction; but a worm whose vitality is unimpaired may be entirely displaced before this force may be apparent, and before it can lay hold of the tissues with its mouth. The period after distension by winding necessary to a worm to accommodate itself would indicate the frequency with which the process might be repeated; and, as a matter of practice, it may be repeated every eight hours.

A dead guinea-worm may exist in the living tissues without producing any irritation. On one occasion, after removal of a guinea-worm from a Mahratta cart-driver, I was examining him with the view of ascertaining if others existed, when I came upon the characteristic whipcord running across the upper aspect of the left elbow. I pronounced it to be a guinea-worm, which he admitted, but stated that it had been there for two years, and was dead. An incision was made, and fifteen inches of a worm were withdrawn; it was firm and of a translucent appearance in greater part, but with milky opalescent spots at intervals.

Guinea-worm dies out in localities where tanks or ponds, equally used for drinking and washing, completely dry up during the year, and would seem to be endemic only where these do not do so. The way to stamp out the disease is obvious.

The Mahommedan *hakim* and Mahratta *dharawallah* seem to reason that treatment might be so applied as to stink the worm out, coax it out, pull it out, or suck it out. Upon the lines of these four ideas, I would refer to measures for its removal.

The mephitic theory, not being able to stand the test of physiological reasoning, has not been pursued in practice by me further than to test the value of the application of assafœtida poultices as an incitement to the more rapid extrusion of the animal and an auxiliary to the winding process; but I am unable to endorse what has been urged by sufferers to me in their favour.

The coaxing-out theory would appear to be more reasonable. Observation of the natural behaviour of an uninterfered with mature worm, from the moment of extrusion to complete escape, during prolonged immersion in running water for instance, where it would be aided in its escape, and at the same time nourished and protected against the deleterious effects of exposure to the air, would doubtless prove that it is not so hard-and-fast a tenant as is supposed. The readiness with which an uninjured partially extruded worm will, in running water, come out six inches or more, and the fact that coils of the worm are frequently found on a poultice, are matters of frequent observation. In the application of poultices to aid winding and promote extrusion of the worm, that moisture should be thoroughly retained, so that there should be no drying up, is more important than the quality or kind of poultice. At the same time, I have to remark that brinjole poultices have been with me more fertile in showing coils of worm than linseed or other poultices. As a protection against the air, and to retain the consistence and vitality of the worm, glycerine and water painted on its extruded part seemed to be useful. A difficulty occurs in protecting the part from the accidents of rubbing, and especially during the sleep of the patient, when he is apt to displace the poultice and break the worm. But the winding process and all these aids to it are applicable only to the extruded worm. It is probable that in temperate countries, where the worm is unfrequent and not expected, this will be the most usual condition when

* British Medical Journal, June 12th, 1870.

relief is applied for; but in tropical countries, and especially in localities where it is endemic, the worm is usually first discovered like a piece of whipcord under the skin, or about to form its characteristic vesicle. Although the animal may give no perceptible indication of its presence, which it only determinedly does, as a rule, on its piercing the true skin, if looked for, it will almost always, except in very fat persons, be *first* found at one or several spots under the skin; and the larger and firmer it feels, so it may be considered the more mature (its immense ovisac being the more crowded with its active brood), and the readier to yield to one or other of the following methods of immediate extraction. These methods may be named (1) incision and traction, and (2) incision and suction, including suction without incision.

1. When the worm can be felt at more than one spot under the skin, the place to select for operation is, *cæteris paribus*, one-third from its anterior extremity, which, as has been stated, is furthest from the heart. The reason of this has already been indicated in the statement that the worm can lay hold of the tissues with this end, and an equality is thus endeavoured to be established between the amount of resisting force of each end. An incision is to be made above on a line with the worm, and, as it is approached, dissection must be made accurately, and with care not to prick it in the slightest. It is well to allow one inch or one inch and a quarter of incision through the skin, and three-quarters of an inch of dissection immediately above the worm. An aneurism-needle should now be passed round it, and it is preferable that two pairs of hands should be ready to steadily and continuously pull hand over hand, in opposite directions, without a moment's interruption, each end of the worm. In the majority of cases, when the needle is passed round the worm, a foot or more will come out on the double without perceptible resistance, but subsequently the resistance of the further tissues and the contractility of the worm come into play; but these obstructions, unless the distance of either end is too great, or the worm is much entangled in tendons or joints, will not prevent it from following on traction. What has to be guarded against is an interruption in steady pulling, which would seem to afford the worm opportunity to seize the tissues with its oral aperture. In 1868, in Thayetmyoo in Burmah, I first had occasion to observe the effect of cutting down and pulling out on the double a guinea-worm on the dorsum of the foot; but not till 1872, at Belgaum, Bombay Presidency, in the case of a battery with its followers infested with guinea-worm, from Ahmedabad, had I opportunities of studying the behaviour of the worm and employing this mode of extraction. Subsequently, a considerable field of practice was opened to me amongst the Gharriewallahs passing through Belgaum to and from the Dharwar districts, who used to apply in numbers to have their worms removed. I then came to the conclusion that the worm, if looked for, would be *first* most frequently perceived under the skin, and that in this state it was easy of removal, and not liable to the accidents and wearisome defects of the winding process. In the case of the battery, an examination of the men twice weekly enabled me to pick out not a few cases of "worm" to whose hosts their presence was matter of much surprise, and who were then immediately operated on, their limbs surrounded with a bandage, and sent to duty without any necessity for admission to hospital. I found the native cartmen, on account of their leanness, much better subjects for the recognition under the skin of, and dissection for, the worm, and from one I was able to remove at one sitting three entire unbroken worms. When I failed to draw out both or either ends, the worm was wound up on the double, painted with a little glycerine and water, and covered with a poultice or wet lint. With the view of relaxing the hold of the animal with its mouth, I had begun to try the effect of an injection of salt water and santonin in water from a subcutaneous syringe into the tissues of its extruded portion; but experimentation in this direction was so short-lived as to be without result. But even with this occasional failure at immediate removal, a worm rolled up on the double is removable with more than double speed by the winding process; and, if careful protection against injury be afforded, one subsequent attempt may suffice to withdraw it.

2. I subsequently learned that the worm can be extracted by incision and suction, and probably by suction without incision. An operation by a native expert was thus described to me. There was a coil of worm to be felt under the skin, and for some days previously the worm had been lively and giving indications of piercing the skin. The operator rubbed the skin for some time over the worm with the points of his fingers, and then made two small incisions and applied a trumpet-shaped tube horn, about one foot in length, at the small end of which he sucked. He carried on this process of air-exhaustion for some time, recovering his breath from time to time, while he closed the tube with the point of his tongue. On removal of the instrument, a clot of blood with the complete worm was presented. I have not had opportunity to ascertain the extent of applicability of this process, nor am I aware if any surgeon has either used a suitable instrument or demonstrated suitable cases in which to apply it; but this is doubtless the direction in which the best results at the smallest trouble to the patient will be achieved. The ordinary cupping-glass has been used, but there are obvious objections to suction by this instrument. The cases in which this process would be most suitably applied are probably all those where a local irritation of the skin indicates impending penetration by the worm, and it is also probable that, even after rupture of the vesicle, and so long as the vitality of the worm is not impaired by injury, exposure to the air, or discharge of its brood, it will be removable by suction. The effect of the preparatory finger-rubbing may be to stimulate the worm to vital action, but probably to break up and render easily penetrable the tissues between the bottom of the incision and the end of the worm.

I have not been able to come to any conclusion as to the value of galvanism as an aid to extraction. Military apothecaries in India have always suggested it, and this I believe was taught them at the College in Bombay. I applied it in two instances before incision and traction, without failure occurring. It is possible that its application before incision and traction, or incision and suction, would guarantee the success of these operations, and it is probable that traction after incision should be performed in this country under tepid water or a spray of steam.

The worm ought not to be looked upon in the light of the surgical idea of an obnoxious "foreign body" only, but of a vital foreign body whose natural development towards generation is simultaneous with an attempt to escape for this purpose from its host.

THERAPEUTIC MEMORANDA.

ON PILOCARPIN IN ASTHMA.

P. M. is a warder in H.M. Prison, Waterford (of which I am surgeon), and is about fifty years of age. His heart and lungs are perfectly sound, and neither father nor mother suffered from asthma. He had been for many years in the Royal Irish Constabulary; but, having one day fallen asleep in the open air, he awoke very much chilled; and from this he dates his first attack of asthma. He tried to carry on for some time, but the attacks becoming more severe and frequent, he had to leave the constabulary service. He then entered the prison service as warder; and his health, although he still suffered from occasional attacks, was much improved for about five years. This I attribute in great measure to the exceptionally high ground on which the prison is placed. Last October, however, he was again attacked by asthma, complicated by acute bronchitis of both lungs, and very nearly lost his life. He, however, recovered; but since this time has been a martyr to the disease, with occasional remissions for a few weeks, and from the 4th April, 1880, to the end of last June, had entirely to give up duty. I tried all the usual remedies: smoking of stramonium and datura tatula, bromide of potassium, lobelia, etc.; also, I am almost ashamed to say, some patent papers for burning—viz., ozone-paper, and Palmer's anti-asthmatic papers (the latter, it is only fair to state, in general giving prompt relief to the dyspnœa). He was about resigning his position in despair, when Dr. Berkart's valuable articles on the treatment of asthma fortunately appeared in the BRITISH MEDICAL JOURNAL; and on June 25th I gave him his first injection of pilocarpin, using Messrs. Savory and Moore's discs for the purpose, and commencing with one-twelfth of a grain. This had no perceptible result; so next day I increased the dose to one-fourth of a grain. This was followed by the usual effects—salivation and diaphoresis. There was no depressing effect on the heart's action, and he spent an unusually quiet night. Next day, and every day following for a week, I injected one-third of a grain with most beneficial results. One day, indeed, he suffered for a short time from nausea and vomiting; but this soon passed off. He resumed his duty as prison warder on July 4th; and he informs me that he now sleeps the whole night, and, with the exception of a slight "choky" feeling on awaking first thing in the morning, which soon passes off, says he "never was better in his life". I am at present giving him arsenic internally, and an occasional injection of pilocarpin. His appearance is much improved, and he is evidently increasing in weight.

WILLIAM L. MACKESY, M.B., L.R.C.S.I., Waterford.

ARSENIC IN SKIN-DISEASES.

THE perusal of Dr. Farquharson's paper on the use of arsenic in skin-diseases, published in the JOURNAL for May 29th, 1880, which has just reached me, leads to my sending a report of the following case, in which one point in Dr. Farquharson's paper is well borne out; namely, that it is by no means necessary to induce the physiological effects of arsenic in order to produce the curative effects of that drug. It is also a well-

marked instance of toleration, although the doses given were by no means small. Sheikh Wazeer, aged 20, a drummer of the 16th Lucknow Regiment, N.I., at Jhansi, first came under treatment in the beginning of January in this year for well-marked acne rosacea. The whole face was affected, the skin being thickened in parts, red and shiny in others. The body was not affected. The sebaceous glands were much hypertrophied; and the skin of the nose and cheeks hung in irregularly hypertrophied folds. This condition had existed for some years; lately it had somewhat increased, but gave him no uneasiness; and he was otherwise in perfect health and strong. He did not suffer from dyspepsia. No member of his family was similarly affected. There was no apparent cause. I commenced treatment with five minims of liquor arsenicalis twice daily. After a few days, he began to show definite but slow improvement, and the dose was increased to eight minims twice daily. Under this, he rapidly improved; the hypertrophy, both of the glands and the skin, diminished; and the skin covering the nose and cheeks lost the tense glazed appearance, and became smooth and pliable. Wishing to rapidly finish the case, the regiment being about to move to the front, and seeing no counterindication, I increased the dose to twenty minims a day. All this time, the lad remained an outpatient, and I put no restrictions on his diet. (In native regiments, this is a difficult and troublesome matter.) On February 8th, the regiment marching, I discharged him vastly improved, and cured, with the exception of two rebellious points of enlarged gland and hypertrophied skin, one on each cheek. Up to this time, no physiological effects had appeared. Six weeks ago, he again made his appearance at the hospital, and stated that he feared his face was again becoming bad. I resumed the arsenical treatment, commencing with five minims three times a day, and gradually increasing to eight minims. No local treatment was ever tried. After a fortnight or three weeks, all the enlarged glands had subsided, and his face became quite smooth and soft. The cure in a month was *complete*, even to the subsiding of the two points, which had resisted the former time. The last fortnight, he has had daily attacks of ordinary ague, going through the usual stages. This, I think, is very remarkable, when we consider that all this time he was taking an antiperiodic in the shape of eight minims of liquor arsenicalis three times a day, and the system must have been to a certain extent saturated with arsenic, even allowing for the greater portion being removed by the excretory apparatus. Up to the present, despite the usual routine of antiperiodic remedies having been tried, the daily paroxysms continue unchecked. The arsenic has been stopped, having accomplished its work. Can any one inform me whether the people of Styria, who are large consumers of arsenic, have any special immunity from ordinary ague, or the contrary?

GEORGE A. HARRIS, Surgeon I.M.D.,
16th Lucknow Regiment N.I., Ali Musjid, Afghanistan

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

VICTORIA PARK HOSPITAL.

MITRAL REGURGITATION FROM DILATATION OF THE ORIFICE, WITHOUT DISEASE OF VALVES, HEMIPLEGIA OF RIGHT SIDE, AND SOFTENING OF LEFT HEMISPHERE: ASTHMA.

(Under the care of Dr. PEACOCK.)

SAMUEL MILLARD, aged 16, a shoemaker, residing at Deptford, was admitted into the Victoria Park Hospital on April 20th, 1880, labouring under symptoms of heart-disease. He had had rheumatic fever five years before, and had been suffering more particularly for six months. On examination, the præcordial dulness was found to be extended much beyond its normal limits. Above, it commenced at the level of the third cartilage, and transversely it extended from the right side of the sternum to beyond the left nipple. The apex of the heart beat in the sixth interspace, about an inch below, and in the line of the left nipple. The whole præcordial region was remarkably prominent, and a loud systolic murmur was audible over the whole space, but was much the most intense at the point of pulsation of the apex, and it was propagated to the left of that point towards the axilla; it was also audible behind in the dorsal region; a thrill was felt at the apex. The hepatic dulness was increased in extent, and there was some tenderness on pressure in the right hypochondrium, and an icteroid tinge of the complexion generally. The urine had a specific gravity of 1020, and was not albuminous.

On May 7th, he had a second attack of cardiac dyspnœa, followed by sickness; and, the following day, the mouth was observed to be drawn to the left side. When seen by Dr. Peacock, on the evening of the same day, he appeared to be quite intelligent, but was paralysed on the right side; the right side of the face was motionless, while the left side was drawn; the tongue deviated to the right, and the right arm and leg were entirely powerless. He was quite aphasic, being incapable of uttering any articulate sound, and, when he attempted to speak, only making a kind of scream. The action of the heart was very irregular, but the murmur was still audible at the apex in the dorsal region. He continued much in the same state till the 24th, when he sank.

On *post mortem* examination, the heart was found to be very much enlarged, the enlargement being chiefly due to dilatation of the cavities, especially of the right auricle and ventricle, which were distended with dark coagulum. The left ventricle was also large, and the auriculo-ventricular aperture dilated, admitting the passage of a ball measuring fifty-two Paris lines in circumference. The valves were free from disease. The brain appeared healthy externally, and the vessels at the base were free from disease, their coats being thin and transparent, and the cavities throughout their course free from coagulum, except that a small dark clot was contained in each cerebral artery at the point where it divides into its usual branches. On slicing the brain, a large patch of softening was found, external to the left corpus striatum. The softened brain was almost diffluent, and was generally pale, but in some parts deeply tinged with blood.

REMARKS.—This case presents several points of interest. Though the physical signs generally pointed to mitral regurgitation, yet the thrill which was felt at the apex seemed to indicate the existence of some constriction of the orifice, and it was supposed to be a case of mitral obstruction and regurgitation. This idea proved to be incorrect; the case was really one of regurgitation due to dilatation of the orifice, a much more unfrequent condition. It was also supposed that the paralytic symptoms were due to embolism of the left cerebral artery or its branches; but, on examination, the artery of the left side was found free from disease, for the small clot which was found in the left cerebral artery corresponded in every respect with that found in the artery in the right side, and had probably no connection with the production of the softening of the left hemisphere, to which the hemiplegia of the right side was due.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 7TH, 1880.

W. S. PLAYFAIR, M.D., President, in the Chair.

Uterine Fibroid.—Dr. CHAMPNEYS showed the uterus of a woman aged 69. The posterior wall was occupied by a large fibroid tumour, which had extended into the posterior lips of the cervix and far below the level of the os externum. The rest of the uterus was not thicker than a double sheet of blotting-paper, this atrophy affecting the cervix also. In the right broad ligament was a calcified fibroid tumour, of the size of a large tennis-ball.

Ruptured Tubal Pregnancy.—Dr. GOLDSON showed the uterus and appendages of a woman aged 22, mother of two children. When sitting at work, she was suddenly seized with violent pains in the lower abdomen, and became faint and pallid. Mr. Henry Thompson of Hull, who saw her in the course of an hour, found her in a state of collapse and almost pulseless, and she died in eight hours. At the necropsy, Mr. Thompson found the abdomen full of blood, amounting to at least six pounds. The specimen showed the right Fallopian tube distended by what seemed to be a fibrinous clot, and in this situation a rent had taken place. The uterus was lined with decidua, and a mucous plug occupied the cervix. The woman had menstruated six weeks previously.—Remarks were made by Dr. WILTSHIRE, Dr. SAVAGE, Dr. ROGERS, Dr. CHAMPNEYS, and the PRESIDENT.

Report of Committee on Dr. Chambers' Case of Hysterectomy.—The tumour measured 9 by 8 by 4¾ inches; and on section was found to be a large fibroid uterus. The fibroid was situated above the cavity into which it bulged. In its lower third, it was intimately connected with the uterine tissue.—In reply to Dr. POTTER, Dr. CHAMBERS stated that the patient had done well.

Ladies' Sanitary Towels.—Dr. GALABIN showed the new sanitary towels manufactured by Messrs. Southall and Barclay of Birmingham, as a substitute for the ordinary diapers for use during the catamenia, and after confinement. They contained a pad of absorbent cotton wool,

rendered antiseptic by boracic acid, as being less irritating than other antiseptics. The advantages were that they could be burned after use, and so were especially valuable for the lying-in room, and that they were very soft and absorbent. The retail price was 3s. a dozen, and it was believed that the cost would not much exceed that of the washing of ordinary diapers, since they could be worn longer. The wholesale agents in London were Messrs. Sharp, Perrin, and Co., 31, Old Change.

Report on Sixty-seven Cases of Uterine Distortion or Displacement treated during Seven Years at All Saints' Institution for Ladies.—The discussion of Dr. GRAILY HEWITT'S paper on this subject was resumed.—Dr. BANTOCK expressed his high estimate of the value of the paper, and considered not its least merit to be the prominence given to the doctrine, that deviations of the uterus are directly or indirectly the cause of much, though variable, constitutional disturbance, as well as local suffering. It was an encouraging fact to those who accept this doctrine, that, however determined was the opposition ten or fifteen years ago, it had gradually become less and less. It was still maintained by some, as by Scanzoni, that flexions and versions are of no importance, unless complicated by an alteration in the texture of the organ. The evidence adduced by Scanzoni in favour of this view was of the weakest kind; and moreover, the chief result of this displacement was that very alteration of texture to which so much importance was attached. It was admitted that sudden displacement of a healthy uterus generally produced marked symptoms, and he had never seen a case of well marked retroversion, retroflexion, or anteflexion without some symptom referable to either the menstrual periods or intervals. He thought that the distinction between version and flexion was not always maintained by the authors of standard works, as Dr. West and Dr. Barnes. He could not, however, follow Dr. Gervis in his classifications of cases of retroversion into three varieties, since he thought it could serve no useful end in practice. It was more important to recognise the difference between retroflexion and retroversion, and he was in the habit of regarding the position and direction of the cervix as the chief test. If the os pointed towards the pubes, or even towards the vaginal outlet, the case was essentially one of retroversion, though there might be a bend whose concavities looked backward. In his own practice, out of 149 cases of uterine displacement, 72 had retroversion, 51 anteflexion, 21 anteversion, and only 5 retroflexion. He believed that Hodge's pessary had no direct action on the body of the uterus, but acted by drawing the cervix backward. This was the only appropriate treatment for retroversion. Retroflexion, on the other hand, could only be treated satisfactorily by some such instrument as Meadows's compound stem. In some cases of anteflexion also, in which the flexion was very pronounced, some form of intra-uterine stem was ultimately required. Dr. Goodell, of Philadelphia, had recently withdrawn his condemnation of the use of the intra-uterine stem.—Dr. ROGERS remembered one of their past presidents stating that he never used a pessary of any kind, believing them to be dangerous instruments. He had himself found pessaries, especially Hodge's and Zwanke's, of great use in displacements and fallings of the womb. Our latest authors were gradually admitting that flexions and their consequences play a most important part in the causation of dysmenorrhœa and other chronic sufferings. He thanked Dr. Graily Hewitt for pointing out the necessity of treating displacements. He thought it an evil, however, to keep patients so long recumbent. He had also long ago been obliged to discard the cradle pessary on account of the mischief it caused, especially in married life. Adopting careful preliminary treatment, he had found Dr. Greenhalgh's elastic stem, as well as that of Dr. Wynn Williams and others, give great relief. Up to this moment he had not had a fatal case, and only one or two where the instrument was not well borne. Dr. SAVAGE said that argument was scarcely needed to show the propriety of using stems for uterine deviations, when they really were the cause of suffering which often was not the case. Pessaries without stems merely kept the uterus out of the vagina. But on a former occasion he had brought to the notice of the Society nine cases of death caused by stems, death in each case being due to rapid peritonitis. The stems then in use were certainly coarse ill-fashioned things, yet stems after the modern fashion had been the cause of much mischief. He mentioned a typical case in which a young married lady, vainly sighing over her unfruitfulness, was treated by a stem. Gradually increasing pain, with nausea, and rapid loss of flesh followed. Only tardy and somewhat incomplete recovery took place after cessation of treatment. Practitioners forward in advocating treatment of this kind, never seemed aware of disasters of the above sort, and not one of the deaths before mentioned had been recorded. Congenital uterine deviations invariably defied mechanical treatment, but no one could diagnose between congenital and acquired. Examinations for displacement should be made with a single finger, the patient standing, and those chiefly counted important which caused partial inversion of the vagina.—Dr. MATTHEWS DUNCAN was not prepared to make any lengthened statement of his views as he would have wished to do, but he would not let the opportunity pass in absolute silence. The paper and the speeches in support of it were of great value, but he agreed with neither the substance nor the tenor of them. It was advantageous to consider displacement without descent, and he would confine his remarks to this limited subject. Displacement without descent was so far, at least, an uncomplicated affection. Descent in addition to displacement introduced no new kind of disease, but a changed set of conditions not so simple as those of displacement without descent. He regarded the morbid importance of displacement as being much exaggerated. It would be nearer the truth to say it had little or no importance. Then, the wide range of symptoms attributed to displacement he considered quite unjustified by clinical facts. The treatment of displacement without descent, whether it was desirable or not, was an utter failure; and displacement was never cured, in the sense that the uterus afterwards remained in place without a pessary.—Mr. THORNTON thought that, if uterine cases could always be treated under such favourable conditions as those related in the paper, the results would be as good, without the use of either special postures or special pessaries. He agreed with Dr. Duncan in distinguishing displacements without descent from those with it, and in believing that the latter cases alone gave trouble or required aid. He did not believe that stem-pessaries ever really cured, but that they often did incalculable mischief. He had some years ago a fatal case from the use of one of Meadows' stems, though every care was taken in preparing the uterus for its introduction, and it was only in twenty-four hours.—Dr. CORY had this year had a case similar to that mentioned by Mr. Thornton. A stem was introduced with every precaution for the treatment of anteflexion in a patient aged 22, and removed after twenty hours on account of pain. The patient died from peritonitis ninety-six hours after its removal.—The PRESIDENT expressed his conviction that Dr. Hewitt's careful and long continued study of the effects of uterine flexion, had done much towards advancing our knowledge of an important class of disease. He was himself more convinced of the importance of flexion than he had been previous to a study of Dr. Hewitt's opinions. But he was very far from granting Dr. Hewitt's contention that flexions were the "fons et origo mali" in all forms of uterine suffering, and formed the key to gynæcology. Against such a theory of uterine disease, he respectfully protested, as being unscientific and unproved. It seemed to him totally impossible that, in anything like the number of serious cases of uterine disease as those tabulated, such affections as endometritis, uterine catarrh, and the like, could have been absent. Those who neglected these conditions deprived themselves of an important aid in treatment. He protested against the adoption of a one idea theory, and pleaded for a catholic and broad view of the subject.—Dr. GRAILY HEWITT in reply said, in reference to the remarks of the President, that he had not in his work assigned that exclusive importance to flexions which he seemed to imply, but all along insisted on the coexistence of an abnormal condition of the uterine tissues. By using the word mechanical, he did not mean that pessaries were necessary in every case. Dr. Gervis had misunderstood him in reference to the amount of rest enforced in the cases related. It was only in patients actually bedridden that such prolonged rest had been required. No doubt the removal of pessaries from time to time was necessary, but he considered that a pessary acted like a splint in case of fracture, and, therefore, continuity of action was essential. He considered the use of stems a valuable means of treatment, but he felt bound to say that he preferred other methods. He could only understand the failure of the cradle-pessary in the hands of others, by supposing that the instruments were not made on his own model. He often found the base of the triangle made too long and the height too little. As to the necessity of using stems in retroflexion, he had cured very many cases of severe retroflexion by the combined use of the Hodge's pessary, and repeated unbending of the uterus by means of the sound. He was surprised to hear Dr. Duncan's opinion as to the absence of symptoms in case of flexion unless associated with descent of the uterus. His own experience was, that descent was almost universally present in cases of flexion, and formed an almost essential part of the disorder.

SPRAINS AND WOUNDS.—Dr. Brinton says (*Philadelphia Medical and Surgical Reporter*) that, to treat sprains, the injured limb should be placed in hot water, and boiling water be slowly added until the highest endurable temperature be reached. The limb is to be retained in the water a quarter of an hour, when the pain will have gradually disappeared.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 7TH, 1880.

THE PROSPECTS OF MEDICAL REFORM.

THE necessity for the amendment of the Medical Act of 1858 unfortunately still remains as important and as urgent as at any previous period of its history. That Act, which was mainly due to the persistent efforts of the British Medical Association, backed by Mr. Headlam, and accepted by Lord Mount-Temple, then Mr. Cowper, was only agreed to as a first instalment of reform, by which some of the many and gross anomalies which characterised the profession were rectified. Of the points advocated by the Association—

1. A *Medical Register* was formed;
2. A national *Pharmacopœia* was compiled; and
3. Reciprocity was agreed to.

The Medical Council was also formed; but, owing to the non-existence at the time of a *Medical Register*, the profession was not represented in it. It was, however, distinctly understood by the late Mr. Southam and others serving on the Medical Reform Committee of the Association at that period, that once the *Register* of the profession was completed, and the electing constituency thereby established, then representation of the profession should be conceded. The duty of influencing and controlling medical education rests with the General Medical Council; but, as at present constituted, it has proved unequal to the task. It labours under the radical vice of being almost exclusively composed of representatives of the very bodies whom it has the duty of supervising. At the passing of the Act of 1858, the Association endeavoured to exclude from registration all who had not been examined in both medicine and surgery, but were defeated in their attempt, and imperfectly educated persons are still placed on the *Register*.

The General Medical Council has recently held another session, at great cost to the profession, but without coming to any decision likely to promote the removal of the abuses which still remain. The late Government acknowledged the necessity for legislative action; and there can be little doubt that, if the late Parliament had not been so early dissolved, the vexed question of medical reform would ere this have been settled. The Select Committee appointed by the House of Commons had sat in two sessions; the Scotch corporations, previously to the appointment of the Committee, had elected to be governed by its report; and, in all probability, all parties would have accepted its decision.

The question now is, Should the present Government, with its overwhelming majority, shrink from dealing with the subject? At an early period of the present session of the new Parliament, Mr. Mundella, the Vice-President of the Privy Council, in reply to Mr. Errington, who desired to know whether the Select Committee on the Medical Bills would be reappointed, stated that the Government did not intend to reappoint it, as it was their desire to take the subject into consideration in all its bearings during the recess. Under these circumstances, the Medical Reform Committee sought and obtained an interview with the Lord President on Friday, July 30th. The details of what transpired are given at length in our present issue. The fear of opposition where not mere professional, but vital public interests are concerned, will not, it must be hoped, deter the present strong Government from action in a matter of such deep concern to the public welfare; but, should it shrink from the duty, it will then fall on the profession and the Association, as before 1858, to act so that the labours of the late Government and of the profession, aided by the evidence taken before the Select Committees, may be utilised. The subject, however, is one which concerns the public at least as much as the profession. The Act itself is one which aims at securing an adequate standard of fitness to practise medicine and surgery in all practitioners who figure on the *Medical Register*, and at protecting the public against persons who falsely assume medical titles and qualifications which they do not possess. It is admitted on all hands that it effects neither purpose; and it is, therefore, much to be regretted that at this stage there should be any hesitation on the part of the Government in fulfilling a plain public duty. The preliminary inquiries have been very laborious; and to abandon the Committee now before it has reported, to leave the question, so laboriously opened, suspended between the Committee Room and the floor of the House, would be a signal confession of weakness or of indifference, such as could reflect little credit on the earnestness or on the legislative capacity of the responsible Ministers of the Crown. Nor can it be much more satisfactory to the General Medical Council, which has repeatedly urged the adoption of a system of conjoint minimum examination, on the framing of which years of exhaustive labour have been expended. It is as little agreeable to the Crown representatives in the Council; these have already earnestly represented to the Lord President that they found themselves in an utterly untenable position; discredited by the profession; powerless to ensure the carrying out of an adequate education and examination in medicine, surgery, and obstetrics, prior to admission to the *Register*, which they believe to be essential to the protection of the public; overruled by the interested votes of contending corporations; appearing always in public before the profession as accused and censured persons, on their defence, unable to justify and unable to alter that which they disapprove. Their position is thoroughly undignified, and they cannot adequately fulfil the conditions of their duty to the public. These representations had great weight with the last Government; it may be hoped that they will have no less with the present.

Suggestions of a compromise were thrown out at the close of last session; and now the parties to this discussion are plainly told that, unless they can "agree among themselves", the Government cannot undertake the trouble of settling the matter in dispute. This is no doubt a short and easy way to legislation. If it were likely that the Scotch medical corporations and universities would consent voluntarily to any sort of limitation or change in their mode of conferring diplomas or degrees, when they have persuaded themselves that such alterations can do them individually no good, and may do them some harm, it might be worth while to suggest compromise. But as it is perfectly certain that they will voluntarily surrender nothing of their supposed advantages, and as they announce that they would submit only to the decision of a Select Committee, it seems trifling to suggest that the Committee should not re-assemble to complete the inquiry; or that the Government should not undertake to arrive at a conclusion from the extensive data already existing, but that a voluntary agreement should be entered into. If the latter had been probable, it would not have been necessary to appoint a Select Committee at all. Is there any authentic instance of a corporation, or series of corporations, voluntarily doing what it thinks contrary to its interests?

If it were a mere question of "squabbles" of corporations, or, as Sir Dominic Corrigan phrased it, "a battle of shops", the public and the Council might be expected to take but a lukewarm interest in the fight, and await calmly the result, even if it were the fate of the Kilkenny cats. But larger interests are involved. The *Register* is not a protection to the public: the Medical Acts do not fulfil their purposes. It is hardly statesmanlike to suggest that the great labour which has been expended to remedy these defects should be wasted, and that the rival interests

should be left to fight it out among themselves for an indefinite period. The proposal is not exhilarating for the future efficiency of the Medical Council; it is not just to the profession; still less would it be fair to the public, or creditable to the Government.

THE LAW OF CORONERS.

THE medical profession is fully alive to the great need for some reform in the present law regulating the constitution and procedure of coroners' courts, though differences exist as to the best means by which to effect reform, or the directions in which such changes should go.

The late Government had determined to grapple with this question; and a Bill was prepared and placed in the charge of Sir Matthew White Ridley, which embodied the results of the deliberations of the Parliamentary Committee to which the matter had been referred. It is to be hoped that the present Government will find time during next year to pass this much needed measure. Scarcely a week passes without some flagrant instance of the mode in which the public interests, and the character and liberties, nay, even the lives, of individuals, are jeopardised by the ignorance, the obstinacy, and the folly too often exhibited by coroners and their juries. Very recently we commented upon the unjust and unreasonable verdict of manslaughter returned by a coroner's jury against the senior medical officer of the City of London Union Infirmary. At the same time, a similar case was pending in Birmingham. Dr. O'Leary had a verdict of manslaughter returned against him by a coroner's jury. At the examination at the police-court, the magistrates dismissed the case without calling on the defence; and the grand jury at the assizes at Warwick have ignored the bill. No one could desire a more complete testimony to the unfounded nature of the charge than this result; but we are well informed that, had the case gone to trial, the evidence for the defence would have proved most clearly that Dr. O'Leary was entirely free from even moral culpability, in reference to the fatal termination of the illness for which he attended the deceased.

The facts of the case show that the deceased was suffering from mitral stenosis, with chronic bronchitis and phthisis, which induced premature labour. Dr. Angus Macdonald has taught us to dread the complication of mitral stenosis in pregnancy, and his statistics show the rate of mortality to be over sixty per cent. in such cases. This woman was, we believe, a primipara—another point against her chances of recovery. Finally, she was extremely poor, living in a filthy and wretched lodging, almost entirely neglected, and obliged to get up and downstairs to wait upon herself. Under these most unfavourable circumstances, there is little wonder that death occurred. In the charge of Mr. Justice Field to the grand jury, his lordship is reported to have said, "In this case the evidence of negligence was furnished by a medical man, who was of opinion that, if more attention had been paid to the deceased on the Friday, in all probability her life would have been extended for some time. He did not think it right or fair to measure criminal cases so closely as this, as, to obtain a conviction, gross and culpable negligence must be proved". It is to be regretted that a medical man should have been found apparently only too willing to impute blame to a brother practitioner, and to involve him in one of the most serious charges from which even the complete exoneration, which the law and society afford Dr. O'Leary, makes no kind of compensation for the mental strain and anxiety, the temporary disgrace, to say nothing of the loss of time and expense, which have fallen upon him in so undeserved a manner. But while we regret the ungenerous conduct of the medical witness, we may learn from it one lesson as to the direction in which a change is necessary in the present law. It is a monstrous thing that the mere opinion of one medical man, who may be, and often is, not so well skilled in the matters on which he is giving evidence, and may be, and sometimes is, open to the suspicion of not looking too leniently on the doings of a neighbouring and opposing practitioner, should be sufficient evidence upon which to base a verdict that may deprive a man of his character, of his means of livelihood, of his liberty, nay possibly of his life; for men have been hanged before now on the evidence of one medical witness, though possibly quite justly.

With reference, therefore, to the very important question of medical evidence, we would urge the necessity of an alteration in the law which would make the presence of two medical men necessary at all judicial *post mortem* examinations, both of them being nominated by the coroner, and one being selected, as far as possible, for his knowledge and experience in pathology and judicial investigations.

EXPURGATION OF THE "DENTISTS' REGISTER".

THE promptitude with which the Medical Council at its last sitting disposed of the dental business indicates the great advantage of being able to deal with these questions by committee, and affords an argument for dealing in a similar way with a good deal of the medical business. Two hours sufficed for the satisfactory disposal of the dental questions on the business programme; several of which, however, at the suggestion of the legal adviser of the Council (Mr. Ouvry), were discussed with closed doors—the alleged ground for privacy being that the "opinions of counsel" (Mr. Fitzgerald and Mr. C. Bowen) did not in all respects accord. We have, as the result of the reading of the two opinions in private (carried by eleven against five, six not voting and two being absent), a resolution to the effect: "That the opinion of counsel be taken as to whether the Council can delegate to the Executive Committee the initiative of the proceedings by the Dental Committee, under Section 15 of the Dentists' Act." The opinion of Mr. Fitzgerald, taken by the British Dental Association, and placed at the disposal of the Council, is to the effect that the power can be so delegated, in which opinion the statement of Mr. Ouvry would lead us to believe Mr. C. Bowen does not wholly concur.

The question at issue is merely one of more or less delay in the reference of cases of alleged incorrect registration to the Dental Committee, for the determination as to the facts of the respective cases; the decision of the Committee upon which is a necessary precedent of any conclusive discussion upon them on the part of the Council. Nothing has, however, transpired which justifies the suspicion that there is any difference in the opinions as to the erasure of the names of persons who have obtained registration by means of incorrect declaration, or which would excuse those persons from withdrawing their names who, without due consideration, assumed a false position by causing themselves to be entered in the *Dentists' Register*.

It is to be regretted that both Mr. Fitzgerald's and Mr. C. Bowen's opinions were not entered on the minutes, and all mystery avoided. This was felt by many members of the Council; but unwillingness to act at variance with the advice of their solicitor prevailed, and the doors were closed.

OUR AUSTRALIAN BRANCHES.

WE are glad to hear news of the continued prosperity and activity of our Australian Branches. Dr. Louis Henry, the founder of the Victoria Branch, to whom the Association is deeply indebted for the energy and ability with which he undertook the formation of that Branch, and assisted in arousing the interest of the medical profession in other parts of the Australian Colonies, and in forwarding the formation of other Branches in these columns, writes to us that, from communications received from Dr. Galbraith of Invercargill, New Zealand, there is every reason to hope that the Association may shortly have a New Zealand Branch. Dr. Henry informs us that he has also been in correspondence with Dr. Patrick Smith of Woogaroo, Queensland, and that there is a prospect, also, of representing the Association in that flourishing colony. The New South Wales Branch, the foundation of which is due, in a large measure, to the energy of Dr. Milford of Sydney, is also flourishing, and will, we are convinced, prosper. We regret having as yet received only meagre reports from these Branches. We shall hope, however, to receive from them a full contingent of medical intelligence and scientific matter, for which we shall do the largest amount of justice possible relative to the limited space we have at our

command for the great mass of important matter which now daily reaches us from one or other of our ten thousand medical subscribers and readers in all parts of the world. We would ask, from the secretaries and officers of our Australian and other distant Branches, their warm co-operation in providing us with regular correspondence from their Branches, and abstracts of the papers read; and, at the same time, we must ask their indulgence if we are not always able to do as prompt justice to the communications forwarded as we should wish to do. In any case, we can assure them of the deep interest which the JOURNAL will always take in the contributions coming to us from these distant members of the Association, and of our desire to promote in every way the best interests of our more remote, as well as of our nearer, Branches. It should be noticed that the minutes of a recent meeting of the Committee of Council contain cordial recognition of the value of these Branches, and warm and friendly congratulations to our Australian brethren, who are heartily welcomed within the circle of the Association. Those congratulations are, they may be assured, not merely formal, but are warmly felt by all the members of the Association. The facilities which the JOURNAL will henceforth afford for bringing the most distant members of our profession in the English-speaking colonies into constant weekly communication with each other and with the members of the profession residing in Great Britain, will, we trust, not only be fruitful in producing sentiments of mutual interest and fraternal regard, but will also facilitate the spread of scientific knowledge, and help to maintain as high a standard of ethical and professional rule in the most remote parts of the empire and its colonies as in the centre.

DR. J. B. BERKART has been elected a corresponding member of the Société des Sciences Médicales et Naturelles de Bruxelles, in recognition of his scientific studies of the pathology and treatment of asthma and other subjects.

SIX people have just been poisoned at North Nibley, Gloucestershire—a labourer, his wife, and four children. They had eaten some stale shrimps. The labourer is already dead, and the woman and children are in a very dangerous condition.

MESSRS. MIDDLETON, M.P., Webster, M.P., Puleston, M.P., and Cheetham, M.P., were unavoidably prevented from joining the deputation of the Parliamentary Bills Committee in opposition to the Vaccination Acts Amendment Bill.

AN annual prize of seven guineas for excellence in practical physiology has just been founded at St. Bartholomew's Hospital, to commemorate the long connection of Harvey with the hospital, to which he was elected a physician in 1609.

HENRY MORTON, a chemist, of the Broadway, Deptford, has been fined £5 at the Greenwich police-court for selling a tincture of quinine which was adulterated in such a manner as seriously to injure its properties as a medicine. It was stated that the practice complained of was very common.

DEATHS FROM DIARRHŒA.

THE deaths referred to diarrhœa in the twenty largest English towns, which had steadily increased from 51 to 337 in the six previous weeks, further rose to 577 last week; they were equal to an annual rate of 5.0 per 1,000 in London; while in the nineteen provincial towns it did not exceed 3.1. The diarrhœa death-rate ranged in the nineteen provincial towns from 0.0 and 0.5 in Newcastle-upon-Tyne and Bradford, to 5.3 in Salford and 10.2 in Brighton. In London, the deaths referred to diarrhœa, which had steadily increased from 16 to 202 in the seven preceding weeks, further rose last week to 350, notwithstanding the moderate temperature and the frequent and abundant rainfall. These 350 deaths exceeded the corrected average number in the corresponding week of the last ten years by 35; they included 269 of infants under one year of age, 60 of children aged between one year and under five, and 12 of persons aged upwards of sixty. The annual death-rate from diarrhœa, which averaged 5.0 per 1,000 in London, ranged from 2.9 in the Central, to 5.9 and 6.1 in the Southern and Eastern groups of registration districts. The deaths of 8 infants and of 5 adults were referred to simple cholera or choleraic diarrhœa.

COLOUR-BLINDNESS.

WE last week announced, on behalf of the Ophthalmological Section, that it is hoped that *all* members attending the Cambridge meeting will present themselves for an examination of their colour-perception, and thus assist in settling the much disputed question of the percentage of colour-blind persons. Holmgren's tests will be in readiness in a room adjoining the place of meeting of the Ophthalmological Section during the times of sitting. In drawing further attention to this announcement, we may add that the average proportion of congenitally colour-blind persons is said to be four per cent., but that some doubt whether such proportion exists among educated persons. Therefore, it is desirable to test the medical profession. Moreover, those who say that the proportion is as large as four per cent., say that colour-defective persons know their fault, and purposely abstain; so that abstentions at Cambridge will be very important and injurious.

ANNUAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual meeting of this Association was held on July 30th at the Royal College of Physicians, under the presidency of Mr. Mould of Cheadle. There was a very full attendance of members, from all parts of the United Kingdom. At the morning sitting, a hearty vote of thanks was accorded to Dr. Lush, the retiring President, and the usual routine business was transacted. In the afternoon, the President read a carefully prepared and exhaustive address, introducing, among other topics for discussion, the question of providing detached cottage and villa residences for lunatics, apart from the asylum proper; and Dr. Boyd read a paper upon the simplification of admission formalities. The members dined together in the evening at Willis's Rooms, when they were joined by the Earl of Shaftesbury, Mr. J. T. Hibbert, M.P., and other distinguished guests. Lord Shaftesbury's health having been enthusiastically drank, his lordship, in feeling terms, expressed the great pleasure which it gave him to meet a body of medical and scientific gentlemen, of whose services he could speak with the greatest gratitude. Referring to the length of time during which he had been connected with lunacy work, he favourably contrasted the present state of things, both in public and in private asylums, with that existing in former years; and alluded to the conscientious manner in which medical practitioners had discharged the duties imposed upon them by the Lunacy Acts, as proved by the evidence adduced before the late Parliamentary Committee, which showed that 185,000 certificates had been issued, and persons shut up upon those certificates; and, though the Committee sat for six months, yet they did not discover a single instance in which the patients had been shut up without good and sufficient reason. The present tendency (one to be guarded against in the public interest) was to let out everybody who was shut up, and henceforward to shut up nobody at all. It was to be hoped that, when measures of lunacy reform were decided upon, nothing would be done which would throw unnecessary impediments in the way of early treatment, by a mistaken delicacy in regard to the "liberty of the subject". The two great principles to be maintained were, a thoroughly efficient, permanent, and independent body of visitors; and every facility, under proper control, for early treatment. The toast of the House of Commons was responded to by Mr. Hibbert, M.P.

CATTLE-DISEASES.

M. POINCARÉ has met with, in condemned meat at the *abattoir* at Nancy, elements which seemed to him to be parasites not as yet described. In consequence of the analogy they showed to gregarines, he was led to consider whether he had not met with one of the phases or metamorphoses of the tænioïds, and if it is not by this means that raw beef gives tænia to so many sufferers. M. Poincaré also (*Revue Scientifique*, July 31st) records the death from charbon of more than twenty

cattle, caused by pasture covered with marsh-water containing bacteria. He verified the fact by inoculating with this water two guinea-pigs, which died in a very few days.

MEDICAL EXAMINATIONS.

An action was recently tried before Mr. Justice Lindley and a common jury, which was brought by a young woman named Louisa Latter, to recover damages for an assault alleged to have been committed upon her under somewhat peculiar circumstances. The defendants were Captain and Mrs. Braddell, in whose service the plaintiff had been as domestic servant, and a medical man named Sutcliffe. The case had been tried at the last assizes, upon which occasion the jury were unable to agree to a verdict, and it was consequently set down again at these assizes. The defendant, Mrs. Braddell, believing that the patient was *enceinte*, informed her husband of the fact; and he wrote to Dr. Sutcliffe, asking him to come and examine his servant as soon as possible. Dr. Sutcliffe saw both Captain and Mrs. Braddell and the plaintiff. The plaintiff then went upstairs to her room, and Dr. Sutcliffe followed her, and made an examination of her, which led him to the conclusion that she was not pregnant; and he then went downstairs to Mrs. Braddell, and told her she had better apologise to the plaintiff. The plaintiff alleged that this was done entirely against her will, and that she always protested against any examination being made at all. She also alleged that the examination was improperly made, and that it might have been made without the amount of minute examination that was used. Dr. Sutcliffe, on the other hand, denied that the plaintiff ever made any objection either to the examination or to the mode in which it was carried out, which, he said, was only the ordinary method. Mr. Justice Lindley ruled that, as far as Captain and Mrs. Braddell were concerned, there was no evidence to show that they authorised or directed any examination of the plaintiff unless she consented, and, consequently, that there was no case for assault against them, and left it to the jury to say whether Dr. Sutcliffe had either made the examination against the plaintiff's will or in an improper manner. The jury found in his favour on both points, and a verdict was entered for all the defendants. The issue of this case is thus satisfactory; but medical men cannot be too strongly cautioned never to undertake any examination of the kind except with the full consent of the individual given before witnesses. Neither the direction of a mistress nor a police-order suffices; the subject must assent of her own will.

THE HEALTH OF PARIS.

The health-conditions of Paris have not been quite so favourable during the last week as previously, the deaths having risen to 1,130, while those of the week before were only 908, the average of corresponding weeks for the last three years. The principal causes of the increased mortality have been infantile diarrhœa, which rose from 115 to 118, and pulmonary phthisis, which rose from 138 to 170. Other diseases show a pretty constant figure. Small-pox carries off about 40 a week; while typhoid has been diminishing for several months, the number of last week being 16, while that of the week before was 22.

FAMILY PREDISPOSITION TO DIPHTHERIA.

In the course of a very interesting report which Mr. D. P. Saer has presented to the Pembroke Rural Sanitary Authority, on a severe epidemic of diphtheria attacking fourteen out of a small community of one hundred and twenty-two persons, and killing seven, he gives the following instance of the family predisposition to diphtheria which is so well marked a characteristic of the disease. In a certain village, only one family was invaded; but four of the children were attacked, and three died. In another village, three children of one family were attacked; and in a third family, living in the village where the disease was most fatal, no fewer than six children died of the disease. This fatality in a single household is only paralleled by the case of Trottescliffe, to which we drew attention on the 22nd of November last (vol. ii, 1879, p. 827). Dr. Baylis, in his last annual report, discusses at length the causes of this latter outbreak, which he regards as having had a "filth" origin; and to the same cause Mr. Saer ascribes the outbreak in his district. He admits, however, that there were some antecedent deaths in the locality registered as from affections of the throat allied to diphtheria; and, bearing in mind Dr. Thorne Thorne's investigations with regard to the progressive development of the property of infectiveness in diphtheria (see vol. ii, 1878, p. 883), it may be doubted whether these antecedent cases of throat-affections might not have been more closely associated with the subsequent outburst of diphtheria than the undoubtedly filthy condition of the place where the epidemic occurred.

PROVIDENT DISPENSARIES IN THE PROVINCES.

A correspondent writes to us:—The meeting at Leicester last Thursday marks an era in the history of this movement. The object of it was to extend the benefits of the Leicester Provident Dispensary to the rural districts of the county. It was presided over by the bishop of the diocese, and was attended by the county and borough members and a considerable number of clergy and medical men, while the Charity Organisation Society was represented by Sir Charles Trevelyan. All main points were fully brought out. Dr. Crossley admitted that the practice of the Leicester Infirmary would be improved if it were relieved from the necessity of prescribing for every description of trifling ailment, so as to concentrate its energies upon the in-patient department for cases requiring clinical treatment, and the out-patient department for those requiring a second or consultative opinion, a matter of frequent occurrence in country districts, owing to the limited experience of many local medical practitioners. Mr. Albert Pell and Sir Charles Trevelyan strongly insisted that it is idle to preach independence and self-respect on one hand, while, on the other, we train our people to habits of mendicancy and dependence, by encouraging them to go about begging for "out-patient letters"; and that the greatest demoralising influence of all—out-door relief—cannot be corrected until all above the position of legal paupers provide for their own medical attendance by small periodical payments on the principle of mutual assurance. Leicester has set a beneficent example to the rest of England; for, by first developing a strong central provident dispensary, numbering twenty-five thousand members, whose united contributions amount to £4,000 a year, a powerful leverage has been established for extending the system to the surrounding district.

A THIRTY-THREE DAYS' FAST: DEATH.

Dr. Collins of Scarborough writes to us:—*Apropos* to the American physical endurance mania, I beg to report the following case which occurred in the practice of my friend Dr. Cross, through whose kindness I was permitted to see the patient. During April last, Dr. Cross was called upon to attend Miss L., aged 80, for a slight attack of bronchitis. From this, his patient recovered in about a week. She had always been a moderate eater, and enjoyed perfect health; she was muscular, but thin. During her illness, she took her food as usual; and, in the way of stimulants, some gin and hot water at bedtime, as she had been accustomed to do for some considerable time. Two days after her recovery, Dr. Cross's attention was directed to the fact that Miss L., without any known cause, eschewed food and nutrient liquids of every description. She could no longer be induced to take her gin and hot water. She also refused nutrient enemata and medicines. She merely gulped down a mouthful of cold water now and then, amounting to a daily average of about two ounces. With the exception of this water, she took nothing whatever until the day of her death. She lay in bed perfectly motionless, talked little, and took slight notice of any person. At the week's end, she commenced to be delirious at night. The tendency to delirium ceased after a few days. She slept seven or eight hours out of the twenty-four, and took regularly about a wineglassful of water daily. She had had two or three motions during the first week. Her urine was scanty. She lived on, though her death was daily anticipated. At the end of the third week, she had a few motions resembling the meconium of infants; but only one other slight motion after that time. The urine was scanty throughout. I saw her for the last time on the twenty-ninth day. She was

a perfect skeleton; her condition was moribund; she knew nobody, and muttered something unintelligibly. Pulse 110, scarcely perceptible. The heart-sounds were very faintly audible, with acceleration of the second sound at the base. Breathing was 26, noiseless (slight upheaval of bed-clothes covering the chest counted). She struck me very forcibly as resembling some animals in their state of hybernation. In this condition, she remained until life ebbed away on the thirty-third day of her fast. Dr. Cross saw her daily; and neither he nor I have the slightest reason to suspect that any dissimulation was practised either on the part of the patient or of her friends. The friends are highly respectable and trustworthy people; there was nothing to be gained by imposture; there was no craving for food, nor pain to be alleviated; and there was no physical exertion of any kind, and, consequently, no wear and tear of tissues. Considering the length of time that persons are known to have lived under very adverse circumstances, I see nothing physically impossible in life being prolonged for thirty-three days, especially when a little water had been taken to assist the elimination of urea. *Contra factum non licet argumentare.* Both my friend Dr. Cross and I are perfectly satisfied—nay, morally certain—that all the surroundings of the case are a sufficient guarantee for its authenticity.

DR. TANNER'S FAST.

Dr. TANNER'S fast is nearly over, and whether it is a great imposture or a remarkable feat of foolhardy endurance remains, and probably will long remain, doubtful. Our able contemporary, the *New York Medical Record*, writing on the completion of the twenty-first day of the fast, observes, that the experimenter was then in excellent condition and suffering very little. On the sixteenth day he began to drink water freely, and his condition at once greatly improved. Dr. Tanner has had no passage from the bowels since the first day of his fast. His temperature, pulse, respiration, and skin have been normal. Assuming then, the fact given by Valentin and other physiologists, that as much water is lost by the lungs and skin as by the kidneys, we reach the following interesting paradox. During the first four days after the faster began to take water, he took into his system 192½ fluid ounces of water; he lost, by the kidneys 100¾ fluid ounces, and by the skin and lungs (assuming the usual physiological changes) an equal amount, or about 200 fluid ounces in all. Yet he gained in bodily weight during that time 4½ pounds! Calculating upon the data for the seven days a similar difficulty is found. The supposition that the whole thing is a farce is at once suggested. There are, however, three sets of watchers with him all the time; a regular physician, a *Herald* reporter, and an eclectic. One estimate of the urea in the urine gives: on the first day, 29 grammes; the fifth day, 16 grammes; 18th day, 14 grammes.

UNSANITARY ENGINEERING.

IT is but a short time ago that the new East London Hospital for Children was completed at Shadwell. A large, well arranged, and specially erected hospital was then opened with much ceremony, and everything looked bright for the future of this useful charity. Alas! someone had forgotten to overhaul the drains; and now we are informed, in a circular just issued by the committee, that it has been found absolutely necessary to close the hospital for at least two months—not for want of funds, but "because of the condition of the drainage of the hospital, which has been found, upon careful examination, to be dangerous to the health of those residing on the premises". This is but one more example of the ignorance often displayed of the simplest elements of sanitary construction. Until architects give more attention to this subject, a sanitary engineer should be engaged to superintend the drainage arrangements of all new hospitals. What is wanted in this country, is the compulsory registration of the plans of the drainage arrangements of all public institutions.

BROMIDE OF ETHYL.

THE *New York Medical Record* records two cases in which the new anæsthetic was administered. It required eleven minutes to bring one patient under its influence, and nine drachms were used. Its odour was very disagreeable, its effect was evanescent. Two drachms had previously put the house-physician asleep, and, during its administration to the patient, the doctor—who appears to be unusually susceptible to the effects of anæsthetics—came near falling asleep. Another patient, a very strong man, just as he was coming under the influence of the same anæsthetic, became excited, violent, and unmanageable, sprang from the table, and escaped to his bed. This is not a very satisfactory "record", but it probably does not represent the results of very skilled administration.

THE CALCUTTA MEDICAL INSTITUTIONS.

THE report for the year 1879 on the Medical Institutions of Calcutta has been published, and contains many facts of general interest. The general sanitary condition of Calcutta during the year in question was better than in 1878, the municipal returns showing the death-rate to be, in 1879, 30 per 1,000, and 38 per 1,000 in the previous year. Except during the first quarter of 1879, there was no exceptional prevalence of small-pox, as there had been the year before; and the great fever mortality of 1878, which was evidently connected with dear food, was no repeated. This improvement in the general health condition of the city naturally led to a falling off in the numbers requiring hospital treatment—the total number of patients treated being 265,018, being about 21,500 less than in 1878, and 34,500 less than in 1877. Mahomedans and Hindus are, of course, the classes of the community from whom the great bulk of the patients are drawn; but the Surgeon-General remarks that the table showing races is not of much value as a test of the prevalence of disease among the different classes of the community, owing partly to the indefinite way in which Eurasians and native Christians are returned both in the hospital books and the census-papers, but chiefly because hospital admissions, being regulated by the available accommodation, cannot be a safe guide to the health conditions of the classes represented by the patients received. Malarious fevers proved less fatal than in 1878, as well as less prevalent. Diseases of low condition and debility were of equal prevalence, but much less fatal, in 1879. Cases of dropsy presented themselves in usual numbers, but were very fatal. Respiratory affections, though equally prevalent, were less fatal than in 1878. Cases of dysentery and diarrhœa were less numerous than in the former year, but showed a very high death-rate. A fatal form of dysentery is particularly noted among seafaring men, although by no means confined to them. Besides the hospital cases, a high death-rate from dysentery distinguished the year 1879 throughout the city and suburbs. The returns for 1879 are silent as to the "acute œdema", supposed to be beri-beri, which has attracted much attention in Calcutta in the present year. On the whole, it appears that, although there has been a slight relative improvement in 1879, Calcutta has, since 1874, become more unhealthy, as regards serious fevers, than it was in 1871-73.

VARIATIONS OF TEMPERATURE.

M. DUMONTPALLIER has greatly simplified his apparatus for the refrigeration of febrile patients. He now only uses two vessels, which are both placed in communication with the tubes of his coverlet. The one, being raised about sixty *centimètres* above the bed, acts as a reservoir; the other, placed on the ground, acts as a receiver. When the vessel which has served as a reservoir is empty it should be placed on the ground, and that which has served as a receiver should be raised sixty *centimètres*. The flow of water is thus established in an inverse way. M. Dumontpallier's numerous researches have given him the opportunity of observing the rise of the temperature at different hours of the day and night. He has noted the following variations. The temperature rises gradually from eight o'clock in the morning to six or eight in the evening; it falls from six to eight o'clock in the evening till midnight; it remains stationary from midnight till eight in the morning. It hence results that, to protect the patients from the dangers of excessive bodily heat, it suffices to lower their temperature from eight in the morning till eight in the evening.

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending July 24th, it appears that the death-rate in the eight principal towns was 20.6 per 1000 of estimated population. This rate is 3.2 above that for the corresponding week of last year, and 2.0 above that for the previous week of the present year. The lowest mortality was recorded in Aberdeen—viz., 11.6 per 1000—and the highest in Paisley—viz., 29.7 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.3 per 1000; almost the same as the rate for last week. Acute diseases of the chest caused 69 deaths, or 11 more than the number recorded for the previous week. The mean temperature was 58.2°, being 0.2° above that of the week immediately preceding, and 0.5° above that for the corresponding week of the previous year.

DR. CAMERON'S PUBLIC HEALTH BILL.

DR. CAMERON'S Bill to amend the Public Health (Scotland) Act of 1867 and the Amendment Act of the same year has been issued. It is backed by Dr. Cameron, Sir E. Colebrooke, Mr. Fraser-Mackintosh, and Mr. Anderson. The chief clause provides for the alteration or construction of special drainage and special water-supply districts.

DRUNK OR DYING.

THERE has just occurred in Glasgow a case which has had the effect of again directing public attention to the question, which has been discussed often before, as to what steps are taken at our police-stations to discriminate between the effects of immoderate drinking and those due to disease or accident. On July 20th, an unfortunate man was taken to one of the police-stations in Glasgow at an early hour in the morning, under the impression that he was "drunk and incapable". He was locked up in the usual manner; and it was discovered next day that, even after he had been subjected to an ablution, he did not seem to get sober. On medical advice being summoned, it was found that he was suffering from concussion of the brain, and he was thereupon removed to the infirmary, where he died the following day, and a *post mortem* examination revealed the fact that the cause of his death was fracture of the skull. As is natural, the public mind has become uneasy at the fact which this case discloses, that an individual may be bundled unceremoniously into a police-cell as "drunk and incapable" when he is really ill, or suffering from the effects of some severe injury; and it is clear that some precautions should be taken to prevent the possibility of such grievous mistakes.

GLASGOW WESTERN INFIRMARY.

THE annual meeting for the distribution of the awards gained by the successful students in clinical medicine and surgery was held at the Western Infirmary on July 29th. There were present several of the University professors. The Chairman of the Infirmary Managers presided; and, in addressing the students, he remarked on the benefits conferred by the Western Infirmary upon the community at large, and upon its value as a clinical school. The medal for clinical medicine was awarded to Mr. Alex. Adam, and the medal for clinical surgery to Mr. John Ritchie. Addresses were afterwards delivered by Professors Gairdner, Young, and McKendrick.

UNIVERSITY OF EDINBURGH: GRADUATION CEREMONY.

THE annual ceremony of conferring the degrees of Doctor and Bachelor of Medicine, and Master in Surgery, on the successful candidates took place on Monday, in (for want of a more suitable and appropriate place) the General Assembly Hall. The Lord Chancellor Inglis presided, and conferred the degrees, while the Senatus, examiners, graduates, and their friends completely filled the building. Twenty-seven graduates received the Doctorship under the new statutes, and one under the old. Of these, ten were commended for their theses, five competed for gold medals, and four were deemed worthy of receiving them. One hundred and twenty-four received the M.B. and C.M. degrees conjointly, six the M.B., and one the C.M. Of the M.B.'s, four graduated with first-class honours, and nine with second-class honours. The Ettles Prize, awarded to the most distinguished graduate of the year, was gained by T. P. Anderson Stuart, M.B.; the Beaney Prize for Anatomy, Surgery, and Clinical Surgery, was gained by W. H. Dobie, M.B.; the Wightman Prize for Clinical Medicine was gained by R. F. Rand, M.B., and the Syme Surgical Fellowship was awarded to David Berry Hart, M.D. (who also received a gold medal for his thesis). The Cameron Prize was awarded to Professor William Roberts, F.R.S., of Owens College, Manchester, for his researches on Digestive Ferments, which are familiar to readers of this JOURNAL. After the ceremony of "capping" and prize-giving had been finished, the professorial address was delivered by Professor Rutherford, who, after congratulating the graduates on their attainments and position, dwelt chiefly, in the principal portion of his speech, on the influence universities had exercised on medical education, and on the drawbacks of the one portal system of admission to the profession. On Saturday evening, the graduates had a dinner in the Waterloo Hotel, at which there was a good attendance. Professor Douglas Maclagan presided.

GRADUATION CEREMONY AT GLASGOW UNIVERSITY.

THE annual ceremony of capping the graduates in medicine, law, and arts, took place on July 29th, in the Lower Hall of the University. There was a large turn out of the general public to witness the ceremony. Principal Caird presided. The graduates in law were presented by Professor Roberton, while Professor Gairdner presented the graduates in medicine. Of these last, seventy-nine received the degree of M.B. and C.M., and nine the degree of M.D. After the ceremony of capping, Dr. Cleland, Professor of Anatomy, delivered an interesting address, the subject of which was "Truth, Pathology, and the Public", in which he dwelt on the duty of the public in relation to pathology.

FEVER IN WISHAW PARISH.

THE report to the local authority at Wishaw, read at their meeting last week, showed that the cases of fever had increased in number, and now amounted to 140, of which 100 were in New Mains, 25 in Cambusnethan, and 15 in Overtoun and Waterloo. There had been 15 deaths from fever since the previous meeting, making a total of 35 deaths since the fever broke out. The water has been carefully analysed, but was found to be pure and good, only requiring filtration. The sanitary inspector stated there was no overcrowding.

IRELAND.

THE FEVER IN THE WEST OF IRELAND.

DR. C. J. NIXON, temporary medical inspector, in a recent report to the Local Government Board, states that he has no doubt that insufficiency of food, or food of an unvarying nature, strongly predisposes to the spread of every infectious disease; also, that the mental distress which privation engenders must tend in the same direction, as one of the agents which lessen the resistance-power of the individual to infection; also disregard of sanitary precautions. He believes these conditions capable of converting a disease ordinarily endemic into an epidemic. But it is mainly to contagion and overcrowding that we must look for the immediate exciting cause of the spread of typhus fever, or of its generation *de novo*. Dr. Nixon, in consequence of the unwillingness on the part of the patients or their friends to seek admission to the fever hospital, suggests that the provisions in the Public Health (Ireland) Act, relating to the removal of infected persons to hospital by order of a justice, should be rigidly enforced. On the 16th July, there were forty patients in Swinford Fever Hospital, of whom ten were in the sick wards, and thirty in the convalescent wards, which returns appear to show that the outbreak is decreasing. Besides cases of typhus, enteric fever exists to some extent, and there are several

cases of diarrhœa and dysentery. Dr. Nixon reports that he has only seen one case of typhus which presented the signs of purpura hæmorrhagica, and that in a very limited degree. The sanitary condition of the villages adjacent to Swinford is described as most discreditable. For example, in Faheens, a place close to Swinford, in most of the cabins, cattle and pigs are kept in the room that is occupied; while the sewage matter is partly carried off by an open drain which runs through the centre of the floor, and stagnant pools, containing all sorts of offensive matter, lie in front of the cabins. In one cabin in Kilkelly, Dr. Nixon saw fully eight inches of manure in a room where seven persons lived; a large pond filled with greenish water, containing all kinds of sewage-matter, was in front of the house, and the sewer in connection with it had its mouth closed by a large stone placed against it.

THE APOTHECARIES' HALL OF IRELAND.

AT the annual meeting of the General Council of the Apothecaries' Hall of Ireland, convened by authority of the Act of Incorporation, on Monday last, the following members were elected as office-bearers for the ensuing year:—*Governor:* Edward H. Bolland, Esq. *Deputy-Governor:* Thomas Collins, Esq. *Court of Directors and Examiners:* John Evans, Arthur Harvey, Charles Holmes, Charles H. Leet, Charles J. Moore, Robert Montgomery, Henry P. Nolan, Jerome O'Flaherty Edward J. O'Neill, Sir George B. Owens, John Ryan, James Shaw, George Wyse, Esqrs. *Examiners in Arts:* H. Colpoys Tweedy, M.D., Sch. Univ., Dublin; Arthur Wilson, B.A., Sch. Univ., Dublin. *Representative on the General Medical Council*, and *Secretary*—C. H. Leet, Esq.

LONDONDERRY CITY AND COUNTY INFIRMARY.

FROM the report of Sir William Miller, visiting surgeon to the infirmary, for the year 1879, we learn that during that period 863 were treated in this institution, of whom 782 returned home cured or relieved, 30 died, and 51 remained under treatment on the first day of the present year. There were also 395 cases of accident, which included 15 dislocations and sprains, 23 fractures of the arm, 16 fractures of the leg, 12 fractures of the thigh, and 101 incised and lacerated wounds. The operations performed during the year amounted to 84, and comprised an amputation of the thigh for compound fracture, 2 of the leg for compound fracture, 3 of the foot, and several others for hernia, epithelioma, club-foot, removal of tumours, etc. Of those operated on, but one died; a result which is highly satisfactory, and, while reflecting great credit on the skill of the operator, shows in a forcible manner the benefits to be derived from institutions of a similar kind. The demand for trained nurses has been extremely large, and a sum of £46 19s. has been added to the funds of the charity from this source. A committee of the grand jury were appointed at the Spring assizes to examine into the expenditure of the infirmary, inasmuch as there is an annual grant of £1,494 from the county towards the maintenance of the institution; and the following report, brought before the grand jury at the present assizes, will show that they are satisfied in reference to this matter. "The committee have also carefully considered the case of the County Infirmary, the accounts of which have been fully explained them by the secretary and Sir William Miller. The contribution of £1,494, annually paid towards its support out of the county funds, appears to be well employed, although, undoubtedly, the chief benefit is enjoyed by the city, and by that part of the county which is contiguous to the infirmary. On the other hand, it is largely supported by subscribers in the town and neighbourhood, principally at whose cost a large outlay has been recently incurred on structural repairs and alterations. A great improvement in the nursing department has been recently accomplished, chiefly through the exertions of Miss Scott, of Willsboro'. In the opinion of the committee, the infirmary, as a school of medicine and hospital for the treatment of serious cases, is of great use, and could not be replaced by the infirmaries in workhouses, which have neither the means nor appliances to compete with the county hospital in a large town."

LUNATIC ASYLUMS, IRELAND: ANNUAL REPORT.

FROM the twenty-ninth report of the District, Criminal, and Private Lunatic Asylums in Ireland, which has been recently issued, we learn that on the 31st of last December there were 12,819 in these institutions, of whom 3,491 were located in poor-houses, 8,490 in district asylums, and 630 in private asylums. There was an increase in the accommodated insane during the past year of 234 inmates, 154 of whom were in workhouses; but when we remember the severity of last winter, and the destitute condition of many counties in Ireland for many months, it cannot be surprising that most of the imbecile and idiotic were forced to seek shelter in workhouses; so that lunacy cannot be regarded as really on the increase in Ireland. Of the 8,490 cases located in district asylums, many are simply placed in them out of harm's way, but not as being adequately or suitably accommodated, some of these institutions being overcrowded from twenty to forty per cent. Gradually, however, a more satisfactory condition of things is taking place, particularly at Cork, Kilkenny, Clonmel, Omagh, Ballinasloe, and especially at Armagh, where a sum of £20,000 is at present being expended on structural additions. On the 1st of January, 1879, there were 8,407 patients in district asylums, and last year 2,392 were admitted, or a total of 10,799 under treatment during the past twelve months. Of these, 1,004 were discharged cured, being at the rate of 44 per cent. on admission; 245 were improved, and 105 unimproved. The deaths during the year came to 949, all from natural causes, with the exception of two, which were accidental, and one suicidal, constituting a percentage of mortality of 8·75 on the entire number in asylums, or nearly one more than in 1878, an excess accounted for by the harshness of the season, and the prevalence of bronchial disease. The inspectors refer to the beneficial effect of early treatment in cases of lunacy, which illustrates the necessity of public and well-organised asylums. Taking, for example, the duration of disease, as existing under three months before reception, in 599 cases, we learn that 390 recovered under a four months' residence. In receptions of from three to eight months' prior duration of disease, and in recoveries between four and eight months, 140 and 278 are respectively enumerated; thus 668 cures stand against 739 calculated admissions. Of the 8,490 resident in district asylums at the beginning of this year, the probably incurable stood as nearly as possible to the curable as three-and-a-half to one, a proportion more favourable to recovery than generally obtains. With respect to the supposed causes of mental disease of patients in district asylums, we learn that to moral causes 1,639 cases were ascribed, which included 482 from grief, fear, and anxiety; 341 from poverty and reverse of fortune; and 245 from religious excitement; while 2,006 were due to physical causes; 1,222 were hereditary; and in 3,623 instances the cause was unknown. As regards their social condition, 1,861 patients were married, 5,816 single, 467 widowed, and in 346 cases the condition was unknown. The remarkable disparity between the single and married cases of lunacy has on several occasions been pointed out, so that we shall not further refer to it, except to state that no satisfactory explanation has ever been given of the occurrence. The subject of insanity, as a transmissible affection, is a point of social interest; and, from the statistics carefully prepared by the resident physicians of district asylums, it would appear that, out of 8,490 patients under treatment on the 31st of December last, the antecedent history of 4,867 cases was obtained, and in 1,222 the supposed cause of malady was attributed to an hereditary predisposition. Also there were 593 individuals within the degrees of relationship, from parentage to that of second cousinship. Of the 950 acres attached to district asylums in Ireland, 690 are cultivated, and produced last year a net profit of £5,141 3s. 4d. The asylum-farms thus afford not only a highly lucrative return, but give, what is still more desirable, means of out-door employment, the most wholesome and curative of all helps in the treatment of mental aberration. The inspectors believe that no difference should exist between the position of medical superintendents in Irish and of those in English and Scotch asylums; the duties of the former being at least fully equal to the duties performed elsewhere by their *confrères*, whilst both are alike educated in the higher branches of professional literature.

AMENDMENT OF THE MEDICAL ACTS.

DEPUTATION TO EARL SPENCER.

On Friday, July 30th, a deputation from the British Medical Association and the Medical Reform Committee, waited upon Earl Spencer and Mr. Mundella at the Privy Council Office. The following gentlemen composed the deputation:—Dr. Waters, Chester, Chairman of the Medical Reform Committee; the Hon. H. W. Tollemache, M.P. for West Cheshire; Mr. Hastings, M.P.; Dr. Lyons, M.P.; Mr. A. M. Sullivan, M.P.; Dr. Alfred Carpenter, President of the Council of the Association; Dr. De Bartolomé and Dr. Chadwick, Vice-Presidents of the Association; Mr. Prosser, President of the Birmingham and Midland Counties Branch; Mr. Hodson, President of the Cambridge and Huntingdon Branch; Dr. Withers Moore, President of the South-Eastern Branch; Mr. Ernest Hart; Dr. A. P. Stewart; Mr. Nelson Hardy; Dr. Rees Philipps; Dr. Grigg. Mr. Tollemache introduced the deputation.

Dr. Lyons, M.P.: Before Dr. Waters commences his statement, perhaps you will allow me to say, on behalf of the Irish branch of the profession, that this is a subject that has occupied our attention very much for some years past, and it is one which we hope will receive the attention of Her Majesty's Government. What shape legislation may or should take is, of course, not for me on this occasion to indicate, but the subject is one which the Irish branch of the profession desires strongly to recommend to your lordship's consideration.

Dr. Waters: On behalf of the Medical Reform Committee of the British Medical Association, I have to thank your lordship for according us an interview at what we regard a very important crisis in the history of the medical profession. During the last three sessions of Parliament, distinct Medical Act Amendment Bills have been brought forward by the late Government, by the British Medical Association, and by private members. In the session of 1878, the Bill of the Government passed the House of Lords, but was withdrawn in the House of Commons. In the Session of 1879, the Bill of the Government also passed the House of Lords, and was read a second time in the House of Commons; and, with the Bill of the Association and two other medical Bills, was referred to a Select Committee. In 1880, the same Bills were again referred to the Select Committee. The Select Committee had for its chairman the Right Honourable the Chief Secretary for Ireland, who himself had charge of a Medical Bill in 1870, which after passing the House of Lords was withdrawn in the House of Commons; and the present Chairman of Committees of the House of Commons, well known for his intimate acquaintance with our educational institutions, was also an active member upon it. The Select Committee on the Bills in the early part of the present year (1880), had nearly terminated its labours when the late Parliament was dissolved, and the report of the Committee consequently could not be completed. The evidence taken before it has, however, been printed in two Blue Books and affords valuable materials; in fact, as the Association believes, sufficient materials on which to base legislation. The Association feels that the work of these Select Committees should be utilised in obtaining a settlement of some of the many acknowledged anomalies which exist in the profession; for instance, in the granting of licences to practise and in the education of the members of the profession, and also in amending the constitution of the General Medical Council, in which the profession, as a body, is wholly unrepresented. The Association, in submitting to your lordship the necessity for fresh legislation, are actuated by an earnest interest in the welfare of the general community which is deeply involved through the present admission of incompletely educated men to the *Medical Register*; men who, having been examined in one department only of the profession—it may be medicine, it may be surgery—are yet entitled to be placed on the *Medical Register*, and thereby enabled to practise all branches of the profession, those even in which they have not been examined, nor their attainments tested. The present session of the new Parliament has been so short as not to have permitted any hope of successful legislation on a subject which has taxed the powers of many leading statesmen; but your lordship's representative in the House of Commons, the Right Hon. Mr. Mundella, has promised to take the question into consideration during the ensuing recess. Under these circumstances, the Medical Reform Committee, representing the British Medical Association in this matter, comes before your lordship. The British Medical Association is the largest body of the kind that has ever existed. Its members are of necessity registered medical practitioners, and it now numbers about 8,000, and may, without the slightest exaggeration, be said to comprise the *élite* of the profession. It was founded in 1832, and from that date until now, a period of 48 years, has gone on steadily increasing in numbers and in influence. It now comprises about thirty different branches, spread over England, Scotland, Ireland, India, and the Colonies, and has greatly contributed to weld the profession of the United Kingdom into an united body. The Association publishes a weekly Journal, which commands a leading position in medical literature. The Association appoints various committees: the Journal and Finance Committee; the Parliamentary Bills Committee, whose duty it is to watch over all Bills relating to the general health of the community; the Scientific Grants Committee, which has for a series of years recommended considerable grants of money for the prosecution of original scientific investigations; and the Medical Reform Committee. The Association, from the earliest period of its formation, has evinced an active and deep interest in medical reform. It was founded in the year 1832; and in 1833, at its second annual meeting, an address on medical reform was read by Dr. Barlow. This address was printed and freely circulated amongst the profession, as well as amongst the members of the Association. General interest in the question of medical reform was excited and the attention of the legislature attracted. This address represented: "That the main requisite and only stable foundation for any sound system of medical polity is to establish an adequate and uniform education for the whole profession, so that all who enter it shall pass through the same course of preliminary and medical instruction, be tested by the same examinations, and when approved, entitled to the same privileges". This extract is read with the view of showing that, at this early period, the Association arrived at the conclusion that it was indispensable, in the interest of the public, that the numerous examining bodies should in some manner or other be brought together, so that there might be something like uniformity of qualification and of tests on the part of every person entering the profession. This qualification was to entitle to registration, and was to be regarded as the minimum qualification—the holder being free to obtain any higher qualification he might desire. In 1834, the year following the publication of this address, a Committee of the House of Commons was appointed to enquire into "the laws, regulations, and usages regarding the education and practice of the various parts of the medical profession in the United Kingdom." The printed evidence relating to the state of the profession in England only, and not including Scotland or Ireland, occupied 800 folio pages. The Committee, as also occurred during the last Parliament, never made a report. In the year 1837, the Association appointed a Medical Reform Committee. After the appointment of this Committee, in 1840, 1841, 1844, 1845, medical Bills were introduced by Mr. Warburton, Mr. Wakley, Mr. Hawes, and Sir James Graham; but all efforts at legislation in the interest of the public, to put an end to the competition for candidates which existed amongst the numerous licensing bodies, were defeated. One and all failed through inability to reconcile the conflicting interests of the universities and corporations. In the year 1855, Sir James Graham, Lord Palmerston, and Sir George Grey having abandoned the task of passing a Medical Bill, Mr. Headlam, on June 26th, acting on behalf of the Association, introduced a Bill, framed to establish a register of legally qualified medical practitioners to improve the system of professional education; to introduce something like uniformity of examination through the United Kingdom; to guarantee reciprocity of practice on the foundation of uniformity of minimum qualification; to frame a national pharmacopœia, and to create a recognised governing body truly and adequately representing the various interests of the profession. The examinations were to be conducted in each division of the United Kingdom by the respective existing colleges upon an uniform plan, and were to be *preceded by an examination in the subjects of general education*. In this Bill of the Association, all the grand principles of reform embodied in the Medical Act of 1858, in the Government Bills of 1870, of 1878, 1879, and 1880, are found; and, in addition, that of the direct representation of the profession in the Medical Council, owing to the omission of which the said Government Bills were wrecked. In 1858, after conference with the late Sir Charles Hastings, then Chairman of the Medical Reform Committee of the Association, Mr. Walpole being Home Secretary, the Right Hon. Mr. Cowper, now Lord Mount-Temple, introduced, and, with modifications, carried through the Bill of the Association, which was simply accepted as an instalment of medical reform. The Bill unfortunately contained no adequate provision for uniformity of professional education and qualification. In default of this, the Reform Committee pressed a clause, rendering it imperative on every person to produce proof that his qualifications comprised both medicine and surgery; but even this modest provision, now universally admitted to be necessary, was rejected, and so the evil of persons qualified in only one branch of the profession being entitled to get on the *Medical Register*, and thereby entitled to undertake the duties and responsibilities of general practice, has been continued to the present day. At the instance of the Reform Committee, a clause, re-

quiring evidence of sufficient general education from persons about to enter the medical profession, was also added by Mr. Cowper; but, much to the regret of the Committee, was struck out; and, as a consequence, the general education of the medical man in this country, so far as regulations are concerned, is greatly below that which is enforced on the continent. In France, a medical student must have obtained the diploma of *Licencié-ès-Sciences*, as well as *Licencié-ès-Lettres*; and in Germany, must have obtained his *exeat* from a gymnasium, both high standards of literary and scientific acquirements, before he can commence his medical studies. The General Medical Council, as at present composed, consists of twenty-four members; seventeen being representatives of the various universities and corporations, and of the remaining seven several are closely connected with the governing bodies of some of the corporations. These gentlemen are all men of distinction in the profession, and have its interests at heart; but they are none the less bound up with the interests of their respective corporations; and the consequence is, that the establishment of conjoint boards of examination and the enforcing of adequate general education on the part of the General Medical Council, as far as may be inferred from the report of the proceedings of the Council during its last session, are as remote as ever. The Association and the profession believe that the introduction of direct representatives of the profession into the General Medical Council would be of advantage to the profession by bringing it into direct relation with that body; and many distinguished men, amongst whom Sir William Jenner, K.C.B., and Dr. Andrew Clark may be mentioned, are of the same opinion. The Medical Reform Committee deems the Medical Act of 1858 unsatisfactory for these reasons. 1. It does not secure adequate general education on the part of the medical student. 2. It permits men rejected by one medical board to present themselves for examination before another without further study, and so encourages a tendency to competition for candidates. 3. It allows men, qualified only in one branch of the profession, to be placed on the *Register*, and so to practise all branches of the profession, to the prejudice of the general public. 4. It does not give the profession any representation in the General Medical Council, although the profession finds all the funds which defray the expense of its sittings, while the rich universities and corporations do not contribute anything towards the payment of their own special representatives. 5. It does not protect the public from the evils accruing from the practices of persons falsely pretending to possess medical qualifications. Under these circumstances, the Medical Reform Committee desires to entreat the Government to deal with these important subjects in the ensuing session of Parliament, and so settle the long agitated question of medical reform. All these matters have been so thoroughly thrashed out by constant discussion and debate, that in the profession there is now no difference of opinion as to the points of reform which it is desired to obtain. I may mention that reform has never proceeded either from the universities or from the corporations; it has been chiefly due to the exertions of this Association. Nor has the improvement of the medical education of students been due to the universities. There is a gentleman present, Dr. Stewart, consulting physician to the Middlesex Hospital, and a member of the Medical Reform Committee, who, as a student in Glasgow, was Chairman of a Committee of students, pressing upon the professors the necessity of not degrading the profession to which they aspired by admitting men whose attainments in general education were not such as to qualify them for the position their profession should give them.

Mr. HASTINGS, M.P.: As I am desirous of returning to the House, which is now sitting, perhaps your lordship will allow me to say a few words. I must apologise for speaking on a subject on which I cannot, not being a member of the medical profession, pretend to have a great knowledge as to details; but inasmuch as it is now, I am sorry to say, nearly thirty years since I first interested myself in what is called the medical reform question, and I had something to do with more than one of the Bills introduced into the House, I am anxious to bear testimony to the fact that the objects which this deputation is now endeavouring to obtain, and to impress upon Her Majesty's Government, are the very same objects as those which, thirty years ago, were striven for by the British Medical Association, and by the great body of the medical profession throughout the United Kingdom. I may mention that I drew the first Bill with reference to this subject; I drew the Bill afterwards introduced by Mr. Headlam; and this compelled me to pay great attention to the question. I then found this state of things. There were nineteen distinct licensing bodies at that time in England, Scotland, and Ireland, all granting their licences on their own authority, without any communication with each other, on different standards of education, on different degrees of qualification, thereby undoubtedly leading very often to an unwholesome competition amongst them for fees in the issue of their licences. Now the great object of the British Medical Association in the Bill which it framed, was to establish one uniform system of examination throughout the kingdom, if possible by means of one conjoint board, which should represent all the different universities and medical corporations, and grant a licence that should be operative throughout the whole kingdom, proceeding from one uniform and definite standard, fixed by the highest authorities as to medical qualifications. Another object was—but that was really a means to an end rather than the end itself—to obtain a representation of the profession in the governing body that was to be constituted under the Act. Now I am sorry to be obliged to say that neither of these objects has been attained with anything like the fulness originally intended. Up to the present time, there has been no conjoint board established. Although I believe I am right in saying that a great deal has been done to obtain uniformity of qualification and of the standard of examination amongst the different licensing bodies, still the one great object, that of having one examination conducted by a conjoint board throughout the United Kingdom, has never yet been realised; and that is the special object which the British Medical Association, in the interests of the public as much as in the interests of the Association, is desirous to press upon Her Majesty's Government. With regard to the other matter, which is subordinate, because, although important in itself, it is only a means to an end—that of the representation of the profession in the Medical Council—I can bear witness to the fact that that was an object most earnestly striven for nearly thirty years ago by the Association, and it was based on the belief that, until that representation was obtained, the voice of the great bulk of the profession would never be heard in all the fulness to which it was entitled, against the voice of a number of chartered corporations, who, however eminent their members, and however good their objects, as we all admit, nevertheless must have their own individual and peculiar interests upon this point, as somewhat diverse from the interests of the whole body of the profession and of the public. Now, my lord, the scheme which I drew for the representation of the profession was finally set aside by Mr. Cowper after a great deal of consideration. I for one will always bear the warmest testimony of the kindness, courtesy, and consideration which he gave to the measure when he was a member of Lord Palmerston's administration. It was set aside by himself because he thought the practical difficulties were too great to be overcome, and in its place there was devised a plan of adding to those members of the Council who were elected by the universities and medical corporations six members of the profession appointed by the Crown. I was assured at the time by Mr. Cowper that the intention was that those six members should be men eminent in their profession, but as far as possible independent of corporation influences, and representing the general body of the medical profession in the same independent way as they would have done if, according to the original plan, they had been elected by the votes of the profession to serve in the Council. I would not presume to say how far that object has been attained by the appointments from time to time made by the Crown; but I know that there does exist, not only in the medical profession, but I think elsewhere, a feeling with regard at any rate to some of the distinguished men who have been appointed, that they are naturally and necessarily so bound up with some of the medical corporations that it is impossible to expect from them that entirely independent opinion which the profession would desire to hear expressed in the Council on their behalf. I desire to apologise for taking up your lordship's time, but those are the views that I entertain. I am very happy to attend on this occasion, having been so long connected with the subject; and if the Government should see fit to introduce any Bill into the House of Commons in the direction which the Association desires, I need not say it shall have my vote and my humble support.

Dr. WATERS: In reference to what Mr. Hastings has said, I may mention that one great reason why direct representatives were not added to the General Medical Council was, that there was no list of electors; that there was no *Medical Register* by which it could be ascertained who could vote for them. But now the existence of the *Medical Register* has removed all difficulty; yet the promise which was implied at the time when the Bill of 1858 was introduced, that, as soon as there was a *Medical Register*, direct representatives should be given to the profession, has never yet been fulfilled. There was an implied promise (that was the inference and the belief of men who belonged to the then Reform Committee) that, when the *Register* was completed, direct representatives of the profession would be appointed.

Dr. A. CARPENTER: I do not know, my lord, whether any matters of detail may be put before you in connection with this question. The subject of medical education, in certain ways, has occasionally been brought before myself, not as a medical man, but as a magistrate for the county of Surrey. It has constantly come to my notice, that reports drawn up by esteemed members of the medical profession, which are presented to me for inquiry with reference to the condition of cer-

tain poor persons who are proposed to be put into a lunatic asylum, are drawn up in a certain form; and I may say without hesitation that scarcely one out of five of those reports is drawn up in such a way as that experienced men can come to any conclusion as to whether the particular patient is lunatic or not. Now, those who draw up these reports are generally medical officers attached to the Poor-law unions, a large number of whom have no education in connection with psychological subjects. It is true that a question on psychology may be asked in their examination; but it is not looked upon as part of their course, that they should follow out that subject in the way in which undoubtedly it ought to be followed out by every medical man who is practising amongst the poor. That matter was only recently brought to the notice of the Medical Council. I think I may say without hesitation that scarcely one gentleman on the Medical Council knows anything about the difficulties connected with these subjects amongst the poor of our land; and, if they have no experience, how is it possible for them to legislate as to the education of gentlemen who are to undertake this duty? They will legislate very well for the education of gentlemen who practise amongst the aristocracy and the great of the land; but with regard to the poor they have not any special knowledge themselves. I bring this matter forward as one out of several that one might go into to show that, as far as the interests of practitioners engaged in attendance on the poor of the land are concerned, they do not meet with that attention that I think they ought to meet with at the hands of the Medical Council, and that I am quite sure they would meet with if more gentlemen connected with the general working of the profession, independently of colleges and corporations, were on that Medical Council. I do not wish to take up any more of your lordship's time; but I thought it was important to refer to a subject which has only recently been determined by the Council as not being a necessary part of medical education.

Earl SPENCER: I may say for Mr. Mundella and myself, that we have not gone into this subject during the present session, though we quite admit its importance; and we desire to keep ourselves quite open to consider our course of proceeding whenever the time may come for looking into the matter. The subject is one of very great difficulty. The number of attempts that have been made to solve it proves that it is no easy matter to deal with; and I think we should not even be prepared to promise to introduce a measure unless we really saw some possibility of arriving at a solution of the difficulty. These measures appear to create a considerable amount of opposition; and I need hardly say that such opposition, coming from practical sources, cannot be disregarded in questions of this sort. Unless there is something like—I will not say unanimity on the subject, for that, perhaps, would not be possible—but, unless there is something like a prospect of carrying through a measure with the general concurrence of the medical profession in England, I do not think it would be wise even to attempt it. That is all, I think, I have now to say. If, on looking into the matter, we see our way to consider the subject, we shall no doubt think it most desirable to consult gentlemen who represent so important a section of the medical profession in England as those whom I see before me.

Mr. MUNDELLA: I should like to ask Dr. Waters if what he desires is, that every medical man should have a double qualification.

Dr. WATERS: We think that every man who practises generally should be tested by an examination as to his knowledge of surgery, medicine, and midwifery. There is no person on the Council connected in any way with obstetrics, which is one of the most important branches of the profession.

Mr. MUNDELLA: Then you desire that there should be only one examining body?

Dr. WATERS: We want one examining body for each division of the kingdom.

Mr. MUNDELLA: You know what comes of that. All the existing examining bodies have a number of representatives in the House of Commons; and unless there can be some common agreement amongst the profession, it is utterly impossible for any Government, however strong, to carry a measure. That has been my experience in the twelve years that I have been in the House of Commons. I have watched these medical Bills year by year, and they are always defeated by the action of the medical men themselves—that is to say, by those whom they are able to influence in the House of Commons to introduce this Bill or oppose that. Last year, there were three measures before the House, and three or four the year before. I have seen some score of measures before the House. The examining bodies, I believe, are nineteen in number, and they all have influence in the House. The sixty Scotch members and a number of Irish members are able to defeat any measure. There rests the whole difficulty. What is wanted is a common agreement among the examining bodies, and then a common agreement among the profession.

Dr. WATERS: There are two points on which the profession has been specially tested; one is, the importance of a conjoint board of examination. A canvass of the whole profession was taken; and, notwithstanding the influence of the corporations, the proportion of objections was not more than one in nineteen. On the subject of direct representation, the proportion was only about one in forty-one. That I believe to be as near unanimity as we can well get on this earth. I may mention that the same observation was made to the Association before the year 1858. When ministers were approached on the subject, we were told that if the profession were united, the Government would undertake the question. The universities and corporations failed then as now to agree, but the profession was united. Mr. Headlam took up the Bill of the Association, and brought it before the House of Commons; it was scoffed at in the leading article of the *Times* on the morning of the day on which it was to be brought forward; but, notwithstanding, it was carried by an enormous majority—147. Therefore, the profession has no doubt that if the Government will undertake legislation in the sense in which the profession regard it to be necessary, it will have no difficulty whatever in carrying its measure through. The late Government would have had no difficulty in carrying their measure, had it conceded a modification of the General Medical Council. So it was with the Bill of 1870. I was at that time Chairman of the Medical Reform Committee; and it was in consequence of the objection of the profession, about ten thousand of whom signed petitions against the measure for not conceding a modification of the Council, that the Bill was thrown out. As far as the profession is concerned, therefore, it may be fairly said to be united in the matter.

Mr. MUNDELLA: I have seen, informally and unofficially, Dr. Acland and some of the gentlemen with whom he is associated. Are they in agreement with you on this matter?

Dr. WATERS: During the session of 1879, before the Select Committee, six members of the Medical Council were examined, and the point upon which the examination turned was—who are for direct representation, and who are not. There were three members of the Medical Council in favour of it, and three opposed to it. That was a very even division; and, when you put against that the fact that the whole of the profession is for it, I think that legislation in opposition to the wishes of the whole profession could scarcely be expected by Dr. Acland.

Earl SPENCER: Does he not represent a large section of the medical world?

Dr. WATERS: He is connected with Oxford, and Oxford is, I need not say, a great educational institution; but the number of medical graduates passing in connection with it is only about three or four *per annum*.

Earl SPENCER: I do not think that we can discuss the matter a great deal further. We might go into interesting details on the whole subject; but I do not know that it will lead to any very great advantage at this moment. If we do enter upon this subject, I will undertake that we will enter into communication with you, and hear distinctly and plainly and categorically all the views that you may wish to lay before us.

Dr. STEWART: May I say one word? The question has really entered on a new phase since the labours of the Select Committee of last session. That inquiry has been the means of laying a great deal of information before the Government, before the public, and before the profession, which has never before been brought forward for nearly forty years; and, after we have got together so large an amount of evidence, I think that legislation should be undertaken.

Mr. MUNDELLA: Do I understand that the Bill of last year met generally with your approval?

Mr. NELSON HARDY: Yes, except that it did not provide for direct representation on the Medical Council. May I add one word as to why we come to the Government at all in this matter? Under the Bill of 1858, the government of our profession was committed to the Medical Council against the wishes of some of those who had so actively taken part in promoting legislation, and in opposition to the view that direct representation ought to form an element in the Council. They had abundant means at their command; they were given the power of representing to the Privy Council any body which did not do what was considered necessary with regard to the education and examination of medical students. In the view of the whole profession outside the Medical Council and these privileged bodies, that Medical Council, after twenty years, have failed in their duty, both to the public and to the profession; we say, therefore, that it is not fair any longer to tax us for the support of a Council with which we are dissatisfied, and on which we have no representative whatever. We say, either that we should have direct representation on the Council, or that we should cease to contribute to their funds; and we say that, if

the Council had done their duty, there would be no necessity for coming to Government and pestering them with these medical subjects, which we know that they cannot care to have anything to do with. They are most intricate subjects, every one of them; the conjoint board scheme has taken some of the best men in our profession weeks and weeks to labour at, and it cannot be expected that a number of gentlemen, occupied with other things, can understand it in the course of a short time. Then the question of the punishment of those who wrongly assume medical titles is one of the most difficult points on which any body can be engaged. Yet the Council has left the subject entirely untouched. The conjoint scheme to which he had alluded was foreshadowed in the Bill of 1858; it was indicated in that Bill that such a thing should be carried out, but they were not positively directed to do it. We say, that what they have not been positively directed to do they have not done, and they have done as little as possible for their money; they have spent £120,000 or £130,000, and they have done as little as they could do for it. As for any results that can be shown, after twenty years' work of the Medical Council, we outside the Council, and outside these privileged bodies, say there are none. Then, again, with regard to the recognition of the colonial and foreign graduates, that is also a most difficult subject; we say that it might have been settled long ago, if the Medical Council had devoted their energies to it, instead of spending their time in discussions which certainly have not edified the profession and increased our respect for the body which is supposed to govern us. We say, therefore, that we have a very strong case to put before the Government, and that we are hardly treated if the matter be not taken up by the present Government, and as fully examined into as it was by their predecessors.

Mr. MUNDELLA: Do you want a continuation of the Committee? That was one question before us, whether you wished to reappoint the Committee. It was impossible to reappoint the Committee when there was no actual proposition before the House of Commons.

Mr. NELSON HARDY: I think you do not want any further evidence.

Dr. STEWART: There are certain bodies that I believe wish very much to give further evidence, but I do not think, as regards the whole body of the profession, there is any very great desire to add anything more—because the evidence of last year was so very conclusive.

Mr. MUNDELLA: You all recognise, I presume, that the Medical Council and the privileged bodies to which allusion has been made have very great power and influence in the House of Commons—power and influence enough to destroy any scheme that does not harmonise with their wishes. That is the real difficulty.

Dr. DE BARTOLOMÉ: All we want is a counterpoise to that influence. With regard to the Committee of last session, I think you have had as much evidence as you will ever obtain; but, if it will shorten the process and hasten the result, we have no objection that the labours of the Committee should be turned to a good use.

Earl SPENCER: I understand you think that there has been sufficient evidence given.

Dr. DE BARTOLOMÉ: I should say so. If we begin *de novo*, we shall have another hitch, and be thrown over another twenty years. Therefore, I would say, if you have anything like approached the termination of your labours, let us go on.

Mr. MUNDELLA: If there be any representatives of outside bodies who desire to give evidence before the Committee, they will consider that they have a grievance if they are not allowed to do so; they will think that they have not been fully and properly heard.

Dr. DE BARTOLOMÉ: That is a question we cannot deal with; I merely express my own feeling and the feeling of the profession.

Mr. MUNDELLA: If the inquiry have not been exhausted, it will only hamper legislation to stop it.

Dr. STEWART: That bears out what I said a few minutes ago. I think there are other bodies that do wish to be examined, and it will be a great pity that the inquiry should be considered as closed without their being fully heard.

Earl SPENCER: There is only one other remark that I wish to make in reference to what has been said by a member of the deputation. He says that the Government is bound to consider this question as being one of great importance. I should be sorry if it were thought we did not consider this question one of great importance. The Government is bound to take up and consider any question of great importance. All that I meant in my observations—and I think Mr. Mundella meant the same thing—was that the Government saw no advantage in taking up a subject unless there was some prospect of carrying it to an advantageous conclusion. I admit that the subject is an important one, and that we are bound to deal with it if we see our way through it.

Dr. DE BARTOLOMÉ: We had come so very closely to one view—the late Government and ourselves—that it would be a pity to drop the subject; the difference was very slight.

Dr. WATERS: The matter was almost settled when Parliament was dissolved; that was really the feeling of the profession, and, I believe, also the feeling of the corporations.

Mr. MUNDELLA: I do not think you were any nearer carrying your Bill.

Dr. WATERS: The Government would have carried it.

Mr. MUNDELLA: I cannot say that I think so; the powers of opposition are so strong.

Earl SPENCER: Have you not thought once or twice before that the Government was going to carry your Bill?

Dr. WATERS: The Government failed to carry their Bill because it did not accord with the wishes of the profession. It was thought by the profession—I do not wish to use a wrong expression—it was thought improper that the Government should legislate for the profession without considering their clearly announced views.

Earl SPENCER: But you admit that there are other interests opposed to yours, and very strong ones, that have a considerable following in the country, and may arouse very great opposition to any measure in Parliament.

Dr. STEWART: I should like to call attention to the fact that the demand of the profession is that they should have a voice and be heard in the Medical Council. To that, there is little or no opposition; the great opposition is to the conjoint scheme.

Mr. MUNDELLA: Was the plan of the late Government acceptable to the gentlemen here?

Mr. NELSON HARDY: Except on that one point, on which, I think, we may fairly expect sympathy from a Liberal Government.

Mr. MUNDELLA: The question is, What is practicable?

Mr. NELSON HARDY: We ask the Government to put their force into the matter, and carry it for us; that is the point.

Dr. WATERS: If that be conceded, we think the Bill will pass.

Earl SPENCER: We are much obliged to you for coming here and stating your views.

Dr. DE BARTOLOMÉ: And we thank your lordship for your kindness in admitting us.

PATHOLOGICAL DESIDERATA.

A LIST of desiderata has been prepared by the Council of the Pathological Society, in the belief that it may prove useful in guiding the work of the Society. It appears to us that such a list will be valuable beyond the range of the membership of the Society, as indicating directions in which material for future progress in pathological knowledge may be collected by observers and practitioners throughout the kingdom. It is not intended in the least to restrict the spontaneous action of members, or to limit its scope. Miscellaneous specimens not mentioned in the list will, of course, be as acceptable as heretofore. By the aid of this list, however, the Council desires to gain for certain subjects that kind of elucidation which can be secured only by the abundant production of carefully examined facts. It is believed that not a few items of valuable pathological evidence are lost through a misconception and underrating of their worth; and some of these it hopes to save.

In face of the fact that the meetings have in the past been always crowded with specimens, the Council would scarcely have ventured to issue such a wide invitation for the production of more, were it not that a special provision has recently been made for their reception. This has been done in the arrangement for the exhibition of specimens *by card*. It is probable that a large number of those mentioned in the list of desiderata may be suitably shown without occupying the time of the meetings by oral communication. In the selection of specimens suited for this mode of exhibition, the Council would suggest, for the guidance of members, that, as a rule, any specimens exhibited simply in proof or illustration of a definite statement may be shown by card, whilst those which are more doubtful, which require explanation, and concerning the real nature of which differences of opinion may arise, had better be brought before the meeting *viva voce*.

It is probable that this list of desiderata will be revised and reissued annually, and suggestions from individual members as to subjects which they would like to be mentioned in it will always be acceptable.

DISEASES OF THE NERVOUS SYSTEM.—Specimens illustrating the results of nerve-stretching.—Specimens illustrating traumatic lesions of nerve-trunks and their repair.—Brain, spinal cord, nerves, and muscles from cases of the following: Pseudo-hypertrophic paralysis; progressive muscular atrophy; infantile paralysis; general paralysis of the insane; diphtheritic paralysis; chorea.—Specimens illustrating the pathology of the nervous system in diabetes.—All specimens illustrating the pathology of the sympathetic nerves and ganglia, especially in syphilis, Addison's disease, and exophthalmic goître.—All specimens illustrating diseases of the nervous system in inherited syphilis.—Specimens proving the existence of true external (non-ventricular) hydrocephalus.—Speci-

mens illustrating the pathology of so-called "serous apoplexy" (brain, kidneys, etc.).

DISEASES OF ORGANS OF RESPIRATION.—Specimens of membranous laryngitis and tracheitis from cases in which no history of personal contagion can be obtained.—Specimens of laryngeal disease from cases of congenital syphilis.—Specimens of syphilitic disease of lungs.

DISEASES OF ORGANS OF CIRCULATION.—Specimens of syphilitic disease of the larger arteries.—Specimens of syphilitic disease of the heart's valves.—Specimens of gouty (urate of soda) deposits in the heart's valves.—Specimens of aneurism of the smaller cerebral arteries in relation to apoplexy.—Specimens from cases of cerebral apoplexy in young adults.—Specimens of ulcerative endocarditis; of mitral stenosis, without other valvular lesions; of thrombosis and embolism of large arterial trunks; of *ante mortem* plugging of the pulmonary artery; of thrombosis of the portal vein.

DISEASES OF ORGANS OF DIGESTION.—Specimens of "lichenoid" disease of the tongue (? cryptogamic).—Strictures of the œsophagus not obviously malignant.—Annular stricture of the intestine.—Duodenal ulcers, especially after burns.—Specimens from any case of obstructed bowel, in which the operation of laparotomy has been entertained or performed.—Specimens of stricture of the intestine, the result of dysenteric ulceration.—Specimens of extensive ulcerative enteritis.—Specimens of hypertrophic cirrhosis of liver.

DISEASES OF THE OSSEOUS SYSTEM.—Diseases involving epiphyses and cartilaginous ends of diaphyses.—Cases of late rickets and of so-called congenital rickets.—Dissections of recent dislocations of all kinds.—Dissections of old unreduced dislocations of all kinds.—Specimens of separation of epiphyses or of fractures through the ends of bones in young persons; also specimens of the results of such injuries, showing the alteration in the growth of the bone some years afterwards.—Specimens of recent fractures in the ends of bones of adults, especially of those involving the head of the humerus, the scapula, the lower end of the radius (Colles' fracture).—Specimens illustrating the simulation of dislocation at the shoulder in cases of united fracture of the head or neck of the humerus.—All specimens illustrating the conditions of parts in ununited fracture of long bones.—All specimens, whether from museums or recent, illustrating the displacement of the semilunar cartilages in the knee-joint.—All specimens, whether from museums or fresh, bearing upon the subject of joint-changes, absorption of bone, or spontaneous fracture, in locomotor ataxy.—Specimens illustrating exceptional conditions of extensive destruction of the joint-ends of bones, bony outgrowths, and thickening of the capsule from patients not ataxic.—Examples of spontaneous, or almost spontaneous fractures of long bones, with especial reference to the constitutional cause.—Cases of mollities ossium, with especial reference to possible causes.—Dissected specimens of genu valgum.—Specimens of spondylitis deformans; osteitis deformans.

DISEASES OF THE SKIN.—The histology of the various forms of skin-disease, even of the most common, has as yet been very inadequately examined; and records of careful work, verified by the specimens, will always be acceptable to the Society. This remark applies generally to almost all varieties of morbid change, but the following subjects may be specially mentioned.—The histology of herpes zoster at different stages in reference to the skin and its nerve-structures, the nerve-trunks, and the spinal ganglia.—Respecting molluscum contagiosum, further facts are required as to the structure in which the new growth begins, the nature of the molluscous bodies, and, if possible, the explanation of its contagiousness.—The different forms of morphœa or scleroderma require examination in all their different stages, and especially in the earliest.—Exceptional forms of xanthelasma, its cystic and sebaceous complications, and its peculiarities when occurring on parts other than the eyelids.—Lupus erythematosus and "lupus sebaceus".—Rodent cancer of parts other than the face, and allied forms of malignant new growth in the skin.—Framboesia and allied conditions.—Visceral affections in xanthelasma and in molluscum fibrosum.—Specimens of vegetable parasites in unusual conditions, *e.g.*, Burmese ringworm.—The demonstrations of rare forms of skin-disease by the production of living specimens will always be valued. It is not necessary that such specimens should be supposed to be unique, or that they should illustrate novel views, provided that they are examples of conditions so rare that only those who have special experience can be supposed to be familiar with them. Specimens from residents abroad who may be able to afford the Society the means of examination of forms of skin-disease not occurring in Britain will always be acceptable.

DISEASES OF THE DUCTLESS GLANDS AND LYMPHATIC SYSTEM.—Specimens of lymphadenoma.—Specimens of "lymphatic leucocythæmia".

MORBID GROWTHS.—Specimens of primary cancer of the following parts: bone, lymphatic glands, liver, lung, prostate, thyroid.—Specimens of cysts under the sternomastoid muscles.—Specimens of infantile sternomastoid tumours.—Specimens having reference to the spontaneous disappearance of new growths.—Specimens illustrating the transformation of simple inflammatory conditions into malignant disease, *e.g.*, leucomata of the tongue; of syphilitic and other scars; of eczema of nipple; especially in the early stages of the change.—The Society will be always glad to examine specimens of the rarer forms of tumour, which should be accompanied by life-histories and authenticated by microscopic sections. As examples of the tumours to which reference is here made may be mentioned: 1. Alveolar sarcoma; 2. Colloid cancer; 3. Secondary epithelioma in the viscera; 4. Malignant disease beginning under the nails.

DISEASES OF THE GENITO-URINARY ORGANS.—Specimens of tubercular disease implicating the testes, prostate, and bladder at the same time.—Specimens of disease of the testes in congenital syphilis.

INTRA-UTERINE LIFE: MORBID CONDITIONS PRESENT AT BIRTH (AT FULL TIME OR PREMATURE).—Specimens illustrating the effect of specific animal poisons, of syphilis, or any other definite morbid condition in the parent, upon the fœtus.—Dissected specimens of arrests of development; *e.g.*, spina bifida, encephalocele, hare-lip, ectopia vesicæ, absence of bones or of parts of limbs. (If from early periods of fœtal life, they will be the more valuable.)—All forms of congenital tumour (the common forms of nævi and mole excepted), more especially coccygeal tumours, congenital cystic tumours, including hygroma or "hydrocele of the neck", and all kinds of new growth allied to the malignant class, with careful attention to the family history.—Specimens illustrating the histology of the various forms of moles and nævi.—Specimens of collapsed eyeballs present at birth.—Dissections of the eye, whether from man or the lower animals, in cases of cataract present at birth.—Specimens illustrating the effects of inflammatory processes in the fœtus, *e.g.*, fœtal endocarditis.—Congenital dislocations.—Living specimens of arrested development of limbs, and of local hypertrophies.

COMPARATIVE PATHOLOGY.—Specimens of new growths.—Specimens of rickets.—Specimens of tophi, especially from birds.—Diseases of bones and joints, especially those bearing on the subjects of rheumatism or gout.—Diseases of the arterial system: aneurism, etc.—Diseases of the heart.—Specimens illustrating the lesions of paraplegia and other affections of the nervous system.

THE PARKES MUSEUM OF HYGIENE.

ON Tuesday, the 28th ult., a large and influential public meeting was held in the Egyptian Hall of the Mansion House, under the presidency of the LORD MAYOR, in the interests of the Parkes Museum of Hygiene. The museum is now a great central institution for the instruction of the public, where not only professional men, but owners of property, employers of labour, manufacturers, artisans, and other persons, both men and women, may study at their leisure the subjects in which they are most interested. The financial state of the museum is scarcely satisfactory, and it was mainly to aid it in that respect that the meeting was convened.

The LORD MAYOR, in opening the proceedings, expressed the great pleasure it gave him to allow the meeting to be held in the Mansion House, and to be the means of introducing an institution of such value and importance to the notice of the citizens of London.

Dr. POORE, the Honorary Secretary, read the report, which stated that the provision of a new home for the museum had already become a necessity, and the removal of the collection to a building specially designed for it in some central position would prove a great benefit to the museum and a great boon to the public. As to the financial position, since the spring of 1876, £1,285 had been subscribed. Of that, £641 had been expended in museum fittings, in paying the salary of a curator, and in other unavoidable expenditure. £600 had been invested, which yielded an income of something less than £24 *per annum;* and the treasurer had £65 in hand. The museum was free in every respect, and was entirely dependent upon voluntary contributions. The executive committee were determined that the institution should remain a true museum, and not become a mere showroom for manufacturers and patentees. To achieve that object, a permanent home for the museum must be found, and a sufficient sum provided to meet the annual expenditure. The committee confidently appealed to the public for the necessary funds.

EARL FORTESCUE moved, as the first resolution, that the annual report afforded conclusive evidence that the Parkes Museum of Hygiene was meeting a great educational want and was eminently worthy of public support.

Mr. G. PALMER, M.P., briefly seconded the resolution.

Mr. ERICHSEN and Mr. ERASMUS WILSON supported the motion.

The resolution was then put and carried unanimously.

Sir WILLIAM JENNER, in proposing a vote of thanks to the Lord Mayor, after referring to the lovable character and the professional eminence of the late Dr. Parkes, whose name the museum bore, said the lectures to working men in the museum were valuable as teaching them to improve not only their own homes but the homes of every member of the community. It was not only the houses of the poor, but the mansions of the rich, which required looking after in a sanitary sense. The task of teaching workmen to build houses properly and healthily was neither more nor less important than the due attention of the inmates to the sanitary state of their own dwellings. Many a man's want of health was simply due to the vitiated air he breathed; and to this cause most of those very common ailments—sore-throats—were attributable. He concluded by earnestly commending the museum to the practical support of the meeting and of the public at large.

The vote of thanks was seconded by Mr. GEORGE GODWIN, supported by Sir J. FAYRER, and carried unanimously, and the LORD MAYOR having suitably replied, the meeting broke up.

THE CAMBRIDGE MEETING.

THE Executive and Reception Committees are actively at work, and all promises well.

The RECEPTION ROOM (with Post-office, inquiry department, etc.), will be at the *Guildhall*, in the middle of the town. Here will be the MUSEUM—an arrangement which has proved attractive to exhibitors, for whose requirements for space Mr. Wallis found it difficult to provide. The rooms for the meetings of the Council and of the Committee of Council; the General Secretary's room; and the Section of Public Health, will be at the *Guildhall*.

All the other SECTIONS will be at the *Museums*. The PATHOLOGICAL MUSEUM will be at the Anatomical School, which is part of the same block. The Editor of the JOURNAL (Mr. Ernest Hart); the General Secretary (Mr. Fowke); and the Medical Secretary (Dr. Anningson), will also have rooms in the *Museums*. The room of the Honorary Reception Secretary (Mr. A. P. Humphry) will be at 56, Corpus Buildings.

The GENERAL MEETINGS will be in the *Senate House*, where the Addresses will be delivered—that by the President, on Tuesday, at 8 P.M.; that on Medicine, by Dr. Bradbury, on Wednesday, at 11 A.M.; that on Surgery, by Mr. T. Holmes, on Thursday, at 11 A.M.; and that on Physiology, by Dr. Michael Foster, on Friday, at 10 A.M. The HONORARY DEGREES will be conferred in the *Senate House* by the Vice-Chancellor of the University, on Wednesday, at 12.30 P.M.; members of the University will wear, as usual, their academical costume, and doctors their scarlet robes. The recipients of the Degrees will be presented by the Public Orator of the University, who makes an oration in Latin on the occasion. The presentation of the Gold Medal of the Association will also take place in the Senate House, at 12.30 P.M. on Thursday.

The Senate House and the Museums are each within three minutes' walk of the Guildhall.

REFRESHMENTS.—Breakfasts, lunches, dinners, etc., can be obtained at the *Corn Exchange*, a spacious room at the back of the Guildhall.

The ENTERTAINMENTS will be: 1. The *Soirée* at the *Fitzwilliam Museum*, the use of which handsome building the University have kindly granted for the evening, and the picture-galleries and rooms of which Mr. Siemens is kindly arranging to light with his electric apparatus. The Band of the (Prince of Wales's Own) Norfolk Artillery, and the Orpheus glee-singers, will attend. The adjacent gardens of Peterhouse will also be made accessible from the Museum, and will be illuminated. 2. The *Garden Party*, given by the President, in the grounds of *King's College*, which the Provost and Fellows have kindly lent for the occasion. The Band of the 50th Regiment, and the Concordia Glee Club (consisting of members of the University), will perform. 3. The *Soirée* in the large Hall and Combination Room of *St. John's College*. The gardens at the back of the College will be open, and will be illuminated. 4. An *Organ Recital* in the Chapel of *Trinity College*, on Wednesday, at 5 P.M. This organ is known as one of the best in the country. 6. On Thursday, at 8 P.M., the Chapel of *King's College* will be open, and the organ will be played. Though this instrument is considered not to be quite equal to that at Trinity, its fine notes, sounding through the spacious stone-vaulted building, will afford no slight compensation to those members who are unable to attend the annual dinner at Trinity, and to the ladies.

Ladies are invited to all the above entertainments.

Members are also invited to tea and coffee in Caius College at 10 P.M., on Tuesday, or as soon as the general meeting in the Senate House is concluded.

The proceedings of the meeting will commence with a short choral SERVICE and sermon by the Bishop of Ely, in the *Chapel of King's*. After the sermon, a collection will be made in aid of the Medical Benevolent Fund, which, it will be remembered, originated in connection with the Association, and the benefits resulting from which are well known.

In some of the sections, opening addresses will be given by the Presidents. These will be important and interesting, and there is abundant provision for work in the way of papers and discussions. Indeed, good management on the part of the several Presidents, a rigid adherence to the rule of limitation of time allowed to the readers of papers and to the speakers, and no small forbearance on all sides, as well as diligence and method in the conduct of the business by the Secretaries, will be requisite to make good use of the material at their disposal, and to prevent dissatisfaction at the omissions of parts of the programme, which must in some instances be made.

The following are among the foreigners who have accepted the invitations sent by the Reception Committee: Dr. Warlomont of Brussels; Drs. Landolt, Worms, Marey, Ranvier, Weber, Brown-Séquard, Lucas-Championniére, and Lannelongue of Paris; Professors Busch and Westphal of Berlin; Professor Preyer of Leipzig; Professor Donders of Utrecht; Professor Klebs of Prague; Dr. Chauveau of Lyons; Dr. Toussaint of Toulouse; and Professors Gross, Beard, and Darling from America.

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

To be presented at the Annual Meeting in Cambridge.

THE Scientific Grants Committee have, in the first place, to express their deep regret at the loss, by death, of their esteemed Chairman, Mr. George W. Callender; and to put on record the high value they attached to his services. They have also to regret the retirement of Mr. Curling.

The Annual Meeting last year voted £300 for the uses of your Committee.

The following grants have been made during the year, viz:—

	£
Dr. Ogston: For a Research into the Relation between Bacteria and Surgical Disease	50
Mr. W. North: To Discover what, if any, Relation exists between the Nitrogenous Egesta and Muscular Work	50
Dr. Ewart: To continue his Research into the Life-History and Pathological Relations of Specific Organisms already known, and for the Discovery of other similar Organisms and the Channels through which they enter the System	10
Dr. Crocker: To continue his Research on the Physiological Action of Alcohol, with especial reference to its mode of Elimination	24
Dr. Thin: To continue his Research into the Nature and Development of Conditions of Life of the Vegetable and Animal Parasites that infest the Human Skin	5
Mr. Chiene: To continue his researches on the subjects—1. Are there present, in Organs of Living Animals, Particles which originate the Bacteria met with after Death? 2. Do the Discharges from Wounds which are Antiseptically Treated contain Organisms?	15
Dr. Barlow: To continue an Experimental Investigation into the Changes produced in the Blood-Vessels by Alcohol	8
Drs. Ferrier and Gerald Yeo: Research to determine the Conditions of Safety in Surgical Operations, and to ascertain the effects of Lesions of different parts of the Brain on the Bodily and Mental Functions	50
Dr. Newman: Research on the Functions of the Kidney and on the Physical Conditions which regulate the flow of Urine	10
Mr. Malcolm Morris: An Investigation into the Anatomical Characters of certain Diseases of the Skin allied to Vesicular, Scrofulous, Lupoid, and Syphilitic Affections	10
Dr. McKendrick: Anæsthetic Committee	50
Dr. Haycroft: An Investigation on Urea in Blood and Muscle	25
	307

The following table shows the amount

	Allowed. £	Expended. £ s. d.	Returned. £ s. d.
Dr. Ogston	50	50 0 0	—
Mr. W. North	50	50 0 0	—
Dr. Ewart	10	—	10 0 0
Dr. Crocker	24	—	24 0 0
Dr. Thin	5	5 0 0	—
Mr. Chiene	15	—	15 0 0
Dr. Barlow	8	—	8 0 0
Drs. Ferrier & Gerald Yeo	50	50 0 0	—
Dr. Newman	10	2 16 8	7 3 4
Mr. Malcolm Morris	10	—	10 0 0
Anæsthetic Committee	50	50 0 0	—
Dr. Haycroft	25	25 0 0	—
Total	£307	£232 16 8	£74 3 4

The Committee have to report, in reference to the work done by your grantees during the past year, as follows.

Dr. Ogston will present to this meeting a report on the results of his in-

vestigations into "The Relations between Bacteria and Surgical Disease".

Mr. W. North has made a series of laborious and careful observations on "The Elimination of Nitrogen during Severe Exercise". As some of his results differ materially from those previously obtained by other investigators, he desires to repeat his observations, and verify his results, before publication. No report will be submitted to you until this has been accomplished.

Dr. Thin's labours have borne good fruit, and he will read two papers at this meeting, embodying some of his results, viz.:—1. On the Connection of Fetid Perspiration of the Feet with a New Bacterium (*B. fœtidium*), and on a New Method of Treatment suggested by this Discovery. 2. On the Pathology of Psoriasis. Other results of great promise, but not yet quite ripe for publication, have also been obtained, in his "Research into the Nature and Development of Conditions of Life of the Vegetable and Animal Parasites that infest the Human Skin".

Drs. Ferrier and Gerald Yeo will lay before the meeting a report of the work hitherto done by them, including many important facts. Much, however, remains for future investigation in the "Research to determine the Conditions of Safety in Surgical Operations; and to ascertain the effects of Lesions of different parts of the Brain on the Bodily and Mental Functions". These investigations will be continued by Dr. Gerald Yeo.

Dr. Newman's Research on the "Physical Conditions which regulate the Flow of Urine", is still incomplete; but he hopes to be able to report before the end of this year.

Dr. McKendrick's Glasgow Committee on Anæsthetics have done much valuable work, and have already reported twice, especially calling attention to ethidene dichloride as an anæsthetic agent of much promise. A further report will be made to this meeting.

Dr. Stephen Mackenzie's report on Pyæmia, due last year, but deferred, is still incomplete, but will be published as soon as received. Dr. Mackenzie will exhibit at this meeting some microscopical specimens in connection with his investigation.

Dr. Radcliffe Crocker has presented a valuable report on "The Physiological Action of Alcohol, with especial reference to its Mode of Elimination". This will appear in the JOURNAL at an early date.

Dr. Haycroft will present a report on an "Investigation on Urea in Blood and Muscle" to this meeting.

The report of the Hydrophobia Subcommittee has been delayed by the lamented death of Mr. Callender, its Chairman. It is, however, the intention of the Hydrophobia Subcommittee to present a joint report showing the result of their labours thus far, early in the autumn. The work of the Subcommittee includes a topographical account (with maps) of the distribution of cases of hydrophobia for a series of years, prepared by Mr. Ernest Hart; an elaborate and laborious digest of the literature of the subject has been made by Dr. Wm. Ewart; a series of pathological examinations have been conducted by Dr. Gowers, who showed some of his results at the last annual meeting; another series by Dr. Turner (under the guidance of Dr. Greenfield) at the Brown Institute. Some of these will be produced at the Pathological Section at this meeting. A certain number of patients suffering from hydrophobia have been visited by the late Mr. Callender, Dr. Burdon Sanderson, and Dr. Lauder Brunton.

Drs. Braidwood and Vacher will present to this meeting their third and final report on the "Life-History of Contagium".

Dr. J. Cossar Ewart has been unable to prosecute his investigation into "The Life-History and Pathological Relation of the Specific Organisms, already known; and on other similar Organisms, and the Channels through which they enter the System". The grant of £10 has therefore been returned.

Dr. Barlow has been unable to prosecute his "Experimental Investigation into the Changes produced in the Blood-Vessels by Alcohol." The grant of £10 has therefore been returned.

Mr. Chiene has been unable to prosecute his "Inquiry into the Origin of Bacteria". The grant of £15 has therefore been returned.

Mr. Malcolm Morris has been unable to prosecute his "Investigation into the Anatomical Characters of certain Diseases of the Skin". The grant of £10 has therefore been returned.

Grants for various sums, amounting to £225, have already been promised, subject to the annual meeting voting the necessary means; and further applications are expected.

The Committee request that you will place £300 at their disposal for the ensuing year.

W. F. WADE, Chairman.

THE Cameron Prize of the University of Edinburgh, for the most important addition to practical therapeutics in the past year, has been awarded to William Roberts, M.D., F.R.S., Professor of Clinical Medicine in Owens College, Manchester, for his "researches on the digestive ferments and the preparation and use of artificially digested food".

REPORT OF THE HOSPITAL OUT-PATIENT REFORM COMMITTEE.

To be presented at the Annual Meeting in Cambridge.

THE Committee have held but few meetings this year, and have not succeeded in doing anything to promote the end for which they were appointed by the Association—the reform of the out-patient departments of the London hospitals. There are several reasons for this inaction. In the first place, it was thought desirable to wait for the report of the Committee of treasurers of hospitals, who had circulated a paper of questions to all the metropolitan hospitals, on which it was believed that they intended to found some action. Your Committee, however, find, with regret, from the letter of Mr. Cross, dated St. Bartholomew's Hospital, June 16th (printed in the Minutes), that no action is to be taken on the matter; and a subsequent application for any information which the treasurers had collected was met with a refusal.

The Committee had, in the previous year, personally visited several of the hospitals; but were not able to obtain anything except general expressions of sympathy, and assurances of a desire for improvement. This desire your Committee believe to be perfectly sincere, but it has not resulted in any definite reform (as may be seen by a reference to the Minutes); nor, we believe, will it do so, in the absence of some strong public manifestation equally intelligible to the lay and medical governors of these institutions. To pursue the same course by going round to other hospitals would only be to waste time and risk misconstruction as to the motives of the Committee.

It has been strongly urged by some members of the Committee, that an effort ought to be made to persuade the managers of hospitals to change their out-patient departments into mere consulting rooms—*i.e.*, to abolish treatment of out-patients, except, perhaps, in cases of accidents and discharged in-patients. The change, we believe, would be a great improvement; but we see no prospect of its being adopted in deference to any influence which we can exert; and, in fact, any recommendation of the kind is liable to be, and is, constantly met with the objection that, as the poor have been for many years invited to come in crowds to the out-patient rooms for the treatment of ailments of all kinds, it would be barbarous to suddenly shut the doors in their faces without making some provision for their treatment elsewhere.

In deference to this feeling, the Chairman deferred summoning the Committee until a scheme had been matured, which had been for some time in preparation, under the auspices of a mixed Committee, presided over by Mr. Stansfeld. The object of the scheme is to secure the co-operation of the great Friendly Societies in founding a large institution, or confederation, of provident dispensaries, in which all persons above the pauper class can obtain treatment, either at home, or at the dispensary, as may be needed, in consideration of a small permanent payment, on the principle of mutual insurance. That scheme is now completed, and steps are being taken to carry it out. It is clear that if such a plan were generally adopted, it would provide for the treatment of the ordinary ailments of the working classes, and would justify the public in requesting the managing bodies of hospitals to introduce those reforms into their out-patient departments which are agreed to be desirable. The only question is, whether the details of the proposed scheme are satisfactory; and on this question it is hoped that the Association will deliberate during the present meeting.

Without in any way pledging the Committee either to the proposed scheme, or even to the principle of provident dispensaries, it is the opinion of the Chairman and of the majority of the members of the Committee, that the out-patient department of our hospitals and dispensaries will never be adequately reformed until the working classes can be made to see that ordinary illness, like other accidents of humanity, must be provided for by their own exertions, and that it is only under special emergencies that charity ought to be brought into play—and until the medical profession can be brought to acknowledge that a great proportion of the ailments which are now treated in the out-patient department are unfit for hospital treatment at all, and can only be successfully managed by medical men having the same relation to their patients as private practitioners have in other classes of practice.

TIMOTHY HOLMES, Chairman.

MR. GLADSTONE.

FOR a week, Mr. Gladstone's friends had noticed that he had been failing. On Friday last, the 30th ultimo, not feeling well and wishing to be quiet, he dined with Lord Frederick Cavendish, and he had no sooner sat down than he had a rigor. He was compelled to retire from the table, and having been made warm and comfortable, he felt much better, and later was about to proceed to the House of Commons, when happily it was found that it had been counted out. He recovered, and on Saturday morning felt pretty well: but at 12 o'clock, he had a

second rigor. Mrs. Gladstone then, feeling alarmed, consulted Dr. Andrew Clark, his usual medical attendant, who shortly visited the Premier, and found him coming downstairs to go to a meeting of the Cabinet. His temperature was 103°, and he was at once sent to bed. In the evening the temperature rose to 103.5°.

Mr. Gladstone passed a restless night, and, under no other medicinal influence than that of a little citrate of ammonia, he was drenched with exhausting sweats. On Sunday morning, the temperature had fallen, and the patient expressed himself as feeling much better. This improvement continued until late in the afternoon, when suddenly the temperature again rose to 103°, the pulse and respirations being accelerated; and the base of the left lung, which at first had been somewhat dull and crepitating, exhibited signs of increased congestion. There was again a restless night, with profuse sweating.

On Monday morning, the temperature was 101.5°, and the local symptoms were unaltered. In the evening, the temperature again rose to 103°, and there were again profuse perspirations. At this stage, the exhibition of two teaspoonfuls of brandy on two separate occasions produced an immediate and unfavourable effect, complained of by the patient: the sweats were suddenly checked, the skin dried, and the sense of *malaise* heightened. The night was similar to the two preceding ones, except that movement in bed produced cough.

On Tuesday morning, about 9 o'clock, the temperature had fallen to 100°, and the respirations and pulse had become less frequent. Within an hour, however, the temperature rose to 102°, and was followed by profuse sweating. About midday, the temperature, pulse, and respirations fell to the average of health, and continued normal during the rest of the day and the succeeding night.

On Wednesday morning, Mr. Gladstone was again seen by Sir W. Jenner (who had visited him on Monday) and Dr. Andrew Clark, when it was found that the signs of congestion of the lung had disappeared, that the fever had subsided, and that beyond weakness, the natural result of the attack through which the patient had passed, he was free from evidence of disease. This condition has been happily maintained up to the present time (Thursday evening). Mr. Gladstone, of course, feels much weakness, but is making most satisfactory progress; and, as he seems to be quite free from all organic disease, there is every reason to expect that his restoration will be complete.

THE VACCINATION BILL.

On Monday afternoon a deputation, consisting of Mr. Spottiswoode (President of the Royal Society), Dr. Risdon Bennett (President of the College of Physicians), Mr. Erichsen (President of the College of Surgeons), Mr. Spencer Wells (Vice-President of the Royal College of Surgeons), Mr. Erasmus Wilson, Professor Huxley, Dr. Farquharson, M.P., Dr. Pitman, Dr. Quain, Dr. Russell Reynolds, and Dr. Wilson Fox, had an interview with the President of the Local Government Board (with whom was Sir John Lambert, K.C.B.) on the subject of the Vaccination Acts' Amendment Bill, and to urge that it be not passed. The arguments set forth were that if the Bill passed it would be at once a premium held out to ignorant people to evade the law by the payment of a small penalty, and consequences of the direst character, in the shape of small-pox, might easily be thereby spread amongst the people, and a visitation similar to that of twenty years ago might ensue, which destroyed the lives of thousands of people. They urged the efficacy of vaccination as a protection to the people, and predicted that fatal consequences would follow the passing of such a measure as that proposed.

Mr. DODSON, in reply, denied that the law, as it stood now, was compulsory, but simply inflicted a succession of fines for the omission to have a child vaccinated; and he denied that his Bill gave a licence to exempt people from the operation of the law, but that it was simply a question of mitigating penalties by reducing their number. He was not opposed to making vaccination universal and compulsory; the question was as to the best mode of effecting obedience to the law. Perhaps those who had to administer the law were more competent to deal with the matter than the medical profession. It was a question of expediency. He granted that the opinion of the medical profession was entitled to great weight, but could not admit on such a question as the present that they were entitled to outweigh other opinions, and more especially the opinion of those people who had to administer the law.

PRESENTATION.—A handsomely illuminated address, and solid silver salver with a pair of goblets, have been presented to Alexander Flood, Esq., who lately resigned the Holywell Dispensary District in the Enniskillen Union, of which he was medical officer for thirty-four years. The presentation was made on Thursday, July 29th, by a large deputation, headed by James Bracken, Esq., J.P., and the Rev. Dr. Clarke, who were chairman and secretary, respectively, of the presentation committee.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-EIGHTH ANNUAL MEETING.

THE Forty-Eighth Annual Meeting of the British Medical Association will be held at Cambridge, on Tuesday, Wednesday, Thursday, and Friday, August 10th, 11th, 12th, and 13th, 1880.

President: DENIS C. O'CONNOR, A.B., M.D., Professor of Medicine in Queen's College, Cork.

President-elect: G. M. HUMPHRY, M.D., F.R.C.S., F.R.S., Professor of Anatomy in the University of Cambridge; Senior Surgeon to Addenbrooke's Hospital.

An Address in Medicine will be delivered by J. B. BRADBURY, M.D., F.R.C.P., Physician to Addenbrooke's Hospital; Linacre Lecturer in Physic.

An Address in Surgery will be delivered by TIMOTHY HOLMES, M.A., F.R.C.S., Surgeon to St. George's Hospital.

An Address in Physiology will be delivered by MICHAEL FOSTER, M.D., Hon. M.A., F.R.S., Prælector in Physiology in Trinity College, Cambridge.

The business of the Association will be transacted in Eight Sections.

SECTION A.: MEDICINE.—*President:* George Edward Paget, M.D., D.C.L., F.R.S., Cambridge. *Vice-Presidents:* George Johnson, M.D., F.R.S., London; P. W. Latham, M.A., M.D., Cambridge. *Secretaries:* W. B. Cheadle, M.A., M.D., 2, Hyde Park Place, London, W.; D. B. Lees, M.A., M.D., 2, Thurloe Houses, Thurloe Square, London, S.W.

SECTION B.: SURGERY.—*President:* William S. Savory, M.B., F.R.S., London. *Vice-Presidents:* William Cadge, F.R.C.S., Norwich; John Wood, F.R.C.S., F.R.S., London. *Secretaries:* John Chiene, F.R.C.S.Ed., F.R.S.Edin., 21, Ainslie Place, Edinburgh; George E. Wherry, M.B., M.C., F.R.C.S., 63, Trumpington Street, Cambridge.

SECTION C.: OBSTETRIC MEDICINE.—*President:* W. S. Playfair, M.D., London. *Vice-Presidents:* H. Macnaughton Jones, M.D., Cork; Henry Gervis, M.D., London. *Secretaries:* R. N. Ingle, M.D., F.R.C.S., 21, Regent Street, Cambridge; C. E. Underhill, M.D., 8, Coates Crescent, Edinburgh.

SECTION D.: PUBLIC MEDICINE.—*President:* Henry W. Acland, M.D., LL.D., F.R.S., Oxford. *Vice-Presidents:* Arthur Ransome, M.A., M.D., Manchester; Thomas Pridgin Teale, M.A., F.R.C.S., Leeds. *Secretaries:* William Armistead, M.B., St. Mary's Villa, Station Road, Cambridge; Thos. J. Walker, M.D., 18, Westgate, Peterborough.

SECTION E.: PSYCHOLOGY.—*President:* J. Crichton Browne, M.D., LL.D., F.R.S., London. *Vice-Presidents:* G. F. Blandford, M.D., London; P. M. Deas, M.B., Macclesfield. *Secretaries:* G. M. Bacon, Hon. M.A., M.D., Lunatic Asylum, Fulbourn, Cambridge; Henry Sutherland, M.A., M.D., 6, Richmond Terrace, Whitehall, S.W.

SECTION F.: PHYSIOLOGY.—*President:* William Rutherford, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Arthur Gamgee, M.D., F.R.S., Manchester; Robert McDonnell, M.D., F.R.S., Dublin. *Secretaries:* W. H. Gaskell, M.A., M.D., Grantchester, Cambridge; William Stirling, D.Sc., M.B., Marischal College, Aberdeen.

SECTION G.: PATHOLOGY.—*President:* Sir James Paget, Bart., D.C.L., LL.D., F.R.S. *Vice-Presidents:* Samuel Wilks, M.D., F.R.S.; W. Howship Dickinson, M.D. *Secretaries:* W. S. Greenfield, M.D., 15, Palace Road, Albert Embankment; Charles Creighton, M.A., M.D., Anatomical Museum, Cambridge.

SECTION H.: OPHTHALMOLOGY.—*President:* William Bowman, F.R.C.S., F.R.S., London. *Vice-Presidents:* Henry Power, F.R.C.S., London; Henry R. Swanzy, M.B., Dublin. *Secretaries:* W. A. Brailey, M.A., M.D., 38, King's Road, Brownswood Park, London, N.; David Little, M.D., 21, St. John Street, Manchester.

A Subsection of Otology will be formed, of which Mr. W. B. Dalby, F.R.C.S., of London, will be Chairman, and Dr. James Patterson Cassells of Newton Terrace, Sauchiehall Street, Glasgow, and W. D. Hemming, F.R.C.S., of Bournemouth, honorary secretaries.

Treasurer: R. M. Fawcett, M.D., 3, Scrope Terrace, Cambridge.

Honorary Local Secretaries: Bushell Anningson, M.A., M.D. (Hon. Medical Secretary), Walt-ham-sal, Barton Road, Cambridge; A. P. Humphry, Esq., M.A. (Hon. Reception Secretary), Corpus Buildings, Cambridge.

Letters relating to the strictly medical work (Sections, Museums, etc.) of the meeting should be addressed to Dr. Anningson; other letters to Mr. A. P. Humphry.

TUESDAY, AUGUST 10TH, 1880.

2 P.M.—Meeting of Committee of Council at the Guildhall.
2.30 P.M.—Meeting of the Council of 1879-80 at the Guildhall.
4 P.M.—Short Service, with Sermon by the Bishop of Ely in King's College Chapel; after which a collection will be made in aid of the British Medical Benevolent Fund.
8 P.M.—General Meeting in the Senate House. President's Address; Annual Report of Council and other business.
10 P.M.—Tea and coffee in the Hall of Caius College (close to the Senate House).

WEDNESDAY, AUGUST 11TH.

9.30 A.M.—Meeting of Council of 1880-81 at the Guildhall.
11 A.M.—Second General Meeting in the Senate House. Address in Medicine.
12.30 P.M.—Conferring Honorary Degrees in the Senate House.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
9 P.M.—Soirée in the Fitzwilliam Museum and grounds of Peterhouse by the Reception Committee.

THURSDAY, AUGUST 12TH.

9.30 A.M.—Meeting of the Committee of Council at the Guildhall.
10 A.M.—Third General Meeting in the Senate House. Reports of Committees.
11 A.M.—Address in Surgery in the Senate House.
12.30 P.M.—Presentation of the Gold Medal of the Association.
2 to 5 P.M.—Sectional Meetings in the New Museums and Lecture Rooms.
6.30 P.M.—Public Dinner in the Hall of Trinity College.

FRIDAY, AUGUST 13TH.

10 A.M.—Address in Physiology in the Senate House.
11 A.M.—Sectional Meetings in the New Museums and Lecture Rooms.
1.30 P.M.—Concluding General Meeting in the Senate House. Reports of Committees and other business.
4 P.M.—Garden party in the grounds of King's College by the President.
9 P.M.—Conversazione in St. John's College and grounds.

Ladies will be admitted to the Soirée, Garden Party, and Conversazione.

SECTIONAL ARRANGEMENTS.

SECTION A.—MEDICINE.

The following are the subjects for discussion in this Section.

1. "Hysterical Anæsthesia." The subject will be introduced by Dr. Bristowe. Dr. Althaus, Dr. Brown-Séquard, Dr. Broadbent, Dr. Buzzard, Dr. Dreschfeld, Dr. Matthews Duncan, Dr. Ferrier, Dr. Balthazar Foster, Dr. W. Moore, Dr. Wade, and others, are expected to take part in the debate.

2. "Asthma." The discussion will be opened by Dr. Andrew Clark. Dr. Berkart, Dr. Eade, Dr. T. Hayden, Dr. Douglas Powell, Dr. F. Roberts, Dr. C. T. Williams, Dr. Burney Yeo, and others, are expected to take part in the debate.

The following papers have been promised for reading in the Section.

Report of the Committee on Anæsthetics.
ALTHAUS, J., M.D. The Diagnosis and Treatment of Localised Brain-lesions.
ANDERSON, E. C., M.A., M.D. The Presence of Leucin and Tyrosin in the Urine in Numerous Diseases.
ANDERSON, McCall, M.D. On the Curability of Attacks of Acute Phthisis (Galloping Consumption).
BARLOW, T., M.D. 1. Cases of Hysterical Analgesia in Children. 2. (With Dr. D. Lees). The Diagnostic Value of Cranio-tabes.
BOWLES, R. L., M.D. Stertorous Breathing in Apoplexy, and the Management of the Apoplectic State.
BROWN-SÉQUARD, C. E., M.D., F.R.S. Unilateral Convulsions due to Brain-disease.
BULKELEY, L. Duncan, M.D. The Management of Eczema of the Anus and Genital Organs.
BUZZARD, T., M.D. The Transfer of the Epileptic Aura by Blistering.
CHEADLE, W. B., M.D. The Existence of Two Distinct Species of Eruptive Fever, commonly included under the head of Measles.
CLIFFORD, L., M.D. The Naming of Diseased States so as to indicate the Chief Causes of them.
COLLIE, A., M.D. The Incubation Period of Enteric Fever.
CROCKER, H. Radcliffe, M.D. 1. An Undescribed Disease of the Scrotal and Inguinal Hairs (with specimens). 2. The Local Treatment of Psoriasis.
DYCE, R., M.B. Physiognomy relative to Disease.
DOUGLAS, J. M., B.A. The Diagnostic Significance of Œdema of the Left Arm, and of the Left Side of the Neck and Thorax.
DREYSCHFELD, J., M.D. A Case of Duodeno-colic Fistula.
DRYSDALE, C. R., M.D. Syphilitic Insanity.
ELLIOT, R., M.D. Narratives, with *Post Mortem* Inspections, of Two Cases of Embolism of the Pulmonary Artery.
FERRIER, D., M.D., F.R.S. Affections of Vision from Cerebral Diseases (with specimens).
FITZPATRICK, T., M.D. The Limits of Heredity in Disease.
FOTHERGILL, Tilton, M.D. The Mineral Waters and Climate of Spa.
GAIRDNER, W. T., M.D. The Therapeutics of Bright's Disease.
GOODHART, H. P. A., M.D. A Case of Softening of the Pons Varolii, with Thermometric Observations.
GOWERS, W. R., M.D. Paralytic Chorea.
HAWKES, Arthur H., M.D. The Winter Climate of San Remo.
HOLDEN, J. Sinclair, M.D. Salicylic Acid in Diabetes.
HOWARD, E., M.D. The Treatment of Impending Apnœa or Threatened Death; its Intention and Use; with Anatomical Explanation.
JAGIELSKI, V., M.D. The Curative Influence of Koumiss in Pulmonary Consumption and Diseases of Emaciation.
JAMES, Prosser, M.D. 1. Topical Medication of the Mouth and Throat. 2. Laryngeal Phthisis.
JAMIESON, W. A., M.D. Notes on Alopecia Areata: with Microscopic Specimens.
LEES, D. B., M.D. (with Dr. Barlow). On the Diagnostic Value of Cranio-tabes.
LITTLE, J. Fletcher, Esq. 1. The Treatment of Chronic Rheumatoid Arthritis by Oil-rubbing, Russian Baths, and Electricity. 2. The Treatment of Sleeplessness by Sitz-baths, etc.
MAHOMED, F. A., M.D. Remarks on Bright's Disease; with special reference to the Unequal Development of its Several Factors.
MARCET, W., M.D., F.R.S. The Influence of Altitude, with Reference to the Treatment of Pulmonary Disease.
MELDON, Austin, M.K.Q.C.P. The Pathology and Treatment of Gout.
MOORE, W., M.D. 1. A Case of Anæsthesia, with Tremor, Paresis, Analgesia, Achromatopsia, Amyosthenia, Ischæmia, and Hystero-Epilepsy. 2. Case of Hemichorea, with Hemianæsthesia, Ischæmia, and Hystero-epilepsy.
PARKER, R. W., Esq. The Treatment of Empyema by Paracentesis, with Simultaneous Injection of Purified Air.
PAYNE, J. F., M.D. On the Origin of the Late Outbreak of Plague in the Province of Astrakhan.
RABAGLIATI, A., M.D. The Classification and Nomenclature of Disease.
ROBERTS, W., M.D., F.R.S. Beef-tea and Peptonised Beef-tea.
SQUIRE, Balmanno, Esq. The Treatment of some of the Commoner Chronic Skin-Diseases by the Prolonged (several hours) Daily Immersion of the Patient in various Aqueous Solutions at the Neutral Temperature (92° Fahr.).
STARTIN, J., Esq. Acne and its Treatment.
STURGE, W. Allen, M.D. Cases of Hemianæsthesia of Special and General Sensation, of Organic Origin, accompanied by Hemiopia.
STURGES, O., M.D. The Nomenclature of Pneumonia and other allied Lung-Inflammations.
THIN, George, M.D. The Cause of the Bad Odour sometimes associated with Excessive Sweating of the Feet; with Directions for Treatment.
THOMPSON, Reginald, M.D. 1. The Pathogeny of Inspiration. 2. Pulmonary Syphilis.
TIBBITS, E. T., M.D. The Modern Theory of the Action of Digitalis.

The following demonstrations will be given in this Section.

GOWERS, W. R., M.D. The Clinical Measurement of the Corpuscles and Hæmoglobin of the Blood.
SQUIRE, Balmanno, Esq. Typical Cases of Skin-Disease: by Aid of the Dissolving Views Apparatus, in the theatre of the Cavendish Laboratory.

SECTION B.—SURGERY.

Discussion will take place in this Section on the following subjects.

1. "The Treatment of Wounds." The discussion will be opened by Professor Lister, F.R.S.

The following papers on this subject are promised.

FERRIER, D., M.D., F.R.S., and YEO, G. F., M.D. The application of the Antiseptic Method in Cranio-Cerebral Injuries.
MCVAIL, J. C., M.D. Ten Years' Surgery in the Kilmarnock Infirmary.
ORMSBY, L. H., Esq. The Treatment of Wounds by a Modified Use of Antiseptics.

2. "Stricture of the Urethra." The discussion will be opened by Sir Henry Thompson.

The following gentlemen have promised to take part in the discussions: Mr. E. Atkinson (Leeds); Mr. T. Bryant, (London); Dr. E. H. Bennett (Dublin); Mr. Reginald Harrison, (Liverpool); Mr. Berkeley Hill, (London); Mr. Furneaux Jordan, (Birmingham); Mr. Edward Lund, (Manchester); Mr. W. Mac Cormac, (London); Professor Macleod (Glasgow); Mr. Oliver Pemberton, (Birmingham); Mr. William Stokes, (Dublin); Mr. W. F. Teevan, (London); Mr. Walter Whitehead, (Manchester); Mr. John Wood, F.R.S. (London).

The following papers are also promised in this section.

ANNANDALE, Thomas, Esq., F.R.S.E. A Method of Operating by Means of Suspension.
ATKINSON, E., Esq. Surgical Paralysis of the Upper Extremity.
BENNETT, E. H., M.D. Fracture of the Neck of the Humerus as a Complication of Dislocation of the Shoulder-joint.
CHIENE, John, Esq. Recto-vesical Fistula.
KEETLEY, C. B., Esq. A Method of Treatment of Gleet.
JAMES, Prosser, M.D. Stricture of the Œsophagus.
LUND, Edward, Esq. A case in which one-third of the Clavicle, the whole of the Scapula, and the Upper Extremity, were removed, for Sarcomatous Growth around the Shoulder-joint.
MACNEIL, William, M.D. Notes on Thirty Cases of Osteotomy.
MELDON, Austin, Esq. The Result of Twenty Cases of Intravenous Injection of Milk.
MYRTLE, A. S., M.D. Dupuytren's Contraction of the Fingers.
OGSTON, Alexander, M.D. The Treatment of Flat Foot.
OWEN, Edmund, Esq. Should the Hot Bath be employed in the Treatment of Strangulated Hernia?
PAGE, Herbert W., Esq. Immediate Suture of Divided Nerves.
PALMER, M., Esq. A Case of Ligature of the Carotid and Subclavian Arteries for Aneurism of the Innominate. (The specimen will be exhibited.)
SMITH, E. Noble, Esq. The Etiology of Pott's Disease of the Spine.
STOKES, William, Esq. Suprapubic Luxation of the Femur.
SYMONDS, C., Esq. Case of Stone in the Bladder having for its Nucleus a Portion of Bone.
TEEVAN, W. F., Esq. Bigelow's Operation for Stone in the Bladder, with Cases.
THOMPSON, Sir Henry. Lithotomy at a Single Sitting.
WALKER, Thomas J., M.D. A Demonstration on the method of Applying the Plaster-of-Paris Jacket in the Recumbent Position.
WHITEHEAD, Walter, Esq. Removal of the Tongue.

Subsection of Otology.

The following subjects will be discussed in this Subsection.

1. "The Therapeutic Value of Electricity in Ear-Diseases."
2. "The Comparative Value of the various Mechanical Aids to Hear-

ing, with special regard to the several kinds of Artificial Drumheads, and to those Instruments which Assist Deafness by Conducting or Transmitting Sound, either directly or indirectly, to the Organ of Hearing."

The following gentlemen have promised to take part in the discussion: Dr. James Patterson Cassells (Glasgow), Mr. E. C. Baber (Brighton), Mr. A. Gardiner Brown (London), Dr. Kirk Duncanson (Edinburgh), Mr. George P. Field (London), Mr. Douglas Hemming (Bournemouth), Dr. A. H. Jacob (Dublin), Professor H. Macnaughton Jones (Cork), Dr. Loewenberg (Paris), Dr. W. A. McKeown (Belfast), Dr. A. Ogston (Aberdeen), Dr. Pierce (Manchester), Dr. Urban Pritchard (London), Dr. Story (Dublin), Dr. Llewelyn Thomas (London), Mr. Torrance (Newcastle-on-Tyne), Dr. E. Woakes (London).

The following papers have been promised.

Baber, E. C., M.B. An Improved Oste[illegible]

Brown, A. Gardiner, Esq. A New Standard for Hearing Power by Comparison with the Sense of Touch.

Brown, Lennox, F.R.C.S.Ed. Analysis of the Results of the Use of the Audiphone in One Hundred Cases of Deafness.

Cassells, J. P., M.D. 1. Antiseptic Aural Surgery. 2. A New Hearing Instrument.

Field, F. M., M.D. 1. A Case of Lupoma of the Auditory Meatus. 2. A New Method of Treating Chronic Suppuration of the Ear.

Thomas, R., Esq. The Treatment adopted in a Recent Case of Vascular Neoplasm.

Thomson, C. S., M.D. The Comparative Value of Various Mechanical Aids to Hearing.

Turnbull, Lawrence, M.D. Syphilitic Affections of the Ear.

Woakes, E., M.D. The Use of Electricity in Ear-Disease.

Dr. Loewenberg and Dr. Pope Hennessy will also read papers.

Mr. T. H. Pinder will show some Instruments for the Removal and After-treatment of Polypi and Granulations of the Ear.

Mr. Eglin of Glasgow will show several forms of Rhodes's Audiphone, and give a demonstration on them.

Section C.—Obstetric Medicine.

The following subjects will be discussed in this Section.

1. "Uterine Hæmostatics." The discussion will be opened by Dr. Atthill.

2. "The Removal of Uterine Tumours by Abdominal Section." The discussion will be opened by Mr. Spencer Wells.

The following gentlemen are expected to take part in the discussions: Dr. H. Gervis, Dr. Matthews Duncan, Dr. Barnes, Dr. Heywood Smith, Dr. A. Wiltshire, Dr. G. Roper, Dr. G. E. Herman, Dr. Galabin, Dr. W. Williams, Dr. P. Boulton, Dr. A. H. McClintock and Dr. T. More Madden (Dublin), Dr. C. E. Lyster (Liverpool), Dr. Savage and Mr. Lawson Tait (Birmingham), Dr. Murphy (Sunderland), Dr. G. H. B. Macleod (Glasgow), Dr. Thorburn (Manchester), Dr. A. E. A. Lawrence (Clifton), and Dr. T. Stainthorpe (Hexham).

Bassett, John, M.D. *Post Partum* Hæmorrhage.

Bennet, J. Henry, M.D. 1. Hæmorrhage and Sickness during Pregnancy. 2. Abortion in connection with Inflammation of the Cervix and of the Body of the Uterus.

Donovan, W., Esq. A few Cases of Labour.

Drysdale, C. R., M.D. The Infantile Death-rate in European Countries.

Duncan, J. Matthews, M.D. On Open Fallopian Tube.

Edis, Arthur W., M.D. On the influence of Uterine Disorders in the Production of Sick Headaches and other Allied Affections.

Gervis, H., M.D. Some points in the Treatment of Uterine Flexions.

Hewitt, Graily, M.D. On Congestive Hypertrophy of the Mucous Lining of the Body of the Uterus.

Hicks, J. Braxton, M.D., F.R.S. Note on the Plug in Uterine Hæmorrhage.

Jones, H. Macnaughton, M.D. Obstetrical Knowledge in its relation to the Present Standard of Medical Education.

Lawrence, A. E. Aust, M.D. Cases of Malignant Disease of the Uterus treated with Chian Turpentine.

Macdonald, Angus, M.D. The Communicability of Puerperal Fever.

Macdonald, Keith N., M.D. Practical Remarks on the best Treatment to be adopted in cases of "Accidental" and "Unavoidable" Hæmorrhage.

Mapother, E. D., M.D. Sterility: Excision of Anomalous Membrane: Conception.

Pallan, Montrose A., M.D., LL.D. The Etiology and Treatment of Laceration of the Cervix Uteri.

Savage, Thomas, M.D. Hysterotomy.

Tait, Lawson, Esq. On the Treatment of Uterine Myoma by Enucleation, Hysterotomy, and Oöphorectomy.

Thornton, J. Knowsley, Esq. One Hundred and Fifty Cases of Complete Ovariotomy performed Antiseptically, with Remarks on the Essentials to Success in the Application of this Method.

Walter, W., M.D. A Case of Cæsarean Section in which the Mother and Child were saved.

Wiltshire, A., M.D. Glycosuric Pruritus Vulvæ.

Section D.—Public Medicine.

The subjects for discussion are:

1. "The General Working of the Public Health Administration in Great Britain and Ireland." The discussion will be opened by Dr. Alfred Carpenter and Dr. F. T. Bond.

2. "Diseases communicable to Man from Diseased Animals used as Food." The discussion will be opened by Mr. F. Vacher of Birkenhead and Mr. E. J. Syson of Huntingdon. Eminent veterinary surgeons have been invited to take part in the discussion. The following paper on the subject has been promised.

Fleming, G. Esq., F.R.C.V.S. The Relation of Bovine Tuberculosis to the Public Health.

The following papers are also promised in this Section.

Bell, J. H., M.D. 1. On Anthrax from Mohair in Woolsorters. 2. On Anthracæmia from Mohair in Woolsorters and Heifers.

Cameron, Charles A., M.D. 1. The Occurrence of Sewage in Oysters. 2. Observations on the Entry of Air into Sewers.

Dolan, T. M., Esq. The Prophylaxis of Rabies and Hydrophobia (with diagrams).

Drysdale, C. R., M.D. Vital Statistics of the East End of London.

Fox, Cornelius B., M.D. The Impairment of the Efficiency of the Medical Officer of Health, produced by his Want of Independence as a Public Official.

Francis, Charles R., M.B. Enteric Fever in India.

Hardy, H. Nelson, Esq. Provident Dispensaries, and Paying Patients at Hospitals.

Hayden, John, M.D. Milk Pathology.

Kerr, Norman, M.D. The Effects of the Excess in Alcohol on the Death-rate.

Lee, Robert, M.D. A Simple Method of Diffusing in the Atmosphere Carbolic Acid, the Essential Oils, etc., for the purposes of Disinfection.

Manby, Alan R., Esq. On Recreation for Boys' Clubs.

Sansom, A. E., M.D. Suggestions for the Reform of the Out-patient Department of Hospitals.

Stewart, A. P., M.D. Note on a proposed Metropolitan Home for Convalescents from Scarlatina.

Wells, T. Spencer, Esq. On Cremation or Burial.

Wilson, E. T., M.B. Questions connected with the Management of Fever Hospitals.

Wilson, J. M., M.B. Suggestions for the Better Controlling of Infectious Cases among School Children.

Mr. Ceely (Aylesbury) will show Drawings of the Vaccine Vesicle in Different Stages.

Mr. Jabez Hogg will exhibit an Instrument for the Detection of Sewer-Gas.

Section E.—Psychology.

The subject for discussion in this Section is:

"The Influence of Alcohol in the Causation of Insanity." The discussion will be opened by Dr. G. M. Bacon; and Dr. Hack Tuke, Dr. Shuttleworth, Dr. More Madden, and other members, have intimated their desire to take part in it.

The following papers on this subject are promised.

Bevan, Fletcher, M.B. The Intemperance of Parents a Predisposing Cause of Imbecility in Children.

Sutherland, H., M.D. Cases of Alcoholic Insanity in Private Practice.

The following papers are also promised in this Section.

Ball, B., M.D. (Paris). Certain Cases of Functional Ischæmia of the Brain.

Bevan, G. M., M.D. (New York). The Sub-varieties of Neuræsthenia.

Blandford, G. F., M.D. Cutaneous Discolorations in the Insane resembling Bruises.

Browne, J. Crichton, M.D., F.R.S.E. 1. The Necessity for a School of Medical Psychology in London. 2. A Plea for the Minute Study of Mania.

Dolan, T. M., Esq. The Detention of Lunatics in Workhouses.

Miller, W. J., M.D. Rapid Death from Hæmorrhage into the Pons Varolii and Medulla Oblongata.

Savage, G. H., M.D. 1. A Case of Multiple Apoplexies simulating General Paralysis in a Woman. 2. The Weakmindedness after Apoplexy.

Tait, Lawson, Esq. Two Cases of Menstrual Epileptic Mania treated by Oöphorectomy.

Tuke, D. Hack, M.D. The Recovery of the Insane.

Section F.—Physiology.

The following are the subjects for discussion in this Section.

1. "The Evidence derived from Clinical Observations and Physiological Experiments as to the Seat of the Formation of Urea in the Body." The discussion will be opened by Professor Gamgee, F.R.S., of Manchester.

2. "Sleep and Hypnotism." The discussion will be opened by Professor Preyer of Jena.

The following papers have been promised in this Section.

Anderson, F. C., M.D. The presence of Leucin and Tyrosin in the Urine in numerous Diseases.

Birch, De Burgh, M.B. On Bone and the Function of Osteoblasts.

Brown-Séquard, C. E., M.D., F.R.S. The Effects produced by various Lesions of the Base of the Brain on the Excitability of the so-called Motor Centres.

Cunningham, D. J., M.D. Further Observations on the Intrinsic Muscles of the Mammalian Foot.

Elliot, R., M.D. The first Publication of the now Established Theory of the Second or Sharp Sound of the Healthy Mammalian Heart.

Ferrier, D., M.D., F.R.S., and Yeo, G. F., M.D. The Cerebral Visual Centres.

Gibson, George A., Sc.D., M.B. On the Relation of the Radial Pulse to the Heart-beat.

Hamilton, D. J., M.B. On a New Method of making Sections of an Entire Brain.

Haycraft, J. B., M.B. On Urea in Blood and Muscle.

McKendrick, J. G., M.D. Rhythmic Movements of the Gills of the Goldfish.

Newman, David, M.B. On the Contraction of Striated Muscle, and the Composition of the Broad Dark Bands.

Ransome, A., M.D. The Action of the Ribs in Forced Expiration.

Roy, C. S., M.D. On a New Rapidly Freezing Microtome.

Stirling, William, M.D., Sc.D. On the Effect of Certain Drugs on the Reflex Excitability of the Spinal Cord (preliminary notice).

The following demonstrations will also be given.

RANVIER, Professor, and WEBER, Dr. Various Microscopical Specimens.
PREYER, Professor. The Hypnotism of Animals.
GAMGEE, Professor. The Fibrin-ferment.
LANGLEY, J. A., Esq. The Microscopic Appearances presented by Pepsin-forming Glands in Hunger and in Digestion.
HAMILTON, D. J., M.D. Sections of the Brain, exhibited by means of the Oxy-hydrogen Light.
ROY, C. S., M.D. A new Microtome and other Apparatus.
GASKELL, W. H., M.D. The Action of Dilute Alkalies and Acids upon the Heart.

SECTION G.—PATHOLOGY.

The special subjects for discussion are as follows.

1. "The Influence of Injuries and Morbid Conditions of the Nervous System on Nutrition." The discussion will be opened by Mr. Jonathan Hutchinson.

The following gentlemen are also expected to aid in the discussion of this subject: Dr. Brown-Séquard, Dr. Clifford Allbutt, Dr. Althaus, Dr. Dreschfeld, Mr. Howard Marsh, Mr. E. Nettleship, Dr. Vivian Poore. The following papers on this subject are promised.

BUZZARD, T., M.D. The Affection of Joints in Locomotor Ataxia, and its Association with Gastric Crises.
DUCKWORTH, Dyce, M.D. On Gout considered as a Trophe-neurosis.

2. "Micro-organisms; their Relation to Diseases." The discussion will be opened by Professor Lister, F.R.S.

The following gentlemen are expected to take part in the discussion: Professor E. Klebs (Prague); Rev. W. H. Dallinger, F.R.S.; Professor Burdon Sanderson, F.R.S.; Dr. Vandyke Carter (Bombay); Professor Ray Lankester, F.R.S.; Mr. Malcolm Morris; Dr. Douglas Powell; Dr. William Roberts, F.R.S. (Manchester); Dr. Ernest Sansom. The following papers on this subject are promised.

ALEXANDER, Laughlan, M.D. On Bacillus Malariæ.
MAHOMED, F. J., M.D. The Germ Theory, in its Bearing on the Pathology and Treatment of the Specific Fevers.

The following papers have also been promised.

COHNHEIM, Professor, and Charles S. ROY, M.D. Experiments bearing on the Vascular Mechanism of the Kidney (preliminary notice).
COTTLE, Wyndham, M.B. Congenital Naevoid Papilloma.
CROCKER, Radcliffe, M.D. The Histology of Lichen Circinatus.
DICKINSON, W. H., M.D. Cases illustrating some of the rarer results of Embolism of the Cerebral Arteries (with drawings).
DRESCHFELD, Julius, M.D. 1. Contributions to the Pathology of Fibroid Phthisis (with preparations and microscopic sections). 2. The Histological Relations of some forms of Sarcoma and Carcinoma.
ELLIOT, Robert, M.D. 1. Batrachian Type of Heart in a Youth Twenty Years of Age. 2. A Typical Case of Aneurismal Heart.
EVE, Frederic S., F.R.C.S. On the relation of Irritation and Chronic Inflammation to Epithelial Cancer (with drawings and microscopic specimens).
GOWERS, W. R., M.D. Two Cases of Sclerosis in Syphilitic Subjects.
HAMILTON, D. J., M.D. A brief Account of Pathological Researches on Tubercle and allied Affections of the Lung.
LEECH, D. J., M.D. On Glomerular Nephritis.
LEWIS, David B., M.D. A Case of Tubercular Tumour of the Pons Varolii, associated with Conjoined Deviation of the Eyes.
OGSTON, Alexander, M.D. The Nature of the Globes Epidermiques of Epithelioma.
OGLE, W. Bird, Esq. Case of Medullary Neuroma of Brain (with microscopic specimens and drawings).
PAGET, Sir James, Bart., F.R.S. On Pathological Catalogues.
RICHARDSON, Benjamin Ward, M.D. Notes Observations on the Histology of Breast-Tumours.
STERNBERG, Dr. (U.S.A.). On the Blood in Yellow Fever (illustrated by photo-micrographs).
THIN, G., M.D. The Pathology of Pemphigus.
TOMMASI-CRUDELI, Professor. On the Physiological and Pathological Anatomy of Charbon, and on the septicæmia produced by Inoculation of Charbon in the Sheep.

SECTION H.—OPHTHALMOLOGY.

The following are subjects for discussion in this Section.

1. "The Nature of Glaucoma."

2. "Toxic Amaurosis, especially in relation to Colour Perception." Professor Donders (Utrecht) will deliver an address on some points relating to the Perception of Colours.

The following papers have been promised.

ADAMS, Edward, M.D. A successful Case of Sympathetic Ophthalmia.
BADER, C., M.D. Description of the Ophthalmoscope.
BADER, George, Esq. On Central Amblyopia.
BAKER, W. A., M.D. On the Size of the Aqueous Chamber in Glaucoma.
CARTER, Dr. Vandyke. On the Treatment of Obstruction of the Lachrymal Duct by Rapid Dilatation with Lacrymal Probes. 2. On the Operative Treatment of Conical Cornea.
CHEVALLEREAU, C. Jose. On Colour.
CHEVALLEREAU, C. Verbert. Esq. On the Employment of Atropine in Corrective Prescription.
FRANKLIN, C. L., M.D. A Case of Spasm of Accommodation.
HOLMES, Edward, M.D. (of Melbourne). A New Treatment for Painful Ophthalmia.
LAWSON, Dr. (Vienna). On Changes in the Vitreous Humour in Corneal Inflammation.
GOWERS, W. R., M.D. On Optic Neuritis in Glaucoma.
HARTRIDGE, Dr. On Ophthalmoscopic Appearances in Cerebral Hæmorrhage.
HOLMGREN, Professor. On Hysteroscopy.
HORNER, J. W. Tyrrell, F.R.S. On Ophthalmic Out-door Practice in Hospitals.
HUTCHINSON, Jonathan, Esq. On the After-treatment of Cataract Operations. 2. On Chronic Relapsing Cyclitis.
LANDOLT, Dr. 1. The Shape of the Cranium in Anisometropia. 2. Traumatic Cataract.
MCHARDY, M. M., Esq. The Value of Gymnastic Visual Exercises in the Treatment of Functional Amblyopia.
MORTON, A. S., Esq. On Mydosis.
NELSON, J., Esq. On Tobacco-Amaurosis.
NETTLESHIP, E., Esq. On Colour-Blindness in Atrophy of the Optic Nerve.
POWER, H., Esq. Amyloid Degeneration of the Conjunctiva.
SMITH, Priestley, Esq. On the Pathology of Primary Glaucoma.
STORY, J. E., M.B. Toxic Amaurosis.
TAYLOR, C. Bell, M.D. 1. On the Value of the Continuous Galvanic Current as a Therapeutic Agent in certain Diseases of the Eyeball and its Appendages. 2. An Epitome of Eight Hundred Cases of Cataract Extraction.
TEALE, T. Pridgin, Esq. On the Rapid Determination of Hypermetropia by the Ophthalmoscope.
WALKER, T. Shadford, Esq. On the Amblyopia and Amaurosis of Tobacco and Alcohol.
WALKER, G. E., Esq. 1. On a Case of Sympathetic Ophthalmia. 2. On the Cicatrix of Filtration Theory.
WARLOMONT, E., M.D. Optometry in its relation to the Examination of Soldiers.
WATSON, Spencer, Esq. On the Advantage of Opening the Capsule before making the Corneal Incision in Cataract Operations.
WOLFF, J. R., M.D. On Corneal Transplantation.
Professor SNELLEN (Utrecht) will also offer a paper.

The following instruments will be exhibited and explained in this Section.

BADER, Mr. C. 1. New Fixation Forceps. 2. New Cilia Forceps. 3. A New Contrivance for Magnifying and Illuminating during Operations on the Eye.
COLLER, Mr. 1. A New Refraction Ophthalmoscope. 2. A New Optometer.
FITZGERALD, Dr. A New Instrument for Tattooing the Cornea.
FORBES, Dr. Litton. A New Form of Artificial Eye.
FROST, Mr. Thompson's Ametrometer.
GOWERS, Dr. 1. A New Form of Refraction Ophthalmoscope. 2. An Instrument for Ophthalmoscopic Measurements.
HIRSCHBERG, Dr. (by Dr. Brailey). An Improved Form of Diplometer.
LANDOLT, Dr. Some Improved Instruments.
SMITH, Mr. Priestley. A New Tonometer.
WARLOMONT, Dr. A New Form of Spring-Scissors.

COLOUR-BLINDNESS.

It is hoped that *all* members attending the meeting will present themselves for an examination of their colour perception, and thus assist in settling the much disputed question of the percentage of colour-blind persons. Holmgren's tests will be in readiness in a room adjoining the place of meeting of the Ophthalmological Section during the times of sitting. Directions for finding the room will be duly posted up.

PATHOLOGICAL COLLECTION.

The following contributions have been promised.

Microscopic Specimens: by Dr. Stephen Mackenzie, Dr. Charlewood Turner, Dr. D. J. Hamilton, Dr. Byrom Bramwell, Dr. Dreschfeld, Dr. Leech, Dr. Thin, Dr. Lauchlan Aitken, Mr. Malcolm Morris, Dr. Vandyke Carter, Dr. Osler (Montreal), Professor Klebs (Prague), Mr. Greig Smith, Dr. Braidwood, Mr. Vacher, Dr. Radcliffe Crocker, Mr. Dolan, Mr. Frederic Eve, and Dr. Greenfield.

Drawings: by Dr. Reginald Thompson, Mr. James Startin, Dr. Hoggan, Dr. R. J. Lee, Dr. Greenfield, Dr. Creighton, Dr. Mercer (New York), Dr. Osler, Mr. Jonathan Hutchinson, Dr. Sternberg (U. S. A.), Dr. Maddox, Mr. Eve, Dr. Braidwood, and Mr. Vacher.

Other Preparations: by Dr. Alexander Ogston, Dr. T. Barlow, Dr. Dreschfeld, Dr. Creighton, Dr. Elliot (Carlisle), Mr. Lawson Tait, Professor Busch (Berlin), Dr. D. J. Leech, Dr. Sherburne (Hull), Dr. Kirkwood (Peterborough), Dr. Isambard Owen, and Dr. R. J. Harvey.

ANNUAL MUSEUMS.

The Pathological Collection will be in the Anatomical Museum.

Honorary Secretary to the Pathological Collection: C. Creighton, M.D., Anatomical Museum, Cambridge.

The Exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetic and Sanitary Appliances, will be in connection with the Reception Room in the Guildhall.

Honorary Secretary: G. Wallis, Esq., Corpus Buildings, Cambridge.

Honorary Secretary to the Sanitary Collection: W. Armistead, M.B., Station Road, Cambridge.

EXCURSIONS.

On Saturday, August 14th, there will be excursions to Ely, Peterborough, Audley End, and Royston.

Honorary Secretary to the Excursion Committee: G. Wallis, Esq., Corpus Buildings, Cambridge.

Annual Dinner.

The number of persons that can be accommodated in the Hall of Trinity College is limited to 350. Tickets for the annual dinner will be reserved for members who make application, accompanied by payment of one guinea, to A. P. Humphry, Esq., Corpus Buildings, Cambridge.

Lodgings.

Members desirous of having lodgings engaged are invited to apply to the Reception Secretary, A. P. Humphry, Esq., 56, Corpus Buildings, Cambridge.

Regulations for the Conduct of Annual Meetings.

Notice is hereby given that, at the Annual General Meeting of members to be held at the Senate House, Cambridge, on Tuesday, the 10th day of August next, at eight o'clock in the afternoon, the following regulations for the conduct of Annual Meetings will be proposed for adoption, on behalf of the Committee of Council.

General Control of Meeting.

1. The programme of the Annual General Meeting shall be under the control of the Committee of Council. The following regulations shall guide the Committee of Arrangement and any local Committee that may be formed.

Necessity of Limiting the Expenditure.

2. The gradual and constant increase of the members of the British Medical Association renders it expedient to express the strong opinion of the Committee of Council, that the medical men of the locality at which the Association holds its meeting should not deem it necessary to incur a large expenditure; as, otherwise, the choice of a place of meeting must be more and more limited to the larger towns of the kingdom.

Annual Dinner.

3. The Annual Dinner shall be under the control of the Committee of Council.

Papers to be Read at Meeting.

4. All papers intended to be read at the Annual Meeting shall be forwarded, together with an abstract, to the Secretaries of Sections, ten days before the Annual Meeting takes place, excepting the Addresses of the Presidents of Sections, or the Addresses to be delivered in General Meeting.

Direction of Sections.

5. The President, Vice-Presidents, and Secretaries of Sections shall form a Committee of Reference, with power to accept, decline, or postpone any paper, and to arrange the order in which the papers shall be read.

Grouping of Papers for Discussion.

6. The papers in each section shall, as far as possible, be grouped together, so as ensure a general discussion on kindred subjects.

Length of Time to be occupied by Papers or Speeches.

7. No communication shall occupy more than fifteen minutes, and no person shall be permitted to speak more than once or for more than ten minutes during the discussion thereon.

Resolutions at Annual Meetings.

8. No motion shall be brought forward at the Annual Meeting, unless it has been proposed by the Committee of Council or a Committee of the Association, or notice of the same shall have been given on the previous day, in writing, to the General Secretary, to be entered on the Agenda of the day and printed in the daily journal. This does not apply to amendments moved in due form.

Meeting of Committee of Council. Meeting of Council.

9. The Committee of Council shall meet on the first day of the Annual Meeting, in the afternoon. The Council of the Association shall meet subsequently, and the first General Meeting of the Association shall be held in the evening.

Reports of Committees.

10. All reports of Committees of the Association shall be printed in the Journal before the Annual Meeting.

Notice of Amendment.

Dr. Norman Kerr hereby gives notice that he will move that the following words be added to Regulation 3 of the proposed Regulations for the conduct of annual meetings—viz., that the price of the dinner-ticket shall not include a charge for intoxicating liquors.

Francis Fowke, *General Secretary*,
British Medical Association.

161A, Strand, London, August 4th, 1880.

North Wales Branch.

The thirtieth annual meeting will be held at Beaumaris on Tuesday, the 31st day of August.

Special arrangements are being made for the latter part of the journey (across the Menai Straits), and for visits to the various objects and places of interest in the neighbourhood.

Further particulars will be announced by notices in the Journal, and by circular to the members on an early day.

J. Lloyd Roberts, *Honorary Secretary*.

Denbigh, July 20th, 1880.

Victorian Branch: Ordinary Meeting.

An ordinary meeting of this Branch was held in the hall of the Royal Society on June 24th; the President (Mr. Gillbee) in the chair. The attendance of members was very satisfactory.

The President announced the election by the Council of two new members, bringing the whole number up to sixty-three.

Lunatic Asylums.—The Honorary Secretary (Dr. Henry) reported the particulars of the deputation of the Council which recently waited upon the Chief Secretary relative to the management of the lunatic asylums of Victoria. In addition to what had been published in the daily papers, he mentioned that Mr. Ramsay had stated it to be the intention of the Government to establish a sort of filtering hospital for the insane, so that those really requiring medical treatment might be separated from those needing only maintenance and supervision; also, that the deputation had claimed that the proposed lay-inspector should be subordinate to the medical head. With reference to the composition of the proposed commission, the deputation had informed Mr. Ramsay that the suggested number of seven was suggestive only, and was in no sense offered as an indispensable condition in the new mode of management.

Papers.—The following were read.

A paper was read by Dr. Alexander Morrison, of East Melbourne, on Lunacy Reform. A discussion took place, in which Dr. Cutts, Dr. Henry, Mr. Robertson, Dr. Stewart, the President, and Dr. McMillan took part.—Dr. Morrison replied.

Mr. Rudall read a paper on Senile Cataract, with Demonstrations of Perrin's Ophthalmoscopic Eye, by means of Carter's Large Ophthalmoscope. The apparatus exhibited by Mr. Rudall was remarkable for its completeness and its singular simplicity, and incidentally demonstrated the great advantage possessed by modern ophthalmologists as compared with those who practised this speciality thirty years ago.

Mr. R. Robertson read a short paper on the Treatment of Diphtheria by Copaiba, the discussion upon which was postponed until the next meeting.

Purification of Water.—The President drew attention to a discussion which had recently taken place in the Royal Society on the purification of the Yan Yean water by means of alum or lime. He wished, he said, to take the opinion of the Association as to the desirableness of this process. His own opinion was that, as it was not clear there would not be alum or lime left in solution after the precipitation of the organic matter, the use of such water would be injurious to health.—A conversation followed, in which the opinion generally was expressed that, while it was not impossible to use alum or lime in the manner proposed so as to ensure the whole of what was used being precipitated, it was better to leave the use of the agents to private option. The feeling was unanimous that the continued drinking of water containing even small quantities of alum or lime in solution would be certainly hurtful.

Worcestershire and Herefordshire Branch: First Meeting.

A meeting of members of the Association was held in the Guildhall, Worcester, on Friday, June 25th, for the purpose of inaugurating a new Branch for the counties of Worcester and Hereford. The chair was taken by D. Everett, Esq., of Worcester.

Formation of the Branch.—It was proposed by the President, seconded by Dr. Stanley Haynes, and resolved: "That—inasmuch as thirty-nine members of the British Medical Association have decided to form a Branch, to be called the Worcestershire and Herefordshire Branch of the British Medical Association—a request be forwarded to the Committee of Council to recognise the said Branch at their next meeting: and that the names of thirty-two other gentlemen, who are desirous of becoming members of the British Medical Association and of the above Branch, be submitted for election at the same time."

Officers and Council.—The following were elected. *President:* D. Everett, F.R.C.S. (Worcester). *President-elect:* H. Vevers, M.R.C.S. (Hereford). *Honorary Secretaries:* G. W. Crowe, M.D., and W. Strange, M.D. *Council:* T. Bates, Esq. (Worcester); W. S. Batten, Esq. (Bromsgrove); C. C. Cocks, M.D. (Ross); A. L. Haynes, Esq. (Evesham); S. L. Haynes, M.D. (Malvern); — Moore, Esq.; T. Pike, M.D. (Great Malvern); W. Roden, M.D. (Kidderminster); G. A. Sheppard, Esq. (Worcester); H. Swete, M.D. (Worcester); — Smith, Esq.; T. Turner, Esq. (Hereford); M. A. Wood, Esq. (Ledbury).

Representatives in the General Council.—D. Everett, Esq.; W. Roden, M.D.; and T. Turner, Esq.

Rules.—A code of rules was laid before the meeting, and ordered to be adopted and submitted to the Committee of Council for approval.

President's Address.—The President delivered an address, which is published at page 199.

WEST SOMERSET BRANCH: ANNUAL MEETING.

THE thirty-seventh annual meeting of this Branch was held at the Squirrel Hotel, Wellington, on Thursday, July 22nd, at 3 P.M.; JOHN MEREDITH, M.D., President, in the chair. There were present fourteen members of the Branch and three visitors.

Vote of Thanks.—On taking the chair, Dr. MEREDITH proposed a vote of thanks to Dr. Clark for his services as President during the past year, which was carried by acclamation.

Report of Council.—The following report of Council, together with the Treasurer's statement of accounts, were received and adopted.

"Your Council, in presenting their report for the past year, are pleased to say that the Branch continues to be prosperous and to be fairly well supported. The number of members now on the list is fifty-nine, being one less than last year. The losses by removal and otherwise have been four; the new members admitted, three.

"Although it is gratifying to find that the Branch pretty well maintains its numerical strength, your Council think it right to repeat the wish, often before expressed, that more of our brethren who are resident in West Somerset, and as yet unconnected with the Association, would afford themselves and us mutual pleasure and profit by entering the Association through this Branch, and attend, as they may be able to do so, our periodical gatherings.

"In referring to the meetings of the Branch during the past year, the Council feel that they may point back to the last annual meeting, which was held at Dunster, as a good illustration of the advantages derivable from such reunions. In addition to the usual routine business and an interesting address from the President, the day was replete with more than the usual enjoyments of a delightful holiday in one of the most lovely spots to be found in the county.

"The proper professional work of the Branch has been kept up at the intermediate meetings. The question, 'What is the Use of Alcohol in the Treatment of Disease?', and the subject of 'Medical Education', were respectively well discussed at the autumnal and spring meetings. Dr. Meredith's case of oöphorectomy, which was published in the JOURNAL after being read at the former meeting, was of more than passing interest. Mr. Liddon's paper on 'Hernia through the Obturator Foramen', with an illustrative case successfully operated on, and the papers and cases contributed by Dr. Cordwent, Mr. Parsons, and Mr. Rigden, will have left on the minds of those who listened to them, and joined in the discussions which followed, valuable lessons, which may be turned to good account, should similar cases occur in their practice at some future time.

"Your Council, in compliance with a request from the Chairman of the Parliamentary Bills Committee of the Association, last week prepared and signed a petition against the Vaccination Bill now before Parliament, which has since been presented by one of the county members.

"The Treasurer's accounts, presented herewith in their usual form, show that he has in hand a credit balance of £6 15s. 5d. in favour of the Branch."

Intermediate Meetings.—It was resolved, "That the Council be requested to arrange for holding an autumnal and spring meeting as usual."

Place of Meeting and President-elect for 1881.—It was proposed by Mr. PRANKERD, seconded by Mr. ALFORD, and carried unanimously, "That the next annual meeting be held at Taunton; and that G. W. Rigden, Esq., be President-elect."

Honorary Secretary and Treasurer.—It was resolved, "That Dr. Kelly be re-elected Honorary Secretary and Treasurer."

Council of the Branch.—It was resolved, "That the following be the Council for the ensuing year: J. Meredith, President; T. Clark, Past-President; G. W. Rigden, President-elect; H. J. Alford, M.D.; Walter Edwards; H. W. Randolph; H. Alford; W. L. Winterbotham; J. Prankerd; and W. M. Kelly, M.D., Honorary Secretary."

Representatives of the Branch in the General Council.—It was resolved, "That Thomas Clark, Esq., John Meredith, M.D., with the Honorary Secretary, be the representatives of the Branch in the General Council for the year 1880-81."

Petition against the Vaccination Bill.—A short petition, drawn in accordance with the terms of the draft supplied by the Chairman of the Parliamentary Bills Committee of the Association, was laid before the meeting, and gentlemen present were invited to sign it. A letter from Dr. Cordwent on the subject was read.

President's Address.—After a few preliminary observations, the speaker took up the subject of the social *status* of the general practitioners of medicine in England, Ireland, and Scotland; and remarked, as indicated in the columns of the BRITISH MEDICAL JOURNAL last year, that doctors are keenly alive to social position; and that, upon the whole, the position is better in Ireland and Scotland than it is, as a rule, in England; but that the difference is being rapidly removed. Medical practitioners are learning how to be true to themselves, and this education redounds to the good of the public. He dwelt next upon the comparative relationship of the three great professions—Church, Law, and Medicine; how each acquits itself towards the community at large; deducing therefrom that, should society bring itself to its simplest form and discard all superfluous appendages, the church as a special vocation, and law as a special profession, could be reduced to a very limited compass, if not dispensed with altogether; while medicine could not be so treated, but rather the contrary. Since few only, taking the material interest of a community into consideration, could be spared for the calling, the aptitude of these to cure disease and injuries would constitute the ground of their existence among people. The relationship of medicine to State organisation was referred to, alluding to the history of ancient empires, where man's relation to society was comprehended and displayed often with elaborate care. His relation to matter was hardly thought of; and this, the speaker inferred, was one of the main reasons why those historic kingdoms passed away, leaving little more than a name for us in these days. "They knew not how to sustain a nation's health and energy." Passing on from this, he paid a just tribute of praise to the members of our profession connected with Government in the department of State Medicine. From the consideration of the doctor's relation to the public at large, his relationship with his brother practitioners was spoken of, and shown to be more cordial than ever, thanks to such associations as this. In conclusion, the peculiar position of the medical practitioner and his patient was noticed; and an admirable sketch of it, as given by Professor Donders, was quoted. The splendid reception given to Professor Lister at Amsterdam last year was alluded to, to show that, after all, the highest reward distinguished men among us seek is the good opinion of their brother practitioners.

Vote of Thanks.—At the conclusion of his address, which was much applauded, a cordial vote of thanks was awarded to the President.

Oöphorectomy in Cases of Dysmenorrhœa.—Mr. LAWSON TAIT referred to the inevitable opposition and hostile criticism to which every new operation was subjected, and noticed at some length the history of several operations which have been introduced within the last thirty years. He pointed out that, even in some cases when they overcame hostile criticism, it still remained a matter of doubt (as in the case of the resection of the knee-joint) whether the operation, by its results, was justifiable or otherwise. For the relief of dysmenorrhœa by oöphorectomy he claimed the following advantages: 1. Comparative safety of the operation, as no fatal results had followed the operation in his hands; 2. Immediate or almost immediate benefit to the patient, pain and hæmorrhage being in every case alleviated, and in a majority of the cases entirely removed; 3. Great improvement in the bodily condition and general health of the patient; 4. Restoration in the cases of women dependent for their living on labour to a position in which they are enabled to remain in domestic service, or discharge other labour, without the interruption as heretofore of several days in each month. Mr. Tait then gave very full details of the cases of fifteen women upon whom he had performed the operation, from which it appeared that in nearly all it was called for by the existence of menorrhagia, attended with great pain and suffering in some of the cases, with excessive hæmorrhage in others, threatening life itself. In all the cases, they had for years resisted every known method of treatment. The ages of the patients operated upon varied from twenty-one to thirty-seven years. Some had been married, and had borne children; some were unmarried. In the majority, the history had been the same: cirrhosis of the ovaries, following ovaritis, the sequelæ of some of the exanthematic diseases, with more or less malposition of the uterus; and in some of the cases, adhesion of the ovaries to the rectum and other organs. Many of the cases were women in domestic service; three were, however, in the upper class of life. To the former class, Mr. Tait alleged that the most marked benefit would be derived from the operation, as it enabled them to earn their living, when in many cases they had ceased to be able to do so, and had become a burden to their relations or friends, owing to the necessity of remaining in the prone position from ten days to a fortnight monthly. In women of the upper class, Mr. Tait was understood to say that he would hesitate to recommend the operation, except when it was necessary to save life, or when pain was so excessive that existence was a burden to the patient. Mr. Tait then proceeded to rebut the various objections which had been brought, or might possibly be preferred, against the operation. 1. *Unsexing the patient.*—With regard to this point, Mr. Tait said that, as the diseases for which the operation was done had already unsexed the patient as far as child-bearing was concerned, and in many cases as far as marital functions also, this argument was futile. The operation often restored

the sexual capacity previously destroyed. In this the operation had had, in his experience, exactly the opposite effect attributed to it in the argument he was discussing. 2. *Destroying the sexual instinct and desire in women.*—Mr. Tait said that this was wholly a misconception, and that, in fact, no such consequences resulted. Two of the patients operated upon were married ladies of good position, and they stated that it made no difference whatever in their marital relations; and all stated that no change whatever had been brought about in their feelings to the other sex. 3. *Alteration of voice, appearance, etc.*—This was also a bugbear; for, except the increased flesh consequent upon improved general health and relief of pain, there was no abnormal increase or tendency to adipose development. There was no change of voice whatever, nor was there any disposition apparent to abnormal or undue growth of hair. This was due, he thought, to the fact that in no case would the operation be performed until after puberty, and that after that period no change followed either in the sexual feelings or physical appearance. 4. *Criminal abuse of the operation.*—The possibility of such an idea occurring, even if any member of our profession could be found base enough to prostitute his abilities for the commission of such a crime, was indicated by Mr. Tait with great force. He showed that no woman could be found to undergo such a very serious operation, involving the laying open of the abdomen, for the purpose of procuring exemption from the consequences of sexual intercourse. As a matter of fact, in the course of his practice, he had found that the mere discussion of the operation was sufficient to give great relief to the symptoms, when such were exaggerated or due to hysteria. In fact, in such cases it helped us in diagnosis, for only genuine cases would submit to it. Mr. Tait frequently referred, for confirmation of his views and opinions, to a treatise on gynæcology recently published by the distinguished American Dr. Goodell. In the United States, he remarked that oöphorectomy had already passed the probationary stage, and was recognised as an established operation—in fact, had been hailed as a means of relief for otherwise incurable suffering.—Several interrogations were put, which were replied to by Mr. Tait.—A cordial vote of thanks was then passed unanimously to Mr. Tait for his attendance on the occasion, and for his able and interesting discourse.

Dinner.—Several of the leading inhabitants of Wellington; the Rev. Prebendary Knowling, vicar; E. B. Tylor, Esq., D.C.L., F.R.S., etc.; joined the dinner party as guests. The usual toasts were responded to with much spirit; and this very successful meeting was brought to a close at ten o'clock.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE DEPTFORD HOSPITAL.

THE report of the Superintendent of the Deptford Hospital to the Metropolitan Asylums Board, extends over the period from April 1878 (when the institution was reopened) to December 1879, and shows that a great amount of good work was done at a time when small-pox was more than usually prevalent in the metropolis. Some questions relating to vaccination have been much before the public of late. The facts and inferences mentioned by the medical superintendent of the Deptford Hospital will, therefore, be read with special interest. From April 11th, 1878, to December 31st, 1879, 1,634 acute cases of small-pox were admitted; 1,325 were discharged recovered, and 282 died. There were also admitted, 142 convalescents from other hospitals of the managers, and 56 cases of diseases other than small-pox. Of the 1,634 acute cases, 1,148 were vaccinated, 228 were doubtfully vaccinated, and 258 were unvaccinated. Of the vaccinated, 83 died; of the doubtfully vaccinated, 78; and of the unvaccinated, 121; showing a death-rate of 7.2 per cent. in the vaccinated, 34.6 per cent. in the doubtfully vaccinated, and 47.2 per cent. in the unvaccinated. The average duration of residence of the cases that recovered was forty-four days.

In the Tables which are appended will be found some interesting facts regarding vaccination. Persons with imperfect or even good vaccination marks become susceptible of small-pox within a few years of their vaccination; but no fatal attack occurred in the vaccinated under seven years of age, and only 14 (or 16.86 per cent.) deaths under puberty; while among the doubtfully vaccinated and unvaccinated, 134 deaths (or 66.33 per cent.) occurred under puberty. Sex would appear to have an important influence on the mortality from small-pox in vaccinated persons under puberty. In those with imperfect marks, 2 deaths occurred in females as early as seven, while in males no deaths occurred before twelve; and in those with good marks deaths occurred in females at eleven, and there are five deaths under puberty (sixteen years), but in males no death occurred under nineteen. This would appear to indicate the necessity for earlier revaccination in the case of females than in the case of males.

THE LEICESTER PROVIDENT DISPENSARY.

THE Leicester Provident Dispensary is one of the most successful institutions of the kind in the kingdom. The Committee now propose to extend its benefits to the country districts around Leicester. And with this object they have issued a circular, which is intended to prepare the way for a general meeting of the gentry, magistrates, and members of Parliament for the county. From this circular we learn that the institution was originally started as a free dispensary; that in 1862 it was placed on the Provident basis, and commenced its operations with 2,300 paying members. At the present time, it has between 24,000 and 25,000 members, and this number is continually increasing. The central buildings have been recently enlarged, and there are now three branches within the borough of Leicester and one at the village of Belgrave, all of which are doing useful work; and, in the opinion of the board of governors, the time has arrived when the work can take a wider field of usefulness by carrying the same organisation into the country. For this purpose, it is at first proposed to embrace an area of about six or seven miles round Leicester, and divide this into four districts, in each of which there would be a small central dispensary, with a resident dispenser. Each of these districts would be again subdivided into five or six parts, consisting of groups of villages, in the centre of which a small cottage dispensary would be opened.

The dispenser of the district, after attending to his central dispensary in the early morning, would attend at two or three of the cottage dispensaries each day at stated times, so as to go round his districts two or three times a week.

The medical men now resident in the proposed districts, and who, so far as they have been seen, are in favour of the system, would be invited to enter on the dispensary staff, and would take areas to be agreed upon between themselves and the board, attending at their local dispensary at stated times, and visiting at the patients' homes when required to do so.

For the management of the country districts, it is proposed to appoint in each village an honorary member as steward, who would see that proper cases were admitted, collect subscriptions (but not the members' payments), and represent the dispensary in his village.

The stewards would form a district board, who would meet as often as necessary to generally look after the work of the district. This board would elect one of its number as a member of a central board sitting in Leicester.

The management, so far as the paid officers are concerned, would be done by the central staff in Leicester—a course resulting in much economy for the county extension; and the medicine, etc., would also be supplied from the central dispensary.

Although a part only of the county is thus included, it is intended, if the work prosper and the organisation be found complete, to gradually extend the work throughout the county.

The dispensary board, in discussing this matter, has not overlooked the fact that in almost every village there is a benefit club for men, and in several a similar club for women, and it is not proposed to interfere with these organisations; but the number of people thus benefitted is comparatively small, and the medical relief of an uncertain character. The dispensary would, if required, undertake, upon certain fixed terms, the medical work of the clubs, leaving the rest of the work to be managed as at present. There are also other means, such as medical clubs, by which the proposed object could be partially attained; but the dispensary board, having, after many years of patient work, gradually improved the system in Leicester until it is now considered one of the most perfect in England, is anxious to make a fair trial of the same system in the county.

OUR CONFESSIONAL.

MAGNO INGENIO, MULTAQUE NIHILOMINUS HABITURO, CONVENIT ETIAM SIMPLEX VERI ERRORIS CONFESSIO; PRÆTEREQUE IN EO MINISTERIO, QUOD UTILITATIS CAUSA FACTURIS TRADIT, NE QUI DECIPIANTUR EADEM RATIONE, QUA QUIS ANTE DECEPTUS EST.—(Celsus *De Medicina*, Liber viii, cap. 4.)

LACERATED PERINÆUM.

SIR,—To my great astonishment I perceive two letters in your Journal of this date (June 12th), taking exception to certain of my remarks concerning "La stated Perinæum", an article upon which subject appeared in your issue of May 29th last. In my reply to these, I must be very brief.

Mr. William Donovan may have had a mischance in his first case of forceps, by not directing them properly; but in my practice, which is nearly fourteen years, I conceive I have a very good idea of the axis of the outlet. I still contend that, in most cases, "there is no necessity for leaving the forceps on while the head is passing through the vulva"; for I distinctly inferred that women who are well formed (*embonpoint*), there is more chance of rupture of the perinæum, and especially in primiparæ. We must recollect that the shoulders have to assume a slightly different position from the disengaged head, and that there is no necessity to be in such a violent hurry to disengage the head. Although the forceps might lessen the transverse diameter, the quickness of the extraction through the soft parts in a

woman's case as I have described, would just make "a very fair rupture", the very thing we want to avoid, by using more antiseptic. Hence I shall continue to use my carbolic more than ever in future, as I had unfortunately to report two cases of this distressing complaint.

With reference to the second letter from "M.R.C.S.", I am compelled to say that the blood-poisoning had nothing whatever to do with the sutures applied, or in the way they were applied; and I cannot quite see the inference drawn from his remarks. The vaginal secretions were as much in contact with the torn parts in my successful case as in my non-successful one. This is impossible to avoid, even with the deepest sutures; but I only had a needle and ordinary thread, yet I am aware the stitches should be deep, and need not be reminded of this special fact. My friend Mr. Braithwaite, a very old surgeon of Cumberland, is quite aware that blood-poisoning in this case was not due to any neglect, for he saw the case with me. We must recollect that septicæmia may occur from a very slight wound on the finger. Perhaps "M.R.C.S." may not have seen such a case. I am, yours truly,

M.D. of New York.

Marlowes, Hemel Hempstead, June 21st, 1880.

N.B. The continental position is the one nearly always used in America.

CORRESPONDENCE.

THE HISTORY OF OVARIOTOMY.

SIR,—Let me draw attention to an authority that "Auctor" has entirely overlooked in his letter on the history of ovariotomy. In the third volume of Sir James Simpson's works, edited by Professor Alexander Simpson, pp. 488-9, there occurs the following passage.

"An analysis of Dr. Clay's cases furnishes a still more convincing proof of the fallacy of the objection to ovariotomy which we are now considering. (The operation is as fatal now as it was at first.) Dr. Clay published the following table of the results of his operations in the year 1856, up to which time he had performed it in seventy-one cases. In the first 20 operations, there was 1 death in every 2½ cases; in the second 20 operations, there was 1 death in every 3⅓ cases; while in the last 31 operations there was 1 death in every 4 cases. Such a table shows how, in the hands of a careful and intelligent operator, the mortality from this severe operation may go on diminishing, till now Dr. Clay is able to perform ovariotomy with a better prospect of success than surgeons can ever have when having recourse to some of the more serious though very common surgical operations. .....The results of the operation, in the hands of one operator at least, are not included in the table I have given. I refer to those of Mr. Spencer Wells, who has latterly devoted much attention to the improvement of ovariotomy, and who tells me that he has performed the operation now in sixteen cases, and has lost only six of his patients. In other words, the operation has been attended, in the hands of Mr. Spencer Wells, with a mortality of 37½ per cent., or of 1 in 2⅔ of all the cases: a high ratio of mortality, no doubt, but still, as he remarks, less than that attendant, in our metropolitan hospitals, on lithotomy in the adult, or amputation of the thigh."—I am, yours faithfully,

ANDREW S. CURRIE, M.D.

Lydney, Gloucestershire, July 28th, 1880.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

SIR,—Before the Council proceed to active measures, it would be interesting to know the nature of the arrangement which they have succeeded in effecting with the Foresters' and other friendly societies, the self-supporting dispensaries, artisans' clubs, and kindred bodies. Sir C. Trevelyan states, in his letter in the JOURNAL of the 31st ult., that an arrangement has been made; but he does not indicate what that arrangement is, or how far it goes. As you have expressed a particular wish for the opinions of members of the body of general practitioners on the Association in question, I venture to give you mine, which is that, in the metropolis, such an Association has no *raison d'être* at all.

If the out-patient departments of all the hospitals of London were closed to-morrow, whither would the sick poor turn for aid? The poorest would go to the parish, so the profession would not be affected by them; but the section above pauperism would of necessity go to the doctors, to the self-supporting dispensaries, or to the clubs, and the profession would gain to that extent. But does sufficient accommodation exist? Undoubtedly so, in many districts; and where it is defective at present, it would soon be created, in accordance with the ordinary laws which regulate demand and supply. The projected Association is open to the grave objection that whatever dispensaries it might establish would be the artificial creation of a powerful organisation to meet a fancied want, instead of being spontaneous developments under the influence of the requirements of particular districts.

It is, of course, too much to expect that so powerful and well-meaning an Association will be content to vanish into thin air directly it is told by an obscure individual that it is not wanted; but I may, perhaps, be permitted to offer some suggestions in addition to those which have already appeared in your columns.

1. Even at the risk of being inquisitorial, the income-limit should be definite, and the heads of families should have to subscribe to a statement of the amount of their income, or rather that it does not exceed the prescribed limit; and should incur a deterrent penalty for a wilful misstatement.

2. There ought to be no advertising whatever, excepting the announcement in the window or on the wall of the dispensary itself. This precaution would be absolutely necessary for the protection of the general practitioners of the districts affected.

3. Dispensaries ought not to be established in the vicinity of existing dispensaries of a self-supporting character, whether such dispensaries be the private speculations of medical men or the creation of a local organisation; provided always that such dispensaries are officered by one or more duly qualified practitioners. The consent of a majority of the members of any friendly society, clubs, Foresters, or kindred bodies, ought also previously to be obtained.

If the precautions that I have ventured to suggest be observed, the Association is not likely to do much harm, even if it does not do much good. I enclose my card, and am, sir, your obedient servant,

A MEMBER OF THE METROPOLITAN COUNTIES BRANCH.

August 1880.

SIR,—I have read Sir C. E. Trevelyan's letter in the JOURNAL of July 31st, with astonishment and regret; astonishment, that he should make such a statement as that, "the payments are higher than those under the "club doctor" system"; and regret, that the Association should seek the alliance of friendly societies, and that there should be practically but very little check upon persons proposing to become members. A regard for your space precludes me from attempting to disprove the assertion with reference to the lower rate of club payments; so far as my reading and experience goes, that is entirely a fallacious statement.

From the remark that "this is not a charitable, but a commercial system", it would seem that the object of the promoters of this Association is to create a huge Co-operative Medical Supply Company; and, with the rule quoted by Dr. Gray in operation, we shall have an Association started in the metropolis of the kingdom, false in its principles, and disastrous to a large number of the medical profession. There is a class of persons too well off to be allowed relief through the Poor-law, who are yet too poor to pay the lowest fees of the most junior medical practitioner. *This class of persons is a comparatively small one.* Now, I contend that, with a due regard for the dignity and welfare of the profession and the needs of this class of persons, the only thing we are called upon to do is to place within the reach of the latter the means for obtaining sound medical advice by their own small periodical payments. If individuals of this class do not choose to avail themselves of these means, the existing channels of relief are still open to them. It is no part of our duty, and certainly not to our interest, to offer a premium to people of all sorts to become members, as will be done by a rule without restriction, and by the co-operation of friendly societies. Do not let us talk of the "abuse of medical charity", if such a huge abuse, as this Association will be, is to be forced upon the profession. A "club" is detrimental to the profession in this way: it insures members certain payments when sick, without any regard to their pecuniary position, which is very right and proper; but such membership entitles them to medical attendance. And such a system is to be grafted on, in part, to the Provident Medical Association. I fail entirely to see what the Association wants with the co-operation of friendly societies. Reading between the lines, it seems to me that the tendency will be to create a large Association offering the advantages of "cheap physicking" to any of the lower middle class who choose to avail themselves of it, with very little regard to the claims of the profession, and hereafter to quote its increasing number of members as an argument in favour of its need and success. This is what is often done with regard to the out-patient department of hospitals: "See what a large and ever-increasing number of patients we have, and, therefore, how necessary such a department is, and what a large amount of good it is doing!" It does not follow at all.

The establishment of a provident dispensary is the offer of a certain commodity (medical attendance) at considerably less than its market value, and in doing this we ought to take care that the interests of the medical profession generally are not encroached upon more than is actually necessary. Is the Metropolitan Provident Medical Association carrying out this principle? I say, most emphatically, no.

The benefits of a provident dispensary should be limited to those in receipt of weekly wages below a certain amount—say thirty shillings. A provident married man, earning so much, can and does, *as a rule*,

pay his doctor's bill; as for the improvident man earning so much, he would not join a provident dispensary, or, if he did, he would not keep up his payments. I am also inclined to think that the office of medical attendant ought to be open to all registered medical practitioners in the neighbourhood willing to act. And why could not the patients be seen at the doctor's surgery, and medicines dispensed at conveniently-placed dispensaries? Such an arrangement would lessen the expense considerably.—Yours, etc., ALFRED SHEEN, M.D.

Cardiff, August 3rd, 1880.

THE OPHTHALMOLOGICAL SOCIETY.

SIR,—I cannot but think that the extrametropolitan ophthalmologists misconceive the motives of those who opposed Mr. Solomon's resolution. As one of those who voted against it, I may be permitted to state that I did so on two grounds. First, the officers of the Society, as arranged, constituted one-third of the members; and that proportion seemed as large as would permit a due rotation of officers. Secondly, I doubted whether Mr. Solomon's opinion would be shared by the extrametropolitan members generally, seeing that one-half of the highest offices (vice-presidencies) had been allotted to them. Since, however, his opinion does seem to be shared by many others, the question can surely be reopened at the general meeting in October, when the rules are discussed; and I venture to predict that, in deference to the opinions which have been expressed, the resolution of Mr. Vose Solomon would then be carried unanimously.—Yours obediently,

W. R. GOWERS.

50, Queen Anne Street, Cavendish Square, W.

THE HARVEIAN ORATION.

SIR,—Will you kindly admit the following reply to some expressions used by Dr. Ogle in the Harveian Oration which he delivered on June 25th last in the Royal College of Physicians, and printed in the JOURNAL. I am led to reply to his statements, because this is not the first time such have been made.

1. Dr. Ogle is reported to have stated, regarding Harvey's *Exercitationes de Generatione Animalium*, printed in 1651, that "this was the first book on midwifery written in the English language" (see JOURNAL, July 10th, p. 42).

2. Dr. Ogle is also reported to have said, "I fail to discover any indication in Harvey's writings of his own theological views, excepting in his will, which is most religious in tone".

3. Dr. Ogle is also reported to have stated that "It does not appear why he parted from the service of his beloved and respected master the King" (see JOURNAL, July 31st, p. 161).

1. Harvey's work on *Generation* was neither written nor first printed in the English language, but in Latin. An inferior translation into English was made; it is stated to have been by a Llewellen, and printed in 1653; which was, of course, before Harvey departed.

2. Dr. Willis has stated, "In the will, he further 'most humbly renders his soul to Him that gave it, and to his blessed Lord and Saviour Christ Jesus'", as evidence of Harvey's religious opinion (see Life in *Works*, 1847, p. 79, and *Will*, p. 89). I may remark that a person's religious opinion, in early or later times, cannot be drawn from expressions contained in a will. It was legally necessary that similar expressions should be inserted in all wills. If such religious expressions had been left out, relatives might have found to their cost that their departed relation would be branded in a court of law as worse than an infidel, and his property confiscated. I am surprised that any religious expressions in wills should have been produced as evidence of religious opinions.

3. Dr. Willis has stated: "From the date of the surrender of Oxford (July 1646), Harvey followed the fortunes of Charles no longer. Of his reasons for quitting the services of his old master, we know nothing. He probably felt anxious for repose, etc," (see Life of Harvey in *Works* by Willis, 1847, p. 32). I may remark that Oxford surrendered to the Parliamentary Army in July 1646, under Lord Fairfax; and that King Charles I was obliged to "leave off gunning". Having dismissed his personal retinue, he made his escape from Oxford; and for his own personal security, he had to guard his movements with the utmost circumspection and privacy until he arrived in Scotland. Thus it was for politic reasons that Harvey was severed from his royal appointment—an appointment sanctioned by the Parliament; and the formidable disasters which befell the King, precluded any recall or reunion.—I am, yours faithfully, E. NOCK.

August 2nd, 1880.

P.S.—If any reader can inform the writer by whom *The Anatomical Exercises of Dr. William Harvey, concerning the Motion of the Heart and Blood*, first printed in 1653, was translated, with reference to any evidence, I shall be much obliged.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, July 29th.

Guy's Hospital.—Mr. PULESTON asked the Secretary of State for the Home Department whether his attention had been called to the present condition of Guy's Hospital and to the statements made by the senior physician in a letter to *The Times* of Saturday last, and to the report of the inquest since held in the hospital; and whether, as the hospital was subject to the control of Parliament, he would take steps to remedy a state of affairs which was calculated to impair the usefulness of the institution.—Sir W. HARCOURT said he was not aware that he had any authority to take steps to remedy the state of affairs to which the hon. member referred. A verdict of manslaughter had been returned against one of the nurses, and the matter so far would be investigated in a court of law. He had every hope and confidence that the governors of the hospital would cause an inquiry to be made into the entire subject.

MILITARY AND NAVAL MEDICAL SERVICES.

SURGEON-GENERAL MUNRO, C.B., is under orders for Gibraltar, and his place at the office will be taken probably by Surgeon-General Fasson.

WE learn that the prospects of the next army medical examination are unusually good, between sixty and seventy candidates having already sent in their names.

THE INDIAN MEDICAL SERVICE.

SIR,—I have been directed by the Committee of the Indian Medical Service Defence Fund to ask you to publish the two following extracts from letters recently received by them from officers in that service, and to allow the extracts to be prefaced by a very brief statement of their reasons for asking you to grant this favour.

First, it appears to the Committee to be only just that those young men who propose to present themselves as candidates for admission to the service at the examination to be held within the next few days should be urgently and repeatedly warned of the altered conditions of that service, of which not the faintest hint is given in the "memorandum" issued from the India Office, setting forth its advantages and conditions. It is scarcely credable, but is nevertheless a fact, that the said memorandum, dated "June, 1880", is precisely identical with that issued previous to former examinations, notwithstanding the very radical changes that have been made in the service by the General Orders of the 2nd January and the 15th March last.

Secondly, our vast Indian possessions furnish an extremely important field for the pursuit of scientific investigation in medicine and the allied sciences, and it appears to the Committee to be a matter of national concern that this almost boundless field of study should not be disregarded, but that young men of talent, and of pride in their professional reputation, should be especially tempted—as up till now they have been—to devote themselves to an Indian career.

Now the Committee had made arrangements to have a question—or if necessary several questions—put to the Secretary of State for India by one or more of their numerous friends and coadjutors in the House of Commons, in order to attract public attention to this matter, but, just as they were on the eve of having the first question asked, the recent news from Afghanistan was made public. This news is of such a character that it cannot fail to be particularly harrassing to the officials at the India Office, and, devoted as they are most thoroughly to the interests of the Indian Medical Service, and determined to urge its claims on the attention of Parliament, the Committee of this fund have a feeling I might almost say of satisfaction, in being able at such a time to refrain from adding to the innumerable and worrying questions, with which Lord Hartington has at present to cope.

That, sir, is the reason why the Committee respectfully ask *you* to publish the following extracts, for, in view of the great Medical Congress at Cambridge, they think it very important that the claims of the Indian Medical Service should immediately be brought prominently to the notice of at least the great medical public: a service which you are best able to perform.

These extracts are from two letters received recently. I could quite

easily fill the whole of your columns from beginning to end with letters to the same effect, received since the organisation of this fund.—I am, sir, yours truly,

CHARLES WAHAB, Secretary
Indian Medical Service Defence Committee.

8, Northumberland Street, W.C., August 3rd, 1880.

[Extract No. 1.] Afghanistan, June 1880.

To C. Wahab, Esq., Indian Medical Defence Association.

Sir,—. . . . . If there *must* be one surgeon-general for the two services, then all that our service can expect is the alternative appointment. For many reasons an officer of our service should *always* be the chief, for the native troops far exceed the British troops in numbers, and their importance in actual service, as we have seen here, is equal to that of the British troops judging by all the actions round Cabul, etc. . . . . Most important of all is the argument that the British surgeon-general's first acquaintance with native troops is as an administrative officer. As an executive officer, he is entirely ignorant of them. I was asked here the other day, in the office of my deputy surgeon-general of division, what the difference was between Sikhs and Mussulmans? And why I did not indent for killed (by a Mahomedan) meat from the Commissariat for the sick Sikhs, just as for the Mussulmans, instead of indenting for a live goat for the Sikhs to kill according to their own custom. Other questions of a similar nature, showing equally perfect ignorance of the native in every way, I have had.

The British surgeon-general at headquarters certainly has some help from his Indian Service secretary, but then again we suffer, as all the influence in giving army appointments to regiments will be in the hands of the secretary, his British chief's knowledge of us juniors will be little indeed, and in cases where we have served in the circle of an Indian service deputy surgeon-general, his (the surgeon-general's) knowledge of it will be *nil*.

Again, in all cases, without exception, where the deputy surgeon-general is a British army officer, his secretary should be of the Indian Service, and *vice versâ*, though this latter is not so important, as any Indian Service man can understand a British soldier's needs; but not every British Medical Officer can know those of the native troops.

. . . . . If the service were as it was when I entered it, I am satisfied; but if the Government cut down our good appointments, by which we could have saved so as to assist our pensions, then they should increase the pensions. Another thing is, that a man in Indian Service, who chooses the military branch, has nothing, or next to nothing, to look forward to. There are only six deputy surgeons-general now, instead of eleven (in Bengal) I do not think it (choosing the military branch) should debar him from sanitary commissionerships, or similar appointments; if so, the military appointments will be greatly shirked.

. . . . . There should be no closer union with the British Army Medical Department. Any of us who wanted it, could have taken it from its present owners in open competition, but we did not want it; we worked hard for the Indian Service, and if there are any "plums", we earned them fairly, and we hope we shall not be robbed (to use the proper term). We came to the Indian Medical Department for a good, honourable, and remunerative service, in which we do not want to be disturbed, and with which we are all content, and we cast no longing eyes on the relative rank and the extra buttons of the Army Medical Department.

. . . . . There is one more point, and it is unemployed pay. A man may be hard at work in a line hospital, and not draw more than pay of his rank. I myself, in this campaign, had five different changes for a time, and yet could only draw unemployed pay; but believe me there was plenty to do.—I am, sir, yours truly,——

[Signed by a Surgeon of the Indian Army.]

[Extract No. 2.] Afghanistan, June 1880.

To C. Wahab, Esq., 8, Northumberland Street, London.

Sir,—. . . . . I would especially direct the attention of the Committee to "unemployed pay". There is a clause in the warrant which states that we are to be paid at the rate of 286 rupees per month, until the examination known as the Lower Standard Hindostanee shall have been passed. I arrived in India . . . . and passed this examination six months afterwards, and was almost immediately ordered on field service. Since coming into the field, I have been employed on duties of the most varied character. I was broke I about from pillar to post in the Kyber Pass for seven months, doing duty at outposts, and sometimes being compelled to march at a moment's notice, and without sufficient transport, so that I have on several occasions had nearly my whole kit

Every post of importance here is occupied by officers of the British army. . . . . I consider it a scandalous proceeding to make our department subordinate.

The position I enjoy as Deputy Surgeon-General Medical Officer, I have found to be a most unenviable one: in the field, we have not the comforts of the regimental mess, which our seniors attached to regiments enjoy, and we find ourselves generally "no man's children".

For all my work and discomfort, I have only been allowed the "unemployed" rate of pay, which is less than that drawn by the most junior officer of the Staff Corps. . . . .

I had hoped to enclose you a subscription to the Fund, but owing to some misunderstanding between the Civil Department, in which I was first employed, and the military paymaster, I have been unable to get my pay settled. . . . . I personally feel very thankful to the Committee for the great interest they have taken in this matter.—Yours very truly,——

[Signed by a Surgeon (M.D.) in the Indian Medical Service.]

ARMY MEDICAL SCHOOL.

THE fortieth session of this School ended on July 2nd. Thirty-three surgeons on probation, out of thirty-four who entered the school on April 1st, passed the final examination, and will receive commissions as surgeons in the British Army. We give their names, but not their numbers, below. Under a clause in the recent warrant, surgeons on probation leave Netley in the order in which they entered the Army Medical School. The professors are called upon simply to say *Fit* or *Unfit*, as the result of their final examination. Twenty-three candidates for Her Majesty's Indian Service entered and passed out of the School. With regard to them, the old, and we cannot but think good, rule holds good, that they take their final place as the combined result of the examinations in London and at Netley. It is a significant fact that all the honours of the School have been carried off by gentlemen belonging to the Indian service.

Mr. Simpson, with 5,635 marks, gained both the Herbert Prize and the Martin Memorial Medal; and Mr. Lukis the Parkes Bronze Medal, with 5,483 marks.

Only three candidates for commissions in the naval branch entered the Army Medical School, and all receive commissions.

The prizes were presented by Colonel Sir Charles Pearson, K.C.M.G., the military commander of the Royal Victoria Hospital, who afterwards, in a very effective and soldierlike speech, addressed the gentlemen about to leave the School. Mr. McCormack of St. Thomas's Hospital, and Sir Joseph Fayrer also spoke, and offered their warm congratulations on the termination of their labours. The company afterwards lunched at the mess of the officers of the Medical Department of the Army.

INDIAN MEDICAL SERVICE.—The following is a list of candidates for commissions as Surgeons in Her Majesty's Indian Medical Service who were successful at both the London and Netley examinations, August 1880.

		Marks.		Marks.
*	1. J. Simpson	5635	13. C. P. Maitland	4088
†	2. C. P. Lukis	5483	14. D. F. Dymott	4018
	3. R. R. H. Whitwell	5465	15. R. H. Cama	3986
	4. L. A. Waddell	5233	16. W. B. Browning	3[illegible]
	5. H. P. Dimmock	4530	17. C. Henderson	3806
	6. G. Shewan	4445	18. F. R. Divecha	3692
	7. D. B. Spencer	4[illegible]	19. A. P. Adams	3674
	8. J. Clarke	4391	20. C. M. Thompson	3663
	9. C. C. Vaid	4383	21. C. S. Rundle	3667
	10. P. D. Paul	4303	22. J. W. Evans	3[illegible]2
	11. T. R. Mulroney	4115	23. J. Leonard	3[illegible]4
	12. T. R. Macdonald	4094		

Willis, C. F. (who became ill last session) 4130

* Gained the Herbert Prize and the Martin Memorial Medal.
† Gained the Parkes Memorial Bronze Medal.

NAVAL MEDICAL SERVICE.—The following is the list of candidates for commissions as Surgeons in the Medical Service of the Royal Navy who were successful at both the London and Netley examinations, August 1880.

	Marks.
1. H. G. Jacob	4758
2. W. M. Levy	4[illegible]9
3. W. S. Lightfoot	3644

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE UNJUST CHARGE AGAINST MR. BUNCOMBE.

IN the Central Criminal Court on Tuesday last, Mr. Besley applied that Mr. Buncombe, the principal medical officer of the City of London Union, against whom a coroner's jury had returned a verdict of manslaughter in connection with the case of the Russian, Salewskann, who was charged with the murder of a patient in the workhouse, that the defendant shall surrender and plead, and his recognisances be discharged, as there was not the slightest foundation for the charge. Mr. Poland said he appeared, with his learned friend Mr. Montagu Williams, for the public prosecutor, in this case; and that, upon the finding of the coroner's jury, the matter had been investigated, and it was found that there really was no evidence whatever to support the charge against Mr. Buncombe. He therefore had come to the conclusion that no bill should be preferred before the grand jury, and the recognisances of the witnesses who had been bound over to prosecute should be discharged. Mr. Justice Hawkins concurred in this course being taken, and said it was clear the coroner's inquisition could not be supported, and further made some strong remarks upon the informal manner in which Mr. Buncombe had been sent before the court; he expressed a decided opinion that no imputation rested upon him, and that his conduct had been most kind and considerate. We heartily congratulate Mr. Buncombe on this very satisfactory termination of the case, not that we ever entertained any other opinion than that his professional reputation and conduct would be thoroughly sustained. We only trust that his defence has not mulcted him to any very great extent.

SIR,—Under the above heading, you described and commented, in the JOURNAL of the 17th ult., on the treatment which Mr. Buncombe, Senior Medical Officer of the Infirmary of the City of London Union, has received at the hands of an ignorant coroner's jury, who have committed him to take his trial for manslaughter, in con-

sequence of one inmate of the infirmary having murdered another inmate during a paroxysm of mania.

I am not personally acquainted with Mr. Buxton, nor beyond what I have read in the papers do I know anything of his case; but, if what has appeared be correct, he is exposed to much unmerited annoyance, anxiety, and expense; and it seems to me that he is a case pre-eminently calling for the active practical sympathy of the profession. I would suggest that, without waiting for the issue of the proceedings, a fund should be subscribed to guarantee Mr. Buxton his expenses; and if you will take charge of such sums as may be sent to you, I will have much pleasure in contributing to it a satisfactory sum, which will, no doubt, be shared by many besides yours faithfully,

A MEMBER OF THE METROPOLITAN COUNTIES BRANCH.

August 2nd, 1880.

Our readers are probably aware by this time that the charge has been formally withdrawn at the Central Criminal Court, with the full concurrence of Mr. Justice Hawkins, the presiding judge. Nevertheless, there can be no doubt of the advantage and hardship to which Mr. Buxton has been subject from this case, and we shall be happy to receive any subscriptions.

COMPULSORY REGISTRATION AND COMPULSORY NOTIFICATION OF INFECTIVE DISEASE.

SIR,—The Secretary of the Dublin Branch of the Association does me simple justice in saying that I would be the first to claim the merit of originating the Compulsory Registration of Infective Diseases: a proposal which was first made by Dr. J. W. Moore, last January, in his address to the Dublin Branch, and is recorded in your Journal and in their Transactions. A reference to these records will, however, show that compulsory notification was then recommended as a supplement and assistant to compulsory notification; and I believe it originated (as suggested by me in the discussion) in Dr. Duffey's committee.

I think that the strongest advocates of compulsory notification will admit that the discussion in your columns has been adverse to their proposal, by depriving it of one of its objectionable features, and thus rendering it more readily acceptable. As introduced to the Dublin Branch it proposed (in the model clause for an Act on the subject) that the attending physician, surgeon, and midwife should report to the head of the family, an official certificate declaring the nature of the infective disease, and should enjoin him to transmit it to the proper sanitary authority. A detached form for such certificate was appended to the model clause, requiring at the foot a pecuniary penalty, rendering the head of the family with a money penalty in the event of his not "forthwith" handing it in at the public office of the sanitary authority on receiving it from the attending physician.

At the Branch Meeting I protested against such a duty being imposed on the medical attendant, and repeated my objections to it in your columns.

I am happy to see that the Irish Medical Association have adopted this view, by recommending that the duty of notification shall devolve solely upon the head of the family or the occupier of the infected dwelling; and that the duty of the medical attendant in this respect shall be discharged by his informing such head of the family of the nature of the disease, and of its infective character, thus leaving the physician exactly in his present position. It does not matter how the head of the family ascertains the existence of infective disease: it may be from the physician, the nurse, from his own observation, or knowledge—once he ascertains it he is bound to notify; and to such notification no sensible person will object any more than to the several other compulsory Acts which are essential to the working of civilised communities. The recommendations of the Irish Medical Association receive the general confidential support of the medical profession: and it is understood that other important professional bodies have reported to the same effect.

There is a great deal of force in Dr. Duffey's remark that registration of infective diseases [illegible] warning to sanitary authorities as early as would be afforded by direct notification; there is, however, much to be said for such registration; medical men would cordially adopt and work it; the machinery for working it is familiar and at hand, and it could be at once and simply set in motion. It might be well to try it in the first instance; and then, when sanitary education would have become more common, notification would be accepted and perhaps welcomed. Sanitary education is our great hygienic want, and nowhere more than in this city, the sanitary condition of which is simply deplorable.—I am, Sir, your obedient servant,

F. J. B. QUINAN, M.D. Univ. Dub.,
Fellow of the King and Queen's College of Physicians.

29, Lower Fitzwilliam Street, Dublin, July 31st, 1880.

DISINFECTION OF CLOTHES AND BEDDING: HOUSEHOLD FILTERS.

SIR,—Would any of your correspondents favour me with the best means of disinfecting the clothing, bedding, etc., of patients suffering from scarlet fever, measles, etc., for an "urban sanitary district", estimated population 5,783? The "patent disinfecting chest" of Dr. Rogers of Retford, which was figured in the JOURNAL of January 13th, 1877, has been laid before them, but thought expensive. I should be glad to hear from other medical officers of like districts the means that are adopted by them. Which household filters are considered to be the best for country districts where well- and rain-water is the sole supply; one to remove, besides impurities, the taste peculiar to rain-water?—I am, etc.,

SANITARY MEDICAL OFFICER.

QUEEN'S COLLEGE, BELFAST.—The following prizes were awarded at the termination of the Summer Examinations: *Botany.*—Isaac Crawford, James Meek, and G. S. Tate, equal; Henry Massey, and J. H. Montgomery, equal; Thomas Friell and J. E. Heather, equal; J. Brownlee. *Practical Chemistry.*—Senior: J. J. Austin; Junior: S. A. Swan, Thomas Cromie, and W. J. Mehany, equal; H. C. Cooke, Henry Massey, William Brown. *Medical Jurisprudence.*—W. H. Lendrum and H. C. Cooke, equal; Thomas Sinclair, Samuel Connor, Robert Stewart, J. S. Collins, W. J. Watt. *Midwifery.*—Thomas Sinclair, W. H. Lendrum, Robert Stewart, Samuel Connor, James Finkerton, W. J. Watt.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted a Fellow on July 29th, 1880.

Fox, Cornelius Benjamin, M.D.Edin., Ilfracombe.

The following gentlemen were admitted Members on July 29th.

Biss, Cecil Yates, M.B. Cantab., St. John's Park, S.E.
Colquhoun, Daniel, M.B.Lond., Denmark Hill, S.E.
Gabbett, Henry Singer, M.B.Dubl., 33, Upper Bedford Place, W.C.
Horrocks, Peter, M.D.Lond., 29, Merrick Square, S.E.
Ludwig, Gustav H. W. R., M.D. Leipsic, German Hospital, E.
Maclean, Lachlan H. J., M.D.Heidelberg, 13, Bernard Street, W.C.

The following gentlemen were admitted Licentiates on July 29th.

Acland, Theodore Dyke, 19, Vincent Square, S.W.
Adam, Caleb Denovan, London Fever Hospital, N.
Atkin, Charles, Sheffield.
Capes, Herbert James, M.D.Lond., 150, Edgware Road, W.
Cree, William Edward, 2, Pemberton Villas, N.
Davies, Morgan, M.B.Aberdeen, London Hospital, E.
Dingley, Alfred, 7, Argyle Square, W.C.
English, Thomas Johnston, 121, Pulham Road, S.W.
Faithfull, Robert Lionel, M.D.New York, 62, Gower Street, W.C.
Falla, Walter, Jersey.
Hamerton, George Albert, Lambeth Infirmary, S.E.
Hanson, John Edward, 28, Reedworth Street, S.E.
Hudson, The Rev. Joseph, Penton Road, N.
Lawford, John Bowring, M.D.McGill, 17, Palace Road, S.E.
Perkins, George Chapman Steele, Guy's Hospital, S.E.
Pilkington, Francis Sergent, 3, Merrick Square, S.E.
Porritt, Norman, General Infirmary, Leeds.
Richardson, Charles Boards, Great Hadham.
Ross, James Frederick William, M.B.Toronto, 2, Oxford Terrace, N
Routh, Amand Jules McConnel, 52, Montagu Square, W.
Sanders, John William, M.D.Brussels, Guy's Hospital, S.E.
Stansby, Charles John, 154, Hoxton Street, N.
Sutcliffe, John, Denmark Hill, S.E.
Ware, John William Langston, Barnstaple.
Warren, Henry Guy Seymour, 41, Cambridge Street, S.W.
Wigg, Alfred Edgar, M.D.Brussels, 7, Albert Street, N.W.
Wilson, John, St. Bartholomew's Hospital, E.C.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners, on July 29th.

Messrs. Percy E. Shearman, Wimbledon, Thomas Buxton, Fazeley, Staffordshire, and David Collingwood, Liverpool, students of University College; Henry W. Stevenson, Isle of Man, and Jonathan N. Cook, Rochdale, of St. Bartholomew's Hospital; Charles E. Baddeley, Newport, Shropshire, and Arthur G. Wood, Trinity Square, of King's College; John Ackery, Queen Anne Street, of the Middlesex Hospital; Lesley R. Colledge, Surbiton, of St. George's Hospital; Frank W. Marlow, Wantage, of St. Thomas's Hospital; James Turton, Portsmouth, of the Charing Cross Hospital; and William A. Smith, Clifton, Bristol, of St. Mary's Hospital.

Nine candidates were rejected.

The following gentlemen passed on July 30th.

Messrs. Alfred P. Hart, Norwich, John F. Bullar, Southampton, James S. Hunt, Bisley, Gloucestershire, and Nicholas P. Elliott, St. George's Road, N.W., of St. Bartholomew's Hospital; Henry Maudsley, Little, Yorkshire, and George Mc W. Henry, Omagh, co. Tyrone, of University College: Frederick W. Brookes, Westminster Bridge Road, of the Charing Cross Hospital; James H. Greensill, Great Witley, Worcestershire, of the Middlesex Hospital; and Arthur O. Evans, Oswestry, of St. George's Hospital.

Thirteen candidates were rejected. With this meeting, the examinations for the diploma of membership of the College for the present session were brought to a close.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 29th, 1880.

Addison, Charles James, Weymouth.
Crosse, William Henry, Guy's Hospital.
Farmer, Ernest William White, University College.
Maxwell, Charles Mayne, 121, Euston Road.
McAlister, Donald, St. Bartholomew's Hospital.
Rhodes, James Havelock Alexander, 7, Osmond Street, W.C.
Rigby, John, Preston.

The following gentlemen also on the same day passed their primary professional examination.

Adkins, George, London Hospital.
Furnival, Francis Henry, St. Thomas's Hospital.
Verdon, Michael John, King's College.
Sinclair, John, London Hospital.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—On Friday, July 2nd, the following Licentiates, having complied with the by-laws relating to Membership, were duly admitted Members of the College.

Charles Trussell Bridgeford, 1860, Bray; Henry Gray Croly, 1860, Dublin; Robert R. King Eames, 1862, Dublin; Richard Warren Pendleton, 1860, Liverpool; Charles Henry Robinson, 1862, Dublin.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

*BIRMINGHAM AND MIDLAND EYE HOSPITAL—Dispenser. Salary, £70 per annum. Applications, with testimonials, to the Secretary, not later than August 12th.

BLACKBURN AND EAST LANCASHIRE INFIRMARY—House-Surgeon. Salary, £100 per annum, with board, etc. Applications, with testimonials, to the Secretary, not later than August 21st.

*BRAINTREE UNION—Medical Officer and Public Vaccinator to No. 5 District. Salary, £85 per annum. Medical Officer and Public Vaccinator to No. 6 District; salary, £30 per annum. Medical Officer and Public Vaccinator to No. 7 District; salary, £50 per annum. Applications, with testimonials, on or before August 20th.

CHIPPING SODBURY UNION—Medical Officer and Public Vaccinator for No. 5 District. Salary, £35 per annum. Applications, with testimonials, before August 11th.

DAVENTRY UNION—Medical Officer to the Workhouse, and 1st and 2nd District.

*KENT AND CANTERBURY HOSPITAL—Surgeon—Applications, with testimonials, before August 13th.

MARTLEY UNION—Medical Officer of the Knightwich District.

NEWRY UNION—Medical Officer for Donaghmore Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on August 20th.

*NORTH KENSINGTON AND KENSAL TOWN PROVIDENT DISPENSARY—Resident Surgeon. Salary, £80 per annum, with apartments, etc. Applications, with testimonials, to the Honorary Secretary not later than the 14th of August.

*NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with apartments, attendance, coals, gas, etc. Applications, with testimonials, to the Secretary on or before September 1st.

*NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—Registrar. Applications, with testimonials, not later than September 1st.

PRESTON RURAL SANITARY AUTHORITY—Medical Officer of Health.

ST. GEORGE'S HOSPITAL—Surgeon and Assistant-Surgeon. Applications to the Secretary on or before August 12th.

SHEFFIELD FRIENDLY SOCIETIES' MEDICAL INSTITUTION—Junior Medical Officer. Salary, £120 per annum. Applications to the Secretary.

STOW UNION—Medical Officer to the First District and Workhouse, and Public Vaccinator.

THETFORD UNION—Medical Officer to the Northwold District.

UNIVERSITY COLLEGE, Bristol—Registrar and Secretary. Salary, £400 per annum.

UNIVERSITY COLLEGE, London.—Surgical Registrar. Applications, with testimonials, to the Secretary, on or before August 30th.

*WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary on or before the 9th of August.

YEOVIL UNION—Medical Officer to the 2nd District.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DENT, Clinton T., F.R.C.S., appointed Surgeon to the Belgrave Hospital for Children, *vice* G. C. Sterling, F.R.C.S., resigned.

HEATH, R. E., M.D., appointed Honorary Surgeon to the Torbay Hospital, Torquay, *vice* William Pollard, F.R.C.S.Eng., appointed Consulting Surgeon.

JONES, Thomas, M.B., F.R.C.S., appointed Surgeon to the Manchester Royal Infirmary, *vice* S. M. Bradley, F.R.C.S., deceased.

*SOUTHAM, F. A., M.A., M.B., F.R.C.S., appointed Assistant-Surgeon to the Manchester Royal Infirmary, *vice* T. Jones, M.B., F.R.C.S., promoted.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

WILLIAMS—PRICE.—At St. Mary Abbots Church, Kensington, on the 27th ultimo, by the Rev. H. A. Vernède, Morgan Williams, Esq., Surgeon, to Sarah Jane, the only child of the late Mr. Alderman Price, Justice of Peace, both of Cardiff.

DEATHS.

BARNES.—At Oakfield House, Rickinghall, Botesdale, Suffolk, on August 1st, Thomas Edward Barnes, M.D., M.R.C.S., aged 43.

GILLIES.—At Dresden House, Ealing, on the 5th instant, Dr. Gillies, aged 43.

PHYSICAL RECREATION FOR LONDON YOUTHS.—A conference to consider the desirability of taking some steps to provide gymnasia and other means of healthy physical amusement for youths between the ages of 14 and 21, was held on Monday afternoon in the Jerusalem Chamber. The chair was taken by the Earl of Shaftesbury. After a statement from Canon Farrar of a scheme which suggested the establishment of a large gymnasium, with cricket and football clubs, boat clubs, a cadet rifle corps, singing classes, baths, etc., as a means for bringing London youths into friendly contact with laymen and clergymen willing to work for them, a resolution was unanimously passed that it was desirable that some steps should be taken in this direction. Lord Shaftesbury said that the importance of the plan suggested could hardly be exaggerated, because it was an endeavour to do something for the 100,000 young men of London, and because he had found, from examination of statistics and from other sources, that but few youths took to a life of crime after the age of 20. The spirit of crime was usually contracted between the ages of 14 and 20. He regarded the occupation of the evening by youths of the working classes as a matter of special importance. At the close of the meeting, a committee was appointed to bring the question under future consideration.

PUBLIC HEALTH.—During last week, being the thirtieth week of this year, 3,802 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 23 deaths annually in every 1,000 persons living. The annual death-rate was 17 in Edinburgh, 18 in Glasgow, and 28 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Sheffield 15, Bristol 15, Bradford 16, Nottingham 20, Sunderland 20, Hull 20, Wolverhampton 20, Plymouth 20, Portsmouth 21, Birmingham 21, Newcastle-upon-Tyne 21, Salford 22, Leeds 22, Leicester 23, Norwich 24, Oldham 24, Manchester 25, London 25, Liverpool 28, and the highest rate 34 in Brighton. The annual death-rate from the seven principal zymotic diseases averaged 6.2 per 1,000 in the twenty towns, and ranged from 0.8 and 1.7 in Bradford and Newcastle-upon-Tyne, to 10.9 and 13.6 in Norwich and Brighton. In London, 1,746 deaths were registered, which exceeded the average by 49, and gave an annual death-rate of 24.9 per 1,000. The 1,746 deaths included 4 from small-pox, 39 from measles, 77 from scarlet fever, 6 from diphtheria, 28 from whooping-cough, 18 from different forms of fever, and 350 from diarrhœa—being altogether 522 zymotic deaths, which were 25 below the average, and were equal to an annual rate of 7.4 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 176 and 161 in the two previous weeks, rose to 200 last week, and exceeded the corrected average by 42; 119 were attributed to bronchitis and 52 to pneumonia. Different forms of violence caused 49 deaths; 45 were the result of negligence or accident, including 17 from fractures and contusions, 2 from burns and scalds, 9 from drowning, 3 from poison, and 11 of infants under one year of age from suffocation. Four cases of suicide were registered. At Greenwich, the mean temperature of the air was 62.2°, and 0.5° below the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 13.2 miles per hour, which was 3.8 above the average. Rain fell on six days of the week, to the aggregate amount of 1.84 inches. The duration of registered bright sunshine in the week was equal to 43 per cent. of its possible duration. The recorded amount of ozone was considerably above the average during the week.

TESTIMONIAL TO DR. CHARLES D. WAITE.—On Friday evening, July 30th, a party of forty gentlemen, consisting of the Committee of Management of the Westminster General Dispensary, Gerard Street, the physicians and surgeons, the Rev. Selwyn Mayo Carell, Dr. Joseph Rogers, and W. J. Fraser, Esq., the Churchwardens of St. Ann's, Soho, dined together at Willis's Rooms, St. James's. The chair was occupied by Thomas Blackwell, Esq., of Pinner and Soho Square, the treasurer of the institution, to whose hospitality and liberality the entertainment was due. After dinner, the Chairman announced that he had invited the gentlemen present for the purpose of aiding him in tending to their esteemed friend, Dr. Waite, who had been compelled, by advancing years and infirm health, to resign the appointment of senior physician to their dispensary, which position he had held for a lengthened period, and the duties of which he had performed to the entire satisfaction of the governors, and with such beneficial results to the thousands of sick poor who, during his tenure of office, had passed under his care, some tribute of the admiration and esteem entertained for him by the patrons and friends of the institution. The testimonial consisted of a silver centre-piece, with a Canova figure surmounted by a handsome cut-glass dish to hold fruit or flowers, and two dessert stands to match, also of silver, supported by boy figures. The bases of the set are enriched with wreaths of vine leaves and flowers, and on them was engraved the following :—"Presented to Charles D. Waite, Esq., M.D., M.R.C.P., F.R.C.S.L., Physician to the Westminster General Dispensary, by the Committee and Governors, as a mark of their high appreciation of his valuable services during a period of thirty years." Dr. Waite, in returning thanks, expressed in feeling language his sense of the great compliment which had been paid to him in the very beautiful and handsome present made to him that day, and further said he could hardly find words to express his sense of the great kindness exhibited by Mr. Blackwell in entertaining him, and the numerous gentlemen he saw around him that evening. Several other speeches followed, and the entertainment came to an end, all the gentlemen present expressing their extreme gratification at that which had taken place.

SYPHILITIC MUSCULAR CONTRACTION.—In the *American Journal of the Medical Sciences* for April, Dr. Van Harlingen of Pennsylvania records three cases of a peculiar affection of the muscles which is occasionally seen in syphilis, and which has been described by Notta, Mauriac, Fournier, and others. In the first case, a woman aged 25, about seven months after infection with syphilis, complained of pain and difficulty in moving the right arm and elbow-joint. The arm hung in a partially flexed position, and the forearm could not be extended beyond an angle of about 150°, on account of what appeared to be a shortening of the biceps. Any attempt at further extension was met by a sudden check, accompanied by pain over the insertion of the biceps into the radius. Flexion of the elbow-joint was also imperfect, and caused pain over the outer condyle of the humerus. Both biceps and triceps were tender on pressure, the tenderness being greater in the tendinous than in the muscular portion. The joint and integuments were healthy. Recovery took place in eight months under antisyphilitic treatment. In the second case, that of a woman aged 44, the symptoms were similar to those in the first, but here the left arm was affected. The right knee also was swollen, and the leg could not be flexed much beyond a right angle. Any attempt at further flexion gave rise to severe pain just below the patella. In less than three months, all traces of the affection disappeared under mercury and iodide of potassium. In the third case, which occurred in a healthy married woman about a year after the earlier symptoms of syphilis, the left arm was also the seat of the affection. The joint seemed rigid, and the forearm could not be fully extended. There were also occasional shooting pains in the left shoulder, elbow, wrist, and knee-joints. Improvement took place under iodide, but the patient attended so irregularly that the case could not be followed to its termination. The affection known as syphilitic muscular contraction attacks most frequently the biceps brachialis, but any muscle may suffer. According to Mauriac, the left side of the body is more commonly attacked than the right. The affected muscles may usually be freely handled without giving rise to pain: but sometimes, as in the author's first case, there is a certain amount of tenderness. More usually, pressure on the tendon causes pain. General pains, with stiffness, soreness, and occasional cramps in certain muscles are usual. In each of the author's cases, stiff neck, coming on towards night, was noted. The contraction developes insidiously, and, if not treated, may last for a year or more. It belongs to the early manifestations of syphilis, occurring most commonly between the sixth and fifteenth months of the disease. The joint is intact. The bones are unaffected. The muscles themselves are apparently normal, and show neither swelling nor induration. The pathology is unknown.

A "JURY OF MATRONS" was empanelled on Tuesday last, at the Central Criminal Court, to determine whether a female prisoner, who had been found guilty of the murder of her child, was pregnant; and they came to the conclusion that such was the case. Sentence was consequently respited.

BEQUESTS.—The Belfast Royal Hospital has been left an annuity of £100 *per annum* by the late Mr. Hugh Wardlaw. Mr. Malcolm McCracken has bequeathed £50 to the Belfast Royal Hospital, and £50 to the Belfast Charitable Society.

PEMBROKE RURAL DISTRICT.—Mr. Saer's report for this district is very painstaking, and shows much careful and honest work. The chief event of the year was a severe epidemic of diphtheria at Jamestown, the origin of which Mr. Saer has taken much pains to discover. He thinks that the unsanitary condition of the local school-house generated the infection, though he also speaks of some antecedent cases of sore-throat that were possibly concerned with the commencement of the epidemic. During the year, there were 305 births and 178 deaths in the district, equivalent to rates of 25.3 and 14.8 per 1,000 respectively. Phthisis was very prevalent and fatal, causing in all 31 deaths, or 17.4 per cent. of the whole. Of zymotic diseases, typhoid fever caused 3 deaths; and diphtheria 9. In the epidemic above aliuded to, 14 out of 122 inhabitants of a particular village were attacked with diphtheria, and 7 died. The sanitary administration of the district would seem, from Mr. Saer's description, to be extremely faulty, although the Medical Officer of Health has evidently not shirked his duty in acquainting his authority with the improvements that require to be effected. The tabular statements appended to the report deserve a word of praise.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M. Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M. London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 3 P.M.

SATURDAY .... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30 Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

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J. G.—Mr. Greene, Friday Bridge, Birmingham.

P. J. H. (Dublin).—Marked for insertion, but no date can be fixed.

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TREATMENT OF PHTHISICAL COUGH.

DR. D. J. RUTHERFORD (Balta Sound) recommends the following, which, he says, he has found successful during a practice of twenty years. R Tincturæ cocci 3ss; syrupi simplicis 5j; spiritûs chloroformi mxxx; aquæ ad 5viij. The dose is a dessertspoonful three times daily.

E. O. R. suggests a trial of the effect of hydrocyanic acid. His experience bears out Neligan's statement (*Medicines, their Uses and Modes of Administration*), that "it has been found very serviceable in allaying irritable or spasmodic cough in various pulmonary affections, as in the advanced stages of phthisis". Moreover, it is a most agreeable medicine, given simply with distilled water and syrup, and to avoid the possibility of poisoning—in draught always; or, with the addition (as the symptoms may indicate) of spirit of chloroform, with or without tincture of squill. As an adjuvant, syrup of hemidesmus will be found more soothing than simple syrup. Sometimes a conium pill at night can do no harm, and may do good. The addition of the fourth of a grain of muriate of morphia to three grains of extract of conium will more surely give a good night's rest. And if the hydrocyanic acid be more than counteract the morphia, it is doing away with all the irritation and with this shutting up the secretion, it may be accounted worthy of a reminder.

M. P. V. has been written that he has found the following most useful and beneficial. R Morphiæ hydrochlor. gr. j; glycerinæ (Price's), syrupi sodæ, aa 5ss. Ft. linctus. A teaspoonful to be taken occasionally when the cough is troublesome. The glycerine will readily dissolve the morphia on shaking the bottle.

M.K.Q.C.P. has, in numerous cases, found the following mixture to afford much relief, the dose is for an adult. R Potassæ citratis gr. v, tinct. camph. comp. 3ss, vini ipecacuanhæ mxxxvi ad xl; misturæ acaciæ, syrupi aurantii, aa 5j; aquæ camphoræ 3iv. M. Ft. mistura cujus sumat cochleare magnum, exacquæ 5ss, hisve die, tussi argente. Should the cough be "tight", the temporary addition of thirty minims of antimonial wine will be found advantageous.

U. P. L. L. L. R. C. P. Edin.—The hospitals of Paris and the lectures of the Faculties are free to visitors; but if students wish to attend and obtain certificates, they need to pay small fees, of which the details will be found in the annual edition of a number of the *London Medical Record* (Smith, Elder, and Co.). The recognition of the lectures and hospital practice of the Paris hospitals and practice cannot be claimed as a right, and is not finally accorded by any of the London examining bodies, but is usually accorded on any special application of a *bonâ fide* character.

MEDICAL ETIQUETTE ON BOARD SHIP.

SIR,—After much consideration and consultation, I have determined to lay before you the following facts.

Dr. G. M. Beard is a physician of some prominence in New York, the author (I believe) of a paper at the last Annual Meeting of the British Medical Association, and of a pamphlet on sea-sickness, bearing the sensational heading of "Oh my!". Dr. Beard has just crossed the Atlantic as a passenger on this ship, of which myself and Mr. F. Wilson are the medical officers. He wrote, before sailing, a letter to the Company's agent in New York, in which he requested that gentleman to purchase "several pounds" *(sic)* of the bromides of sodium and potass, and "some hundred" *(sic)* of pills of cannabis Indica, together with citrate of caffeine. This note was forwarded to me and returned by me with the remark, that, as Dr. Beard had not thought fit to say one single word to me or to my junior on the subject, and as we were quite unacquainted with him personally, I declined to sanction any expenditure of the kind on his behalf, or to endorse his letter in any way. During the first five or six days of the voyage the weather was fine, the "Germanic" is a steady ship, and there were no complaints of the malady upon which Dr. Beard claims to be an authority. This period of quiet Dr. Beard utilised by going round amongst the passengers, and asking them (without any communication on the subject with ourselves) to go to him at once should they be sea-sick, as he had an "infallible" remedy. Among others he proffered his aid to a medical man (not knowing that he was a medical man) who was likewise a passenger. On the fifth or sixth day, a gentle swell from the eastward caused some sickness to appear, and the Doctor at once set to work. Armed with his favourite medicines and a hypodermic syringe he "went for" his fellow-passengers with, I regret for their sakes to say, but indifferent success. All this I patiently submitted to, not knowing (after an experience of thirty years) what to make of such conduct, but, when he deliberately wrote out a prescription, and sent a passenger with it to the surgery, I thought it time to put my foot down, and respectfully declined to act as his apothecary, my refusal being stigmatised by Dr. Beard as "a piece of petty jealousy". The gentleman who brought the prescription was greatly incensed and annoyed at Dr. Beard, who, he said, had placed him in a false position, and there was a general feeling among the passengers (many of whom were medical men) that the thing ought to be put a stop to. However, there it remained. Now, sir, I ask you whether Dr. Beard has acted in this matter with that regard for professional decorum which is binding on every qualified practitioner? I have the honour to know many of the leading American physicians, and I am aware that among no class of professional men is the question of etiquette more studiously considered or its demands more closely complied with; and I ask you to publish this letter, because, after an experience of thirty years, this is the first time that I have been treated in such a fashion.

Although I differ from Dr. Beard in my treatment of sea-sickness, I would have cheerfully assisted him to the best of my ability had he vouchsafed any communication with me on the subject. Inasmuch, however, as he warns the public in "Oh my!", against consulting the surgeons of the steam-ships, or, at least, declares that it is utterly useless to do so, it was, perhaps, hardly to be expected that he would take such a step. Be that as it may, those of us who "go down to the sea in ships" assume considerable responsibility, and I think, sir, that you will agree with me that medical enthusiasts would do better to confer with their brethren in charge before they proceed to experiment upon the health of those who are committed to our care.—I am, sir, your obedient servant,

J. FOURNESS-BRICE, M.D., Senior Surgeon "Germanic" and M.B.A.

Off Queenstown, August 1st, 1880.

*** Probably Dr. Beard will like to offer some explanation.

UNIVERSITY OF MANCHESTER.

SIR,—On looking over the list of papers promised for the Cambridge meeting, I am much disappointed to find that there is no promised communication on University medical degrees. I had hoped some one of the Professors of the new Victoria University would have taken this opportunity of bringing the voice of the profession to bear on the question of the immediate cession to the new University of the right to grant degrees in medicine.

I am also a little disappointed that you do not more persistently urge this step. You cannot, surely, read the letters and advertisements that appear in your own JOURNAL. Your pages are full of advice as to how to obtain the Brussels degree; and I find that private tutors are beginning to announce the Brussels degree as one of the qualifications for which they prepare pupils (*vide* BRITISH MEDICAL JOURNAL of last week). Surely, this state of things cannot be allowed to go on. On the eve of the International Congress of 1881, we are proclaiming to the world that no reasonable facilities exist in this country for enabling intelligent young men to obtain a medical degree; for, as the University in London persistently refuses to accomplish her mission by accepting such tests of competency as prevail in the best continental universities, our pupils are driven to Scotland or to some foreign university. There is much more involved in this question, than can be discussed in a letter, and I still hope the subject will crop up at Cambridge.—Yours, etc.,

July 1880. F.R.C.P.

*** We have hitherto stood alone in this matter; but shall be glad of any such support as our correspondent indicates.

CONSULTATION OF THE NAVAL [illegible].

SIR,—Patients have occasionally applied to me for the relief of a [illegible] which I have considered much [illegible] (mental), viz., congestion of the [illegible]. In the case of the last patient, the congestion appears at irregular intervals, the organ becoming [illegible] and highly swollen. The pulsation of the vessels on the side of the nose is perceptible to the touch. There is no acne, no desquamation of the skin. I have in vain sought for some cause amenable to treatment, but have failed. Many [illegible] [illegible] [illegible]

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

SPECIAL NECESSARIES FOR GENERAL PRACTICE.

SIR,—In your issue of July 24th, I notice a letter with above heading from Dr. C. P. Coombs, of Castle Cary, containing much sound advice and information. I must, however, take exception to one remark of his, where he recommends "one or two pistol-shaped splints of medium size for the treatment of Colles's fracture". This kind of splint produces the very deformity that is to be avoided in Colles's fracture. We never use the pistol-shaped splint in the North of Ireland now, but the boat-shaped splint introduced by Dr. Gordon, Professor of Surgery in Queen's College, Belfast, and in his work on [illegible], published by Churchill, further information on the subject will be found.—Yours truly, L.R.C.S.I.

Belfast, July 27th, 1880.

THE DENTAL ACT.

SIR,—We do not for a moment believe that Sir John Lubbock, who on many occasions has shown a warm interest in medical matters, would knowingly lend himself as an agent to others for the purpose of helping them to secure the passing of any Act of Parliament which would prove disadvantageous to the profession generally; we therefore object to any reflection being cast upon him for the part he took in the passing of the Dental Act; and maintain, at the same time, that the [illegible] able to that measure should rest upon those by whom it was drafted, and not upon Sir John, who became merely their parliamentary agent. From incorrect information supplied to him by the framers of the said Act, Sir John Lubbock has publicly repeated several statements [illegible] that Act and its operation which, [illegible] erroneous; and I [illegible] to my replying to the others, that you will permit me to notice the following one of them. Sir John stated lately, [illegible] letter to me, by yet another [illegible] before stated by others in your own paper, that, before the passing of the Dental Act, "the law-courts had held that every one had the right to call themselves 'surgeon-dentists'". For various important reasons, the Alliance Association attach considerable importance to this statement; and for the purpose of giving Sir John Lubbock an opportunity for establishing its accuracy, I addressed, as the Secretary of the said Association, a letter to him, and a copy of which I subjoin.—I am, sir, your obedient servant,

July 5th, 1880. R. H. S. CARPENTER,
Hon. Sec. Medical Alliance Association.

[illegible] Chiropodists' evidence.

Medical Alliance Association, 130, Stockwell Road, S.W., July 1st, 1880.

Dear Sir John Lubbock,—Upon three occasions you have stated publicly that the law-courts have held that, before the passing of the Dental Act, "every person had a right to use the title 'surgeon-dentist'". As the Alliance Association know of no such decisions having been given in the superior courts, and believe that you have been lamentably misinformed upon this point, will you very kindly oblige them with the names of the cases upon which you have based your opinion?—I am, faithfully yours, R. H. S. CARPENTER, Hon. Sec.

High Elms, July 5th, 1880.

Sir,—The case in which it was decided that anyone who chose could assume the title of surgeon-dentist is that of Ladd *v.* Gould.—I have the honour to be, sir, your obedient servant, JOHN LUBBOCK.—R. H. S. Carpenter, Esq.

Medical Alliance Association, 130, Stockwell Road, S.W., July 6th, 1880.

Sir,—In reply to your favour just received, I beg leave to inquire of you in what way you think the case of Ladd *v.* Gould, which is familiar to the Alliance Association, supports your statement of the 30th ultimo that "the law-*courts* have held that, before the passing of the Dental Act, all persons had the right to call themselves surgeon-dentists"? I wish politely to draw your attention to the fact that you have spoken of law-courts, but you refer me to but one single case; and in that case you will find, if you will kindly look over it, that no point of law was decided.—I am, sir, your most obedient servant, R. H. S. CARPENTER, Hon. Sec.—Sir John Lubbock, Bart., M.P.

High Elms, July 17th, 1880.

Sir,—The case of Ladd *v.* Gould was tried, firstly, before the magistrates, and then before the Court of Queen's Bench; and it certainly seems to decide that any person before our Act could style himself a surgeon-dentist. The Lord Chief Justice laid down the law "that dentists have always called themselves surgeon-dentists—custom, immemorial usage, have sanctioned it". It seems to me, therefore, that my statement was quite correct, and I can only regret that we differ.—I am, your obedient servant, JOHN LUBBOCK.—R. H. S. Carpenter, Esq.

Medical Alliance Association, 130, Stockwell Road, S.W., July 19th, 1880.

Sir,—The object of the Medical Alliance in addressing you upon the subject of your published letters is to have it established as a fact whether your repeated statement that "the law-courts have decided that, before the passing of the Dental Act, any person whatever could call himself a 'surgeon-dentist'", is an accurate statement. From your letter just received, it appears that you found this statement upon the case of Ladd *v.* Gould. Now, in that case, no point of law whatever was decided or even entertained by the judges. Gould was charged with having wilfully and falsely taken and used the title of "surgeon". His defence was that he had *not* used that title, but that he had used another and different title—viz., that of "surgeon-dentist". The magistrates considered that the prosecutor had not made good his accusation, and that the defendant had not wilfully and falsely used the title of "surgeon", which was the offence with which he was charged. Against this decision, the prosecutor appealed to the Court of Queen's Bench, when the two judges "decided" that it was a question of "fact" to be decided by the magistrates whether or not the defendant had falsely used the title of "surgeon". These judges ruled that the magistrates found as a fact that he had not used that title, and with that finding—it being a question of fact, and not law, for the magistrates to decide—the judges would not interfere, and the appeal was therefore dismissed, and with costs. I therefore maintain that it is not, as you suppose, a question of opinion between ourselves, but that it is a fact: 1. That the law-courts have not on any occasion decided that, before the passing of the Dental Act, any person whomsoever could use the title of "dental-surgeon"; 2. That no person has been even charged with using the title of "surgeon-dentist".

The passing observation you quote of the Lord Chief Justice is beside the question, and is founded on error. It would imply, if it did not show, that he did not even know that, although there were saving clauses in our various Acts of Parliament for tooth-pullers pure and simple, yet that these Acts imposed heavy penalties upon those who trenched upon the domain of surgery by practising dental surgery without a licence from the College of Surgeons.

You have overlooked another passing remark of the Lord Chief Justice—viz., that the magistrates might have come to a different opinion, and convicted the defendant if the evidence justified it. And you have overlooked, also, a passing remark [illegible] the magistrates, viz.: "The [illegible] the facts before them; they were the proper judges of the facts, and could have decided either one way or the other; but they found that he (Gould) did not wilfully and falsely pretend to be a "surgeon"; and I think they decided properly.—I am, Sir, your obedient servant, R. H. S. CARPENTER, Hon. Sec.—Sir J. Lubbock, Bart., M.P.

(Copy.) High Elms, July 24th, 1880.

Dear Sir, I [illegible] in the matter, and can only repeat as I suppose, "founded in error", but you must excuse my doubting this. The very fact you mention that, since 1859, no person has been charged with using the title of surgeon-dentist, seems an additional evidence, if any were required, that it was [illegible] I am, sir, your obedient servant, JOHN LUBBOCK.

R. H. S. Carpenter, Esq.

Medical Alliance Association, July 25th, 1880.

Sir,—The Dental Reform Association, like the Reform Committee of the British Medical Association, have not shown themselves to be very bright when dealing with legal questions affecting the interests of the public or the profession, and you have been misinformed and misled by them. The opinion the Lord Chief Justice expressed, *without consideration*, upon the occasion you refer to, is on a par with another impromptu opinion he gave when hearing another appeal in a medical case so late as the year 1873 or 1874. His Lordship then stated, in open court, that "any person could practise medicine in England". That this statement was altogether erroneous is shown by the fact that, since then, we have secured a number of convictions in the superior courts for such practice by unqualified persons. What I mentioned to you to be a fact is, not only that no person has been charged with using the title of "surgeon-dentist" since 1859, but that no person has been so charged either in that year or before or after that year."—I am, sir, your obedient servant, R. H. S. CARPENTER, Hon. Sec.—Sir John Lubbock, Bart., M.P.

[illegible] TURPENTINE.

SIR,—It seems [illegible] extraordinary examples of "[illegible] relief [illegible] Mr. Clay at Durham from Chian turpentine. I venture, however, to say, that not a man or woman could continue to take for months Chian turpentine, in the form of pill or emulsion, without sickness, and a horrible loathing of the drug being induced. I altogether deny the position claimed for Chian turpentine as a solvent of cancerous growths. Not a microscopist can be found to endorse such a view: and it is next to an absurdity to suppose that Chian turpentine made into pills, which are about as insoluble in the alimentary canal as leaden bullets, could effect the so-called relief of cancerous pain. Chian turpentine [illegible] and it is to this oil that its supposed virtues are mainly owing, which in any case are small indeed, so far as Chian turpentine is concerned. The silica found in the turpentine has been supposed by some to act beneficially. This hypothesis has been long pronounced untenable.

Into the ancient history of true Chian turpentine it is unnecessary to enter; but a few words may suffice to summarise its late exploits. Only in Mr. Clay's hands has it been at all successful; all others losing faith in its effects; most of the patients becoming disgusted, and refusing the administration of the drug. In true cancer of the uterus, it is impossible for any substance of a terebinthinate nature to act as a solvent of the cancerous mass, either in the living or dead state. The only way in which terebinthinates can act in the living body is by virtue of their antiseptic, stimulating, and quasi-astringent action, and thus, by acting as checkers of decay or decomposition, they may alleviate suffering; but they cannot act as dissolvers of animal tissues in any degree. That Chian turpentine is not a new remedy in cancer is abundantly obvious. The discovery is older than Pliny.

No one will wish to pluck the laurel crown from off Mr. Clay's brow; but, out of a number of specimens of Chian turpentine which I have examined, not one deserves the name but that which I got from a York house of old repute. Many samples are nothing but manipulated resin and Canada balsam flavoured with fennel-oil, and palmed off as genuine "Chio" at an enhanced price. I must leave in disfavour Chian turpentine and its reputed effects, and affirm that it is of no more use in cancer than in gleet, a disease in which I have known ounces taken without effect.

Northallerton, July [illegible]. I am, etc., HENRY BROWN.

RAILWAY MEDICAL ETIQUETTE.

SIR,—You will confer a favour upon me, and perhaps many others similarly circumstanced, if you will kindly reply to the following queries in the forthcoming number of the BRITISH MEDICAL JOURNAL. They have reference principally to the etiquette of the railway company's medical official in cases of accident.

1. Is it the custom of the railway company, or the medical man who acts in their behalf, to intimate to the ordinary medical attendant of the injured person that a visit to, and medical examination of, the case will be made by the medical gentleman acting for the railway company? or

2. Has the railway company the power to send their own medical official to visit and examine the injured person without intimation of such visit and examination being given either to the patient himself, his relatives, or his ordinary medical attendants?

3. Has the ordinary medical attendant of the injured person any ground for claiming a fee from the railway company if their medical official (after having visited and examined the injured person, unknown to the ordinary medical attendant) calls upon the ordinary medical attendant, and consults with him in reference to the case?—I am, dear sir, yours faithfully, R. D., L.R.C.S.E.

*** 1. It is usual for notice to be given and an appointment made where the case is not urgent and the name of the medical attendant is known; but

2. The medical officer may not know the name of the ordinary attendant, or, indeed, whether anyone has been called in, till he has visited the person injured or reported to be injured.

3. He certainly has a reasonable ground for claiming such fee, and we do not think it would ordinarily be objected to by the company.

We may add that it is not to the interest of the patient for his medical man to quarrel with the company's officer; nor, on the other hand, is it to the interest of the company that their medical officer should quarrel with the ordinary attendant. Hostile or strained relations often lead to litigation, which would otherwise be avoided, much to the advantage of both sides. It is to the legitimate interest of the patient that he should be seen early by the company's officer, a refusal to admit whom would throw a doubt on the *bona fides* of the person alleged to be injured, but the company has no *right* of examination without a judge's order.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE DIAGNOSIS OF SCARLATINA.

SIR,—I [illegible] as a disease by itself, and for [illegible] viz.: 1. Laryngeal symptoms of measles; 2. The specific sore throat of measles. In this case the symptoms of measles, viz., hoarseness, coughing, etc., the throat on examination is not the simple sore throat of measles, but the ulcerative throat of scarlatina, unless, when you see the [illegible] palate, uvula, and tonsils will be red and swollen, after which, in the course of a few days, ulcers will form on the tonsils.

I [illegible] having only seen [illegible] cases; two of these having had a previous attack of measles, and another, that of a young lady, having had both scarlatina and measles. I consider this disease to [illegible].

[illegible] about the treatment to be adopted in a case of rötheln. It is simply a combination of the treatment adopted in scarlet fever and measles—viz., diaphoretics, with chlorate of potash, internally, and a solution of nitrate of silver to the ulcers.

The disease is clearly a hybrid of scarlet fever and measles; and why not have a specific name for it?—I am, truly yours,

Gilford, July 31st, 1880. ROBERT MCBRIDE, M.B. Univ. Dub., etc.

PAPER COLLARS.

SIR,—Can you give me any information respecting the manufacture of paper collars? 1. Whether lead is used for the purpose? 2. Whether arsenic is used? 3. Whether any bad results have been traced to the use of them.—I am, etc., MEDICUS.

[illegible] 1. We are not aware that lead is used in the manufacture of paper collars. 2. Mr. Wynter Blyth, Holloway Road, in a communication to the *Sanitary Record* of June 27th, 1879, writes that some manufacturers have introduced "arsenic into the dressing used to produce that beautiful gloss which seems peculiar to some makes of collars". 3. The same gentleman writes that a patient of his had every symptom of arsenical poisoning; and, on analysis of the paper collars worn, 10.4 grains of arsenic were obtained from one collar.

ON THE [illegible] ADMINISTRATION OF CHLOROFORM.

SIR,—After many years of experience in giving chloroform, both in private practice and as a hospital surgeon, I view with some apprehension the views lately put forward by some of your correspondents, that there is no need to watch the pulse in giving chloroform, only the respiration. In inhaling it myself I observed that about a minute was occupied between the time of inhalation and the maximum effect being produced, so that if the patient's pulse begin to intermit, that time has to elapse between the time that the chloroform is taken from the mouth, *with* [illegible] *intensity*. Surely, then, it is of importance to note the very faint beginning of such mischief.

I have never seen a death caused by chloroform, but I have seen a few cases in which it was necessary to stop the operation for a time on account of the effects of the chloroform, which in these cases always acted firstly on the heart. In no case have I seen cessation of the respiration. The experience, however, of death by chloroform in the human subject of any one medical man is necessarily so limited, and the circumstances of such deaths are so little favourable for scientific observation, that I think it is highly dangerous to found a mode of practice on the ideas of [illegible] who say it is [illegible] on the cessation of respiration as the first danger to be avoided, and the only one to be carefully looked for. Perhaps [illegible] this, I may be allowed to speak from my experiments made on animals [illegible].

[illegible] I found that in cats, when chloroform was rapidly administered (the best way, in my opinion, as avoiding that saturation of the blood which is apt to be produced by slow administration, and which [illegible] of the heart's action, if it do occur, almost surely fatal) the systolic action of the heart *invariably* ceased before respiration. If the chloroform [illegible] it was sometimes easy enough to restore animation, but if the chloroform were continued until the respiration stopped also, the chances [illegible] I found by experiment that [illegible] stopped the action of the heart when found on it.

[illegible] the heart [illegible] lethal, chloroform [illegible] the [illegible] heart [illegible] the latter being exceedingly difficult to produce in one case, indeed I could not kill [illegible] 35 minutes (2 minutes being generally sufficient to kill)! and recovery after [illegible] respiration recommenced itself; but when I pushed the chloroform till all signs of heart-movement were [illegible].

[illegible]

W. SQUIRE, M.D.

[illegible]

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

CERTIFICATES OF DEATH FOR INSURANCE COMPANIES.

SIR,—Will you kindly inform me if I am justified in charging a fee for filling up a form of cause of death, and other detailed particulars respecting same, of one of [illegible] the Royal Assurance Company.—Yours truly.

Abbey Lands, Dublin, July 31st, 1880. R. HARVEY HILLIARD.

**** Yes: a fee of one guinea.

TURPENTINE AND ACETIC ACID LINIMENT.

SIR,—Can any of your readers inform me of the ingredients and proportions of a liniment, which must be white and creamy, does not separate on standing, and containing oleum terebinthinæ and acidum aceticum? An answer through your JOURNAL will greatly oblige, yours obediently, PHARMACIST.

Veterinary Infirmary, Moreton Street, Strangeways, Manchester, July 1880.

MR. ROBERT HARRISON (Scarborough) will find that more than one effort has been made to carry out numerous propositions for the establishment of provident funds for members of the medical profession, and that especially a proposition by Mr. Garland of Yeovil was recently taken up practically by a London insurance company, which circulated widely proposals of the sort, and has, we believe, established a department specially adapted for medical men.

COMMUNICATIONS, LETTERS, etc., have been received from:—

[illegible] Waters, Chester; Mr. F. S. Clarke, Dundalk; Dr. W. A. Bailey, London; Dr. W. Westcott, London; Rev. John Bailey, Rochester. Our Edinburgh Correspondent; Dr. J. W. Ogle, London; Mr. K. Mackenzie Chisholm, Radcliffe; Mr. E. B. Biggar, London; Dr. Ll. Thomas, London; Dr. Saundby, Birmingham; Mr. W. A. Fitzgerald, Brixton; Mr. E. Jephson, Durham; Mr. G. A. Oliver, Manchester; Dr. J. Thomas, Rhyl; Dr. F. J. Sandford, Market Drayton; Mr. R. H. Kinsey, Bedford; Mr. Mark Judge, London; Dr. W. R. Gowers, London; Mr. Everett, Worcester; A General Practitioner; Mr. C. J. Wright, Leeds; Mr. Malcolm Morris, London; Mr. A. J. Bell, London; Mr. John Ewens, Bristol; Mr. John Marshall, Dover; Dr. M. Moore, Coventry; Mr. R. H. Harrison, Scarborough; Dr. F. J. B. Quinlan, Dublin; Dr. R. McBride, Gilford; Mr. W. Vaughan, Crewe; Dr. R. Stilwell, Beckenham; Dr. W. A. Jamieson, Edinburgh; Dr. C. D. Hill Drury, Harleston; Mr. Clement Walter, Dover; Mr. C. Frost, London; Mr. J. C. Wilson, Easdale; A. Rae, Hamilton; Dr. H. S. Purdon, Belfast; Dr. J. W. Miller, Dundee; Mr. W. Anderson, London; Dr. Bassett, Birmingham; Mr. A. G. Blomfield, Lynn; Dr. Coppinger, Dublin; Dr. A. Samelson, Manchester; Mr. Daniel Bradley, Dudley; Mr. James Startin, London; Dr. A. Mitchell, Great Yarmouth; Dr. R. E. Heath, Torquay; Pharmacist; Mr. Gerald Coleman, Hemsworth; Mr. Leonard Armstrong, Newton Abbott; Mr. W. Howard, London; Mr. H. Hilliard, Dublin; Mr. T. Cooke, London; Mr. B. J. Cl. St. Ives; Mr. W. B. Dalby, London; Dr. McKendrick, Glasgow; Sir Henry Thompson, London; Dr. A. Ogston, Aberdeen; Mr. T. P. Teale, Leeds; Dr. A. Meldon, Dublin; Mr. G. Anderson Critchett, London; Mr. D. J. Hamilton, Edinburgh; Dr. Leech, Manchester; Dr. J. S. Holden, Sudbury; Mr. A. R. Manby, East Rudham; Dr. R. E. Thompson, London; Dr. Elliot, Carlisle; Dr. McCall Anderson, Glasgow; Dr. T. Savage, Birmingham; Mr. Priestley Smith, Birmingham; Dr. Dawson, Brighton; Mr. A. H. Hassall, London; Dr. A. Sheen, Cardiff; Dr. Bradbury, Cambridge; Dr. H. Rayner, Hanwell; Mr. A. Kisch, London; Mr. C. A. Newnham, Wolverhampton; Mr. W. Davis, Heytesbury; Mr. D. M. Saunders, Clonakilty; Our Glasgow Correspondent; Mr. Bevan, Rickinghall; Messrs. Arnold and Sons, London; Mr. T. J. Dyke, Merthyr Tydvil; Mr. Morgan-Williams, Dover; Mr. Joseph Eastwood, Blackburn; Mr. J. W. Murphy, Dunstable, Our Derby Correspondent; Mr. E. T. Bartlett, Birmingham; Mr. J. Davis, Dublin; Mr. N. A. Humphreys, London; Dr. Redington, Bradford; Dr. [illegible] London; Mr. A. J. Street, Manchester; Mr. Sampson Lamolle; Dr. Mahomed, London; Dr. Cory, London; Dr. Henry Bennet, Weybridge; Dr. [illegible].

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Advertisements should be delivered, addressed to the Manager, at the Office, not later than Twelve o'clock on Wednesday previous to publication, and if not paid for at the time, should be accompanied by a reference.

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Agent for the Advertising Department in France: J. ALLEZ, 67 Rue Caumartin, Paris.

PRESIDENT'S ADDRESS,

DELIVERED AT

THE FORTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

Held in CAMBRIDGE, August 10th, 11th, 12th, and 13th, 1880.

BY

GEORGE MURRAY HUMPHRY, M.D., F.R.S.,

Professor of Anatomy in the University of Cambridge; Surgeon to Addenbrooke's Hospital.

It is my high privilege, on behalf of this University and town, and of the medical profession of the district, to give a welcome, a hearty welcome, to the members of the British Medical Association, to welcome men whose vocation it is to cope with the stern realities and the groaning facts of life, to the home of learning and philosophy, the men who are trained to the ministry of the body, to the place which is devoted to the tuition of the intellect. What higher, more grateful task could be assigned to any person? Be assured that it is thoroughly appreciated by one who, for many years, has been bound by numerous ties to the profession of medicine and the University of Cambridge, and whose chief ambition it has been to assist in linking that profession and the University more closely together.

Gentlemen, as you wander through the sacred groves and the time-honoured buildings of this many-sided and deeply interesting place, feel, I pray you, that you are not merely welcomed by those who are now permitted bodily to receive you, but realise to yourselves also that you are in the presence chamber of the mighty dead, that—

"Where'er you tread 'tis haunted, holy ground";

that every turn you take is hallowed by the impress of a Newton or a Bacon, of a Cranmer, a Latimer, or a Ridley, of a Spencer, a Milton, or a Byron, of a Porson or a Macaulay, of a Wordsworth or a Wilberforce, of a Harvey, a Glisson or a Heberden, of a Whewell, a Sedgwick or a Selwyn; feel that the very stones are reminders of their presence, and cry out in their honour, and speak to you, and welcome you in their names. Those worthies loved the men of work and the men of worth. As such you claim fellowship with them, and a right in the places where their memories live, as well as a heritage in the institutions which the liberality of our forefathers has bequeathed.

And, yet, as you passed the threshold of this place, was not each one troubled with the insuppressible questions, what in these long years, with this might of intellect, and with its forcing power of wealth, has Cambridge done for medicine? What business, as members of a medical association, have we here? Has there not, through the whole period of academic history, been enacted a divorce, a most unnatural divorce, as it were, between body and mind, between, that is to say, the nurturers of the one and the cultivators of the other? Has not Cambridge, more than any university in the world, with perhaps one exception, banished medicine from its walls, and the men of medicine from its schools? How can these things have been so? How is it that the one-half of man's study and of university duty has been so much promoted, while the other half has been so much neglected? These questions will have their way. Can they have their satisfactory answers? Can good reasons be shown why medicine has been allowed to profit so little by that accumulated liberality of many generations, which has given such great impulse to arts and literature, to mathematics and philosophy, to classics and theology, to astronomy and logic; why these should have burned long and brightly here, while the lamp of medicine, which ought to have been among the most shining lights, has been able to maintain a mere flickering existence? While Bellini in Pisa, Hoffmann and Stahl in Halle, Boerhaave in Leyden, Van Swieten and De Haen in Vienna, Sauvages and Astruc in Montpellier, Mondini and Valsalva in Bologna, Montagni, Morgagni, Fabricius ab Aquapendente, Prosper Albinus and Vesalius in Padua, Fallopius in Venice, Cullen, Brown, and the Munros in Edinburgh, were adding to, and rolling on, the great stone of medical science, and were drawing pupils from all parts of the world, and were shedding an unfading lustre upon their several universities, how came it that students of medicine could look to no master teacher here, and that medical science could date no advance from Cambridge? Many, no doubt, like Caius and Harvey, and Glisson and Heberden of old, and Watson, Budd, Burrows, and others of our own time, went forth from Cambridge, equipped with learning, and strengthened by that mental training, which aided them in acutely observing the phenomena, and in solving some of the hard problems of disease; and the advantage thus indirectly conferred upon medicine, in common with other sciences, by university influence and university association, must not be forgotten. But how much greater would have been the benefit, not to medicine only, but to the university and to the public, which must have accrued from a thoroughly well-organised study, and a vigorous teaching of the various branches of this most noble science within the academic walls.

The question recurs, what has prevented its being so? Such barrenness in a great faculty was certainly never intended, was not contemplated, by our founders and first legislators. In the earliest college statutes, permission or direction is given to some of the members to pursue the study of medicine. In the scheme for the university, which was in the main taken from the University of Paris, the faculty of medicine was placed on a par with those of theology and law, and the provisions for teaching and graduating in the three faculties were alike. In the professorial foundations by Henry VIII, by which the professorial system, as distinguished from the preceding method of teaching by regents, bachelors, and doctors, was inaugurated, medicine shared in common with the other faculties. The Regius Professorship of Physic received at that time an endowment and a status similar to those of theology and law; and in the additions to the professoriate which were subsequently made from time to time, the medical sciences have had their fair share. Thus, instead of any idea of stifling them, we recognise a reasonable provision for their nurture; and among the hopeful visions of the early benefactors of Cambridge must have been the scion of medicine, which they grafted and tended, flourishing as a goodly tree, drawing sap from the best sources of science, spreading forth its branches and bearing rich fruit to England.

How have these intentions been foiled? whence the mildew which blighted the plant, and deprived so many ages of its produce?

To these great and interesting questions, as to many others on subjects no less largely affecting the welfare and destiny of man, the answers are not direct and easy, and are to be found, if at all, only by a careful study of the history of the past.

In the early part of the thirteenth century, when the gathering of pupils and teachers here seems first to have come under the legal direction of the sovereign, when students were arriving from Paris, and Cambridge was beginning to organise itself upon the model of that great university, the study of medicine, which meant little more than a culling of the views of Aristotle and Galen, obscured and misrepresented in their transmission through Arabian translations, was much confined to Salerno*, as law was to Bologna, and theology to Paris. Learning, though reviving from the depression which almost amounted to extinction, was at a low ebb, especially on the north of the Alps, and was chiefly in the hands of the clergy, who thought secular knowledge to be unworthy of the attention of men whose minds should be engrossed with the great subject of the, as they imagined then impending, dissolution of the universe; and natural science, where it had any existence, was still poisoned by the follies and mysteries of alchemy, which had not yet given way before the genius of Roger Bacon. This country which, five centuries earlier, before the desolating inroad of the Danes, had taken the lead in Europe, and had sent from its schools of York and Canterbury men who, under the far-reaching wisdom of Charlemagne, drew the first outlines of the French and German universities, was now in the background, at any rate it could boast of no superiority. Grammar, that is Latin, and arithmetic and the logic of Aristotle, as handed down by the Arabians, and expounded by Thomas Aquinas and Duns Scotus, formed and remained for centuries the basis of education in arts. Astronomy and mathematics were but little studied. Some passed on to the faculties of theology and canon law; but very few, not more than one or two in a year, were attracted by that of medicine. Those who would make any progress in it were compelled to resort to foreign universities, as did Caius and Harvey to Padua and Bologna, in which latter place Vesalius, after the long and almost unbroken interval† which had elapsed from the time of Galen, was venturing to dissect the human body, and was followed by Eustachius and Fallopius. Caius, Harvey, and others returned to England; but none of them came back to Cambridge to found a school of medicine here, or to add the lustre of their names, and the vigour of

* Salerno probably owed its early distinction as a university to its lying on the high road of the Crusaders. Robert of Normandy stopped here, on his way home, to be cured of a wound.

† Mondini appears to have dissected two females in 1315, at Bologna, and wrote a work on anatomy, which for three centuries was the text-book in the Italian schools.

their intellects to such school as there was here, for there must have been some sort of medical teaching in the university. There were then, as there ever have been, greater pecuniary and courtly attractions elsewhere. They proceeded, on their return from abroad, to practise their profession, or prosecute their studies, in various parts of England. Caius, it is true, after practising in Shrewsbury and Norwich, was not unmindful to his college, which he refounded and governed till shortly before his death in 1573, though apparently he still resided chiefly in London. In his foundation he was not forgetful of the interests of medicine; and he showed his sense of the importance of anatomy, acquired doubtless during his residence with Vesalius at Padua, by obtaining, in the sixth year of Queen Elizabeth, a licence that his college might, for ever, yearly take the bodies of two malefactors and dissect them without the control of any person. Whether Harvey, when at Caius, may have derived from this any stimulus to his researches, or, indeed, whether the privilege was ever acted on, I cannot tell.* But that there was no great accession to medical study and teaching in Cambridge we may infer from the fact that Glisson, who held the Regius Professorship of Physic for forty years, from 1637 to 1677, was a resident in London.

Ere this, events had occurred which seriously influenced the relations of London, Oxford, and Cambridge to the study and science of medicine. The highly learned Linacre, the great promoter, indeed renovator of learning, more particularly of Greek, in this country, beholding with concern that the practice of medicine was chiefly engrossed by illiterate monks and empirics, endeavoured to strike at the root of this evil by obtaining from Henry VIII, in 1518, letters patent for the foundation of his College of Physicians, with the privilege of licensing practitioners throughout the kingdom. The graduates of Oxford and Cambridge were exempted, forasmuch as, by virtue of their degrees, they were independent of the College, except within its precincts.† Linacre lived to carry out and superintend his plan. Lectures were delivered at the College, and London thus became a centre of teaching, as well as of licensing the practitioners of medicine and surgery; and a new and formidable rival to Oxford and Cambridge was raised in the growing capital of the kingdom. But Linacre, who had been a student and doctor of Oxford, and an incorporated graduate of Cambridge, was not unmindful of the two universities. He showed his anxiety for their welfare, and his desire to promote the study of medicine in them, by bequests for the foundation of lectureships. Unfortunately, owing to the mismanagement of his trustees, these intentions were never carried out. The proceeds of his property, assigned for the purpose, were, in great measure, lost; and the residue was diverted by private influence, at Oxford, to Merton College, and, at Cambridge, to St. John's College. The result upon medicine of what Linacre effected in his life was perhaps greater than that accomplished by any other man in this country; and it might have been far greater had his wise and beneficent intentions been fulfilled. What he left to others to perform, however, missed its mark; and his desire to place in the university scale a gift that might balance the effect of his munificence in London, was woefully frustrated.

The metropolitan influence grew fast. The great centre attracted the practitioners, the teachers, and the students of medicine; and to the universities was left little beyond the function of giving a preliminary training to the few who could avail themselves of it. It must be remembered that in no other country are there ancient and powerful competing corporations similar to our Colleges of Physicians and Surgeons, and having power to grant licences to practise. In other countries, the universities are the only avenues, each in its particular division, to medicine, as well as to theology and law. This very important difference, which is too often overlooked, must ever be borne in mind in making comparisons between the English and the other European universities. Add to this the small population of the districts in which Oxford and Cambridge are situated, together with the proximity of an overshadowing metropolis, and the difficulties attendant on the development of medical schools in the universities are sufficiently apparent.

To proceed, however, with my brief narrative. During the seventeenth and eighteenth centuries, the influence of Aristotle gave way to that of Bacon and Newton, and the system of the university verged more and more to the exclusive pursuit of mathematics and natural philosophy; the method of written examination, which had previously been subordinated to the scholastic exercises, became organised, the valuable fellowships and scholarships were given in accordance with the result of them, the spirit of emulation was excited, and the preparation for the examinations, which had been originally instituted in Paris for the purpose of testing the ability of those who sought to teach, became the too absorbing pursuit; the teaching of the professors, as well, for the most part, as the subjects taught by them, was thrown into the shade, and the students were brought almost entirely under the influence of the college authorities and the private tutors. Classics, at length, contrived to force a recognition. The rich prizes given exclusively for these two school subjects extended the study of them into too late a period of life, attached an undue importance to them, dwarfed all other subjects, both at the schools and at the universities, deterred those students from coming to Cambridge who had not a taste or capacity for them, or who had not the sufficient means of prolonging their school education, and, to say nothing of the religious restrictions, had well nigh divested the university of the character of a national institution, and of its claim to public sympathy and regard.

Happily, the reform from within was at hand; and, thanks to the liberal thoughts and wise discernment of the leading minds of the last generation—more particularly of Whewell and Sedgwick, of Peacock and Henslow—the tide was at length turned. Slowly and somewhat tremblingly the advancing wave of broader educational view came on, and showed its first influence, in 1851, in the foundation of the natural and moral sciences triposes. These were followed in succession by the theological, the law, the historical, the Semitic, and the Indian languages triposes. The subjects of these triposes are growing in estimation and in favour; the provision for teaching them is, year by year, more carefully and liberally made; and rewards for the successful study of them are more willingly granted.

Why not a medical tripos also? I may suppose you inquiring. I can only answer by expressing the hope that, when you next come to Cambridge, you may be relieved from the necessity of asking the question.

At the same time that a wider range was given to the studies of the place, the rigid and inelastic statutes of Elizabeth, which had for three centuries held the University with an iron grip, have been relaxed under the heat of public opinion—that sterling friend to Cambridge—and have given way to a freer constitutional code, which has afforded scope to, and thrown into strong relief, the naturally liberal spirit of the place.

As a result, the University has been opened to all comers from all parts of the world, of every rank and of every religious persuasion. All are on an equality. The College stamp is no longer necessary; for the non-collegiate student stands on the same level with the collegiate. He enjoys the advantage of not being distracted by the anxiety for college rewards, and he can regulate his expenses by the measure of his purse. The requisite tests of general education may now, and should, be passed before the student comes up to Cambridge, or in his first term of residence, so that the whole of the University period may be devoted to those branches of medicine or natural science which are selected. Time is thus economised, and the well-grounded student may pass into the profession through Cambridge almost as quickly and economically as by any other route. It can be no longer urged that the middle classes are excluded from Cambridge, or discouraged from coming; or that the medical student cannot reasonably look forward to obtain a degree. All may come to the waters and drink, not without money but without any undue cost, not without price but with the price of that labour and perseverance which will bring their own sure reward.

That a great future, most potent for good, in connection with medicine, is open to Cambridge I cannot doubt. The opportunity is before her—not, I grant, to make amends for past shortcomings. That can never be done. The past can no more be made amends for than it can be recalled. The debt of lost time and occasion cannot be repaid, except in so far as regret for the omissions of the past may stimulate to better effort in the future. The opportunity is open, not simply to influence the few, but to leaven the large masses of the profession. The opportunity lies in a progressive advance and expansion of the teaching, under which I include examining; for examining should ever be regarded as the handmaid and most important adjunct of teaching. In proportion as Cambridge avails herself of this opportunity, and in that proportion only, will her influence upon medicine be great and good. Her social advantages are much and rightly valued; her literary renown is high; her academic prestige is great; her buildings are inspiring; her history is long and noble; but it is not upon these, but upon the high character of her teaching, that her future must stand. No other foundations will carry the temple to which coming

* Caius lectured on anatomy at the College of Surgeons in London for twenty years. He appears to have introduced the study of practical human anatomy into England. If his intentions with regard to dissection in his College in Cambridge were really carried out, it is probable that human dissection in this country was first practised at that College; and Harvey may have there acquired an insight into the structure of the human body which led to the formation of his views respecting the circulation of the blood.

† Shortly before this time it had been enacted (not improbably through the advice of Linacre) by a statute—which seems to have been the earliest statute in this country for the regulation of medicine—that no person should exercise as a physician or surgeon unless examined and approved by the bishop of the diocese in which he lived, who called to his assistance expert persons in the faculty.

generations are to be attracted. This ought to be so, and it will be so. The ideal, the æsthetic, the poetic, the conventional "gentlemanly", may, and should, give their tone and refinement and play their parts in the formation and elevation of character. The *literæ humaniores* are the proper, the requisite, complement to the *ars et scientia medicinæ*: but the real basis of University success in medicine, as indeed in the other faculties, must be the soundness, and thoroughness, and high standard of its teaching. These will be the measure of the dimensions, and will give solidity to the building; those may impart tone and grace to its structure. Cambridge must give that kind of teaching which will engender broader and clearer appreciation of principles, which will render the study of medicine a medium for the cultivation of intellect, as well as a means of passing into a profession and earning a livelihood. It must show the scientific to be the natural and necessary adjunct to the practical, and must weave the two together into the woof of a high educational system. In no other branch of knowledge are the two so naturally and so entirely conjoined; in no other is there so much that is calculated to give strength and balance to the thinking and the observing faculties; none in which mental and bodily effort is more required and more telling. There is no one, therefore, which is more worthy of university culture, or which would more truly profit by it. May we not also say that, of all the physical sciences, medicine is the most difficult, the most important, the highest? What problems can be so hard of solution as those which relate to the aberrations of the most exquisite of organisms—the organism in which the properties of matter reach their maximum of variety, of complexity, of exquisiteness of combination and action—the organism in which they have their outcome in an association with the marvellous attributes of responsibility and intellectual process. These problems of healthy and morbid action transcend all known methods of calculation; and, as is too commonly found under such circumstances, are liable to fall under the range of dæmonology and quackery—at any rate, to come within the scope of that mysterious and unfathomable *ignotum* which transcends the *magnificum*. The very difficulty of the problems causes them to be ignored or overlooked. Men scarcely venture, or are able, even from a distance, to contemplate them, and therefore have a tendency to leap over them on to conclusions, without calculating the data which brought them there. That these hard problems may, and will one day, be brought within the domain of exact science, and be seen to be regulated by clearly defined law, we may well believe; and we may also believe that, to effect this, in many of the instances, will, through long ages, afford unceasing labour to the investigator and test the highest powers of the thinker. Indeed, the little way we have been able to make along the path of true medical science, in the centuries during which we have laboured at it, is scarcely enough even to open to us the difficulties that lie along it; and we may well believe that many of the enigmas of the science, of those more especially which have relation to psychological abnormalities, must await their solution till the far-off, possibly the latest, cycles of human thought and work.

The importance of the result in this, as in so many other things, is proportionate to the difficulty. When we contemplate the effect upon the physical and moral condition of the people which is likely to result from a clearer knowledge of physiology and pathology; of the causes, nature, and prevention of disease; of the influences of hereditary transmission of peculiarities of temperament; of the various circumstances attendant upon progressive civilisation and social changes; of atmospheric, magnetic, and climatic variations upon those nice balances of function, and those delicate modifications of them which constitute disease—when we contemplate, I say, the vast importance of all this in its bearing upon the physical, mental, and moral status of man, and when we remember that it is the special object and duty of medical science to investigate and elucidate all this, and to formulate principles and rules for our guidance as individuals and as legislators, we find ourselves ready to assent to the striking statement of Descartes, that all great movements in the world of thought, of philosophy, of morals, and of government, are to come out of medicine.

And is such a subject, so fitted to evoke and invigorate the mental powers, and upon the successful prosecution of which the future destiny and welfare of our nation and of our race so much depend, not to receive its fair recognition in this great seat of learning? Is Cambridge to stand aside for the future, as she has too much done in the past, and keep aloof from the task of generating and wielding this potent force? Is this important member of the body politic of the University to be suffered to go unnourished and untended, to the great detriment of the whole? My own experience tells me that such is by no means now, whatever it may have been, the feeling or desire of the members of the University. Certainly it cannot be the feeling or desire of the members of the British Medical Association. Your presence here is the expression of your sentiment, and will, I am sure, give the impulse you desire. You come, not as ordinary careless visitors, but as serious responsible men, who, for your brethren and children's sake, your profession's sake, and your country's sake, have a deep stake in this place. As such you are received. You come as representatives of the medical profession, as members, that is, of the great brotherhood of learning who ought to, and who must, exercise an influence upon all learning; as such you are hailed, and esteemed, and looked up to by the University.

It is in the preliminary subjects of medical study, those which form the subjects of the earlier medical examinations, in addition to the broad ground of general education, that Cambridge will find her most appropriate sphere. The feeling is growing that these subjects would, for many reasons, be best taught apart from the great centres of clinical instruction; and it would be an enormous benefit to the cause of medical education to secure a thoroughly good teaching in these subjects upon the basis of sound general education. This, I am sure, lies at the root of the improvement we are all desirous to effect in our profession; and it is in this work more especially that Cambridge may and ought to play an important and conspicuous part in the future.

In evidence of this, I may refer to the buildings—the New Museums—which will be occupied by you during the meeting, and in which a suspension of our ordinary teaching work is necessitated for the accommodation and carrying on of your Sections. And here I would observe, you must not suppose that "vacation" in Cambridge implies cessation of work. On the contrary, the practical classes are, for the most part, continued during a considerable period of the vacation; and some of the best work of this kind is then carried on, because, the regular courses of lectures being discontinued, and the lecture-rooms yielding to the laboratories and the hospital, the student can devote his attention more uninterruptedly to these last. This week's holiday is in compliment to, rather is enforced by, your presence. I make that remark because it is right you should know that the vacation is not now, whatever it may have been in times past, a vacant period in Cambridge; and because, unless you bear in mind that this week's interruption of medical study is an exceptional condition for which you are responsible, you would carry away a wrong impression of our vacation life. The erection of the buildings to which I have referred, with the laboratories, lecture-rooms, and dissecting-rooms, for experimental physics, botany, mineralogy, mechanism, optics, zoology and comparative anatomy, and physiology, and the provision of a staff of professors and demonstrators, and the better provision for chemistry and human anatomy, are an evidence of the impulse which the teaching of these sciences has lately received in the University, and are the forerunners of further building upon the same plot, by which it is hoped that, ere long, geology will find a suitable dwelling, worthy of the name, and in honour of the memory, of Sedgwick, and that a much needed expansion of the chemical and medical schools will be effected. I speak of a much needed expansion of the medical school—and those of you who are anxious to inform yourselves respecting this will have the opportunity of learning for yourselves that, though physiology is thoroughly equipped—as thoroughly as in any European school, and though the means of teaching and studying chemistry and anatomy have been augmented to meet the requirements of growing classes of students, yet in both of these a further improvement might with advantage be made. A well endowed professorship of pathology is about to be instituted, and a suitable pathological laboratory must be added. A fully complete curriculum Cambridge does not profess; but a sound scientific and practical teaching in the first two stages of medical education—in physics and chemistry; in anatomy and physiology, vegetable, comparative, and human—and a careful clinical training at the hospital, associated with pathology and therapeutics, are quite within our scope, and the teaching in them, I trust, will continue to be carried on with yearly increasing efficiency to a yearly increasing number of students.

This vast Association, one of the greatest guilds that ever existed, rendered possible only by steam and telegraphy, and the energy of successive editors and secretaries, and other officers, and owing its success, in part, to the obvious need of some such bond to unite the peculiarly scattered elements of a great profession, has visited and revisited most of the great towns of the empire, imparting and acquiring energy in its course. It embraces most of the leading members of the profession in this country, is spreading to the colonies, and it attracts to its meetings many from distant lands. It is an enormous power, and it has its own proportionate responsibilities. The united force of eight thousand members ought to roll on the great stone of science, and impel the wave of good feeling to the gradual wearing away of false dogmas, and the still falser notions of conflicting interests, and should stimulate to that unity of purpose and oneness of brotherhood, associated with oneness in a great and holy work, which are among the high ideals of Christianity. It is by greatness of result, rather than by greatness of numbers,

that we must be judged. The greater the force, the greater the waste, unless it be well applied.

Our Sections, with the masterly addresses on various subjects, are well calculated to tell of progress and to aid it, to thrash out the many questions of medical science, to ascertain the results of new medical practice, and to stimulate thought and invention. Our meetings promote business habits and administrative qualities, as well as sociality and friendship. Our JOURNAL is one of the best, and I believe it is the cheapest, of the media of medical intelligence which the world possesses. Thus far we may be well content. But one work—a work that especially appertains to the Association, the work of collective action, of the pull altogether of eight thousand members of the profession, I mean the work of cumulative observation, or accumulated data—has been too little attempted; or, if attempted, has been productive of too little result. I am aware that anything on a large scale of this kind is a serious undertaking, a gigantic enterprise; and I feel it, therefore, to be worthy of this gigantic Association. It is, perhaps, the only work in which all, or a large part, of the members can really and fully participate, and to which each can contribute his mite. It is almost the only way in which questions relating to temperamental, climacteric, and topographical agencies upon disease and many others can be fully investigated and solved. To engage the members of the Association as participators in any division of such work, would prove one of the most powerful inducements to the cultivation of observation and thought respecting the mass of facts which are passing, now too often unheeded or unnoticed, before their eyes; and would tend, more than any other thing, to deepen their interest in the science of medicine, and to impart the charm of wider usefulness to the daily routine of life.

The knowledge that the project is not novel, and that it has been, to some extent, tried by the Association and by some of its Branches without much result, tells us, if we need the telling, that such a work, to be successful, must be undertaken in a careful, deliberate, systematic manner, with a view to its being carried on continuously and thoroughly, so as to ensure the confidence and enlist the sympathy and co-operation of the members. There must be a well paid secretary or registrar, who will devote himself with zeal and ability to the duty of organising a systematic inquiry, who will attend the Branch meetings for the purpose of stimulating investigation and discussion of the questions submitted, and who will collate and codify the evidence and co-operate with a committee—a *medical investigation committee* and a *medical investigation secretary* or *registrar*. A valuable adjunct to this method of investigation would be the art of photography with the method of composite portraits, described by Mr. Galton,* whereby typical illustrations of certain conformations, and of the features of temperament and characters of disease, may be obtained. I do not enter into detail. The scope of the proposal will be sufficiently patent; and, for further arguments in its favour, I will refer to excellent papers upon it in our JOURNAL by Dr. Arthur Ransome† and Dr. Mahomed.‡

To the Association I am personally bound, not simply by the conviction of the good service it has done to the profession, and of the still wider mission of good to humanity yet before it; not simply by the many friendships it has opened to me, and the many happy and improving hours it has given me in company with my professional brethren, and the better feeling towards them with which it has inspired me; not merely by the memory of those good and earnest men who, with a keen appreciation of the wants of the profession, and a true presentiment of the future potentialities of such an Association, were its founders; but, further, because the interest in it was awakened in my boyish mind, together with the first sparkling interest in the profession, by one of those founders to whose energy the formation of the Eastern Branch was due. In the well stored and well used library of Crosse of Norwich, five and forty years ago, my little services were enlisted in the work of the Association, not so much for any good they did to it, but rather on account of the gain he knew it would be to me to be early trained in the feeling that a higher vocation than that which I might suppose to belong to the student of medicine, was opening upon me in the vocation appertaining to the membership of a great brotherhood, and in the duty devolving upon me as a member of a great profession. It was no small thing to have one's sympathies thus early awakened and directed. To the Association I have adhered ever since, as a means of keeping those sympathies alive; and, when the proposal was first made that the present meeting should be held in Cambridge, I felt that we were bound to afford you the opportunity you asked of coming to this much loved place, this fair spot upon which our own lot has fallen. I knew that such would be the sentiment of the profession in the district, and that the members of the profession in and around Cambridge would heartily and liberally respond to the call. I knew that the University and the town would join with us to do you honour. You might have come at a time of greater financial prosperity. You might have waited till our school-buildings were in a more worthy condition; and I trust that the prospect of coming improvement may ever be available as a reason for postponement; but I question whether you would ever have found a more hearty welcome than that which the Profession, the University, and the town of Cambridge, now give to the members of the British Medical Association.

* *Journal of* [illegible], November 18[illegible].
† British Medical [illegible], October 9th, 1869.
‡ British Medical [illegible], Jan. 3rd and 10th, 1880.

ADDRESS IN MEDICINE,

BY

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MODERN SCIENTIFIC MEDICINE.

WHEN the Committee of Council of this Association did me the honour of appointing me to deliver the Address in Medicine at this meeting, several topics occurred to me as suitable; but none more so than the progress of scientific medicine during the last decade. For several years past, these addresses have dealt with special subjects in pathology or practical medicine, or with a comparison of ancient and modern practice of medicine; and no attempt at summarising or stock-taking, if I may use such a phrase, has been made since our meeting in London, in 1873, when we were all so much charmed by the masterly address of the late Professor Parkes.

In reviewing the progress in the science of medicine during the last ten years, every one must be struck with the influence which discoveries in physics and biology (especially physiology) have had upon it; and, in looking forward, it is impossible not to feel that further advances will largely depend upon discoveries in the physical and biological sciences—sciences which, I am proud to say, this University has of late done much to promote; and in which, by means of her physical, chemical, and biological laboratories, she endeavours thoroughly to train her medical students, as the only sure basis upon which their subsequent more purely medical studies can be built. The future progress of medicine depends, in no small measure, upon students thus scientifically educated and trained to exact methods of investigation. Physics and physiology are advancing the healing art each day, step by step, more nearly to the position of an accurate science.

It will be my endeavour, then, in this address, to show that medicine is something more than a practical art; and that the statement of the late Dr. Whewell, in his book, *The Philosophy of Discovery* (page 34), that "we have even yet no science of medicine", in the sense in which he used the term science, namely, "a collection of general truths inferred from facts by successive discoverers"; whatever truth there might have been in it when he wrote, is becoming less and less applicable in the present day.

"Art", as Whewell wrote,* "has ever been the mother of science—the comely and busy mother of a daughter of a far better and serener beauty."

It has been well said,† that "it may be accepted as an axiom that every reduction of physiological or pathological processes to known physical laws, even if only partially and approximately successful, is a step forward in science; and that if the whole disturbance of nature's equilibrium, from the excessive complexity of the function involved, be beyond our power of analysis, there is still some advantage and a gain to precise observation in cutting off and putting on one side such portions as are susceptible of accurate treatment. The predominance of vague, though necessary, general [illegible] such as that of vital action is thereby materially diminished, and the direction is more closely indicated in which future efforts at advance may most judiciously be directed."

We can hardly estimate how much modern medicine owes to physics, unless we reflect how helpless the physician in the present day would be in the study of [illegible] processes and their results, and in the diagnosis

Address delivered at the British Association at Cambridge, 1880.
† Croonian Lectures before the College of Physicians, "On Some Applications of Physics to Medicine," by W. H. Stone, M.B. (*Lancet*, [illegible], 1879).

and treatment of disease, without such instruments as the microscope, the thermometer, the ophthalmoscope, the laryngoscope, the aspirator, and other instruments in daily use. In the hands of skilled investigators, these instruments of precision have worked changes in the diagnosis, interpretation, and treatment of disease of which the physician and surgeon of an older generation could never have dreamt.*

I do not propose to place before you all the discoveries made by the aid of these instruments during the period alluded to. I shall content myself by referring to those only which appear to be of primary importance in marking the progress of modern scientific medicine.

MICROSCOPE.—By the aid of the microscope, an advance has been made in the exact diagnosis of so-called idiopathic or progressive pernicious anæmia. This disease, although first described by Addison (probably in the *Medical Gazette* for March 1849), has only during the last few years been generally recognised—about fifty cases having been recorded by various observers. So far as I can ascertain, Addison made no microscopic examination of the blood in this disease; but, in the *Guy's Hospital Reports* for 1855, Dr. Wilks, who had been testing the blood in reference to the number of white corpuscles, soon after Bennett's and Virchow's discovery of leukæmia, thus alludes to it: "In that class of cases which had specially gained the attention of Dr. Addison, and which he has designated '*idiopathic anæmia*', and where, above all others, it might be presumed that the existence of an excess of colourless globules was possible, no such condition has been found."† This observation of Dr. Wilks has been confirmed by all subsequent writers on this disease; and, in addition to this means of diagnosis, other important microscopical changes have been noted in the blood in this disease, which help to differentiate it from chlorosis and other closely allied diseases, such as leukæmia, etc.

Messrs. Mackern and Davy,‡ and other observers (especially Drs. Byrom Bramwell,§ Stephen Mackenzie,‖ and Finny,¶) have noticed, in blood drawn from persons with this disease by the prick of a needle, that the red corpuscles do not collect into rouleaux, as in health, but lie separately, or form masses of irregular shape; that these corpuscles are very noticeably reduced in number, are variable in size, of great diversity in form; some being oval, others spindle-shaped; some having a tail-like projection; some are larger than the white corpuscles, others not one-fourth of the normal size. In all the abnormal corpuscles, the so-called zooid or yellow substance (hæmoglobin) seems to be collected in one part, leaving the œcoid or rest of the corpuscle (stroma) clear and transparent, and this probably gives rise to the apparent nucleation of the corpuscles.

I have carefully examined the blood in one well-marked case of idiopathic anæmia,** and I failed to find the small spherical red corpuscles regarded by Eichhorst†† as pathognomonic of this disease. Rosenstein, Grainger Stewart, and Bradford have also failed to find these "microcytes"; and they have been seen by Cohnheim in a case of medullary leukæmia, by Dr. Litton in a case of phthisis,‡‡ and by Dr. Greenfield in a case of Hodgkin's disease.§§ Dr. Osler of Montreal has found similar corpuscles in his own blood, and in that of persons free from disease. These corpuscles cannot, therefore, be regarded as diagnostic of essential anæmia; but the three combined abnormal conditions—viz., diminution of the number of the red corpuscles, their paler colour, and the alteration of their shape and size—may be regarded as characteristic.

C. M. Sörensen of Copenhagen‖‖ emphasises the counting of the red corpuscles for the purpose of exact diagnosis, and, from observations in eleven cases of this disease, says that the number of red corpuscles counted (according to Malassez's method) is only one-fourth to one-twelfth of the normal number. Dr. Stephen Mackenzie¶¶ has also made some valuable observations on the reduction of the red corpuscles, in various anæmic states; but in none did he find such a diminution as in this disease.

In August of last year I saw, in consultation with Dr. Ingle of this town, a case in which it was impossible to arrive at a correct diagnosis without a microscopic examination of the blood. The case was that of a married woman, who, during the whole of her pregnancy and for some time previously, had suffered from anæmia. Her condition during labour was so critical that Dr. Ingle asked a fellow-practitioner to be present at the delivery. She lost scarcely any blood during her confinement; but when I saw her, a few days subsequently, she appeared perfectly blanched, the lips and gums being quite bloodless. She had extreme breathlessness, palpitation, and giddiness. Loud venous and cardiac *bruits* were audible. The temperature was 101° Fahr., and the pulse was remarkably soft and compressible. There was some enlargement of the spleen and liver, but none of the lymphatic glands. We could detect no renal, cancerous, or tubercular mischief; and the hygienic surroundings of the patient were good. There had been no great hæmorrhages nor diarrhœa, nor had the woman been exposed to any malarial influence. I at first thought the case was one of idiopathic or progressive pernicious anæmia, which, according to Gusserow, Biermer, and others, occurs most frequently in pregnant women.* A microscopical examination of the blood, however, showed a large excess of white blood-corpuscles; the proportion of white to red being about fifty, instead of three, to a thousand. Now, as in progressive pernicious anæmia there is never any absolute increase of the white corpuscles, we were able in this case to give a more cheerful prognosis; the patient, under the influence of iron, digitalis, and good port wine, making a rapid and perfect recovery. The woman suffered to an excessive degree from the temporary leukæmia or leucocytosis of pregnancy. Iron did good in this case; whereas it has been found useless in pernicious anæmia, arsenic being the only remedy which has hitherto been found beneficial. Whilst upon the subject of the microscopical examination of the blood, I must not fail to mention the ingenious hæmacytometer devised by Dr. Gowers† for estimating the corpuscular richness of any specimen of blood. This instrument has the great advantage of accuracy and simplicity of application in clinical practice, and is an improvement in the latter respect upon the "compte globule" of Malassez‡ and the hæmatometer of MM. Hayem and Nachet. M. Malassez has also devised an instrument, the hæmachromometer, for estimating the amount of hæmoglobin in blood, which is both accurate scientifically, and most convenient clinically. He has pointed out that blood-corpuscle counting is of little diagnostic or clinical use unless combined with estimating at the same time the amount of hæmoglobin present.§

The diagnosis of idiopathic anæmia by means of the microscope furnishes us, then, with a "general truth" as to the abnormal conditions of the blood-corpuscles which has been "inferred from facts by successive discoverers"; and thus may serve to illustrate the statement, that we have, at the present time, a true science of medicine in Whewell's sense of the word.

To mention all that medicine has gained by the use of the microscope during the last few years would be to give a record of pathological progress during the period, and would include such large and important subjects as the recent pathology of tubercle, pyæmia, septicæmia, relapsing fever, blood-entozoa, the infective element of vaccine lymph, etc. One further application of it as an instrument of precision is of considerable interest at the present time, and ought, perhaps, to be noticed in this address. It was only in 1860 that Zenker of Dresden made out, *post mortem*, the disease of trichinosis in a patient that was supposed to have had typhoid fever. How many cases of trichinosis had before that been attributed to some other condition, cannot be estimated. The microscope has discovered the disease, and by the aid of this instrument it will probably be stamped out. In the year 1876, there were in Prussia no fewer than twelve thousand inspectors charged with the duty of inspecting slaughtered swine. Trichinæ were found in one of every two thousand animals. This is a humble use of the microscope, and one not entailing delicate manipulation and high magnifying powers. It is mainly to Professor Virchow, eminent no less as a practical administrator than as a scientific pathologist, that Prussia owes this great triumph of preventive medicine.

Mr. Power, one of the medical officers of the Local Government Board, was enabled, by microscopical examination of the muscles of the only fatal case of the outbreak which occurred on board the reformatory school-ship *Cornwall* in September and October of last year, to show the disease to be trichinosis, and not, as was at first supposed, enteric fever. It is highly probable that in future many cases of supposed enteric fever, for which no adequate cause can be discovered, will prove, as in the instance I have just quoted, to be due to eating trichinised meat.

A very remarkable fact in connection with this investigation is the discovery by Mr. Power of bodies somewhat resembling trichinæ in the

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* See a very able leader on the "Spirit of Modern Medicine", BRITISH MEDICAL JOURNAL, October 4th, 1879.

† *Guy's Hospital Reports* for 1878, p. 185.

‡ *Lancet*, May 1877; also *Guy's Hospital Reports*, 1878, p. 206.

§ *Edinburgh Medical Journal*, November 1877.

‖ *Lancet*, December 1879.

¶ BRITISH MEDICAL JOURNAL, January 10th, 1880.

** BRITISH MEDICAL JOURNAL, December 30th, 1876.

†† *Centralblatt fur die Medicinischen Wissenchaften*, June 24th, 1876.

‡‡ *London Medical Record*, 1877, p. 120.

§§ *Clinical Society's Transactions*, vol. x, p. 52.

‖‖ *Allg. Med. Centr. Zeit ung.*, No. 54. ¶¶ *Loc. cit.*

* *Medical Times and Gazette*, November 21st, 1874.

† *Lancet*, December 1st, 1877.

‡ *De la Numération des Globules rouges du Sang*. Pamphlet. Paris, 1873.

§ *London Medical Record*, 1879, p. 257. See also contributions to Clinical Hæmometry by Baxter and Willcocks, *Lancet*, March 6th, 13th, and 20th, 1880.

voluntary muscles of two undoubted cases of enteric fever which had died in St. Thomas's and the Greenwich Hospitals.* Mr. Power offers at present no positive opinion as to the nature of these bodies, or their relation to enteric fever; but, if this disease should be found to be a form of trichinosis, our views as to its etiology and pathology must be very much modified.

THERMOMETER.—But the thermometer has done even more than the microscope to place medicine upon a scientific basis, and to refute the statement that "we have even yet no science of medicine". I think it may be said without exaggeration, that the treatise on *Medical Thermometry* by Professor Wunderlich has more than any other work furthered the progress of medicine during the last ten years; for it is only during this period that the thermometer has come into general use in the profession, although the first edition of Wunderlich's book was published at Leipsic in 1868. This physician was enabled, from complete thermometric observations, extending over a period of sixteen years, in many thousand cases of disease, to abstract and formulate well-founded general principles from the mass of separate cases; or, in other words, to form a collection of general truths inferred from carefully recorded facts. Owing to his treatise, we have been able to diagnose diseases which at an early stage were previously confounded; *e.g.*, acute tuberculosis and enteric fever.† We have also become acquainted with the typical course which certain diseases run; and it is possible from thermometric observations alone to predict with almost absolute certainty the progress which many acute diseases are making. Probably no one phenomenon helps us so much as the temperature of a patient to reveal the existence of complications, and to predict the favourable or unfavourable issue of fevers and inflammations. Furthermore, as we have learned the natural course of most acute diseases, so have we come to trust less in drugs, and to leave more to nature, or perhaps I should say to careful nursing, rest, cleanliness, and suitable nourishment. Again, as the temperature can neither be feigned nor falsified, the thermometer may render us assistance in determining whether a disease is feigned or not.

In some diseases, such as acute rheumatism and enteric fever, the temperature indicates more truly the gravity of some cases than any other phenomena. It sometimes points out that the temperature is rapidly becoming so great as to be incompatible with life, unless measures be immediately taken to reduce the hyperpyrexia.‡ Dr. Wilson Fox and others have shown that, by appropriate cooling of the body by baths and other external means, patients suffering from acute rheumatism, with a temperature of 110° Fahr., may be rescued from death. The method of cooling the body by affusion of cold or tepid water was known to Dr. Currie of Liverpool and other physicians at the end of the last century; but, until the last few years, this mode of reducing abnormal temperatures has never been systematically and scientifically carried out. In the German hospitals, the method of treating the pyrexial state by the external application of cold has come into general use, and has also to some extent been introduced into private practice. Jürgensen, Liebermeister and Hagenbach, Ziemssen and Immermann, Brand of Stettin, and others, have published statistics of several thousand cases of fever treated in this way; from which it appears that the mortality has been reduced more than one-half, being now only from 3 to 10 per cent. In our own country, this method of treating enteric fever has not carried conviction to the minds of Sir W. Jenner§ and of Dr. Collie,‖ Medical Officer to the Homerton Fever Hospital; but is well spoken of by Dr. Ord of St. Thomas's Hospital and Dr. Cayley¶ of the Middlesex and London Fever Hospitals. My own experience of this mode of treatment is limited to one case of enteric fever, in which the temperature reached 106.8° Fahr., and which was successfully treated by baths.** In progress of time, this mode of reducing the febrile heat of the body will, I think, become generally practised; and though, since the first introduction of the thermometer for clinical purposes by Van Swieten and De Haen,* more than a hundred years elapsed before this instrument became generally used, let us hope that it may not take a century for this simple method of treating pyrexia to meet with general approval by the profession and the public, both of which, at the present time, seem to have an unwarrantable prejudice against it.

The value of the thermometer in clinical medicine has recently received a fresh illustration in the most interesting researches of Peter and Vidal on local temperatures in acute pleurisy, phthisis, and some abdominal diseases.† M. Peter had for a long time been anxious to settle the question whether a local morbid action was accompanied by a local elevation of temperature, and he has been able to answer the question in the affirmative.

M. Peter has found in acute pleurisy, from a long series of investigations, (1) that the parietal temperature outside the pleurisy is from one-half to two degrees Cent. higher than the average temperature of the patient; (2) that the more rapid the effusion, the quicker the elevation of temperature; (3) that when secretion is not going on, and the level of the fluid remains stationary, the elevation of the parietal temperature decreases, but the temperature is still from ½° to 1½° Cent. higher than the sound side; (4) that pleurisy not only raises the parietal temperature of the diseased side, but also that of the opposite side; but the parietal temperature of the diseased side is always higher than that of the healthy; (5) that, while spontaneous absorption of the effused fluid is going on, the parietal temperature drops gradually; (6) that in dry pleurisies the local excess of heat is less than when there is effusion, and the return to the normal temperature also occurs more rapidly; and (7) that the absolute elevation of the local temperature on the diseased side is more considerable than the absolute elevation of the axillary temperature.

M. Peter has also investigated the results of thoracentesis upon the parietal temperature, and has found, when the effusion is not reproduced, that although there is, immediately after the puncture, a slight rise, which lasts for some hours, nevertheless the parietal temperature afterwards decreases, and continues to do so until the normal figure is reached,‡ unless the effusion is reproduced, when the local temperature rises again.

The observations of M. Peter on local temperatures in pulmonary phthisis, which have been fully confirmed by M. Vidal, are even still more interesting. He believes that, as soon as tubercles occur at any point, the local temperature rises there; and he points out that in doubtful cases of phthisis, where the physical signs are not developed, this local thermometry may materially assist us in arriving at a correct diagnosis.

M. Peter has made a further communication to the Académie de Médecine on the subject of local temperatures in abdominal diseases; and he has indicated the differences between the local temperatures of the abdominal parietes in ascites and in the various forms of peritonitis—viz., (1) that which arises by extension from a chronic phlegmasia of the stomach, "gastrite sclereuse"; (2) chronic tubercular peritonitis; and (3) chronic cancerous peritonitis.

M. Peter used an ordinary clinical thermometer for the observations, which, on account of its simplicity, he prefers to instruments of greater precision.

Local thermometry has also been applied to the detection of the precise locality of a cerebral lesion by Broca,§ Dr. Carter Gray‖ of Brooklyn, and others. These temperature observations seem to be of value for the purpose of localising lesions. Dr. Gray has found, from observations on 102 males, among other things, that in health the temperature of the left side of the head is nearly one degree higher than that of the right, and that the average temperature of the frontal and parietal regions is nearly two degrees higher than that of the occipital. Lom-

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* British Medical Journal, April 24th, 1880.

† Dr. Waters of Liverpool has found that in a very large majority of cases of phthisis the temperature attains its maximum about 5 P.M., whereas as a rule the temperature in enteric fever is higher at 11 A.M. than at 5 P.M. This difference may help in the diagnosis of doubtful cases (British Medical Journal, December 20th, 1879).

‡ The cases of abnormally high temperatures recorded by Mr. Teale of Scarborough (see Dr. Dickie's *Lancet*, May 11th, 1878; March 15th, 1879; British Medical Journal, December 20th, 1879, and January 24th, 1880) and others, are very deficient in physiological and physiological knowledge. So far as I can see, every possible precaution seems to have been taken to exclude imposture in these cases.

§ *Lancet*, November 15th, 1879, p. 815.

‖ British Medical Journal, September 27th, 1879. Dr. Collie says those cases in which the bath is most needful are those in which, according to Liebermeister, it is contraindicated—viz., "where there is a very high degree of heart-weakness".

¶ British Medical Journal, April 24th, 1880.

** British Medical Journal, vol. ii, 1879.

* Sanctorius applied the thermometer to the determination of the temperature of the body so long ago as 1626.

† *Bulletin de l'Académie de Médecine*, 2nd series, vol. viii, Nos. 8, 37, 38, etc. See also *London Medical Record*, August 1879; and *Lancet*, January 3rd, 1880. The subject of local temperatures has also been worked at by Dr. Seguin of New York.

‡ In a case of acute pleurisy, with copious effusion, occurring in a young, unmarried woman of 22, with previous good health, under my care in Addenbrooke's Hospital in August 1879, and in which forty-seven ounces of fluid were withdrawn by the aspirator, to the very great relief of the patient, and with a subsequent gradual reduction of temperature and restoration to health, the temperature, after the thoracentesis, both in the axilla and on the walls of the chest, was greater on the *un*affected than on the diseased side—*e.g.*, on August 18th, five days after the tapping, the temperature in the axilla on the diseased (left) side was 102° Fahr.; on the unaffected (right), 102.5° Fahr. Two days later, the parietal temperature on the affected side was 101.4°; on the sound side, 101.8°. Other observations were made with corresponding results. M. Peter's papers only became known to me after I had tapped the chest in this case, and I have had no further opportunity of testing his other results.

§ *Journal de Médecine et de Chirurgie Pratiques*, Art. 10,634 et Art. 11,288

‖ *New York Medical Journal*, August 1878.

bard* has also made elaborate experimental researches on the regional temperature of the head; but he is not "inclined to place much reliance on the examination of the relative temperatures of different parts of the integument of the head as a means of medical diagnosis". Dr. Gray, however, thinks the surface-temperatures at various points of the head indicate similar differences of temperature in the convolutions lying beneath those points; and he refers to a case of tumour of the brain, occurring in the practice of Dr. Frank W. Rockwell of Brooklyn, in which the diagnosis of the locality of the intracranial morbid growth was made with a thermometer applied externally, and afterwards verified by a *post mortem* examination. Other cases have been recorded† which, notwithstanding the adverse criticisms of Rendu,‡ seem to show that we can attribute a positive value to local thermometry in making regional diagnoses in cerebral cases.

General thermometry has been found useful in diagnosing cerebral hæmorrhage from alcoholic poisoning, the general bodily temperature (rectal) falling at first below the normal in cerebral apoplexy,§ but not in drunkenness. Such a case is recorded by Mr. Foster in the *Lancet* for December 27th, 1879.

General thermometry also assists us in the differential diagnosis of true apoplexy from the so-called apoplectiform seizures, which occur in progressive general paralysis, disseminated sclerosis, cerebral softening, and also from uræmic coma. Charcot says, "I have demonstrated by repeated observations that, in true apoplexy, especially when it depends upon cerebral hæmorrhage, the temperature constantly diminishes some moments after the attack, and afterwards remains, generally for at least twenty-four hours, below the normal standard, even when intense and reiterated convulsive fits occur"; whereas, in the congestive attacks (so-called apoplectiform seizures) which occur in progressive general paralysis and in disseminated sclerosis, "the temperature, on the contrary, rises above the physiological standard, and tends to become gradually more and more elevated, during the whole continuance of the attack."

In cases of cerebral softening, according to Bourneville, the "period of initial lowering" of temperature commonly met with in cerebral hæmorrhage, is either absent or much less slightly marked; and, after the first two hours in a case of softening, the temperature may suddenly rise to 102° or even 104°, though it soon descends again to the normal standard, and afterwards exhibits altogether irregular oscillations (unless the pons Varolii be the part affected); whereas in cerebral hæmorrhage, it is found that, if the temperature, after the "initial lowering" rises soon after the attack beyond 102.5°, it rarely sinks again to the normal standard, unless under the influence of a shock resulting from fresh hæmorrhage (Bastian).‖ "In uræmic coma, according to Bourneville, the temperature of the body begins to fall at the onset of the seizure, and continues to sink as long as the coma persists, so that it may fall as low as 90° Fahr. in fatal cases. On the other hand, in coma due to cerebral hæmorrhage or softening, the lowering of the temperature is slighter in amount, and, in cases not fatal within this period, rarely lasts longer than twelve to twenty-four hours" (Bastian).¶

The thermometer is also useful in forming a prognosis in these diseases, but into this I have not time to enter.

OPHTHALMOSCOPE.—Physics have also furnished us with the ophthalmoscope, an instrument which, besides being invaluable in the recognition of diseases of the eye, has of late years assisted us materially in the diagnosis of intracranial tumours, syphilis, chronic Bright's disease, acute tuberculosis, tubercular meningitis,** cerebral embolism, locomotor ataxy, and other diseases which need not here be specified.

No well-educated physician in the present day would think of systematically investigating disease, especially of the nervous system, without an intimate knowledge of ophthalmology. Dr. John Ogle was the first physician in this country to introduce the ophthalmoscope into medical practice; and Dr. Clifford Allbutt's book, *The Ophthalmoscope in Nervous and Renal Diseases*, has, as Dr. Hughlings Jackson well expresses it, "done more than any other work towards the integration of ophthalmology with general medicine." Dr. Gowers's *Manual of Ophthalmology* (Churchill, 1879) is an excellent representation of what is known on the subject up to the present time. In his address on "Ophthalmology in its relation to General Medicine", delivered before the Medical Society of London,* Dr. Hughlings Jackson pointed out how frequently cases of supposed brain-disease are indirect effects of anomalies of refraction, readily recognisable by the ophthalmoscope, and how the correction of a hypermetropia or a myopia by appropriate spectacles may completely remove these *quasi* cerebral symptoms, and save patients from needless drugging with "nervine" and other medicines. These cases show so well the value of a knowledge of physics (optics) not only in the diagnosis of certain disorders, but also in their treatment, that I do not hesitate to quote a passage from the address on this subject. "Mr. Brudenell Carter", Dr. Jackson says, "has reported a remarkable case of myopia, simulating brain-disease, in the eighth volume of the Clinical Society's *Transactions*. This report should be carefully studied by physicians. The patient, for supposed brain-trouble, took a voyage to Australia, but was no better for it. He was told that he 'must abandon the idea of carrying on the family business, or of taking any active part in life'. This patient was immediately, thoroughly, and permanently cured by the adaptation of appropriate spectacles. The possibility of any anomaly of refraction, or any eye-defect, being at the bottom of that patient's troubles, seems not to have occurred either to himself or his doctors. He did not consult Mr. Carter for any defect of sight, but because he had heard that ophthalmic surgeons had an instrument useful in the investigation of diseases of the brain."

Dr. Jackson also relates the case of a medical student who had attacks of vomiting and frontal headache brought on by reading, and on account of which he was obliged to give up work. After travelling abroad for two years, doing nothing towards his career, he was fitted with glasses suitable for the hypermetropic variety of astigmatism, and has been well ever since, and graduated at the London University.

The following case, which came under my observation in January 1879, is one of no uncommon occurrence. A lady who had been ill for some time, and under two medical men, had occasion to consult an oculist for some defect of vision. The ophthalmoscope revealed retinal hæmorrhage, such as is met with in some forms of chronic Bright's disease. The urine was now for the first time tested, and found to contain a considerable quantity of albumen; but, previously to seeing the oculist, renal mischief had never been dreamt of. The lady died about eighteen months afterwards, with well marked uræmic symptoms.

Dr. Gowers relates† a case, in which the detection of an embolus in the central artery of the retina was the first thing which drew attention to the existence of the cardiac affection from which the patient suffered. The patient applied at the Moorfields Ophthalmic Hospital for a defect of vision, and then she was found to have mitral constriction.

The ophthalmoscope often enables us to detect inherited syphilis, when other indications, such as the peculiar teeth, are absent. The relation of disseminated choroiditis to syphilis is extremely striking and important; and such a distinguished observer as Hutchinson has gone so far as to say, that the patches of disorganisation left by choroiditis are almost as pathognomonic of inherited syphilis as the notched teeth.

Other interesting recent researches in this field of medicine are those of Dr. Gowers on the diminution of the calibre of the retinal arteries‡ in some cases of Bright's disease with increased arterial tension; and those of Quincke,§ Becker,‖ and Dr. Stephen Mackenzie¶ on spontaneous visible pulsation of the retinal vessels in connection with aortic regurgitation; and those of Mackenzie and others, of retinal hæmorrhages in connection with purpura, leucocythæmia, idiopathic anæmia, ague, and diabetes.

Retinal hæmorrhages have also been observed in septicæmia and pyæmia. In puerperal septicæmia, they almost invariably occur during the last two or three days of life, according to Litten; and they augur an unfavourable termination of the case. As these hæmorrhages are not found in acute specific diseases, such as enteric fever, they are useful in diagnosis as well as prognosis.

Another important condition, revealed to us by the ophthalmoscope, is the simple atrophy of the optic nerve—atrophy without precedent neuritis—which is seen in some cases of locomotor ataxy, and which may be of help in the recognition of this disease at an early stage. This simple optic atrophy can be sometimes seen before ataxy begins; and along with absence of the "tendon-reflex", or with the presence of the lightning-like pains, it is an almost certain indication that the disease has commenced.

* *Experimental Researches on the Regional Temperature of the Head.* H. K. Lewis. London: 1879.

† *American Journal of Medical Sciences*, July 1879.

‡ *Revue Générale des Sciences Méd. etc.* Art. des Localisations Cérébrales Corticales. Par H. Rendu, 15 Janvier, 1879.

§ Charcot on *Diseases of the Nervous System*. New Sydenham Society, 1877, p. 209; also references there given, especially Bourneville, *Etudes Cliniques et Thermométriques sur les Maladies du Système Nerveux*. Paris: 1872.

‖ *Paralysis from Brain-Disease*, 1875.

¶ *Ibid.*

** See Dr. Garlick's paper, communicated to the Royal Medical and Chirurgical Society, session 1878-79, for changes in the choroid and optic discs in twenty-six cases observed at the Hospital for Sick Children. In six of these cases the ophthalmoscope was of real diagnostic assistance, and in two cases it revealed undoubted meningitis several days before the symptoms were diagnostic.

* BRITISH MEDICAL JOURNAL, 1877, vol. i.

† *Manual of Ophthalmology*, case 48. p. 318.

‡ *Medical Ophthalmoscopy*, pp. 12 and 13.

§ *Berlin. Klin. Wochenschrift*, 1868, No. 34; and 1870, No. 21.

‖ *Arch. für Ophthal.*, xviii, 206-296.

¶ *Medical Times and Gazette*, 1875, vol. i.

The recognition of optic neuritis is of great value both in the diagnosis and prognosis of intracranial tumours. According to Gowers,* it is present in at least four-fifths of these cases at some period of their growth; and its subsidence, when it "has not reached any considerable degree of intensity, may be taken as indicating, in most cases, a retrocession of the growth, and a neuritis of very chronic course affords evidence that the progress of the tumour is equally chronic".

I think I have said enough to show that, apart from any symptom suggesting ocular disease, the eyes should be examined with the ophthalmoscope as a matter of routine, just as we feel the pulse and look at the tongue. This is the only way in which we can avoid errors of diagnosis and can treat our patients upon scientific principles, and thereby raise medicine from the region of pure empiricism. This also is the only method in which we can make the teaching of medicine intelligible to our students, and by which we can encourage them to be constantly cultivating the faculty of observation and comparison; for it has been truly said that "all observation is suggested by comparison", and "experience is founded in a well-directed and extended observation".†

The ophthalmoscope must, therefore, no longer be regarded as an instrument of use only to the ophthalmic surgeon, but as a most valuable instrument in the detection of many morbid states which come under the notice of the physician.

LARYNGOSCOPE.—Our knowledge of the uses of the laryngoscope in clinical medicine to-day is little in advance of what it was ten years ago. The applicability of this instrument in medicine had, previously to this, been almost carried to its utmost by Morell Mackenzie, Sieveking, George Johnson, and others, not to mention others than our own countrymen; and their results have withstood the searching investigations of more recent labourers. Some new facts have, however, been added to our store of knowledge in this department of medicine.

Owing more especially to the careful observations of Dr. Marcet,‡ we can detect tubercular disease in the larynx before there are any physical signs of its development in the lungs. When laryngeal phthisis is present, there is a "whitey, milky, probably purulent mucous fluid in the laryngeal cavity". The diagnosis of laryngeal phthisis is of more value in prognosis than is generally supposed; for if phthisis can be detected in the larynx, we may be quite sure that the lungs either are, or will shortly become, tuberculous, if not obviously so at the time. It is also a well established fact that those cases of phthisis in which the larynx is early involved are less amenable to treatment than most other cases; and hence we are compelled to give a more gloomy prognosis.

We are also indebted to Dr. Marcet (of whom it may well be said *nihil tetigit quod non ornavit*) for pointing out the importance of examining the epiglottis with the laryngoscope.§ Cases of simple and syphilitic inflammation of this organ may be mistaken, as he has shown, for tubercular disease of the larynx, unless an examination is made with the laryngoscope.

In inflammation of the larynx, the laryngoscope helps us to ascertain the presence or absence of membrane, which the report on the subject of croup and diphtheria presented to the Royal Medical and Chirurgical Society by a committee, of which Dr. Dickinson was chairman, has shown to be of the highest importance, both as regards prognosis and treatment.

About 90 per cent. of the cases of membranous inflammation of the larynx prove fatal; and of the 10 per cent. of recoveries, there are few that survive unless tracheotomy be performed. Indeed, "if a child have laryngeal obstruction and membrane is seen in its throat, the chances are that it will either die or be tracheotomised, and not improbably both". On the other hand, cases of non-membranous inflammation of the larynx, even those in which dyspnœa is severe and protracted, almost invariably end in recovery; and the worst cases hardly ever require tracheotomy. Membranous inflammation of the larynx is, in a vast majority of cases, diphtheritic, and accompanied by albuminuria; whereas, in non-membranous inflammation of this organ, the urine is seldom albuminous. Although the committee were unable to settle the vexed question as to what constitutes croup and what diphtheria, the evidence before the committee led them to the conclusion that most cases of membranous inflammation of the larynx were of a diphtheritic character.¶

SPHYGMOGRAPH.—In the field of medicine in which the sphygmograph has been used, the harvest has been more abundant than in the case of the laryngoscope, chiefly owing to the researches of Burdon Sanderson having been elaborated by Galabin, Mahomed, and others. In his thesis, read in 1873, for the degree of M.D. in this University, Dr. Galabin, formerly Fellow of Trinity College, corroborated the views of Burdon Sanderson, George Johnson, and others, on the use of this instrument in estimating the amount of arterial tension, as gauged by the height of the tidal or predicrotic wave of a pulse-tracing; and for the first time pointed out that high arterial tension exists in acute as well as in chronic Bright's disease. The condition of high blood-pressure is of the greatest importance clinically, and should be watched and estimated as carefully as the body-temperature, as there is no doubt it will be when the sphygmograph has been further simplified. High blood-pressure gives the earliest indication of the grave series of degenerative changes throughout the body known as chronic Bright's disease, and may, if neglected, lead to disastrous results both in disease of the arteries and of the heart. High blood-pressure is the cause of all so-called heart-disease in old persons; it is very amenable to treatment, and its treatment is imperatively necessary. Dr. Galabin writes:* "I believe that one of its (sphygmograph's) successful applications would be to estimate the probable duration of life, by showing how far the vascular system has undergone the changes to which it is subject with advancing years, or which may be the only indication of commencing Bright's disease."

Dr. Handfield Jones† has recorded a series of cases in which, without albuminuria or other symptoms of Bright's disease, the sphygmograph has sufficed to diagnose the disease, the high pressure in the pulse being really its pathognomonic symptom. Of the value of the high tension in prognosis he thus writes: "If I were bold enough to be a prophet, I should point to the time when the elder folks, instead of waiting till they have had a stroke of apoplexy or a touch of paralysis, or are laid up with arterio-capillary fibrosis or morbus Brightii, and then hurriedly summoning a physician to do impossibilities, will seek his advice betimes, asking him to supervise their vital functions, regulate their mode of life, and teach them to stay the morbid changes which they know may be silently progressing."

In a paper published in 1874,‡ Dr. Mahomed tried to show that a chronic condition of high blood-pressure led to arterio-capillary fibrosis. This view he has further elaborated in a paper in the last volume of the *Guy's Hospital Reports*, where he says that the hard pulse—the pulse of high tension—is *the* sign of Bright's disease; and that it should altogether replace albuminuria, for this is only exceptionally present.

High blood-pressure gives rise to many functional as well as structural disorders. In the paper referred to, Dr. Mahomed§ described the occurrence of this condition in an acute and transient, as well as in a chronic and permanent, form, as the result of certain blood-poisons, and as an *antecedent* of kidney-disease. He has also demonstrated its existence in pregnancy, and thus indicated the connection between pregnancy and kidney-disease (so called), and thus with puerperal eclampsia.

This condition of high blood-pressure appears to be recognisable early in life, before it has given rise to any structural changes or symptoms, and may be described as depending on the *diathesis*, or less correctly on the temperament, of the person. It is a condition which, when once detected, should be closely watched and treated, otherwise it will develop into chronic Bright's disease.

Of the value of the sphygmograph in valvular disease of the heart, experience has shown that it is of use more as an aid to prognosis than to diagnosis; it enables us to gauge the extent of the lesion.‖ It is also very valuable as a guide to treatment, and in watching the effect of treatment; also in estimating from time to time the advance or otherwise of the disease by the comparison of tracings taken at different periods.

Dr. Mahomed has elaborated¶ the use of the sphygmograph in the diagnosis of aneurism of the aorta; he has shown that it may in some cases be of value in determining the site of an aneurism, and in estimating the amount of arterial tension present and the result of treatment upon it. The plan of treatment advocated in aneurism by Mr. Tufnell has for its object the reduction of arterial tension.

The sphygmograph is further valuable as a scientific means of watching the effects of drugs on the vascular system, especially with a view

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* *Op. cit.*

† [illegible]

‡ *Contributions to the Anatomy* [illegible], Royal Medical and Chirurgical Society, [illegible]

§ [illegible] *Medical Times and Gazette*, May 10th, 1879.

¶ See an interesting discussion on the pathology of Croup and Diphtheria, before the Glasgow and West of Scotland Branch, reported by the remarks by Dr. Coutts, British Medical Journal, [illegible]

‖ [illegible]

¶ Dr. Mahomed's paper, *Medical Times and Gazette*, September 11th, 1875.

* Some [illegible] Aneurism, *Medical Times and Gazette*, August 7th, 1875, and Internal Medicine, BRITISH MEDICAL JOURNAL, vol. ii, [illegible]

to their use in the treatment of Bright's disease and of aneurism by reduction of arterial tension. Above all, it is valuable as an educator and interpreter to the finger; it has taught us the meaning of the *tactus eruditus*, and will always be of the utmost importance in teaching students *what* to feel for in the pulse.

The possibility of recognising Bright's disease in its pre-albuminuric stage by means of the sphygmograph leads me to think, with Dr. Handfield Jones, that this instrument has a great future before it. When people become wise enough to pay their doctors for keeping them in health by periodically examining them to see if there be any abnormal change taking place in their bodies, the sphygmograph must come into general use in our profession. How many valuable lives might be prolonged if this suggestion which I have thrown out were acted upon! An indigestion, with increased arterial tension, is, as Dr. Saundby* and others have shown, the forerunner of Bright's disease; and this functional stage of the malady is probably quite amenable to treatment. This condition of high arterial tension occurs in those who eat too much nitrogenous food for the exercise they take, and thus overtax their digestive organs and load their blood with imperfectly assimilated food.

The remedies for high arterial tension generally are a reduction in the amount of nitrogenous food, purgatives, diaphoretics, bleeding, etc. A milk-diet is of the greatest value in some of these cases, as Dr. George Johnson was the first to point out. I have over and over again relieved this condition of the circulatory system by placing patients in bed and on a milk-diet. To show the value of bleeding in this condition, I cannot do better than quote a case recorded by Dr. Alexander Harvey, Emeritus Professor of Materia Medica in the University of Aberdeen, in his work *First Lines of Therapeutics*, of a young lad of eighteen, in whom general anasarca, accompanied by profound coma, occurred rapidly after scarlatina, and yielded at once to general blood-letting—the coma disappearing in ten minutes and the anasarca within twenty-four hours after the vascular tension had been relieved.

As the profession comes more and more to recognise the importance of increased blood-pressure, the practice of bleeding must come again more and more into fashion. The *pulsus magnus, durus et tardus*, which the old practitioners invariably bled, was exactly the pulse of high-pressure as we now recognise it. (Mahomed.) There can be no doubt that, in the present day, we too much neglect venesection. In cases of apoplexy, with increased vascular tension, bleeding is beneficial; and also in uræmic convulsions, which Mahomed† regards as probably due to minute cerebral hæmorrhages, produced by increased arterial tension, and not to the circulation of excess of urea or ammonium carbonate in the blood (Frerichs), or to anæmia of the brain caused by spasm of the cerebral arteries (Hughlings Jackson and George Johnson).

Some time ago, it was discovered that amyl-nitrite and nitro-glycerine have the property of relaxing the arterioles, and of thus temporarily reducing blood-pressure. This discovery affords a most beautiful instance of what I do not hesitate to call scientific therapeutics, and affords another example that medicine is advancing to the dignity of a science. The drugs I have mentioned are especially suited to those cases in which the heart fails to overcome the great arterial pressure, as, *e.g.*, angina pectoris, and the angina-attacks occurring towards the end of chronic Bright's disease. To Dr. Brunton we are indebted for the discovery of the action of amyl-nitrite in angina pectoris. In his *Gulstonian Lectures*, delivered before the College of Physicians in 1877, he says: "Some years ago, I was placed in exceptionally favourable circumstances for studying the disease. I was able to watch a patient at every hour of the day and night, and to observe every phase of the attack. By the aid of Marey's sphygmograph, I discovered that, during the paroxysms, the blood-pressure rose and the pulse became quick. I might have imagined that the rise of the pressure was due to the quickness of the heart's pulsations; but the experiments of Marey and Chauveau enabled me to say, from the form of the tracing, what I could not have discovered by the finger, that the arterioles were excessively contracted. As the pressure rose, severe pain came on in the heart, and, when the pressure fell, the pain disappeared. It was, therefore, natural to look upon the pressure as the cause of the pain, and my opinion was confirmed by the effects of bleeding; for this lowers the pressure, and each bleeding prevented an attack. The pathology of the disease thus seemed clear; and the next question was, how to treat it? The remedy wanted was one to dilate the vessels, and this the researches of Richardson and Gamgee supplied. Nitrite of amyl they had shown to possess the very power which I desired; and thus, their experiments on the pharmacology of the drug, and my observations on the pathology of the disease united, led to successful therapeutics. I administered the remedy, and the pain disappeared."

Nitro-glycerine has been shown by Dr. Murrell* to have the same physiological action as amyl-nitrite, and may be used in the same cases. Its effects are said to be more gradual and lasting; it may, therefore, be taken regularly three or four times a-day, and the arteries thus be kept in a constant state of relaxation.

We have now seen how the sphygmograph has not only helped to point out the nature of pathological states, but also indicated the treatment suitable for them. There can be no doubt that this subject of arterial tension‡ is one of the "burning" questions in medicine at the present time, and this must be my apology for having occupied so much time it placing it before you.

One other point of great importance, in reference to albuminuria and arterial tension, which must not be altogether passed over, is the so-called "Albuminuria of Adolescents", which was the subject of a paper by Dr. Moxon in the *Guy's Hospital Reports* for 1878. In those cases of albuminuria which occur in young men from the age of sixteen to twenty-two, the albumen is not always present in the urine, but intermits; it is generally, however, present in the urine at some period of the day, most frequently in that passed after breakfast. These patients are usually languid, listless, complaining of headache, are anæmic, and "generally out of condition"; but after a variable time, under the influence of tonic treatment, the albuminuria usually entirely disappears, and the patient's health is restored. Now, in these cases of albuminuria, the arterial pressure is quite normal, or low rather than high. I have seen several cases of this description amongst the undergraduates of the University and others, and it is of the utmost importance to recognise them clinically; for the prognosis in them is favourable, and the line of treatment to be adopted the very opposite of that which obtains in cases of albuminuria with high arterial tension. I am disposed to agree with Sir William Gull, that the albuminuria in these cases is due to atony of vessels and nerves. He says, that albuminuria occurs in young and growing men and boys almost as frequently as spermatorrhœa.‡

In reference to this subject, Dr. George Johnson maintains,§ "first, that this latent albuminuria—albuminuria, that is, unassociated with any other evidence of functional disorder or structural disease—may, by a careful inquiry, be traced back, in a very large proportion of cases, to some probable exciting cause; secondly, that the presence of even the smallest trace of albumen in the urine is always pathological, never physiological; and that the neglect of this indication of a pathological condition and tendency, especially such negligence as involves repeated exposure to the exciting cause, may convert a temporary and occasional into a persistent albuminuria, which, sooner or later, though it may be after many years, will result in a fatal disorganisation of the kidney."

The probable causes of such albuminuria are, in Dr. Johnson's opinion, either (1) imperfect recovery from an acute renal attack; or (2) exposure to cold and wet, especially after being overheated and fatigued by prolonged or violent exercise (common in boys at school); or (3) imprudently prolonged cold bathing; or (4) excessive consumption of animal food and of alcoholic stimulants, either separately or combined; or (5) inveterate dyspepsia in persons of strictly temperate habits; or (6) mental anxiety; and, in some cases, a combination of two or more of these causes.

There can be no doubt that, at the present time, physicians do not regard simply the presence of albumen in the urine as so serious a sign as they would have done ten years ago. The late Dr. Murchison regarded some cases of albuminuria as due to hepatic derangement. In his work on *Diseases of the Liver*, second edition, p. 573, he writes as follows. "There are, also, reasons for believing that albuminuria may be induced by hepatic derangement, independently of structural disease of the kidneys. It is now generally acknowledged that albuminuria, even when copious, and in the absence of any acute febrile disorder, does not necessarily indicate renal disease. Very often in these cases the albuminuria is intermittent or remittent, and the albumen has peculiar chemical characters; the previous addition, for example, of a few drops of mineral acid preventing to an unusual extent the subsequent coagulability by heat. Errors in diet are one of the most common causes. In some persons peculiarly constituted, temporary albuminuria is a constant result of certain articles of food, such as uncooked eggs.

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* *Birmingham Medical Review*, October 1879.

† On the Pathology of Uræmia and the so-called Uræmic Convulsions, BRITISH MEDICAL JOURNAL, July 1879.

‡ Mr. Hamilton ("On the Effects of Increased Blood-Pressure as applied to the Blood-Vessels of the Lungs", *Practitioner*, February 1880) has shown that in croupous pneumonia we have increased blood-pressure, and that the exudation of fibrin and corpuscles into the air-vesicles is due to this, and that venesection is the one sovereign remedy for this disease; whereas in catarrhal pneumonia the very opposite obtains—there is no increase of blood-tension, and bleeding is positively injurious.

‡ Note to Dr. Moxon, *Guy's Hospital Reports*, 1878, p. 238.

§ BRITISH MEDICAL JOURNAL, December 13th, 1879.

In several instances, I have known the urine passed at night to contain albumen, often associated with lithates and a high specific gravity, whereas the morning urine was clear, of low specific gravity, and contained no albumen. Again, in certain cases of exophthalmic goître, the urine at some hours of the day, usually after food, is loaded with albumen, whereas at others it contains none; and this state of matters may last for many months, and then completely disappear. Now it is not contended that, in all these cases, the liver is the organ primarily at fault, but certainly in some there is good reason for believing it to be so, the albuminuria being unattended by any other symptom of renal disease, being variable in quantity and sometimes absent, and the urine being of normal quantity, of high specific gravity, and habitually loaded with lithates, lithic acid, oxalates, and pigments, and there being very often cutaneous eruption, dyspepsia, and other evidence of hepatic derangement. I have met with several instances of this sort, where the patient was subject to severe attacks of what at first seemed to be hepatic colic, but where there was no jaundice, and the paroxysm was followed by a temporary, yet extraordinary, increase of lithates and albumen in the urine. Lastly, so often have I observed albuminuria associated with hepatic disorder, which has disappeared completely and permanently when this has been set to rights, that I have little doubt that we have, in the liver, a cause of albuminuria to which attention has not hitherto been sufficiently directed."

Before leaving the subject of albuminuria, I would especially invite the general practitioner in medicine to help us to solve the meaning of this intermittent appearance of an abnormal substance in one of the secretions. They have opportunities of watching cases in private from day to day, and of knowing the habits of their patients better than a physician, who is only consulted occasionally. It is of the utmost importance that the question should be settled as to whether these forms of albuminuria are due to removable causes, such as indigestion, etc., or whether, as Dr. Dickinson would have us believe, they represent the initial stages of granular degeneration of the kidney.

ASPIRATOR.—Another instrument of precision for which we are indebted to physics is the aspirator, which has proved such a great boon to the physician and surgeon in the diagnosis and treatment of various diseases. It is not my intention to detail all the diseases in which this instrument has been found useful, as this was most admirably done by Mr. Wheelhouse, in his Address in Surgery at the Bath meeting in 1878.* I may, however, perhaps be pardoned for mentioning the great success which has attended our treatment of hydatid disease of the liver by this instrument. This disease is very prevalent in Cambridgeshire. During the eleven years I have been physician at Addenbrooke's Hospital, I have treated a considerable number of cases of this disease with the aspirator, and only one has proved unsuccessful, and this by reason of the aspirator never reaching the sac, which had thick cartilaginous walls, although three punctures were made. In a district like Cambridgeshire, we have opportunities of watching our cases better than in the large London hospitals; and in all my cases, save the one just mentioned, the cure has, so far as can be ascertained, been permanent. I [illegible] making a permanent opening, this application has taken place; simply contenting myself with drawing off nearly, but not quite, all the fluid. My experience does not coincide with that of my friend, Dr. John Harley,† who advocates a permanent opening, and the withdrawal of the hydatids from the cysts, and even of the parent-cyst itself. This method was tried in some of my earlier cases, but was found to have no advantages over the simpler method, and [illegible] pneumonia, which nearly carried off the patients. Before using the aspirator in cases of suspected pleuritic effusion, hepatic abscess, etc., I now almost invariably make a preliminary exploratory examination with a hypodermic syringe, which is really a [illegible] aspirator. I have had to rue the importance of this precaution [illegible] before the profession by Dr. Greenfield.‡

[illegible] The stethometer invented by Dr. Ransome of Bowdon is another instrument of precision, of value in the detection of some chest-affections. Like the sphygmograph, the stethometer is not of ready application at the bedside, and has consequently not come into general use in the profession. It is capable, however, of rendering [illegible] cases of lung-disease are. According to Dr. Ransome, it has, in several instances, indicated traces of former lung-disease that no physical examination of other kinds could display; hence it is certainly useful in examination for life assurance. Dr. Ransome, in a private note, informs me that he thinks stethometry of chief value in estimating the probable course of cases of phthisis and pleurisy. In the chapter on Prognosis in his book on *Stethometry*, he spoke with diffidence on this point; but he is now much more certain of the value of exact measurements in this regard.

SPECTROSCOPE.—Another instrument which promises to be of use in clinical and pathological investigations is the spectroscope, which has yielded some important results in the hands of Dr. MacMunn.* By means of this instrument, it is said we can distinguish blood from the bladder or urethra from blood from the kidney, and blood from the stomach from blood from the lungs, etc.

ELECTRICITY.—The application of electricity to the diagnosis and treatment of diseases of the nervous system has been placed upon a much more scientific basis during the last decade, chiefly owing to the labours of Althaus, Russell Reynolds, Radcliffe, Poore, and Tibbits, in this country; of Duchenne, Onimus and Legros, Cyon and Tripier, in France; of Rosenthal, Zech, Benedict, Brenner, Erb, Meyer, and Ziemssen, in Germany; and of Beard and Rockwell, and of Hammond, in America. The researches especially of Professor Erb of Heidelberg, on the quantitative and qualitative reactions of nerves and muscles to electrical currents, which are termed the "reactions of degenerations", are of the greatest interest and value in the diagnosis and prognosis of certain pathological states.†

It is not contended for electricity that it alone is sufficient to enable us to diagnose any particular disease of the nervous system, but its reactions, when considered in conjunction with a careful consideration of a case in all its bearings, are often of valuable assistance in forming a correct view of it. Let me cite one or two examples in illustration of my meaning. A patient suffered, among other symptoms, from paralysis of the left leg. The reactions of the nerves and muscles to faradism and galvanism were normal. Now, in paralysis from brain-disease, as a general rule, the electrical reactions of muscles and nerves are normal, which is not the case in paralysis from spinal disease, or from disease of the nerves and muscles themselves. The case was diagnosed as depending upon cerebral mischief, and, at the necropsy, a tumour was discovered in the right hemisphere, in the posterior parietal region. Again, a patient has right facial paralysis. The response of the nerve to electricity is considerably diminished. This shows that the paralysis has not a central origin, but is due to cold; that the case is one of so-called rheumatic paralysis. The cases might be multiplied in which the diagnosis of a lesion respectively in the brain, spinal cord, or peripheral nerves, can be established by electrical tests.

Again, electricity is useful in helping us to diagnose diseases affecting the various structural elements which go to make up the spinal cord; but we must not place too much reliance upon it, as several of these elements may be affected at the same time, and we may have irritative as well as paralysing lesions; and this constitutes the great difficulty in the science of electro-diagnosis. Even in some of these cases, however, electricity furnishes us with valuable negative evidence. For example, if, in a case of spinal paralysis, the electrical reactions of nerve and muscle are normal, we may infer that the grey matter of the cord is not extensively affected, and the anterior cornua and roots are intact.

Electricity also assists us in distinguishing functional from organic paralyses, and is valuable in the diagnosis of paralysis from lead-poisoning.

The subject of electro-therapeutics is now assuming so much importance, and its proper application is one which involves so many technicalities, that I should hail with satisfaction the establishment of an electrical department, under the direction of a competent person, in connection with the hospitals of this country, such department being for both paying and poor patients. I feel sure the medical men resident in the neighbourhood of such hospitals would gladly send their patients to them for electrical treatment.

I have found electricity of considerable value in some cases of progressive muscular atrophy and of infantile paralysis; and there can be no doubt of its use in removing chronic facial paralysis from cold, and, in some cases, of chronic neuralgia. Faradism and galvanism are the forms in which electricity is chiefly used in the present day; but statical electricity, produced by the old plate-machine, has recently been found superior to these, in certain cases of hysteria recorded by Vigouroux,‡ Dujardin-Beaumetz,§ and Erlenmeyer.‖

[illegible]

The treatment of aortic aneurism by galvano-puncture has met with some success in the hands of Dr. John Duncan*, Dr. Simpson† of Manchester, Dr. McCall Anderson of Glasgow,‡ and others.§ I must confess I have never had the courage to try it, although I have had two or three cases under my care which might have been regarded as suitable for the operation.

METALLO- AND MAGNETO-THERAPY.—Connected with the subject of electro-therapy are the very interesting investigations of Charcot and others, on the influence of metals and magnets on the human body in cases of hemianæsthesia. The subject is not altogether novel, as it was a belief, even amongst the ancients, that metals applied to the body exercised some influence upon the nervous system.

Metallo-therapy has, however, entered upon a new phase since, in 1848, Dr. Burq propounded the two following propositions: first: "That in certain states of the nervous system, plates of metal, placed upon the skin, have the power of altering general and special sensation and cutaneous vascular supply; and that the susceptibility of individuals to the metals generally used—gold, silver, iron, copper, zinc—varies; a patient sensitive to one metal being insensitive to another; second: that when it has been ascertained to what metal the individual is susceptible, that metal may be successfully administered internally to cure the morbid state of the nervous system."

In 1876, the Société de Biologie appointed a committee, consisting of MM. Charcot, Luys, and Dumontpallier, to investigate the alleged phenomena, which presented its first report in April of the following year. The cases selected were chiefly those of hysterical hemianæsthesia, in which the patients had lost superficial and deep common sensibility, as tested by plunging long needles into the skin of parts usually most sensitive. The senses of taste and smell were usually abolished, and there was dimness of vision, with more or less colour-blindness. The skin was paler on the affected than on the sound side; the temperature also was lower, and the muscular power less. The results of the investigation bore out in every particular Dr. Burq's assertions. The application, for ten or fifteen minutes, of a metallic plate of gold, copper, or zinc—according to the susceptibility of a patient for a particular metal—to the anæsthetic part, restored for a time sensibility in the part. At first, a sensation of heat or numbness was felt in the part, which became red and of a higher temperature. A needle-puncture caused great pain, and made blood flow freely, though previously it was with the greatest difficulty that a drop of blood could be drawn from the limb, even when the needle was thrust through it. The muscular power in the limb was also increased; and taste, smell, and sight were restored. But these effects were not permanent; by the next day, the anæsthesia, etc., had returned. One of the most curious phenomena in connection with these experiments is what has been called the "transference" of sensibility—that is, a loss of sensibility on the sound side in the parts symmetrically opposite to those in which it has been restored.

In two cases of hemianæsthesia, dependent upon organic brain-disease, the metals restored sensibility to the part affected; and the effect, instead of being transitory, as in hysterical hemianæsthesia, was permanent.

The committee reported again, in 1878, on M. Burq's second proposition: "That the external metallic aptitude being known, the same metal administered internally will determine the same results as its external application." Five cases are recorded, in which hysterical patients, sensitive to either gold or copper, recovered sensation on the internal administration of the chloride of gold and sodium, or of the binoxide of copper. Very curiously, when the sensation had returned, the outward application of plates of gold or copper produced a relapse of the anæsthesia.

These experiments appear to have been conducted with every possible precaution against error or imposture; the phenomena not being produced when any other metal than the one to which the patient was susceptible was used. For instance: in a patient sensitive to copper, plates of platinum were substituted for copper without her knowledge, but no results followed; the copper being replaced, the usual phenomena ensued.

In a case of hysterical colour-blindness (achromatopsy), by the application of gold to the temples, the colours were restored in definite physiological order; and on the occurrence of a relapse, they were lost in the same order—a circumstance which excludes all suspicion of fraud.

Cases, similar to those reported by the French committee, have since been published by Drs. Anderson,* Wilks,† Inglis,‡ A. Hughes Bennett,§ Professor Westphal‖ of Berlin, and others, which leave little doubt as to the genuineness of the facts observed.

A satisfactory explanation of these phenomena has not yet been made. M. Burq attributed the effects of the metals to the production of superficial currents of electricity, which influence the nerves of the part; and M. Regnard has conducted some experiments which seemed to bear out this hypothesis. It has been shown, however, by Westphal¶ and others, that sinapisms applied to the anæsthetic parts produce the same effects, even the "transference", as the application of metals; and hence Adler** and others think that these agents act in virtue of their power of producing mechanical irritation. Others, as Dr. W. B. Carpenter, regard these effects as due "to a sustained attention on the part of the patients" (expectant attention); but MM. Charcot and Schiff seem to have eliminated, as carefully as possible, the influence of "expectant attention" in their experiments.

"Expectant attention" may explain much, but it does not explain all in these cases. "It cannot account", as the writer of the article on Metalloscopy, in the *Birmingham Medical Review* for April 1879, justly observes, "for a patient recovering her perception of colours in exact correspondence with physiological law, as related in the second report of M. Charcot's committee. It cannot account for transference—a fact discovered by accident, to the surprise of the observers, and, we are told in one case, the *horror* of the patient. It cannot account for the positive and constant results of certain agencies and the negative results of others; the different effects of the different metals; of the two poles of the magnet; of the magnet with the circuit open or closed. Such facts as the permanence of anæsthesia, caused by superimposing another metal; the prevention of anæsthesia by the same means; the prevention of anæsthesia by placing another metal on the central side of the first, and the absolute powerlessness of the same metal, when placed on the distal side, are also quite opposed to the same views."

The practical outcome of these investigations is, in the hysterical cases, at present not very great. The tendency to relapse and the production of "transfer" render the prognosis gloomy. The phenomena are, however, of considerable scientific interest, and, like the cases of paradoxical temperatures, must be left partly to the physiologists†† for a rational explanation.

The restoration of sensation and also of motion by the magnet in some cases of organic origin (cerebral hæmorrhage, alcoholism, lead-poisoning) is, however, a great gain to practical medicine, and "transfer"‡‡ is very rare in anæsthesia of organic origin.

Thus far, I have mainly endeavoured to show the advantages which have accrued to practical medicine from the use of instruments of precision, for which we are indebted to the science of physics; and perhaps I ought not to conclude without uttering a word of caution, especially to the younger amongst us, not to rely too exclusively upon the information derived from the use of these instruments, to which perhaps there is a great temptation. The knowledge with which they supply us is, on account of its accuracy, of the greatest value, and at present the advance in the recognition and treatment of disease is chiefly due to them; but we must not ignore the aids which stood our predecessors in such good stead—the information with which the physiognomy, especially of patients, furnishes us—the estimation of the nervous element in patients, and the other features of disease recognisable by our senses, which I need not here mention, but which are known to every cultivated physician, and which cannot be measured by any instruments. We must still, therefore, be contented in some measure *stare super antiquas vias*—cultivating that "tact" upon which our ancestors mainly relied.

Had time permitted, I should have attempted to show the influence exerted by an advancing physiology, and especially of what has been called experimental physiology, upon the practice of medicine.

The researches of Ferrier, Fritsch, Hitzig, and Charcot on cerebral localisation; of Charcot and Erb on spinal localisation; of Rutherford and Vidal of the action of drugs on the secretion of bile; and of Roberts of Manchester and others on the digestive ferments, and the preparation and use of artificially digested food, point out how much may be expected in the future, in other departments of our subject, from experiments conceived and conducted in

* BRITISH MEDICAL JOURNAL, May 4th, 1876.
† BRITISH MEDICAL JOURNAL, vol. ii. 1877.
‡ *Clinical Lectures.*
§ Ciniselli's cases, *London Medical Record*, March 5th, 1873; also report by Bucquoy to the Académie de Médecine, January 21st, 1879.

* BRITISH MEDICAL JOURNAL, Feb. 8th, 1879. † *Ibid.*, Jan. 1879.
‡ *Ibid.*, Oct. 14th, 1878. § *Ibid.*, Nov. 23rd, 1878.
‖ *Berliner Klinische Wochenschrift*, July 29th, 1878. ¶ *Loc. cit.*
** *The Bilateral Functions in their Relation to Metallo-Therapy* (Berlin, 1879.)
†† In connection with this, see "Observations on the Influence of an Electro Magnet on some Phenomena of Nerve", by Dr. McKendrick (*Journal of Anatomy and Physiology*, January 1879).
‡‡ For explanation of "transfer" in hysterical and not in organic cases, see paper by Dr. Debove, *Union Médical*, November 1st, 1879. For an explanation of metalloscopic "transfer", see a lecture by Dr. Th. Rumpf of Dusseldorf, *Berliner Klinische Wochenshrift*, No. 30, 1879.

the same truly scientific spirit. And, speaking on the subject of scientific medicine, I cannot but allude to the benefits which our Association especially has conferred upon this branch of study through her scientific grants, and through our most excellent JOURNAL, which, thanks to our accomplished editor, is not surpassed in this or any other country in the scientific material which its pages weekly contain. In preparing this address, I have been struck with the very great care which is taken in our JOURNAL to bring before us all that is best in modern scientific medicine.

And now, nothing remains for me but to thank this accomplished and critical audience for the forbearance with which they have listened to my feeble attempt to place before it the principal gains which have accrued, during the last ten years, to our knowledge of the nature and rational treatment of disease, through the use of instruments, in exact research.

ADDRESS IN SURGERY,

BY

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FERGUSSON AND CONSERVATIVE SURGERY—EXCISION OF THE KNEE AND OF THE HIP.

MR. PRESIDENT AND GENTLEMEN,—It is no slight honour that you have done me in preferring me to my present position; and no light task that you have imposed on me. No one can speak on the present position of surgery before an assembly of surgeons like this, without feeling doubts as to his competence for so difficult an undertaking; but to me such feelings of diffidence are unfortunately the more natural, since, in speaking of the great things achieved by the English school of surgeons in recent times, I cannot, like most of your recent orators, say *quorum pars magna fui*. I am sensible that I must talk of other men's doings more than my own, and be a critic rather than a teacher. Still, I could not refuse the honourable share you offered me in the proceedings of this meeting, however sensible of my own demerits. I owe this invitation, I suppose, to the fact that I am the oldest member of this University who holds office as a surgeon at one of the metropolitan hospitals. Now it is to me, as it must always be to all old Cambridge men, a source of deep interest, not unmixed with some touch of sadness, to come back from the struggles and labours of our busy life in London to these scenes which witnessed the joyous friendships and the unembittered rivalries of our early days. It is, indeed, with a strange mixture of feelings that I find myself speaking about questions of practical surgery in this venerable hall, where all the hopes and fears of our juvenile ambition were concentrated on the results of far different studies.

Different, however, as were the studies of the University in my time from those which occupy the practical surgeon, and small as was the attention then bestowed on natural science of any kind, I have never regretted the years which I spent here, and have always sympathised heartily with the efforts which you, sir, have so successfully made to connect the study of surgery more intimately with the University; and I rejoice in the public approval which has so unmistakably followed your exertions. There is, indeed, much in the contrast between the University as it was then and as it is now, in which a man devoted to practical pursuits may reasonably rejoice. A radical change has passed over these grand old institutions, and has, I think, infused them with fresh life and youth. Not to speak of the happy change which emancipated both the Established Church and the University from the weight of a bond that was pressing heavily upon both, and which rendered the University national instead of sectarian, we, as practical men, may rejoice in the change which has come over the studies of the University in recent years; by which, as its portals have been thrown open to the whole nation, so its energies have been extended to the whole sphere of human learning. And in this great change, the branches of knowledge on which the art of medicine is based, or with which it is connected, have been perhaps the first and the greatest gainers. Far be it from me to decry the studies which were the occupation of my youth and the delight of my maturer years; yet one cannot but admit that mathematics, classics, and philosophy though they may be among the grandest objects of thought—embrace only a portion of the circle of knowledge; and there is no question that modern languages and literature, the physical sciences, and the applications of mathematics were too much neglected in earlier days. All this is now reformed, or is in the way of reform. Natural science forms a portal to the degrees of the University equally with the older studies of the place; and those who are preparing themselves for a medical career can enjoy the great privilege of membership of the University with the least possible expenditure of time or money, and with the greatest advantage, as I think, to the respectability and success of their future career; and glad, indeed, am I to see that this truth is becoming more and more widely known. When I entered the profession, it was a rare thing to find a hospital surgeon who had obtained a degree at one of our old universities. This is so no longer; and for the change we are largely indebted to our present President.

Some one may say: What is this to the business of to-day? Well, sir, I think it is very pertinent to our present topic. This Address, if I am right in my view of it, has for its subject the progress of surgery; and it appears to me that one of the most fruitful sources of that progress has been, and always must be, the increasingly close connection between surgical education and the highest culture of the period. It would be a sorry day for our profession when it was thought to be falling backwards in the estimation of the "liberales" of the nation. Happily, at the present day, all the indications are in the other direction; and we have the fairest reason to hope that this great University will have its due share in the promotion of surgical as well as other science, and that an increasing number of its sons will be found among those who form the great school of British surgery.

For, indeed, British surgery is a thing to be proud of. Less philosophical, perhaps, and less dogmatic than the teachers of foreign schools, English surgeons have distinguished themselves mainly in the practical "art of healing", and particularly in devising and carrying out into practice the operative measures necessary to rescue their patients from death. Hence we see that, in English hospitals, operations are performed with habitual success, which, in some foreign cities, are considered too dangerous to be practised; and hence, also, we see that almost all the improvements in operative surgery are of English origin. I say this in no boastful spirit. It is not due, as far as I can judge, to any national superiority—still less to any greater profundity in philosophical generalisation. Just the reverse. It is due in a great measure to the fact that we have been accustomed to practise in a healthy medium; that our forefathers and ourselves have attended to the laws of health, and never allowed our hospitals to degenerate into the condition of those of some very renowned schools of surgery.*

It would not indeed, I think, be at all difficult to show that both the science and the art of surgery have made as great progress in modern days as any of the purely physical sciences, or any of the arts which are the application of those sciences to matter. The assertion seems a hazardous one, when we remember the triumphs of engineering, electricity, and so forth; yet, to us who recollect patients shrieking and struggling in the agonies of a surgical operation without anæsthetics—who remember when ovarian disease could be overlooked in one of the ladies of the Court, and when its cure was almost unheard of—when amputation was the *ultima ratio* in all serious affections of bones and joints, yet was fraught with deadly peril; and who think of the present condition of each of these great branches of surgery, it will not seem an untenable proposition. I could easily expand this theme into the topic of an address; but I doubt whether it would serve any useful purpose. I think it better to descend from these generalities, and take some special topic, in which I can illustrate what has been done with one great branch of surgery, and point out (alas! too easy) what remains to do.

I have spoken of the progress of surgery as connected with the British school and the British character. But no doubt that progress is largely based on individual peculiarities, and helped forward by individual discoveries and inventions. And I think no better topic can be found for one of these annual addresses than to celebrate the achievements of one of our predecessors—or, still better—to estimate the value of those achievements. Last year, the Association was favoured by the reader of the Address in Medicine (Dr. Hudson of Dublin) with a *résumé* and criticism of the works of Laennec, so admirably lucid, so full of practical information, as well as of literary research, that it cannot but live in the memory of all who heard or read it. Let me try to give a similar, though of course a far weaker, tribute to the memory of one who has passed from among us much more recently, who was a former President of this Association, and whose name can never be divorced from the

* I well remember meeting the most eminent surgeon in Paris (Nélaton) a few years before his death, and his telling me that he never performed an amputation in his hospital practice, and practically avoided, on account of the frightful mortality which attended suppuration. The condition of one of the most renowned hospitals in Germany is sufficiently attested by the delight with which the antiseptic system and its results were received there.

history of the progress of surgery in these islands—I mean Sir William Fergusson.

It is not necessary to recall the particulars of the career of one whom most of us knew so well, or to give a catalogue of his works, or of the improvements which he introduced into practice. It will be enough for me to test the effect which his career has had on surgery by the result (as far as has been ascertained hitherto) of that portion of his teaching of which he was with reason the most proud, and which, as I contend, marks a great step in the progress of our art. I mean what Fergusson called Conservative Surgery—the excision of bones and joints. Yet, a few words may be permitted to me to mark my admiration of one from whom I learned so much; and who was, I think, of all departed surgeons since Brodie's death, the only one who had passed the line—so difficult to trace in life, but so surely recognised in after-times—which separates eminence from greatness. It was not by depth of learning, by eloquence of language, or by philosophical acumen that Fergusson attained greatness. In all these qualities he had his superiors. It was rather in zeal for the promotion of the art of healing, in amplitude of resource, in dexterity, and, above all, in enterprise and daring, that he excelled all his contemporaries. The truth of this is well illustrated by the great surgical exploit which I have taken as my theme to-day, viz., the introduction of Conservative Surgery. It is nothing to the point to say that Fergusson did not devise any of the operations of conservative surgery; that Park of Liverpool and White of London had excised the knee and the hips long before Fergusson's time; and that both operations had been repeated by other surgeons.* Those operations were practically disused. They could hardly, indeed, have been expected to come into general use before the introduction of anæsthetics. But what Fergusson insisted on was something much beyond the substitution of one operation in surgery for another. It was the great principle of preserving a limb, and, as far as possible, the functions of the limb, whilst eradicating the disease of one of the joints—a principle as applicable to excisions as to amputations; and which, in the hands of later surgeons, will, I have no doubt, limit the use of many of the excisions as much as, when applied by him, it limited the use of amputation. For there is a vitality in all sound principles which not only outlasts the occasion that called them forth, but often renders the first form in which they appear speedily antiquated, and even apparently erroneous.

I am not sure that it will not be so with excisions in the lower limb, nor would it detract in the least degree from Fergusson's merit, in my mind, if it were so; nay, I think it would enhance it. What Fergusson contended for, and what many of his contemporaries were slow to admit, was that the surgeon should propose to himself not merely the cure of the disease, which often is easily within the reach of the amputating-knife, but also as much as possible the restoration of the limb to its natural functions. That is common sense, you will say, and no discovery. To this I would reply that almost all great innovations in practice are really expressible in terms of the simplest common sense, and may be made to look like truisms; yet, in the days of which I am speaking, if I may trust my own recollection and a moderately extensive acquaintance with the surgical literature of the period, the principle of conservative surgery was anything but admitted. I can remember being present thirty years ago at the first excision of the knee which Fergusson performed at King's College Hospital, and I recollect the sort of half-anxious interest with which the novel proceeding was looked forward to, and the sort of half-disappointment when it was found that the operation was nothing so striking after all—that it was simple, easy, bloodless, and quite within the reach of any one who chose to repeat it. In those days, who thought of laying open the cavity of a large joint—except, perhaps, as a desperate measure in cases of acute suppuration, in which amputation would have been extremely hazardous? Who ever thought of treating diseased joints by incision and drainage, or any of the milder forms of treatment which are now coming into common use? All this is now changed, I admit, as far as the surgery of the knee is concerned, and is perhaps in process of change in the case of the hip; but I am far from persuaded that it is so when smaller parts are in question. I have seen many and many a foot amputated that I not only think, but (if such a term be applicable to a future event) *know*, might have been saved by some excision or partial removal of the tarsus. Yet if Fergusson's great principle, that two legs are better than one, be good in the case of the knee, surely the same principle, that ten toes are better than five, may be accepted in the case of the ankle or the tarsus. And the further application of the very same view of surgery is more and more coming into prominence—viz., that by judicious surgical interference more and more cases may be rescued from all mutilation whatever, and the limb be really "conserved", unshortened, and in some cases even unstiffened, to bear its owner possibly through some future Peninsular campaign, "to go anywhere and do anything."

I know that it may be said that, in this effort to reform the surgery of the joints—*i.e.*, to eradicate incurable disease without removing the limb—Fergusson was not the first, or at any rate not alone. Nor was he.* It is extremely difficult at the present day—*ὅτε πάντα δέδασται, ἔχουσί τε πείρατα τέχναι*—for anyone to strike out a path in which no shadow of a suggestion of priority can be claimed for any other wayfarer. So when Mr. Lister's theories of antiseptics and carbolic acid were first broached, who does not recollect how it was said, "Carbolic acid is nothing but phenol, and phenol has been used in France for years"? "Antisepsis is nothing but the prevention of unhealthy inflammation, and that has been the aim of surgery ever since surgery was practised systematically." Yet all this detracted nothing from the merit or originality of the proposal. So I have no doubt it is true enough that every surgeon who ever treated a "bad knee" would have been glad to cure his patient without amputation had he known how. I do not deny that in the excision of the shoulder and elbow Fergusson had models upon which he worked; but what I contend is that he erected all this into a system, and showed the profession what general aim to propose to themselves, and how to pursue it, besides reintroducing into practice two almost forgotten operations in lieu of amputation, or of the slow decay of chronic disease, which, however they may be superseded in many cases by yet more conservative methods, will always have their application in practical surgery; while the method itself will always be connected with the name of him whom it is my chief desire to celebrate—the great founder of conservative surgery.

Let me now invite your attention to a very humble attempt to estimate the precise value of the two operations so introduced into modern practice. And in making this attempt I shall altogether discard any effort after what is called "statistical accuracy". More harm, I think, has been done to truth (I am speaking now only of surgical matters) by numerical statements than by any other form of fallacy. When looked at dispassionately, the source of the fallacy can easily be detected. It is in the tacit assumption which must be made in all numerical comparisons, that the integers of which the totals are composed are comparable—*i.e.*, homogeneous. No more deadly error—using the adjective in its plainest and most literal meaning—can be committed. By comparing unlike things, by neglecting the differing antecedents of the same or of different operations, "statistical" writers have often made the more dangerous proceeding appear the less so, and thus have ushered many a poor patient to his death. Surgical operations are steps—very important and decisive steps, it is true, but still only steps—in a process which cannot be estimated unless much more is known about each case than so-called statistics (which in most cases are really only death-rates) can furnish. How short a time comparatively is it since death-rates were triumphantly paraded to show that metropolitan were less healthy than country hospitals! Similar reasoning would show that some homœopathic, or mesmeric, or kinesipathic institution was more salubrious still; and we might apply the same reasoning (if it deserves the name) to private practice, and say that the chemist who doctors children's crushed fingers, and the homœopathist who soothes the sufferings of dyspeptic gluttons or hysterical fine ladies, are better practitioners than the great physicians and surgeons who are consulted in all serious emergencies, because a much smaller percentage of their patients die under their care.

It has seemed to me that nothing valuable can be got in this way; but it is an useful inquiry how far the alterations in practice which Fergusson introduced have kept their ground in his own and other large hospitals—*i.e.*, as to excision of the knee, what evidence we have that it has replaced amputation of the thigh—how far it is used as a substitute for the expectant treatment—and what is its value in vicious ankylosis; and, as to excision of the hip, how far it has come into acceptance at all, and in what class of cases it seems justifiable.

It will be noticed that I confine myself to cases of disease. I have no personal experience of these excisions in traumatic cases, nor do I think that any adequate experience has as yet been acquired in civil practice.

There can be no question that Fergusson's object in introducing the operation of excision of the knee was as a substitute for amputation, and he hoped doubtless to render amputation as superfluous in disease of the knee-joint as amputation of the arm is in disease of the elbow.† A very little experience, however, was quite sufficient to

* See Mr. Jones's paper in the *Medico-Chirurgical Transactions*, vol. xxxvii, page 61.

* See the very modest statement which he himself makes of his claims in his second lecture on the *Progress of Anatomy and Surgery*, p. 34, etc.

† "If excision of the elbow has superseded amputation of the arm as a general practice for incurable disease of the elbow, why should not the practice hold equally

modify any such expectation, and to show that the operation is too dangerous to come into use under some of the ordinary conditions of disease which are often successfully treated by amputation. I mean especially acute suppuration in the joint, advanced age of the patient, and concomitant constitutional affection. Surgeons were soon agreed that, if the operation were to be used at all as a substitute for amputation, it could only be in early life in chronic disease and in non-tubercular patients. This is equivalent to saying that the operation *per se* is more dangerous than amputation; and, although the fact was warmly contested when excision of the knee was in its infancy, I think no one contests it now. At first, indeed, the matter was argued more after the fashion of the advocate than that of the philosopher. A surgeon who said that excision of the knee is a severer proceeding than amputation, was represented as an "opponent of excision", and the controversy was carried on with the sneers and insults which are fit weapons enough in the *forum litigiosum*,—but are surely out of place in an inquiry into the best method of curing disease. Happily, however, all this is a matter of the past. Some of us take a higher view of the utility of these operations than others, but few deny that both excision of the knee and of the hip have their place in surgery. All that remains is, to ascertain as definitely as possible what that place is.

Now here we perceive a considerable change in the opinions of those surgeons who have practised excision of the knee ever since the introduction of the operation. When first introduced it was, as I have said, intended to supersede amputation in chronic disease; and it soon became clear that it could not do this, but at the same time it was seen that there is another very important aspect of the case, viz., how far excision ought to be used as a substitute for the natural cure by ankylosis. You, sir, have dwelt with unmistakable truth* upon the frequent imperfections in the process of natural cure, and such imperfections must have presented themselves only too often to all of us. We must all have seen cases where, after years of suffering and enforced inactivity, the patient has obtained a reprieve, and has been able to use the limb for a time; then has followed another recrudescence of the disease, and, perhaps, the process has been more than once repeated. Ultimately, with a cumbrous, useless, painful limb, and possibly damaged health, he is glad to be quit of the offending joint, and would submit to amputation readily. In many such cases I have performed excision with great success, and I look on them as among the most appropriate for the operation. Hence occurs the question, how far it is justifiable to forestall all this suffering by a resort to excision in certain cases, even though the surgeon cannot say that the natural cure is in his judgment impossible, nor highly improbable. And there is a third class of cases, sometimes difficult to separate from those last mentioned, in which the ankylosis, though complete, is in such an unfavourable position that the limb is useless. Here again excision is, in my opinion, a most valuable operation. Thus the question as to the indications for excision of the knee has been enlarged since the re-introduction of the operation. We have no longer to resolve merely the question of the use of the operation as one of urgency in incurable disease—acute or semi-acute—but also that of its use as an operation of expediency in defective ankylosis, and in faulty or deformed ankylosis, and still further, its use as a method of treatment, *i.e.*, as a substitute for expectancy.

Now, since the commencement of this controversy, another and a most extensive change has come over surgical practice in the introduction of the so-called antiseptic treatment. I must not enter on the wide field of discussion which the very name of this subject opens out. Let it suffice to say that, on whatever other parts of it doubts exist in the minds of more or fewer of us, none, I think, deny that the incision and drainage of joints is more safe and more successful than we used to consider it,* and that now many cases are brought to an apparently successful issue by means of this method of treatment which Fergusson would doubtless have excised, and which his followers continue to excise. I use the term "apparently successful", advisedly. In fact, in those cases in which the symptoms subside after incision and drainage, and the joint relapses into a quiet state, with more or less of mobility, just as in cases of apparent cure by the expectant treatment, the question is, how far the apparent cure is sound and permanent. And it is a question which for my own part I am unable to resolve. I have a strong impression that those cases of ankylosis are the soundest which are the quickest and the most complete; and I am not sure that the retention of a certain imperfect movement in the joint is any real benefit to the patient. But on all these points we are totally deficient in any conclusive evidence. Hospital patients come and go, and little is known about them after they once disappear; but I must confess to a certain want of confidence in the permanency of the cure obtained by incision and drainage in a tolerably large proportion of the cases. This is no argument against the use of the treatment; we ought not to blind ourselves to the indisputable risks of excision, and should not refuse to adopt any means by which an operation can be avoided which we know to be tolerably often followed by death or amputation.

But though the treatment by incision and drainage is coming more and more into favour, there are many hospitals at which it is untried, or at any rate, is rarely adopted. Hence, I think, we can fairly divide surgeons at the present day into two classes, viz.: those who use excision of the knee chiefly or wholly as a substitute for amputation in certain selected classes of cases of incurable disease of the knee, and many of these use excision little, some hardly at all; and those who use it also as a substitute for the expectant treatment, and in this class are some who use excision far more freely than Fergusson ever did.

Now how does this matter stand at our great schools of surgery? I propose here to give you a very short and succinct statement of the numbers of patients operated on by excision of the knee at given ages in the following hospitals; King's College, St. Bartholomew's, Guy's, St. George's, St. Thomas's, Manchester and Leeds. The ample experience of Addenbrooke's Hospital is contained in the volumes of the *Medico-Chirurgical Transactions*, and in papers to which I need not now more than refer. I have also received general statements as to the practice pursued in Liverpool and Dublin, from surgeons of eminence in those cities, but no numerical lists. I shall not go into foreign practice. My impression is, that at Paris, and in France generally, the operation is little practised, from causes at which I have already hinted; and that in Germany, though more extensively employed, it is not a favourite, nor a very successful operation. Possibly things may change, if the antiseptic system improves the safety of German hospitals for operative purposes in the future as it has done in the past. But as yet I prefer to speak of hospitals where the surgeon can operate undeterred by the dread of those diseases, commonly (but as, I think, most unjustly) called *hospital* diseases; and wherein, I believe, recovery occurs in about the same proportion of cases as in private houses. In America also, the operation, if I have been correctly informed, is not in very common use. (Table A.)

This may probably be taken as a fair specimen of English hospital practice; and it shows that the operation of excision is extensively used in all three classes of cases; but that the tendency of surgeons in late years has been more to bring the operation into use as one of expediency, or for the purpose of superseding the expectant treatment, than as one of urgency, or as a substitute for amputation. Yet you will observe the very gratifying impunity to life with which the operation has been performed in every one of these hospitals.

There seems no question that the mortality of all surgical operations has of late years greatly diminished. In amputation this has been the case to a very remarkable extent, as the writings of Mr. Callender and others show. The same appears the case also with excision of the knee. Mr. Bryant,† writing in 1876, speaks of excision as being "seven times as fatal as amputation in young life", meaning below the age of twenty; and says that the operation is too dangerous to be justifiable in childhood. Yet the remarkable fact is on record in the *Guy's Hospital Reports*, that during the five years ending 1878, eighty-nine excisions of the knee had been performed with only six deaths, and in the last two of these years, during which thirty-seven excisions had been performed, there were no deaths whatever. The explanation of the seeming discrepancy no doubt is, that Mr. Bryant's estimate of the mortality is taken from the experience of former years, while the list in question is formed in a great measure from the practice of one of the surgeons (Mr. Howse) following the antiseptic method in his treatment of the

good in the lower limb? That is a question which I for years put to myself; which I still do, though in a less uncertain mood; and it is a question which I avail myself of such an opportunity as this to put again to myself and the profession." *Lectures on the Principles of Surgery*, p. 115.

* "When disease has proceeded to such an extent as seriously to alter or destroy the synovial cartilaginous or osseous structure of the joint, it is almost vain to expect that an useful joint can be restored by which I mean a joint with useful movement, and able to bear the weight of the body well. Indeed, the limited movement which remains is commonly worse than useless: it is mischievous, by entailing weakness with inability to retain, and also and permitting contraction to ensue. The best result that can take place in such a case is the complete abolition of the joint, with ankylosis of the bones; but if the limb be bent or otherwise distorted, it is more likely to be useful when ankylosed than if movement continued. Unfortunately, as we know, this result does not always take place at the knee. As the disease subsides, the articular surfaces become bound, as it were, together, perhaps, in parts only, by a soft fibrous medium, which permits some movement, and has little disposition to ossification, even under the long continued favourable condition of perfect rest. In most of the limbs rendered crippled, useless, and wasted by disease of the knee, some movement of the joint remains, insufficient for any useful purpose, but enough to disable the limb from bearing weight." (Humphry "On Excision of the Knee", *Med.-Chir. Trans.*, vol. xlvi.)

† See an interesting paper by Mr. J. H. Morgan in the *St. George's Hospital Reports*, vol. ix., "On the Operative and Dressing of Joints".

‡ *Practice of Surgery*, 2nd edition, ii, 461.

wound. In the Manchester Royal Infirmary also, where the antiseptic treatment is equally followed, there is only one death out of twenty-four operations, and that after amputation. Almost equally good results, however, have been obtained without any antiseptic treatment by surgeons who are careful to dress their cases themselves, and to leave the parts long undisturbed. Thus my friend Mr. Gant informs me that of the twenty-five cases in which he has excised the knee, many of whom were adults, only two have died, and one of these deaths was from tetanus, an affection which has no known connexion with the method of dressing the wound. In none of these cases were any antiseptic precautions adopted, either in the operation or after treatment. The patients were taken chiefly from the poor of the metropolis, and treated in one of the densest parts of the city, viz., in the Royal Free Hospital.

TABLE A.—*Particulars and Results of Excision of the Knee at the undermentioned Hospitals, in the five years ending 1878.*

Hospital.	No. of Cases.	Limits of Age.	Result. Died.	Result. Failed.	Result. Succeeded.	General Observations.
King's College	21	7 to 35	2 from pyæmia and tetanus	2	17	The two cases in which the operation is said to have failed were, a total failure in which amputation was recommended, but refused; and one in which the patient was unable to walk without crutches. During the same period, there were four cases in which either re-excision or some proceeding for straightening the limb or removing diseased bone was adopted, in all with apparent success.
St. Bartholomew's	24	2 under 5 years, 2 over 50 years	2 1 pyæmia, 1 not stated	7 all amp. 2 died.	15	
Guy's	39	Not given	0	12	73	No deaths out of 37 cases in the last two years of the period.
St. George's	4	7 to 21		2 both amputated. 1 died	2	The only death was after amputation.
St. Thomas's	[illegible]	Early childhood to [illegible]	3	1 [illegible]	42	Of the 12 failures, 4 were amputated. I believe the 8 others are marked either as relieved or uncured.
Manchester	24	As above		8	16	All 8 unsuccessful cases amputated; one of these died; no other deaths.
Leeds	21	Do.	3	6	2	Four cases are unaccounted for. The 6 failures were all amputated, and, I believe, all recovered.
	215		21	47 4 unaccounted for.	173	Of the 47 failures, I believe 36 were amputated.

Appendix to TABLE A, *showing the line of practice pursued at each of the hospitals named.*

KING'S COLLEGE.—As a general rule, excisions of the knee are performed here in cases where the limb would otherwise have been amputated; but it is believed that some exceptions have been made to this rule—in cases where prolonged expectant treatment might have led to an ultimate cure with ankylosis. In the great majority of the cases marked as successful, the soundness of the bony union after excision has been verified

ST. BARTHOLOMEW'S.—The operation is sometimes (but rarely) performed as a substitute for amputation—more commonly in order to cut short the disease, which may be likely to last an indefinite time, and then to leave an useless limb. It is very seldom resorted to in acute disease immediately threatening the patient's life. It is regarded as a favourable operation in cases of vicious ankylosis. It is scarcely ever performed after the age of 35.

GUY'S.—The operation is only practised by some members of the staff, and is used chiefly as an operation of expediency in cases which might possibly, after years of waiting, be brought to a more or less successful issue. Sometimes it is undertaken as an exploratory operation, to be followed afterwards by amputation if necessary. It is regarded as almost free from danger, all the cases being treated on the strict antiseptic system.

ST. GEORGE'S.—The operation has been, from accidental causes, very rarely practised during the time under review. It is used as a substitute for amputation in chronic affection of the bones, rather than as an operation of expediency.

MANCHESTER.—At this hospital, the operation appears to be used chiefly as a substitute for the expectant treatment. Those are regarded as the most favourable cases in which no suppuration exists, as in chronic rheumatic arthritis and in vicious ankylosis; next, degeneration of the synovial membrane; next, disease of the cartilages; then affections of the bone; and, least of all, those of disease of the bones, complicated with sinuses. Incision, with drainage of joints, has much limited the field or excision at this hospital, many cases being by such measures brought to useful ankylosis.

LEEDS.—Much the same observations apply to this hospital. Here, also, the incision, with drainage of joints, has been found very successful. Still, excision is freely resorted to in patients free from constitutional disease, young, and not so deeply affected as to necessitate the removal of the growing epiphysial cartilages.

LIVERPOOL.—The operation seems rarely practised here, and is looked upon with little favour. Rest and extension, with incision and drainage if necessary, are believed able to cure such cases as are curable by excision.

DUBLIN.—The operation is not often practised in the hospitals of Dublin, and has never, as far as is known, been done in private. When used, it seems chiefly to be as a substitute for prolonged expectancy.

If this improvement in the mortality be found to be permanent it would extend the domain of excision, against amputation, to the preservation of many limbs, and to the great benefit of the community. But if this be the case, concurrently must proceed another change, which with equal benefit to humanity will limit the application of excision in the one direction as much as it is extended in the other. I mean the change which will apply the method of incision and drainage, or incision and cauterisation,* or incision and scooping, to many of the cases now treated by excision.

In both directions—both where excision is pushed into the domain of amputation, and where milder and less radical measures are substituted for excision, the great idea of Fergusson is carried out—the preservation of the limb and its functions as far as is consistent with the eradication of the disease, which is what he meant by conservative surgery. Even when we set aside his work, we are really only further honouring the master.

I may say, in passing, that my own experience of excision is not small; for though the number of cases in the list from St. George's Hospital is remarkably low, this is to a great extent an accident depending on the years selected, and at the Hospital for Sick Children in former years I had unusual opportunities for familiarising myself with the subject. Speaking from that experience, I should say that in cases such as are usually reported strumous, where the bones are only superficially ulcerated, in cases of degeneration of the synovial membrane, in cases of limited inflammation tending to necrosis, in cases of abscess in the bone not extending too far from the joint, and in select cases of rheumatoid arthritis, the operation may be tried in healthy subjects with fair prospect of success, and in childhood especially, without much detriment to the prospect of success in consecutive amputation, should that prove necessary. And as to the utility of the limb, when the process of union goes on rapidly, the limb is usually very strong, good, and useful, even if it be considerably shortened when the patient grows up.

Do not let us deceive ourselves in this matter. Some surgeons still seem to believe that the success of excision at its best is not much better than that of amputation. With no wish to speak disrespectfully of those who may in other departments of surgery have seen far more and done far more than I have, I cannot but say that this opinion proves that they can have seen little of excision of the knee. It is said that individual successful cases prove nothing. This doctrine I utterly repudiate. They show precisely what we want shown, viz., what is the best that the operation has to promise if successful. I have seen cases of excision where the patient was really but little worse off than before—the limb stiff, it is true, and shortened—but not so much as to prevent walking freely and actively without any apparatus for a short time, and with a high-soled boot as far as any other man. Even when the limb is much shortened, it may be very useful. And it is well to bear this in mind when the objection from the probable shortening of the limb after excision in childhood is laid too much stress on. The fact is real enough, but such limbs are often very useful, if firmly united. I had the good luck the other day to see a man in whom nineteen years ago I excised the knee for very extensive disease, accompanied by imperfect ankylosis. He was then a child, and it was necessary to remove the whole of both epiphyses. The limb is now shortened seven inches. Yet it is so serviceable that he had walked thirty miles in the day, a few days before he saw me, without excessive fatigue.

Bearing in mind then that, as Fergusson most unanswerably argues, a

* My colleague, Mr. Haward, who has had more experience in the treatment of disease of the joints by incision and the application of sulphuric acid than has fallen to the lot of any other surgeon, has kindly given me a list of the cases in which he has applied it in childhood. This list comprises fourteen cases. Ten of these were of the knee, and seven were successful (including the case published in Mr. Haward's paper in *Clinical Transactions*, vol. vi), *i.e.*, resulted in useful limbs, usually with ankylosis, but in some with good movement. One of these was seen two years afterwards and the permanence of the cure verified. Three cases were unsuccessful—in one the sinuses never healed, and the child afterwards died of tubercular meningitis—in one amputation was successfully performed, in the other amputation was refused and the child taken home in good general health, but with a dislocated useless limb. I am bound, however, to supplement this favourable account by confessing that my own experience of the treatment (in only one case it is true) was disastrous; that at other hospitals—*e.g.*, Guy's—the treatment is not well thought of, and that it failed in the only two adults on whom it was tried at St. George's.

leg with a foot to it, shortened or not, is quite another thing from a stump which has to be fitted to a peg. I cannot see how any man in his senses can deny that it is worth some extra risk to secure such a result.

But in what cases we ought to counsel our patients to incur that risk is hard to define. I hope and believe that, as the danger of other surgical operations is diminishing under improved methods of treatment, so is the danger of this also; and that the limit of age may be extended, and possibly the operation may be found applicable in future to more acute stages of disease than has been the case in the past.

Next let us speak of excision as a substitute for the expectant treatment. And first, I think, this great fact shows how much the expectant treatment is capable of, viz., that excision of the knee is well-nigh unknown in private practice, and amputation very rare indeed. Yet, I suppose it is still more rare for a patient to die of the simple and uncomplicated results of disease of the knee, a disease, however, by no means uncommon in private practice. But the conditions in hospital practice are very different. A private patient has complete rest. If he obtains imperfect ankylosis, it is enough for him. He betakes himself to some mode of life which does not involve much use of the limb, submits to his infirmity, and is glad it is no worse. But all this is very different with the poor man. In the early stages of the disease he works as long as he can, and only when he can work no longer he betakes himself to the surgeon, and as soon as a little repose or hospital treatment has set him up again, he is discharged, and soon provokes a fresh relapse. If ankylosis be at length obtained it is often imperfect, and renewed use soon sets up renewed disease; or the imperfectly ankylosed limb so badly fulfils the demands which he makes upon it, that he is obliged to petition the surgeon for some decisive interference. It is the great length of time which is often required for the natural cure of these affections when they have been allowed to reach a high degree, and the extreme uncertainty of the result, when tested by the stringent conditions of manual labour or service of any kind, that causes the relative frequency of operations for diseased joints in hospital as compared with private practice. But there is also another view of the matter. Allowing that ultimately, after a long period, ankylosis can be obtained, and the joint-disease be completely cured, is it at no expense to the general health that this has been done? Has the patient's expectation of life been in no respect damaged by months or perhaps years of suppuration, confinement, and inactivity? Billroth says: "The final terminations of diseases of the bones and joints are, unfortunately, much less favourable than they are generally assumed to be. Relapses, even in joints which have been cured with ankylosis for years, are unfortunately also by no means uncommon. Individuals who have suffered from these forms of chronic inflammation of the joints seldom live to an advanced age; you will meet few persons over forty or fifty years of age with ankylosis after scrofulous tumor albus". Allowing the fact, as to which I have no trustworthy data, it is quite as susceptible of the explanation I have suggested as of that which Billroth assumes. He argues that this alleged fact shows joint-diseases to be due to a constitutional taint. But I think we are fairly entitled to argue that the patients would have had a better chance of reaching a ripe old age, had a well planned surgical operation restored them early to fresh air and the invigorating influences of active life and occupation. For all these reasons, it seems to me that the timely excision of the knee is an operation well worth contemplating in cases where the natural cure drags on slowly. The question whether it should be performed at once in such cases as seem appropriate, or be preceded by such proceedings as drainage of the joint, or scraping out carious surfaces, or swabbing with sulphuric acid, is one on which we want more experience.

Let me again beg you to observe that these observations apply to cases in which the disease has already reached an advanced stage. We see such cases only too often. A better and more rational system of treating such affections in their early stage would much diminish the proportion of grave maladies of the joints, and render both excision and amputation far more rare in hospital practice.

If this may be accepted as a fair summary of the most recent experience on the subject of excision of the knee, it might be expressed in the following propositions, which I submit to your judgment.

1. Excision of the knee is one of the indispensable resources of surgery, and is useful in all three classes of cases; viz., in those where, otherwise, amputation would be indicated; in those where the expectant treatment might succeed, but is dubious; and in cases of vicious ankylosis.

2. As a substitute for amputation, it is indicated in early life, and in non-tuberculous subjects; in cases of limited caries of the bones, of degeneration of the synovial membrane, and in some conditions of necrosis of the articular surfaces; possibly also in abscess in the ends of the bones.

3. As a substitute for the expectant treatment, it seems to be justifiable, and is extensively used in cases where the patient's circumstances and the slow progress of the case render the surgeon hopeless or very doubtful of recovery with sound ankylosis.

4. It is also frequently used, and is very successful, in cases of vicious or deformed ankylosis.

5. Attempts have been made to limit the place of excision by opening the joint and drainage, and by some other partial methods. These attempts have been fairly successful, especially in cases where the affection is rather of the synovial membrane than of the bones, and they deserve more extensive trial than they seem as yet to have obtained.

6. At the same time, the mortality from excision of the knee seems of late years to have been so greatly diminished as to encourage the hope that the limit of age which it has been found necessary hitherto to observe may be extended, and it may be judged prudent to apply the operation to the treatment of the more chronic affections of later life, such as chronic rheumatic arthritis, more extensively than has been done up to the present time.

TABLE B.—*Particulars and Results of Excision of the Hip at the undermentioned Hospitals, in the five years ending 1878.*

Hospital.	No. of Cases.	Limit of Age.	Result. Died.	Result. Failed.	Result. Stat. recorded.	General Observations.
King's College	16	4 to 40	—	5[1]	8	In 5, sinuses were still open when they left the hospital. The patients, as a rule, were much relieved by the operation. A patient aged 40 died; one aged 39 recovered.
St. Bartholomew's	6	5 to 20	1	—	5?	The information as to completeness of cure is defective.
Guy's	54	—	2	8	43	
St. George's	2	—	1	—	1	
St. Thomas's	76	1 over 50	17	34	25	Many of those classed as "Failed" very probably ultimately recovered with useful limbs; but there is no distinct information. The patient aged 51 died.
Manchester	14	—	2	2	10	In the 2 classed as "Failed", amputation was performed; in one successfully; the other is one of the 3 who died.
Leeds	37	1 aged 13	8	8	21	The 8 cases of failure consist of 3 in whom amputation was performed, and 5 classed as "not improved". I believe the results in the 3 who suffered amputation are not noted. The patient aged 40 died.
	215		40	57	118	

Appendix to TABLE B.

KING'S COLLEGE.—All the operations here seem to have been performed for confirmed caries.

ST. BARTHOLOMEW'S.—This operation finds little favour, as a rule, and is seldom resorted to as long as there appears a possibility of recovery by rest, etc. It is resorted to in cases of long continued suppuration likely to end fatally.

GUY'S.—I am under the impression that, in this hospital, the cases of excision of the hip are chiefly in the practice of one or two of the surgeons, and that the operation is used at an earlier stage.

ST. GEORGE'S.—Here the operation is a very rare one, being reserved for cases obviously incurable otherwise.

ST. THOMAS'S.—Here I believe the operation is practised much more freely and in earlier conditions of disease.

MANCHESTER.—Here, again, the operation seems to be regarded with little favour, and is used chiefly as a kind of adjunct to the natural cure; *i.e.*, to afford a free opening, and remove great part of the diseased bone, even when the whole disease cannot be extirpated. Consequently, the convalescence is very long. Incision and drainage of the joint is well thought of.

LEEDS.—At this hospital, the operation has been tried in various ways: at one time, as a last resort, in cases where death was otherwise inevitable; again, at an earlier stage of the disease; and again in contrast to other plans of treatment; *i.e.*, expectancy, early excision, late excision, and amputation in advanced cases are being contrasted. Hitherto, the experience of the operation has not been favourable.

LIVERPOOL.—The excision of the hip is very rarely practised.

DUBLIN.—In Dublin, also, the operation is little used. One surgeon, Dr. Barton—reports seven cases with good results on the whole. Another, Prof. Bennett [illegible] endeavouring to apply it to the cure of cases in the adult. It seems only employed in cases otherwise hopeless.

The excision of the hip-joint belongs, I think, to Fergusson exactly as much as that of the knee—*i.e.*, though he did not invent the operation, it was to him that we have been indebted for its introduction into our daily practice.' And the figures which I have produced will show that the operation is extensively practised and is fairly successful, although

[1] See his paper in *Med.-Chir. Trans.*, vol. xxviii. The case occurred in the year 1844.

as to the precise amount of success obtained I fear our hospital records do not yield any trustworthy information, for the definite result of this excision is frequently not ascertained till a period at which the patient has passed out of observation. The lists, therefore, of hospital cases show little more than the average danger to life directly from the operation, and they show also that this is not small, although as to this, the result must of course vary with the condition and stage of the diseases. Mere statements of the number who died after the operation are quite worthless unless the particulars of the cases are given. General statements however, cannot show what is the exact condition of the limbs, *i.e.* what the definitive result of the operation has been. No doubt many of the cases entered as "recovered" had open sinuses, and were really uncured, when the patients left the hospital.

In this excision, even more than in that of the knee, the question between operative treatment and the spontaneous cure is important, and is not very easy to settle. In this case also, even more than in that, the difference between hospital and private patients is conspicuous. Hip-disease is anything but uncommon in the children of the wealthier classes. Yet excision of the hip, though not unknown, is very rare, and in the cases in which it is practised in private, it is probably more an operation of expediency than of urgency. Here again the question between the relative value of the cure by spontaneous ankylosis, and that obtained by excision, is one of very great importance. My own opinion is strong, that the limb after excision, however successful—and I may say that I have had the opportunity of examining some very successful cases of my own many years after operation,* is very rarely indeed as useful as it is even after the average cure by ankylosis. Besides this, by appropriate surgical means, and especially by the careful maintenance of extension in the natural position of the limb, a cure can be in most cases obtained which is far superior to that which I have denominated "the average cure". If care be taken from the first to keep the head of the bone in the acetabulum, but not in painful contact with the surface of that cavity, and the limb at the proper angle with the pelvis, ankylosis can usually be obtained without any of that excessive shortening and malposition which is generally the termination of the natural cure. Yet I would not say that such a result can be always obtained, or even that there are not cases in which the natural cure is impossible. For I know well that sometimes the head of the bone has separated from the diaphysis, or a sequestrum from some other source occupies the joint, or an ulcerated pit is formed in the neck or head of the bone by the escape of a mass of "tubercle".

These cases are incurable except by operation. What their average frequency may be, it is hard to say. Some surgeons seem to think that it is a very common thing to find sequestra in the hip-joint; and I must allow that I have found them repeatedly in performing excision; but I think these were neglected cases, and that, if due care be taken of the patient from the beginning of suppuration, such extensive disease of the bone will rarely happen. I judge this from the experience of the Hospital for Hip-Disease, where, though it is very common for abscesses to remain long open, yet it is very rare for sequestra to be formed, or for the suppuration to go on unchecked till excision becomes necessary. It is in the experience of this hospital that we can read, in the plainest possible characters, what ought to be the treatment of disease of the hip-joint in childhood. The treatment pursued at our general hospitals usually fails, because the patient cannot be kept long enough under rest and constant supervision. Rest alone is not enough; a most careful attention to the position of the limb, vigilant watch for any symptom of the formation of abscess, early opening of any collection which may have formed, and watchful management, are essential to cure; and all this may have to be carried on for many years. Such prolonged surgical attendance is within the reach of rich people's children; but it is only at the institution in question, as far as I know, that it has been put within that of the poor; and, until it be so more generally, we must expect to have often to excise the hip-joint, in spite of our conviction that the operation ought rarely to be necessary.

Under what circumstances, then, does excision of the hip become necessary, and under what circumstances is it justifiable, though possibly not absolutely necessary?

Let me preface my answer to this question by giving you in a few words the experience of the hospital to which I have just referred; the only one, as far as I know, in this country where the ordinary disease of the hip in childhood is systematically treated from beginning to end. This institution receives cases of hip-disease occurring in poor children, who have, therefore, been usually neglected, and in many of whom suppuration either exists or is imminent. Not a few are in an incurable condition when admitted, and it is this class almost exclusively that furnishes the fatal cases. No surgical operations are performed in the hospital beyond opening abscesses. The treatment consists in rest, with careful extension; and the most sedulous attention is given to see that the limb is brought into and kept in the natural position. When this has been effected by properly directed extension, and when all abscesses are in a perfectly quiescent state, the child is allowed to get up, wearing a Thomas's splint. No limit is fixed to the stay of a patient in the hospital, where children are often kept for several years.

Under this treatment, the mortality of cases received in an early or curable condition is very small, though a good many of those received in an advanced stage of disease die, chiefly from amyloid degeneration and from tubercular meningitis. Not more than about 4 per cent. are transferred to the neighbouring Hospital for Sick Children for excision. In hardly any cases are sequestra seen to come away from the openings of the abscesses, and the resulting recoveries are with limbs which are straight, strong, and but little shortened, so that the patient can walk freely with the aid of a high boot, and in the best cases with little limping-limbs which contrast very remarkably with the results of excision. The patients are kept under observation for a long time after their discharge, so that the permanence of the recovery can be verified.

The question of the justifiability of the operation in the ordinary disease of childhood must depend in a great measure on the opportunities which the patient has of obtaining some such treatment as the above. Morbus coxarius is rarely incurable if taken early; it has no necessary connection with any constitutional dyscrasia; there is every reason for believing that the abscess which frequently accompanies it is more often the result of motion injudiciously irritating inflamed parts, than the inevitable or even usual result of that inflammation itself; and I myself most firmly believe that the disease in the bones is very often (not to say almost always) produced by the inflammation of the soft structures, and is usually proportionate in extent to the length and acuteness of the suppuration. I further believe that the constitutional mischief which often ends the life of patients with advanced hip-disease is usually not the cause but the consequence of that disease, and that, if we would remove the cause by curing the disease early, there would rarely be any amyloid or tubercular degeneration of the viscera. I can only give you these views as my own, and for what they are worth; I could say much in support of them, but time does not permit. If they be true, what follows? Why, that if we would or could treat hip-disease early, before abscess has formed, by continuous and prolonged rest with extension, the great majority of the cases would recover without any abscess. If the patient be not seen till abscess has formed, still long continued rest with extension will cure most cases, the abscess being early opened and carefully drained, and in only a few of these cases will there be extensive deformity. Even if there be the clearest proof of disease of the bones, still the careful drainage of the abscess, and properly applied extension, will effect a cure in most cases, provided the treatment be extended over a very long period of time, and a better cure than that by excision will follow. This would leave for excision only those cases in which the presence of sequestra could be ascertained by examination, or reasonably inferred from the refusal of the sinuses to close, and those in which the symptoms were so grave that the surgeon thought it necessary to intervene in order to save life.

In such cases, the operation of excision is sometimes very successful; and its merits in successful cases are even more striking than those of excision of the knee, since it rescues the patient from a graver malady, and saves him from a more formidable mutilation. But I need hardly say that the proportion of deaths and failures will be higher than in the practice of surgeons who use the operation for more curable cases.

But cases such as I have sketched would be rare indeed if the treatment above described were carried out at our large hospitals as it is at the little institution in Queen Square. How different is the case! Who has not seen with profound sorrow poor children bandied about from one out-patient room to another, getting splints which only very imperfectly immobilise the joint, or receiving instructions to "keep at rest", which the surgeon knows cannot be carried out, till the limp becomes agonising pain, and the patient is taken into hospital and allowed a little rest in bed? Then, after a few weeks, he is found to be occupying a bed which can be better employed; and, his pain having for a time subsided, he is turned out again. Possibly this process is more than once repeated; and then abscess forms; the joint is found to crepitate; and the surgeon probably knows that, if he keep him in again for a few weeks and send him out relieved, the disease will recur in a worse form; and so he recommends excision. I do not say that the surgeon is wrong in his advice under the circumstances; but I do say that the circumstances show our general hospitals to be places where chronic morbus coxarius can hardly be treated successfully.

There are other and rarer conditions of the hip-joint, such as acute inflammation attacking the epiphysal cartilage, which have been treated successfully by excision; and there are cases, though at present

* See a paper by me in the *Medical Times and Gazette*, November 3rd, 1877.

very few, in which the joint has been successfully excised at a later age for the cure of rheumatoid arthritis.

I would sum up what I have to say about excision of the hip in a very few words, by the simple statement that it ought to be very rarely indeed required, if the disease were treated properly at its commencement. In cases seen at an advanced stage of the disease, it is chiefly when sequestra exist that the operation is *necessary*, though it may be *advisable* as a means of shortening the treatment in other cases also, when the patient cannot obtain the prolonged surgical care which is essential to natural recovery.

In vicious ankylosis, of course, the milder measures of division of the neck or shaft of the bone, introduced into practice by Mr. Adams and Mr. Gant, have proved so successful as to supersede the need for excision.

I have thus tried to give you a general view of the results hitherto obtained from the great revolution initiated by Fergusson in the treatment of diseases of the joints of the lower limbs. The results have not been small, either from the point of view of operative surgery or from that of the preservation of limbs. Operations which used to be considered very fatal here, and which in some foreign countries were given up on account of their mortality, are performed in our hospitals with great success, and indeed are looked on by some surgeons as almost devoid of danger. Many limbs, which thirty years ago would most surely have been amputated, are now preserved in a very useful state; and the domain of conservative surgery has been pushed much further than it was by Fergusson, so that joints are frequently saved altogether which he would have excised. But, after all, much remains to be done. Just consider that I have produced a list showing that, at seven hospitals, two hundred and fifteen excisions of the hip and two hundred and forty-five of the knee had been performed in five years; whilst probably the total number of such operations performed in private practice in the whole country during the period was less than a dozen; and yet every one would agree that the treatment of these diseases is far more successful in private than in public. What a comment is this on the boasts which we constantly hear of our hospital system, by which we are told that the poor get the same surgical skill for nothing which the rich purchase with large sums! True as this assertion may be—nay is—in acute diseases and injuries, it is lamentably false when applied to the chronic disorders, which are by far more common, and to which the poor are more especially exposed. Just think of what my list sets forth. In only a small section of the population, over four hundred persons were exposed in five years to formidable mutilation and great danger to life, perfectly unnecessarily, if they could have been taken proper care of in the early stages of their maladies. And do not forget that what is true of diseases of the joints is true of every other form of chronic disease. In the initial stages of these common affections, it is not only the neglect naturally produced by ignorance and by the daily necessities of the poor which makes the evil inveterate and often fatal; that neglect is largely assisted by the negligent and delusive system of treatment which has unhappily sprung up in our overcrowded and ill-managed out-patient departments. Many a poor parent, if told that the disease in his child's hip or knee might have been cured without any operation at all, would reply with truth that the child had been taken to one of the most famous hospitals in the world, and that he had done all in his power to follow the directions given. How can he tell that the disease is one which requires constant watchfulness on the part of the surgeon, and constant minute adaptation of apparatus, instead of a hasty glance once a week or fortnight; that it requires protracted rest, instead of the rough-and-tumble life of a poor child in the streets; that recovery depends on careful medical and hygienic care, instead of the routine bottle of physic; in fact, that the out-patient department of the hospital is really undertaking that which it is unable to perform? It is clear that the treatment of chronic diseases in the poor cannot be in any degree satisfactory till such diseases are treated at home; and that the most urgent question connected with our hospital system is how we can rid it of the incubus of the overgrown out-patient departments, which are no necessary part of the system, nor formed any part of it originally, but sprang up gradually as a substitute for the shamefully inefficient medical attendance then furnished to paupers.

In order to this end, some efficient system of home attendance must be provided, and for this a scheme has lately been devised, which I hope will be discussed carefully and dispassionately by this Association. But whatever may be the fate of this particular scheme, the general result must be compassed in some way or other if the treatment of these affections is to be in any way really satisfactory. I am not so foolish as to expect that the poor will ever be as well off as the rich in this or any other external circumstance; but I do not see why we should add to their disadvantages, by undertaking at our hospitals the cure of diseases for which hospital treatment is not appropriate; and I do believe that proper medical and surgical treatment can be supplied to them at home, not gratuitously, but on fair terms of bargain and sale, and that the present mischievous system both ought to cease, and will before long be superseded by something better. Let us not forget, whilst speaking about our out-patient system, that Fergusson was one of the first to recognise and protest against its many vices, and that the earliest public protest directed against it was at a meeting, under his presidency, at the rooms of the Royal Medical and Chirurgical Society in the year 1870.

I have spoken of some of the services which our eminent contemporary rendered to practical surgery and to the surgical profession. Time would fail me even to enumerate the rest, nor is it necessary. His presence has passed away from us too recently for them to have been forgotten even in this crowded time. One more remark may be allowed me. If we are now reaping the fruits of Fergusson's proposals to an extent which he himself hardly contemplated, it is because operations which, when he first ventured upon them, were extremely hazardous,* are now found to be comparatively free from danger. I would claim a share in this happy revolution in practice for many unnamed workers both in public and private, and I would remind my hearers that the mortality of surgical operations has been steadily diminishing in the practice of those who do not, as well as those who do, accept Mr. Lister's teachings. For my own part, I claim to be *nullius addictus jurare in verba magistri*, and I have freely criticised the facts and arguments adduced in favour of the germ-theory and the antiseptic system. But let nothing that I have said be taken as implying that I am ignorant of the immense advance in practical surgery which that system has originated, or that I am unwilling to confess how great are the obligations of all surgeons to Fergusson's successor at King's College, Mr. Lister. It is not necessary to believe in all Mr. Lister's theoretical views, in order to admit that no one has had more splendid success in the great object which he proposed to himself — the diminution of the mortality of surgical operations and injuries—and that no one has better deserved the abundant honours bestowed on him from every quarter, and now, I am glad to see, from this University also. When that great career has become a thing of the past, and some worthier orator shall discourse on the services which Mr. Lister has rendered to the world, he will be able to appreciate the value both of the theory and of the practice. The time has not come, I think, to pass any judgment on the former; but I regard it as my duty, as I am sure it is my very great pleasure to take every opportunity of saying that the practice which Mr. Lister has introduced has been eminently successful, and has been the chief cause of the great advance which operative surgery has made in recent years. It is the enviable privilege of King's College Hospital to have been served by two successive Professors of Clinical Surgery who have done more to advance that highest of all the developments of our art than any other men of their generation. Let us mingle with our reverence for the memory of the dead our gratitude for the services of the living.

The mortality in Fergusson's hands was fifteen in forty down to the time when he delivered his "Address on the Progress of Abdominal Surgery" (see p. 115 of that work).

Double Dislocation of the Hip.—The following case, which occurred in the practice of Dr. J. H. Packard, is reported in the *Philadelphia Medical Times* for July 17th. A German, aged 35, had a double dislocation, the head of one femur (the right) being luxated into the thyroid foramen, while the other was thrown on the dorsum ilii. The accident occurred by the falling of a house in the gale of October 23rd, 1878, the man being caught in the doorway as he was escaping. When he was brought to the hospital, immediately afterwards, the right foot was somewhat everted, the leg semiflexed, and the head of the femur could be plainly felt near the median line, decidedly below the pubes. The amount of shortening was not noted, the other hip being also dislocated. Reduction was effected by Dr. Harvey, the resident surgeon, before Dr. Packard's visit; simple flexion and adduction, the knee being at the same time pushed downward, were sufficient. The lesion on the left side, which was clearly indicated by the usual signs, was not corrected until Dr. Packard arrived, when it yielded to the ordinary manipulation. The case did perfectly well, the man being able to walk about in three or four days. He was, however, retained in the hospital for about six weeks, on account of a compound fracture of the right arm, and was then discharged cured.

Vacation Lectures to Practitioners.—The programme of the courses of lectures to be delivered by professors and teachers of the University of Berlin during the autumn vacation has just been issued. The lectures will commence on September 20th, and will terminate towards the end of October.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

At the Annual Meeting of the British Medical Association, in Cambridge, August 1880.

By WILLIAM S. SAVORY, F.R.S.,

Surgeon to St. Bartholomew's Hospital.

ON CONSTITUTIONAL DISTURBANCE.

If I yielded to my inclination, I should remain silent in this chair, or merely invite you, without preface, to proceed at once to the business of this section; but, fearing that such silence should suggest to any one that I do not fully appreciate the honour of being in this place, I will venture to trouble you with a few remarks. But I shall take care that they are very brief, and that they are confined to surgery; and I select the subject of Constitutional Disturbance.

The phrase, "constitutional disturbance", in its application to the effect of local disease or injury, has been always a good one; and down almost to our own time it has, in relation to our knowledge of the subject, been sufficiently precise. But of late, especially, it has become evident that this familiar expression is too comprehensive, and covers widely different states, and of these the two principal ones require to be carefully distinguished. It might be made abundantly clear by reference to the literature of the period, particularly to the works of Hunter, Abernethy, and Travers, that for many years the belief prevailed that disturbance of the whole body, or the illness produced by local mischief, was evoked through the nervous system—and hence the phrases, "sympathetic inflammatory fever", "constitutional irritation"; and this great doctrine naturally grew in force as the functions of the nervous system came to be better understood. The discovery of reflex function went very far to explain the mode of action of the nervous system as the channel of sympathy between the various structures and organs of the body.

But then came the knowledge of what is now known as "blood-poisoning"; and from the time, not far distant, when this first dawned on the minds of surgeons, it has become so rapidly developed that now it threatens to, nay, it actually does, exclude the older view; so that with many, at the present time, constitutional disturbance in this relation means always the phenomena of blood-poisoning, in some one or other of its various forms.

My object, in the few remarks I would submit to you to-day, is to show that both these forms of constitutional disturbance occur; and that, although they are often confused, it is in the highest degree important to distinguish each of them.

Let me, for a moment, fall back on one or two of the fundamental truths of physiology.

In all animals which consist of different parts or organs, it is essential to health that these several parts or organs work in harmony. By this harmony of action, they are enabled to minister to one common end—the life of the individual. They must be so related that the state of any one organ must be recognised by, in order that it may influence, the rest. Thus, while each structure or organ has a special function of its own, its operation is, within wide limits, made subservient to other functions which are associated with it. This correlation or co-ordination of parts is well expressed by the term "sympathy". We say of all animals which consist of separate parts, or of individual structures or organs, that there is, as a necessary condition of their welfare, a sympathy between the parts, structures, and organs which compose them. And, furthermore, it may be noted that as the complexity of the whole individual increases, as the diversity of parts becomes greater—that is, as the grade of development becomes higher, or as specialisation of function is further carried out—so, as the necessary result, does this sympathy or mutual dependence become more thorough, more intimate, and intense. In man, therefore, this sympathy is carried to the extreme; and in him it is difficult to select illustrations of it, only because they are so manifold. Who needs to be reminded of this relation between the uterus and mammæ, between the testicles and larynx, between the skin, lungs, and kidneys, and between the eyes?

It should be observed, however, that although this great law of sympathy is of universal application, yet that all parts are not thus related to each other in an equal degree. Some organs—as, for instance, those I have chosen—are thus more intimately associated than others, and such sympathies as they exhibit may be spoken of as special ones. There is, however, no sharp line of distinction between these and others. This sympathy exists in all degrees, and the study of the proclivity of parts in this direction is a very profitable one.

Now, by what means is this sympathy established? That it is by means of the nervous system, is one of the most familiar and popular facts in physiology. This establishment of harmony between divers parts and their functions is the largest—the universal office of the nervous system. In the lowest and simplest forms of life in which a nervous system can be demonstrated, this appears to be its only function; at all events, it is the only one that can be, at present, clearly made out. As the special arises out of the general, and particular portions of the nervous system become endowed with particular functions, this internuncial office, as it has been well termed, is still the most general one; until even in the highest forms of life, in man himself, where special nerve-centres attain a position of supreme importance, this, the earliest and ever the widest, of the functions of the system, still prevails.

But, impressive as the evidence is of this mutual dependence of parts through the nervous system, it is, nevertheless, clear, that this is not the only agent of sympathy: there is another even more universal, and perhaps more subtle, if in health more obscure in its operation—the blood. The blood is thus the medium of communication between all parts by virtue of the incessant changes which go on everywhere between the blood and tissues in nutrition. You remember the aphorism: "Each single part of the body, in respect of its nutrition, stands to the whole body in the relation of a secreted substance," and Paget's brilliant use of it. And it is not hard to understand that, if any part fails to withdraw from the blood its own proper materials, or restores to the blood substances other than those which are the normal result of the changes it undergoes, the blood must be thereby in some measure and for some time abnormally affected; and hence, as a secondary result, the nutrition of other, and perhaps remote, parts or organs may, in various degrees, through this altered blood, become modified or disturbed. It would be difficult to estimate unduly the part thus played by the blood as the outcome of its great office.

Now, surely the direct application of all this to some of the leading facts in pathology is obvious. We may well speak of constitutional disturbance through the blood, seeing in what terrible forms the affection known as blood-poisoning may present itself. In the worst examples, the blood itself is so changed, physically and chemically, that it kills before there is time for secondary effects to supervene; and in cases such as those which occasionally occur in surgical practice, where the intensity of the mischief is below this, but still in high degree, the evidence is yet more strikingly set forth, not only in the profound and overwhelming constitutional disturbance, but also in the various local effects which may be found scattered over the body. But, in these cases, the poison may be said to be introduced from without. It gains entrance to the blood as something foreign to it; and this is really the case, not only where it is formed upon the surface of open wounds, but even when it is generated among the tissues, deeply in the body, far away from any source of direct contamination by external agents; for it is well known that fluids thus effused and pent up may become changed into the most deadly poisons. But from these cases we may pass, by apparently insensible gradations, to others, where, by what must be regarded as some morbid state of the process of nutrition, or some perversion of the changes between the blood and tissues, the blood itself becomes damaged and so potent for evil. The constitutional disturbance, the fever, the pyrexia, which attends many instances of what, so far as we can tell, is strictly local inflammation, must surely be of this kind. As the result of the changes induced by the inflammation, the blood passing through the part becomes charged with some poison of low degree, or becomes somehow so altered in its constitution, that it tends to provoke mischief wherever it goes. And I say, between these cases of fever, induced by local morbid action, or some form of perverted nutrition, and the instances of blood-poisoning by matter derived from without, it is not at present practicable to draw a line. Indeed, if it be true that normal nutrition and healthy blood are mutually dependent, there can, of course, be no disturbance of nutrition by any form of disease without some equivalent affection of the blood; and hence of some corresponding disturbance elsewhere.

And now let it be observed that such disturbance may practically be revealed in one or two ways. The blood, unduly charged with something mischievous may, by its circulation, continue to disturb the whole system, interfering with the functions of the several organs in various degrees, according to their relative susceptibility, their rate of life, or other conditions; or, happily, some one or more of the organs of excretion may be equal to the task of speedily eliminating the mischievous matter from the blood.

Thus local mischief, in some form or other, by affecting the blood, may disturb the whole system, or only some one or two of its organs; either one whose natural office is that of excretion, or another upon which, for some particular reason, the burden of the mischief may fall.

There can be little doubt that many of the slight and more transient affections of the blood thus induced are in practice unheeded or overlooked. In local mischief of any magnitude, one naturally expects the signs of constitutional disturbance, though even then the blood may not be regarded as the channel; but I think it certain that systemic infection in this way is far more frequent than is generally supposed—that, in fact, it must follow from what appears to be well established, that no form of mischief can be, strictly speaking, absolutely limited to any single part. But in degrees beyond this, if carefully sought for, it may often be detected. In this way may perhaps be most reasonably explained the passing indisposition, for the most part too trivial to lead to spontaneous complaint, which may be often found during the repair of small wounds or other injuries, and usually disappearing, sometimes rather suddenly, in an abnormal character of one or more of the secretions.

I do not think I can choose a better example of one of these slight and transient forms of infection of the blood, and its rapid recovery by elimination, than that which must be familiar to every student of anatomy. Who has not been conscious, during work in the dissecting-room, or *post mortem* theatre, by the taste and smell, and sometimes by nausea and perhaps faintness, of the contact and penetration of volatile matter, the result of decomposition? But this passes speedily away and is forgotten until, it may be some hours after, or even the succeeding day, the peculiar odour is again distinctly recognised, either in the excrement or perspiration or breath. And, by the way, it is interesting to note that in different persons the matter may be chiefly eliminated by different channels; one man habitually passes it off by the skin; another by the lungs; a third by the bowels.

Here the poison, for such it must be styled, enters the blood through the unbroken mucous membrane; but, in its passage through the system, it illustrates, I think, very well some of the facts to which I am anxious to call your attention.

For some time past, the subject of blood-poisoning has proved a most attractive one, and every year has extended our view of it; as if present energy might compensate for a long period of indifference. But, as the older doctrine, which referred all sympathies to the nervous system, so long obscured the new one, it would seem, I repeat, that, in return, there is danger that this more recent doctrine should thrust the older one altogether into the shade. This must not happen; for constitutional disturbance as an affection wrought through the nervous system claims still to stand.

In the practice of surgery, everyone, of course, is very familiar with many instances of local sympathy through the nervous system—of pain or discomfort, or some disturbance of function produced in one part by some form of irritation in another. Who does not at once think of pain or uneasiness in the glans penis from vesical calculus, of pain in the testis from renal calculus, of pain referred to the inside of the knee in disease of the hip? And in these instances, especially in the first and second, it may be remarked that often there is more pain or distress in the part disturbed through sympathy than in the part originally affected. Furthermore, it may be noted that, as Hunter pointed out, such local sympathies are often not reciprocal. Says he: "The liver never sympathises with the shoulder, nor the urethra with the testis; nor, when the glans penis is affected, does any irritation pass to the bladder; but often they are, as, for example, between the head and the stomach." None needs to be told how such particular lines of sympathy are determined by the arrangement and distribution of nerves. What may come of the patient study of these familiar facts is shown in many pages of Mr. Hilton's great work on *Rest and Pain*. An admirable illustration is this of the dependence of surgery on anatomy and physiology for the interpretation of its facts. Through these simpler phenomena, it is not difficult to pass to the larger and more complex ones of general disturbance through the same channel. See, for instance, what occurs in a case of continued toothache. The pain, at first limited to the diseased tooth, at length spreads to adjacent ones; then to the jaws, until the original source of the irritation can hardly be distinguished; and, by-and-by, it radiates over the whole side of the face and head.

Allow me here to refer, in passing, to a point concerning which, as I [illegible] believe, some confusion of ideas prevails. Pain in one part from irritation in another is often spoken of as due to reflex action. Now, reflex action signifies, of course, the transmutation by a nerve-centre of an impulse from without through a sensory nerve into an impulse from within through a motor nerve. But, in the case just alluded to, of transference of a sensation, motor nerves are not concerned. It is a matter entirely between sensory ones. In this case, an impression reaches a nerve-centre through a sensory nerve, and is, by that nerve-centre or centres, transferred to the central extremity of some other sensory nerve, and so gives rise to the sense of pain in the part to which that nerve is distributed.

It may be remarked that, in Hunter's thoughtful and suggestive chapter on Sympathy, no distinction is drawn between sympathetic and reflex action. The physiology of his day had not advanced far enough for this.

I need hardly add that, for the sake of being clear, I have employed what perhaps may be called now the older language of physiology; but those who adopt the more modern view of the properties of nerve-fibres, and their relation to the organs with which at their extremities they are connected, will understand that the same explanation may be offered in other terms.

But, after all, when actual physical changes are wrought in a part through sympathy, in the sense in which it is here understood, by what way is such an influence effected? When an impression is made upon a portion of a nerve-centre in which a sensory nerve ends, it is said that such impression is referred to the periphery of that nerve, and hence pain in some distant part. But such action may lead to disturbance in the nutrition of the part, and to further changes. Now, unless some influence is conveyed from within outwards to the part, it appears to me that no light whatever is thrown upon the cause of any physical changes that may be produced there. Are not then, the vaso-motor or possibly trophic nerves concerned in the question? May not they, in this case, be the lines of an impression from within outward, thus affecting the part directly or indirectly through its circulation?

The constitutional disturbance, the fever which results when the products of inflammation are bound down tightly by fascia, as in a whitlow, or in the case of abscess confined by bone, or, again, in disease of a joint, must be provoked through the nervous system. The symptoms themselves, of which I shall presently speak, the correspondence between the degree of general disturbance and the intensity of the pain or distress or local irritation, and the very speedy and complete relief which so often follows upon the removal of the cause, point plainly to this. In many instances of chronic and destructive disease of a large joint, as the knee, all the phenomena of constitutional disturbance produced in this way are fully and plainly set forth. Their steady persistence while the cause of irritation prevails, the gradual destruction thereby of the health and strength, and oftentimes the sudden rebound and rapid restoration, when the source of mischief is removed, can leave, I think, little doubt on the manner in which such grave effects are provoked.

The term constitutional irritation is perhaps not inappropriate for this kind of disturbance. It may be observed that the local irritation which gives rise to this is almost always, and for an obvious reason, accompanied by more or less of severe pain. Pain alone, if intense and prolonged, may, I need hardly say, produce it. Pain alone, it has been truly said, rarely kills. But it may even destroy life in extreme instances; and pain by itself, as everyone knows, may produce grave constitutional disturbance. More frequently, however, it forms but a part although an important one, of the local irritation, and in its degree, so far as it can be measured, it may be taken as an indication of the amount of local irritation which exists. Yet pain and sympathetic disturbance are not always proportional.

The clinical features of each of these two forms of constitutional disturbance may be, I think, for the most part distinguished. In both, there is usually what is called fever or pyrexia. The temperature is raised, the circulation and respiration are hurried, the secretions are disordered, the tongue and breath are foul. The patient looks and feels ill; he complains of headache, and of various other pains, and of thirst; he cannot eat or sleep well. All these signs or effects are, as the rule, common to the two forms of mischief. But beyond these, in the more active forms of blood-poisoning, there are added the remarkable phenomena of rigors, with great and sudden rise of temperature, followed by profuse perspiration; and, if the case lasts long enough, usually by evidence of mischief in various parts in the way of congestion, inflammation, and suppuration. Even in the milder and more chronic instances of the affection, in all save the most transient, these striking signals are from time to time displayed. And in the graver cases of blood-poisoning, all the symptoms, even those which it produces in common with the other kind of constitutional disturbance, are more marked, and the progress of the case is far more rapid. In the one form, it may be said that the patient is rapidly destroyed; in the other, that he is slowly worn out.

In illustration of the distinction which may be drawn between these two kinds of constitutional disturbance, and for excellent examples of each of them, I would refer to several of the cases so faithfully related in the classical work of Mr. Travers on *Constitutional Irritation*.

Although in his time the distinction was not drawn, and both forms of mischief were included in a common term, it is not difficult, I think, in studying the cases narrated, to distinguish the two classes.

Therefore, it may be said that when fever, which must be of one or other of these two forms, is encountered, the diagnosis of blood-poisoning of the worst kind can hardly now-a-days be doubtful. The general condition of the patient, his very aspect, and the rapid change are enough; and, in cases less intense, the rigors, rise and fluctuation of temperature, sweating, and the signs of local mischief elsewhere, point to the cause.

But, then, in practice the question is not always so simple as this; nay, it is very frequently complicated by the fact that both causes of disturbance are simultaneously at work in the same case. It is easy to see how the same local mischief that leads to the formation of unwholesome fluids will produce irritation of the nerves, and hence the fever which appears will be the result of these two affections in ever varying degree; and, furthermore, even when only one of these two causes is in operation at the onset, it must tend sooner or later to induce the other. Nerve-irritation, if severe and prolonged, by inducing, through sympathy or reflex action, disturbance of the function of important organs, affects the character, alters the constitution of the blood, and the extent to which this reacts upon the prime cause no doubt largely depends on the power of other organs, the emunctories, to rectify the evil. And the blood charged with poison or something unwholesome cannot, we may be sure, circulate through those organs which of all appear most susceptible to the influence of change in it, the nerve-centres, without profoundly disturbing them.

But, although this combination necessarily occurs as the rule, no doubt, in some measure; nevertheless, in the vast majority of cases, one of these two great forms of constitutional disturbance stands out from the other so marked in its features that, practically, it may be considered as the single source of mischief.

Perhaps I ought to offer an apology for the offence of so unfashionable an act as an attempt to introduce physiology into surgery—to try to explain phenomena so frequently encountered at the bedside by any appeal to facts in natural science. Nevertheless, if the attempt is in any, the least, degree successful, I trust to be excused.

HEALTH OF WATERING PLACES AND SUMMER RESORTS.

THE Registrar-General in his recent quarterly return gives as usual the statistics of mortality during the spring quarter for forty-six of the principal English health resorts; and the information has been extended, beyond that given in previous years, to the mortality from each of the seven principal zymotic diseases separately. The mortality given is not that of the actual watering-place itself, but of the district or sub-district in which the watering-place is situated. As a rule, the death-rate in the watering-place is likely to be somewhat higher than in the whole district or sub-district, the watering-place having more of an urban character than the surrounding country; but occasionally the reverse is the case. This, however, though doubtless a matter of interest to the sanitary authorities severally entrusted with the care of the watering-place, and of the district outside its limits, is of comparatively little importance to the holiday-making visitor, who by no means confines himself to the immediate boundaries of the place in which he actually sleeps.

The mean annual death-rate in these forty-six health-resorts was 17.0; the zymotic death-rate being 1.5. This contrasts favourably, not only with the rates in all England, but with those in the rural districts, in which they were 18.2 and 1.7, respectively, and shows that these places taken together have not been wrongly selected by persons in search of health.

The zymotic rate was 0.0 in Southend, Littlehampton, Malvern, and Harrogate; did not exceed 1.0 in Whitby, Lowestoft, Dover, Folkestone, Eastbourne, Worthing, Isle of Wight, Lyme, Sidmouth, Exmouth, Teignmouth, Ilfracombe, Tenby, Aberystwith, Tunbridge, Cheltenham, Leamington, and Buxton; was over 1.0, but did not exceed 2.0, in Scarborough, Yarmouth, Herne, Brighton, Bognor, Weymouth, Penzance, Weston, Beaumaris, Bangor, New Brighton, Southport, Bath, Clifton, and Matlock; was over 2.0, but did not exceed 3.0, in Margate, Ramsgate, Deal, Torquay, and Llandudno; and was over 3.0 in Hastings and St. Leonards (3.9), in Dartmouth (3.8), in Rhyl (4.2), and in Blackpool and Fleetwood (4.3). In Hastings and St. Leonards the high rate was mainly due to measles, in Blackpool to scarlet fever and enteric fever.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE,

At the Annual Meeting of the British Medical Association, in Cambridge, August 1880.

BY W. S. PLAYFAIR, M.D., F.R.C.P.,
President of the Section.

THE TEACHING OF OBSTETRIC MEDICINE.

GENTLEMEN. My first duty, in assuming this chair, is to assure you how highly I appreciate the honour which has been done me by entrusting to me the presidency of this important Section; and I beg you to believe that any failure on my part in efficiently superintending its deliberations will certainly not be due to an insufficient appreciation of the importance of the work before us. The large attendance at our meetings, and the interest which is shown in our discussions, afford ample proof of the estimate which the profession forms of the importance of Obstetric Medicine in the daily work of the practitioner. The majority of my hearers are doubtless engaged in the active practice of the profession in all its branches; and I may confidently appeal to you to say whether the subjects coming under this Section do not only form a large part of your daily work, but, if it be not the case, that they give rise to more anxiety, and involve a deeper sense of responsibility, than perhaps any other part of your calling. If this be so, I hope you will agree with me that it is a matter of urgent importance that sufficient attention should be given in our medical schools to the training of those who are about to enter the ranks of the profession in subjects which form so large a part of their future work. Unfortunately, there is an universal consensus of opinion, on the part of those who are best qualified to judge on this point—that is, those who are responsible for the teaching of midwifery and its cognate subjects—that the present arrangements of the examining boards are lamentably inadequate for the purpose. I do not think that I am entering on topics inconsistent with the work of this Section, if I say a few words on this question. It is, indeed, only by bringing the defects that exist in our present course of education as regards the teaching of obstetric medicine prominently before the profession, and thus ventilating and agitating this important topic, that any real reform can be hoped for. It so happens, that those who are responsible for the arrangement of our curricula, and for drawing up our schemes of examination, have themselves no practical knowledge of the subjects, and may fairly be assumed to be entirely ignorant of the enormous strides that obstetric medicine has made since they themselves were students. The General Medical Council, and the board for preparing a scheme for conjoint examination, do not contain any practitioners who are specially devoted to the teaching or practice of obstetrics. There are on these bodies many eminent surgeons and physicians, but not a single obstetrician; and it is not, therefore, surprising that our special subject should be entirely neglected. I can give you no better evidence of this assertion than the fact that, in the scheme of study recently prepared by the delegates of the various examining bodies, in which it was proposed to remodel the present curriculum, while only forty lectures, extending over three months, were devoted to the whole vast subjects of midwifery, the diseases of women, and the diseases of children, two separate courses, of six months each, were rendered compulsory for what is called practical medicine and surgery; that is, the examining of urine, the use of the microscope, bandaging, and the like—all very useful, no doubt, in their way, but which it is simply ludicrous to compare for a moment to the subjects coming under the head of obstetrics. Nor can it be pleaded that this neglect in giving effect to an urgently needed reform is the result of ignorance of the requirements of obstetrics; for the strongest possible representations have been made to those in authority. In 1868, all the teachers of midwifery in the metropolis signed a memorial to the General Medical Council setting forth how impossible it was for them to do justice to their subjects in the short course of lectures allotted to them; in 1869, a deputation from the Obstetrical Society of London waited on the Home Secretary for the same purpose, and that body has memorialised the General Medical Council twice, in 1868 and 1879; and all without avail.

Now, what is the practical outcome of the existing state of things? Of course, medical students naturally devote themselves with most

ardour to those branches of education which they are led to believe to be most important; and, when they find obstetrics and gynæcology relegated to a summer course, they very reasonably suppose that they can well afford to neglect them. Moreover, those who do follow the teaching of their professors with some degree of attention, have only a garbled and mutilated epitome of midwifery proper presented to them; for what human being can possibly accomplish the impossible task of doing more than that in forty lectures, while gynæcology cannot even be alluded to? It is really lamentable to think of the hundreds of men who are launched into the daily work of practice with such preparation as this; and of the infinite suffering and misery which their ignorance, for which they cannot fairly be held responsible, may cause. To those on whom is imposed the impossible task of teaching midwifery under such conditions, the question is of vital moment. We may remonstrate; we may disclaim responsibility; but the fact remains, that we are the men to whom the students look for instruction. And when, being men with consciences, we reflect on the risk to life and the damage to health that may follow, we cannot, I am sure, but feel it to be our duty to protest as strongly as we can. It was only the other day that the Fellows of the Royal College of Physicians, assembled in Comitia, found it necessary to complain of the ignorance of the candidates who applied for the College licence on topics connected with practical obstetrics. I have had the honour to examine for that licence, and I know that the complaint was not unfounded. But what remedy did they suggest? It is hardly credible, but it is a fact, that all they proposed was to issue a circular to the teachers of midwifery, begging them to pay more attention to the teaching of obstetrics; while at the same time they rejected a motion, proposed by Dr. Barnes and seconded by myself, that they should recommend an extension of the period of instruction to six months. In the face of the repeated assertion of the metropolitan teachers of midwifery that they could not possibly teach their subject in the time allotted to them, such a circular was a manifest absurdity, and could have no possible effect but that of demonstrating the ignorance of those who proposed it.

I do not think that a meeting such as this can do anything to enforce the needed reform; but the opinion of the profession at large is, beyond doubt, a great power; and therefore I have ventured to trespass on your patience by referring to this topic, since it is one which must interest you all, especially such of you as have sons or relatives who are to follow your steps; and I feel confident that, if due pressure be applied, both to the examining bodies and by your individual advice to the members of the legislature with whom you may have influence, in the new scheme for conjoint examination which must ere long become law, the due claims of obstetrics will no longer be so unfairly overlooked as has hitherto been the case.

And now, gentlemen, having ventilated a pet grievance of my own, I shall not occupy your time further by any introductory remarks on the work before us, since it will be far more profitably employed in listening to the discussions and papers which form part of our programme. The selection of set subjects for discussion is somewhat of a novelty in our sectional arrangements; and I hope you will think that those we have chosen this year are not only interesting in themselves, but are of great practical value. You will, I am sure, agree with me that the Section is peculiarly fortunate in having Mr. Spencer Wells to introduce that on abdominal section. Only a few weeks ago, he performed his thousandth ovariotomy; and, having accomplished that astonishing feat, and won for himself undying fame as the practical father of abdominal surgery, he may well turn his energies into a new direction, and reap fresh laurels in developing a comparatively new and untried branch of operative skill. It is not to be expected that an operation requiring so much manipulative dexterity can ever be widely performed; nor are the cases in which it is even to be contemplated of anything like the frequent occurrence of those requiring ovariotomy. Still it is a matter of primary consequence that its indications, risks, and methods should be thoroughly and closely studied; and I anticipate that the discussion about to be commenced will naturally increase our knowledge of the subject.

The second topic we have selected for discussion is of scarcely less interest; and, bearing in mind that it treats of the best means of dealing with emergencies that may happen at any moment in the practice of any one of us, of still greater practical importance. I know of nothing in practice more trying, and more requiring cool judgment, than a sudden and severe attack of *post partum* hæmorrhage. Fortunately, modern science places at our disposal means of arresting hæmorrhage and of obviating its effects, such as the injection of styptic solutions, the use of hot water irrigations, and the hypodermic injection of ergotin and sulphuric ether, which were unknown to our predecessors, and with regard to which much remains to be learnt.

In addition to these subjects of debate, we have a superabundance of most valuable and interesting papers on questions of great importance. I greatly fear that the time at our disposal will not enable us to do them the justice they deserve; but, in order that we may do our best, I shall not further trespass on your patience with any remarks of my own, but proceed at once to the work that lies before us.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY,

At the Annual Meeting of the British Medical Association, at Cambridge, August 1880.

BY J. CRICHTON BROWNE, M.D.Edin., LL.D., F.R.S.E.,
Lord Chancellor's Visitor of Lunatics.

CIRCLES OF MENTAL DISORDER—MODERN NERVOUS DISEASES.

THE General Council of Medical Education and Registration, at its recent session, declined to recommend the licensing bodies of this kingdom to make mental diseases a subject of separate examination for all degrees and licences to practise medicine; and those who know most of the state of medical education on the one hand, and of Psychological Medicine on the other, will, I think, approve the decision at which the Council arrived. The curriculum which a student of medicine has to pursue is already so laborious and varied, that cogent reasons ought to be adduced for adding in any way to its intricacy and burdens; while the teachings of psychological medicine are still so ambiguous and unsystematic, that they can scarcely pretend to supply either much useful instruction or a valuable discipline to the mind. A specialty in medicine—and psychological medicine is a natural and inevitable specialty—is a late differentiation of professional knowledge, and implies skill and attainments that should be sought for only after a liberal general training is complete. To incorporate special study with general medical education is, therefore, to do injustice to both; for general medical education, which already fully occupies the time set apart for it, must be detrimentally curtailed or compressed to make room for the special study; and the special study cannot be advantageously carried on while the foundations on which it ought to rest have not been wholly laid down nor thoroughly consolidated. Facilities for the special study of medical psychology, and perhaps also some test of proficiency in it, ought to be provided for those who propose to devote themselves to lunacy practice; but no one should be encouraged to avail himself of these facilities, nor submit to this test, until he has finished his general medical studies and surmounted his examinations. For those, however, who look to general practice, such an acquaintance with insanity as may be obtained in connection with the study of physiology, medicine, and medical jurisprudence, should be considered sufficient, until the exigencies of professional life bring with them their special and inimitable training in this as in so many other subjects.

But, while we deprecate the introduction of the subject of mental diseases into medical education and examinations, we may, without inconsistency, applaud its recognition by this Association, and the dedication of a Section to its consideration at these annual meetings; for this Association, representing as it does the breadth and culture of the profession, its theoretical scope and practical aims, could not, without grievous default, ignore a department of medical science that is in intimate relation with philosophy, and a branch of practice that deals with a large class of diseases, and in which a numerous body of able and painstaking men are engaged. To overlook medical psychology at these meetings, and to relegate the consideration of it to societies composed entirely of those who march under its banner, would, it seems to me, be to inflict some deprivation on medical psychologists and the Association generally. It would be to deprive the former of the benefit they draw from contrasting their special experiences; while at the same time they come into contact with professional brethren of views and habits of thought different from their own, and obtain a commanding survey of the whole field of medicine, with its broad central expanses and fringe of minor allotments. And it would be to deprive the latter of the advantage it derives from bringing before its members in a convenient way whatever advances are being made in the knowledge and treatment of a group of diseases that have an ever-growing interest for all who practise medicine.

Medical psychology is, as I have said, an inevitable specialty; but it is a specialty that is broadly based on general medicine, and that tends, not, as some specialties unhappily do, to become pedunculated into a quackery, but to increase the breadth and depth of its attachments to the parent stock. It becomes daily more and more apparent that a bodily derangement is responsible for every mental disorder, and that a mental element mingles with every bodily disease. Upon the medical psychologist, therefore, it is incumbent to keep abreast of general pathology; while upon the general practitioner it is incumbent to know something of the progress of psychological medicine. And how important to the public it is that the duty of each of them in these respects should be diligently performed, becomes apparent when we contemplate the number of victims of mental disease that we have with us now, and of diseases which, although they may not be designated mental, nor fall immediately within the province of medical psychology, are still in close alliance with insanity.

According to the latest official returns, there were, on the 1st of January last, 71,191 lunatics, idiots, and persons of unsound mind, in England and Wales: 9,624 in Scotland: and 12,819 in Ireland, making a grand total of 93,634 persons labouring under mental diseases or defects in Great Britain and Ireland. But this grand total, we must recollect, represents only certified or officially recognised lunatics and idiots, and corresponds with an inner circle of insanity, marked off by an arbitrary and somewhat shifting line, and outside of which lies a second circle, embracing a multitude of persons who are subject to no legal restraint, but still come to a large extent under medical supervision, and cannot be shut out from any scientific survey of insanity. Within this second circle—the crazy circle, I should be inclined to call it—fall lunatics whose mental disease, although patent enough, is of so inoffensive a kind that it is not thought justifiable to interfere with their liberty; lunatics whose mental disease is concealed; and lunatics whose mental disease is of a partial character, and is not, perhaps, popularly regarded as mental disease at all. Here we have instances of incipient insanity that has not yet expanded into dimensions that are perceptible to the eye of the law, and of chronic insanity that has crept out of its range of vision; and hosts of eccentric, half-mad, crackbrained, and imbecile persons, who move about in every grade of society. No census of the population of this second or crazy circle has ever been attempted; but that it is very great, may be inferred from a number of circumstances. The late Premier told us that he had to keep a capacious bag for the crazy correspondence from presumably sensible people that was constantly pouring in upon him; and the Astronomer-Royal, we are informed, has a row of pigeon-holes, in which are stowed away the mad communications as to perpetual motion, the squaring of the circle, and other obscure problems, that reach him daily from unappreciated lunatics. Our courts of justice are but too often engaged in investigating crimes committed by indisputable lunatics, whose insanity was not noticed until it culminated in violence or fraud; and our coroners can tell a dismal tale of the consequences of mental disease that has never secured official recognition. There are now upwards of one thousand seven hundred suicides in England and Wales annually, and of these not more than thirty occur amongst registered lunatics of all classes; but in at least three-fourths of these one thousand seven hundred suicides, as appears from evidence given at the inquests, there were distinct signs of mental unsoundness preceding, often for considerable periods, the act of self-destruction; and, as suicide is but the crowning expression of melancholia of a certain intensity, and is only resorted to by a small percentage of those who suffer from mental despondency, the fact that not fewer than one thousand three hundred suicides of unregistered insane persons take place in England and Wales yearly reveals great unfathomed depths of mental unhealthiness in our community. And the experience of medical men also points to vast reserves of hidden and unauthenticated insanity. Of the patients whom they are called on to certify insane, a large proportion have been more or less mentally deranged for months, or even years, before the date at which legal or medical intervention is deemed requisite; and of the patients who seek their advice for mere bodily ailments, a certain number prove to be unmistakably mad, even when they are figuring as useful members of society, and are unsuspected, save by their nearest relatives, of any mental taint.

With the view of obtaining an approximative estimate of the contents of the crazy circle, I some time ago asked a few of my friends, both lay and medical, to scrutinise for me their own acquaintance, and to jot down, firstly, the number of acknowledged lunatics within that acquaintance, whether in asylums, boarded in private houses, or at home; and, secondly, the number of individuals included in it who, although not certified or acknowledged lunatics, are still held in general estimation to me *non compos mentis*—eccentric or half mad. Well, the result of that inquiry was that, within its range, the half mad were to the mad as two to one: from which we should have to conclude that there are, at the present time upwards of 180,000 occupants of our crazy circle in the United Kingdom. Now, I am not inclined to adopt or defend that computation, nor to attach undue importance to an inquiry so trivial in character and so beset with sources of fallacy. I only refer to it as affording some corroboration of the belief that there is much unrecognised insanity in the country, and that the crazy circle is densely populated.

But if we had summed up all the constituents of the crazy circle surrounding the circle of recognised insanity, we should still not have exhausted the material with which medical psychology is concerned; for, beyond the crazy circle, there lies another and an outer circle, which may be named neurotic, and in which are assembled the sufferers from all forms of nervous disease that are not necessarily accompanied by mental disorder, but that must be placed in the same category with insanity, and that in many instances tend towards it. These are epilepsy and paralysis, locomotor ataxia, and every sort of spinal mischief, neuralgia, hysteria, chorea, and, indeed, the whole order of nervous diseases, which, it need scarcely be said, are widely prevalent amongst our population. The returns of the Registrar-General, which are unavoidably most imperfect on this point, show that nearly 70,000 deaths are attributed to nervous disease in England and Wales each year; and as these diseases are not all acute in their course, and are sometimes much protracted, this rate of mortality betokens that the number of persons afflicted by them and living at one time, must be very considerable.

In the three concentric circles that I have enumerated, the insane, the crazy, and the neurotic, interchange and circulation is of course perpetually going on. They are incessantly agitated by centripetal and centrifugal and rotatory currents. A person who has been simply neurotic becomes suddenly insane, and rushes into the central circle. A certified lunatic recovers partially, and being emancipated from restraint, steps into the crazy circle: And a crazy being with occasional acute exacerbations of his craziness requiring temporary asylum treatment, oscillates between the crazy and the insane circles. And as I have already hinted, these circles are not sharply demarcated from each other. On the contrary, the whole mass of mental and nerve disease is finely gradated from the centre to the circumference, and the lines enclosing the circles into which it is for convenience divided, are drawn in an arbitrary manner, and are not by any means fixed and immovable. Hence the difficulties that arise in determining whether the contents of any of the circles are increasing or diminishing, for the shifting of the containing line in the slightest degree would obviously altogether vitiate any comparison of the quantity of the contents of any two circles at two periods, one before and the other after the shifting. With reference to the insane circle, it is alleged that its radius, which is really the definition of insanity, is of an elastic nature, and has been stretched in modern times so as to comprehend much that formerly belonged to the circle of craziness. And thus an explanation, that will not seriously alarm us, is offered of the startling fact that the number of our registered lunatics and idiots has nearly doubled itself in the last twenty-one years, having increased from 37,762 in 1859, to 71,191 on the 1st of January last. Under the influence of the lunacy laws, we are told, and of a more liberal popular conception of insanity, a considerable belt of what was formerly the crazy circle has been annexed to the insane one; and this annexation, together with the enlargement of all the circles in proportion to the increase of the population, will account for its strangely increased dimensions and for the enormous increment of lunatics and idiots with which we have now to deal. For my part, I am not able to credit this flattering tale, nor to perceive any proof that the definition of insanity has been extended in the manner alleged; but I cannot pause here to examine this vexed and entangled question by the old methods. I desire rather to call your attention to the dimensions of the outer, or neurotic, than to those of the inner, or insane circle; and in doing so, I may, perhaps, throw some light on the dispute as to the real or fictitious character of the enlargement of the latter. For probably a certain proportion is maintained between these two circles. Many nervous diseases lead up to and eventuate in mental derangement, and the *neuroses* of one generation are not rarely the *insaniæ* of the next. We should expect, therefore, that any marked increase or diminution in neurotic affections, would be followed, after a time, by a corresponding rise or fall in the rate of prevalence of affections of the mind.

Well, the fact seems to be that neurotic affections are increasing and multiplying on every hand. Dr. Beard, an American physician, who has studied the subject with much ability, maintains that an entirely new state of the system, a morbid nervousness, unknown to the ancients or to the fathers of medicine, has developed itself amongst

his countrymen during the last half century. This state declares itself in neuralgia, sick-headache, dyspepsia, hay-fever, and above all in neurasthenia or nervous exhaustion; and Dr. Beard appears to think that this it is that has set its stamp upon bodily configuration—making the Americans taller, thinner, and lanker than their original stock in England and Germany. The indications which he adduces of the unprecedented nervousness of the inhabitants of the United States, when that nervousness has not mounted into actual disease, are their increased sensitiveness to cold and heat, rendering them unable to live with comfort in rooms of a temperature lower than 70° F., their greatly augmented susceptibility to the action of stimulants and narcotics, the customary doses of which have had to be universally reduced in modern times, the premature decay of their teeth, and their utter inability to digest pork, which their grandfathers partook of in large quantities with impunity. From his own observations, and from the information which he has obtained from old and experienced physicians, and from medical literature, Dr. Beard unhesitatingly concludes, that all nervous diseases are on the increase in America, that many bodily diseases are assuming a nervous or asthenic type, and that nervous exhaustion is so common that it must be regarded as a distinct disease of which there are several varieties.

In this country, nervousness has not certainly obtained the ascendency that it is represented by American physicians to have secured, at least in certain districts—notably, in the Northern and Eastern States—on the other side of the Atlantic. And yet, we are not without evidences that nervousness, that is to say, the nervous temperament and diathesis, are much more common in these Islands than they used to be, and that in some respects we are approaching the state of matters that exists in America. It has even been maintained that in bodily habit our people are visibly adopting the style of Brother Jonathan, and that fat people are less numerous, and thin people more numerous, in the well fed classes of society, than was formerly the case. Allowing, it is said, for the effects of changes in diet, and for the deceptions which changes of costume, like that from crinoline to tying-back and jerseys, may create, it is still manifest that our nation is growing thinner as a whole, and that plumpness is giving place to elegant attenuation. I daresay many of us recollect Hawthorne's description of a middle-aged Englishwoman as she appeared to him in 1863. "She has an awful ponderosity of frame", it ran, "not pulpy, like the looser development of our few fat women, but massive, with solid beef and streaky tallow, so that (though struggling manfully against the idea) you inevitably think of her as made of steaks and sirloins. When she walks, her advance is elephantine; when she sits down, it is on a great round space of her Maker's footstool, where she looks as if nothing could ever move her." That was a coarse and ungracious caricature to come from a pen usually so dainty and kindly as that of Hawthorne; but it would, I think, give comparatively little offence if published now, compared with the storm of indignation that greeted it at the date of its appearance, and simply for the reason that there would be less truth in it. Very stout women, even middle-aged, are, I fancy, less frequently met with than they formerly were; while our young women, although, happily, far from rivalling the slimness of American girls, are, on the average, probably thinner than their grandmothers were at the same age. If this is so, we can only attribute the change which has taken place to the influence of the conditions of modern life upon the nervous system, and through the nervous system upon the nutrition of the tissues. The female sex is of nervous temperament as compared with the male sex, and Laycock used to say that feminine and nervous were synonymous terms. It is, therefore, in women that we should expect to find the earliest and most marked manifestations of changes in the nervous system, influencing nutrition, like those just alluded to, and also of changes establishing greater susceptibility in sensory perception, which has also been pointed to as a sign of the growing nervousness of the age. Our refined and nicely discriminating nerves, it has been asserted, cannot, without discomfort, endure the strong impressions that give to coarse nervous organisations only an agreeable stimulus; and hence the substitution in modern decorative art of delicate combinations and neutral tints, for the glare of primary hues, orange and red and purple, which were in vogue in days less nervous than ours.

All this, however, is somewhat problematical, and we are not without more definite proofs that nervousness is increasing amongst us. What might perhaps be regarded as the best of all proofs of that proposition—an increase in the rate of mortality from nervous diseases, the results of nervousness—cannot be adduced in its support, for the returns show that nervous diseases, as a whole, were as fatal twenty years ago as they are now, and that the number of deaths ascribed to them has fluctuated very little from year to year. But it is to be borne in mind that the death-rate from nervous diseases, as officially set forth, is but a fallacious guide to any estimate of their prevalence, for a large number of the victims of nervous disease succumb to intercurrent maladies, which are registered as the causes of death; and nervous diseases might be disseminating themselves widely amongst us, while nothing in the death-rate gave token of the process. Then, analysis of the return of deaths due to diseases of the nervous system reveals that, while that return, as a whole, has undergone little change, very remarkable changes have taken place in the items of which it is made up. A great reduction has taken place in the number of deaths ascribed to "convulsions", a term which used to cover a multitude of infantile ailments—many of them not nervous at all—and which is still too indiscriminately applied, while a compensatory augmentation has taken place in the number of deaths ascribed to other and less obscure diseases of the nervous system, about which there could be no mistake. As, then, owing to increased care and skill in diagnosis, a large number of deaths which were formerly improperly classified under diseases of the nervous system, are now classified under other headings, and as, notwithstanding this, the death-rate from diseases of the nervous system remains the same, we are entitled to conclude that there has been an increase in the death-rate from nervous diseases, although this is not apparent on the face of the returns.

It is not, however, in connection with the death-rate due to diseases of the nervous system themselves, that the increasing nervousness of this country is most clearly evinced. That comes out most distinctly in connection with the prevalence of other diseases not called nervous, but containing a powerful nervous ingredient. In diabetes, the nervous system plays an important part, and the highest authorities are agreed that it is often brought on by mental anxiety and distress, or by sudden fear and shock. Well, diabetes is advancing with rapid strides in this country. In the year 1863, it caused twenty-seven deaths in every hundred thousand persons living; in the year 1878, it caused forty-three deaths in every hundred thousand living, having advanced steadily year by year in the interim. Dr. Pavy, who speaks from an unique experience, and with unsurpassed insight, is satisfied that these figures cannot be explained away by supposing that there is a more painstaking search for, and a readier recognition of, the disease now-a-days than of yore. He believes that the disease is decidedly more common than it was, and he attributes its greater prevalence to the increased wear and tear of these times. Kidney-diseases, including under these nephritis and Bright's disease, have also advanced rapidly in recent years, having caused 338 deaths in every hundred thousand persons living in 1878, against 215 in the same number living in 1863; and in kidney-diseases, we are now taught to believe, conditions of the nervous system are often involved. Dr. Clifford Allbutt has shown that mental worry is the chief cause of granular kidney; and Dr. George Johnson, while not agreeing with Dr. Allbutt on this point, holds that there is a real etiological relation between mental anxiety and some cases of albuminuria, and that mental emotion often aggravates chronic renal diseases. Heart-diseases are year by year advancing all along the line, and particularly in their neurotic wing. They caused 909 deaths in every hundred thousand persons living in 1863, and 1,373 deaths in every hundred thousand living in 1878, and the movement must be traced, in part at least, as Dr. Quain has pointed out, to the operation of the conditions of modern life, through the nervous system, upon the organs of circulation. The deaths due to aneurism, which in my experience is as much connected with mental as with physical strain, have increased in proportion to the deaths from heart-disease. Rheumatism, in which there is unquestionably a nervous element, and gout, the neurotic character of which has been ingeniously vindicated by Dr. Duckworth, are both much more fatal than they were twenty years ago.

But without any increase in the death-rate from diseases in which there is a nervous element, or from nervous diseases themselves, it is still possible that the latter might be multiplying amongst us in a disastrous manner. For there are diseases of this class which do not shorten life. They cause chronic invalidism; they cripple power, and mar usefulness; they spread wretchedness around; they embitter existence, but they do not curtail it. Indeed, it might be argued that a few mild types of nervous disease are favourable to longevity, by imposing on those whom they afflict a strict regard to health, by withdrawing them from participation in pursuits that are beset with risks, and, by creating a state of system that is indisposed to acute inflammatory attacks. Many observant medical men are of opinion that cases of the minor nervous affections, about which no statistics are available, of hysteria and fidgets, herpes zoster, and urticaria, writers' cramp, and sick headache, are now studded over practice with a profusion that was formerly unknown. Premature baldness is far more frequent than it used to be. Early decay of the teeth occurs in the rising generation with painful frequency. Annual holidays have become a necessity, instead of a luxury. A new literature of neurology has sprung up of late years. New hospitals dedicated to the treatment of nervous diseases have been

established; a new set of specialist physicians have adopted that line of practice. The consumption of neurotic remedies, of morphia, hyoscyamus, conium, chloral, the bromides, arsenic, strychnia, and gelsiminum, is enormously on the increase, as is also the consumption of neurotic beverages like tea and coffee, and of that great nerve sedative, tobacco.

These facts and considerations, and many more of like import, which might be placed before you did time permit, seem to warrant the inferences, that nervousness and nervous diseases are increasing in this country, that the neurotic circle is enlarging out of proportion to the increase of the population, and that the crazy and insane circles which draw from it the bulk of their constituents, are also probably enlarging in a manner disproportionate to the increase of population.

To inquire fully into the causes of this increase of nervousness and nervous disease, would be to enter on an investigation of great interest but of vast extent. They may all, however, be summed up under, 1st. the increasing complexity of the nervous system and, 2nd, the increasing complexity of life. Neural development is still going on in the brain. It is not improbable that that organ is increasing in size in our race, and, of course, an addition to its weight that would be imperceptible in the scales might be of profound import in relation to its functional activity. But without increasing its size, the brain may elaborate its structure by putting forth new gyri, deepening its grey matter, developing new cells, and laying down new commissural fibres, to an incalculable degree; and this much is certain, that whatever their nature be, organic processes are going on in the brain, by which new impressions and new modes of action are registered and transmitted from one generation to another. Thus it is that we, who are of the latest birth of time, inherit something from all past ages, a legacy which is paid not only in wealth of printed books, in cultivated continents, in multitudinous cities, in opulence of arts, in obedient armies of machines and scientific instruments, but in the finer architecture of our brains, in the enrichment of our nervous systems, in new phases of intelligence, and even in new proclivities to disease. For it would seem that subtlety of the higher nerve-centres brings with it instability, and that, as brain-substance grows finer in texture it becomes more explosive in nature.

"Intelligence", says Herbert Spencer, "is the adjustment of the inner to the outer relations". If, then, the outer relations become more numerous, complex, and heterogeneous, the process of adjustment must become proportionately more difficult and hazardous. And our outer relations have surely grown numerous, complex, and heterogeneous in modern times. Our environment has grown varied and intricate; and our environment it is that contains those conditions of modern life, which, acting upon complex and subtle nerve-centres, cause our increased nervousness and increased liability to nervous disease. On every class and on all ages, the pressure of modern life puts a severer tension. Competition waxes keener; the struggle for existence grows more exciting; and that this struggle involves danger is certain, for statisticians tell us that annuitants, clergymen, and the well-to-do classes who have to take no thought for the morrow, live longer than shopkeepers, artisans, and labourers, who have to contend for daily bread. In this struggle, men find it to their advantage to crowd into towns, and Mr. Bright looks forward to a gradual diminution of the rural, and an increase of the urban, population. Well, it is in towns that nervousness and nervous diseases most abound, their growth being encouraged apparently by the excitement of town-life, by the absence of the refining and tranquilising influences of nature, and by the relaxation of those social restraints which conduce to rectitude of conduct in villages and small communities.

Of the many conditions of modern life which may be influential in promoting nervousness, and therefore in contributing to the increase of nervous and mental diseases, there is just one to which I would wish to direct your attention in the time that remains to me, and that is education. Now, it is perhaps somewhat disquieting to be told that education may be a source of disease. We have been accustomed to regard it as the panacea against all diseases, and we have just adopted a national system of education, and greatly improved our standard of culture and machinery of instruction in the hope that we shall thereby abolish or mitigate most of the evils by which the body politic is afflicted. Against the beneficial effects of education, no physiologist or medical psychologist can have a word to say. They know well, none better, that it may be a safeguard of bodily vigour and mental integrity. Undisciplined grey matter is apt to be unstable grey matter, and the want of proper exercise, when nourishment is abundantly supplied, favours a rank and spongy development of feebly acting tissue. The brain steeped in idleness may degenerate as well as the brain that is worn and frayed with excessive toil; while ignorance is for ever betraying the ignorant into a violation of those laws, the observance of which is indispensable to the well-being of the brain. But, on the other hand, the physiologist and the psychologist know also that education, while it secures many and great advantages, brings with it certain dangers that are peculiarly its own. They know that, under certain circumstances and in certain directions, it may be a menace to health and sow broadcast the seeds of disease. To them education is the guidance of growth, and it may be good or bad according as it is calculated to result in constitutional vigour, and a harmonious and well balanced development of parts, or in constitutional debility and a disproportionate and irregular development of parts.

The general tendency of education is unquestionably to increase the activity and susceptibility of the nervous system. It aims at establishing in the supreme nerve-centres certain approved channels of least resistance and areas of ready diffusion, and in doing this, it has to modify the nutrition of these centres and stimulate their growth. It involves increased use of the brain, during which, of course, a larger supply of blood is received, and the vessels become enlarged. In the robust and enduring, this process, if wisely conducted, goes on without detriment to health, and in certain temperaments even with advantage to it. But in the fragile and sickly, in those who are badly nourished, or scrofulous, who are unprepared by inheritance for brain-labour or who are precocious and excitable, it may work serious mischief, particularly if it be pushed on with injudicious haste or ill considered zeal. Then it is that it not only quickens the action of the nervous system, thus causing nervousness, but induces exhaustion of the brain and even structural changes in it.

Dr. Treichler of Bad-Lenk-Bern, in a paper read last year to the Society of Natural Historians and Physicians of Germany, called attention to the great increase of habitual headaches, which has, he alleges, taken place amongst boys and girls, and attributed this to the exhausting effects of excessive and ill-directed brain-work in schools. The publication of an abstract of Dr. Treichler's paper in the *Times* has led to a very full discussion of the subject of which it treats by medical men and educationalists amongst ourselves, and the result of that discussion seems to me to be this, that whilst Dr. Treichler has exposed serious dangers which lurk in our present teaching processes, his estimate that one-third of the pupils attending schools in France and Germany suffer from headaches, which destroy much of the happiness of life and blunt the acuteness of the faculties, is probably an exaggeration. With us, at any rate, no such proportion of children attending schools of any class are subject to headaches brought on by over-exertion of the mind or any other cause. But still an appreciable and perhaps increasing number of school-children in this country suffer from recurrent headaches which are dependent on the toils and anxieties of school-life, and a great many are injuriously affected by these toils and anxieties in a variety of other ways. Mr. Brudenell Carter long ago pointed out that stupidity may be artificially induced by unintelligent and injudicious teaching in schools; and many physicians have recorded cases in which sleeplessness, night-terrors, somnambulism, epilepsy, hydrocephalus, hallucinations, and other maladies have followed upon educational pressure unwisely applied to weakly children.

It is of course difficult to measure, even roughly, the evil consequences of educational pressure and brain-fatigue. Headaches may be unaccompanied by any very ostensible symptoms and may scarcely interfere with school attendance. The manufacture of stupidity may be carried on on a large scale, and obtain no recognition in inspector's reports, and tissue-degenerations and mental diseases may be separated by long intervals of time from the premature or inordinate stimulation of the brain in which their roots really lie. It is only in exceptional instances that that stimulation brings on at once disabling or fatal disease. Some indication, however, of its effects in that exceptional direction may be discovered, I think, in the curious fact that of late years, in which it will not be denied that the schoolmaster has been abroad, the increase in the number of deaths from hydrocephalus has been not amongst infants under five years of age, but among children and young persons from five to twenty-five, that is to say, in the education and post-education periods. Then evidence of the more remote evil consequences of intemperance in education may be seen in the preponderance of nervous diseases in the refined and cultivated classes, and in the parallelism which has been observed all over Europe between the progress of education and the increase of suicides.

If, then, education may have such pernicious consequences as those just enumerated, and many more might have been added to the list, it is clear that it must be carefully guarded and regulated; but guarding and regulation such as required can come only from the physiologist and

psychologist. The schoolmaster must therefore take counsel with them, and they, on their part, must enter more deeply than heretofore into the embryology and evolution of brain and mind, so that they may be able to supply precise rules for the guidance of growth. No doubt much valuable information on this subject has been already accumulated, justifying the promulgation of rules for the preservation of health during education, and for the avoidance of its detrimental effects, which are still but too little regarded. Our knowledge of the growth of the body has enabled us to arrive at some safe conclusions as to the growth of the mind. But an altogether new vista is opened up to us in reference to education by recent discoveries as to the localisation of function in the brain; and no more important problem in connection with education and neurology now awaits solution than that relating to the natural order of development of the various centres of which the brain is made up.

The brain of a fœtus differs from that of an adult not only in size, consistence, and external configuration, being comparatively deficient in secondary gyri, but also in internal structure. Its cineritious substance is composed of an unvaried nucleated network, the nuclei being rounded, and none of those cells with intercommunicating processes being visible, which at a later period are characteristic of the grey matter of the convolutions. As development advances the brain increases in bulk and density, the gyri became more complicated in their arrangement, and layers may be distinguished in the grey matter containing nerve-elements of varied appearance, in which, moreover, cells of different shapes with numerous processes are conspicuous. In the adult brain, as the admirable investigations of Bevan-Lewis and Lockhart Clarke have demonstrated, a structural differentiation has been established in different areas of the hemisphere. In certain portions of their surface, the grey matter is six laminated, in other portions it is five laminated, the latter arrangement being more distinct in the parietal and frontal convolutions, constituting the excitable or motor area of the brain, where so-called giant-cells exist in irregular clusters or aggregations.

Now, we are still unable to say at what stages of growth this elaboration of cerebral structure takes place, but we have grounds for believing that it goes on gradually, but not uniformly, the budding and branching of the cells commencing in certain territories or centres and spreading from them in various directions. It is perhaps late in life before the multiplication of cells, and the extension of their interlacements are at an end; for it is certain that the brain may continue to increase in size until upwards of thirty years of age, and that in every nerve-centre, structural complexity may be augmented, long after the limit of bulk has been reached. Then there can be no question that the functional activity of the different centres is established at different epochs and perfected at different rates. The senses, the motor powers, the emotions, the intellectual faculties, do not come all at once, nor drop in fortuitously now and again. They present themselves in a definite succession, and with a strict regard to evolutional precedence in the infant, the child, and the youth, from the most simple reflex acts to the supreme efforts of will. Each centre emerges from its "antenatal gloom" at an appointed time, and each has a certain season prescribed to it in which to perfect its functions. Reflex centres that have been long laid down, like that for the respiratory process, are at once proficient in their duty; but intellectual centres of recent evolution are only brought tardily to do their work, under the direct influence of conscious effect. And between these are innumerable centres which arise in due succession into activity, and are engaged in training for very varied periods. The foot and leg centres are in advance of these of the hand and arm in their development, and the latter again are in advance of these of the tongue and lips. Chewing is commenced at the eighth or ninth month of life, but the sexual appetite does not assert itself until the twelfth or fourteenth year. Equilibrium is speedily acquired, but years are spent in mastering the niceties of speech.

Now, in each nerve-centre there are two kinds of activity, which must not be confounded with each other. There is nutrient activity and functional activity, and the rule would seem to be that these are generally in the inverse ratio of each other. When nutrient activity is at its maximum, functional activity is at its minimum, and vice versâ. When the brain of the child is growing most rapidly, its functional manifestations are not of the highest order; and when the brain of the man is doing its best work, growth may be said to be over. Growth precedes function, and yet function is, after a certain stage, essential to growth, and it is while growth and function co-exist that the opportunities for education occur. It is at the nascent period in the history of each nerve-centre when growth activity, although becoming less energetic, is still present, and when functional activity, although still feeble, is gradually gathering strength, that most may be done to make or mar it and other centres with which it is associated. Then it is that, by suitable exercise and stimulation cautiously applied, it may be brought to the highest development of which it is capable. By skilful management this nascent period may be prolonged, and a superior anatomical substratum provided for subsequent developments; but by undue eagerness or negligence it may be curtailed, or allowed to slip past unimproved.

The duration of the nascent period, as I have called it, in which growth and function go hand-in-hand, varies exceedingly in different centres. In those concerned with instinctive operations it cannot be said to exist, for their growth is completed without functional stimulation, and they start at once into full functional activity; but in those concerned in the higher intellectual operations it may apparently run on until late in life. But, whatever the duration of its nascent period, each centre requires extrinsic stimuli to develope its structural potentialities, and this is true of the lower reflex as well as of the higher discriminating centres. Dr. Allen Thomson hatched a number of chickens upon a carpet, and they ran about on the soft surface, and never attempted to scrape until a little gravel was sprinkled over it. The moment this was done, however, the appropriate gritty stimulus being applied to their feet and conveyed to the nerve-centre, vigorous scraping commenced—a proceeding in which knowledge or discrimination took no part, for the object of scraping is to find insects or seeds, and, for anything such inexperienced chickens knew, these might be lodged in the carpet as well as in the gravel.

In higher and more complex centres we may discern the influence of extrinsic stimuli, not merely in inaugurating function, but in promoting growth and sustaining structural development. Gudden, a Swiss physiologist, has shown that when the nasal organ of a young rabbit is closed, the olfactory nerve and bulb of the same side are perceptibly atrophied in six or eight weeks, and that when the eye of a young pigeon is enucleated or shut up from the light, the optic nerve and anterior prominence of the corpora quadrigemina of the same side waste very speedily. And similar consequences apparently result in the cerebral centres of the human subject when they are early cut off from functional activity, even in the higher centres; for in two remarkable cases reported by Dr. Gowers and Dr. Bastian, there co-existed with congenital absence of the left hand, and with an aborted condition of the whole of the left upper limb in two adults, an imperfect or dwarfed condition of the ascending parietal gyrus of the right side, in which gyrus the individual and combined movements of the fingers and wrist are localised by Ferrier. Now, whether we regard this gyrus as a true motor centre, or as a sensory region of the kinæsthetic type, it is clear that its growth was stunted by the curtailment of its functional activity during its growth period. But surely we are at liberty to conclude that, had its functional activity been restricted in any other way than by congenital malformation, its growth would still have been restricted. We have long known that muscles, when not exercised, do not develope, and we have now reason to believe that the same is true of the highest nerve-centres. But muscles that have been fully developed, if cut off from exercise, waste and degenerate, which is not true of the highest nerve-centres; for it has been shown, in cases noted by Ferrier and others, that where a leg had been amputated in an adult who had lived many years after the operation, there was no alteration in the cerebral convolution corresponding with the limb, but only atrophy of the lumbar enlargement of the spinal cord on the same side. The lower and comparatively independent centre, with a narrow functional range, had suffered wasting; but the cortical centre, with innumerable cerebral connections, and its complex functions as a basis of motor ideation and of organic memory, had not degenerated, after the restriction of its fundamental activities by the operation.

These facts, that cerebral centres never properly exercised do not develope, and that, once developed, they do not waste, although cut off from those activities that insured their development, strikingly inculcate the importance of educating every centre at the proper nascent period, and the danger of neglecting education until the nascent period is over. They give also a new significance to physical education. Hitherto that has been advocated as a mean towards the improvement of health and the strengthening of the frame, and not as an instrument of mental development. The notion has been that muscular exercise expands the lungs, quickens the circulation, and braces the nerves, and that notion is correct; but to it must now be added the pregnant idea that it also contributes to brain-growth and mental evolution. A large district of the brain is made up of motor centres, and concerned in motor ideas, which form a no less important element in our mental stores and processes than ideally revived sensations. The growth of that district of brain is apparently dependent on muscular exercise, and if that be withheld at the growth period, the development of the brain will be stunted, and perhaps the whole series of ideas connected with form, distance, resistance, weight, etc., rendered faulty or incomplete. And

not only so, but this district is made up of a series of centres in relation with different groups of muscles, and each centre is dependent for its development upon its own group of muscles, and the defective exercise of any group of muscles during the growth period in its own particular centre (the growth periods in most of the motor centres having different starting-points, although overlapping in various degrees) will result in dwarfing of that centre, and a corresponding hiatus, or a general weakness, must exist in the mental fabric.

From this we might deduce that swaddling-bands so applied at birth as to restrain all muscular movements, and kept on during infancy and childhood, would result in idiocy—a speculation to which the wretched muscular development of most idiots and imbeciles, and the fact that their mental training is most successfully begun and carried on through muscular lessons, give some countenance. We should also have to infer that, in order to build up a sound and vigorous brain, we must insure free exercise to the different groups of muscles in the order of the development of their centres, and must in no degree interfere with the natural sequence of their evolution. That being so, we must necessarily ascertain what that natural sequence is which is to be so important a guide to education; for, in our present ignorance of it, we may unwittingly be doing much mischief. Suppose that we are encroaching on the time at which the hand-centres ought to receive their most valuable education—their nascent period—and are devoting that time to the cultivation of the tongue- and lip-centres, then we should be impairing the full development of the brain—disturbing the balance of mind, and sacrificing that technic skill in our artisans of the future which is essential to the maintenance of our national position. For the hand-controlling centre, if not fully exercised at its nascent period, can never afterwards attain to the highest cunning—witness the clumsy caligraphy of those who learn to write in mature life, even when they practise with more than boyish assiduity, and the inferiority of the work of any craftsman who has not served a regular apprenticeship to his trade. In these bewildered times, says Carlyle, all education has run to tongue. But it seems to me, that not only tongue, but hand, and foot, and eye, and back, and every muscle in the body, must be trained in due season, if education is to do what we expect of it, and is to result, not in headaches, and imbecilities, and nervousness, and insanity, but in well-balanced growth of body and mind. The differences which we notice between man and man in deportment and gait and expression are but the outward and visible signs of individual variations in the development of the motor centres of the brain; and the stammerings, grimacings, twitchings, and antics which are so common and annoying, are probably, in many instances, the effects of neglected education of some of those centres, and might have been abolished by timely drill, and discipline. Of these centres, one group—presiding over the hand—ought, I think, to receive more attention than it now does amongst those who are not called upon to earn their living by manual labour. A cunning right hand is one of man's proudest possessions; and I go so far as to say, that every man, no matter what his rank or fortune, would be mentally improved by learning a handicraft, and that every woman should be taught to use her fingers deftly in technic work of some kind. The most learned Jews have always followed trades; and Spinosa was not only a philosopher, but a maker of spectacles. "When we begin", remarks an eloquent writer, "at all to understand the handling of any truly great executor—such as that of the three great Venetians, of Corregio, of Turner—the awe of it is something greater than that felt from the most stupendous natural scenery; for the creation of such a system as a high human intelligence, endowed with its ineffably perfect instruments of eye and hand, is a far more appalling manifestation of infinite power than the making of seas and mountains."

In the hurried glance at education in its relation to the etiology and prophylaxis of nervous diseases, which has been alone possible to me to-day, I have chiefly referred to the motor centres of the brain; but the principle of training in growth-periods is, of course, as applicable to the sensory and other centres as it is to them. The sensory centres are gradually and successively developed; and the future complexion of mental life is in great measure determined by the impressions made upon them when they are undergoing development. Art in the nursery is a subject well worthy of consideration; and efforts should certainly be made to put before children, especially those pent up in towns, good and worthy and beautiful objects at the time their minds are being formed. A little introspection will satisfy most men that pictures and images and forms presented to them in their earliest years enter largely into all their subsequent mental commerce, and sometimes influence their history for weal or woe. "The Edinburgh Castle rock", says Ruskin, "had a daily influence in forming the taste and kindling the imagination of every promising youth in Edinburgh." "The plea for art", says Watts, "rests on much wider and more solid foundations than mere amusement for moments of leisure.....Nothing is so likely to cure the widespread habits of intemperance that disgrace the nation as a taste for art and music generally developed."

I should have been glad to speak of the acquisition of speech, of the basis of attention, of the value of natural science as a branch of elementary education. If I say nothing of these subjects, nor of moral and religious training, it is not because I underrate their importance in contributing to the harmonious development of the brain, but because time does not permit me to enter on so large a theme. As regards moral and religious training, I would say just this, that no one can study insanity without realising that to make men prudent and just and generous, is to protect them in great measure against those moral contagia which float about in such varied abundance in our social atmosphere, and which are so inimical to mental health. And no one can justly study the constitution of the human mind without, I think, perceiving that it contains emotional elements and religious feelings which, when cultivated, contribute to its strength and endurance, but which, when neglected, become sources of weakness and decay. To discipline the natural forces of character, and to place over the mind a pure and lofty ideal, is to take the best possible measures to insure its prosperity and peace. Three-fourths of life are conduct, says Arnold, and three-fourths of conduct are imitation; and it is surely better to imitate an ideal than the men around us or the beasts that perish. In the former, we may have bound up whatever of beauty and goodness the universe displays or it has entered into the heart to conceive; in the latter, we have a strange medley of good and evil, with selfishness in the ascendant, for selfishness must ever be the soul of the plot in that tragedy "The Struggle for Life", with its hero "the Conquering Worm." But, besides the struggle for Life, there is the struggle for Light—an inward struggle, employing no brute force, dealing no death around, but terrible in its earnestness, and fraught with disaster to many minds. For that struggle, as well as for the life-struggle, the mind should be prepared. It cannot be overlooked in any system of education that aims at completeness. And it is at completeness that all systems of education must aim. Only when that is attained, when body and brain and mind are harmoniously developed, shall we be able thoroughly to reconcile progress with health. In the meantime, we must labour in that direction, and strive, as best we may in this dim dawn of biological science, by a timely and well-adjusted cultivation of sense, motion, and intellect, moral and religious feeling, to resist the inroads of nervous and mental disease, and of every foe that may assail us from without or within, and to secure to our country what is stronger than fleets of ironclads, more inviolate than the streak of silver sea,

> "A virtuous populace who rise the while,
> And stand a wall of fire around their much-loved Isle."

NERVE-STRETCHING FOR THE CURE OF LUMBAGO AND SCIATICA, WITHOUT ANY CUTTING OPERATION.

In a late number of the BRITISH MEDICAL JOURNAL, Dr. Bramwell of Perth gives some cases of cure, and others of relief, "by cutting down on, and exposing, the sciatic nerve, and then stretching it," so as to break down adhesions existing between it and its sheath, in cases of severe sciatica. The relief was most immediate and satisfactory in those of his cases in which a feeling, or snapping, or breaking down of adhesions was felt, on putting the nerve on the stretch. I have had myself very lately an attack of lumbago, for the first time in my life. A patient of mine, whom I could not go to see, came to my house, and, seeing how I was suffering, volunteered to cure me; assuring me he had cured, almost instantaneously, several people suffering in the same manner as I then was, by kneading and pressing very hard the parts affected. He placed me on my face and hands on the sofa, and he kneaded the painful parts very forcibly for some time; and then he said, "I don't hear the 'cric-cric' which I always hear when I succeed at once, so I fear I shall not succeed with you." This is evidently the sensation of "adhesions giving way", as described by Dr. Bramwell, when the cure is satisfactory. I have known cases of torticollis get suddenly well, also of pain in the shoulder, on some involuntary violent movement being made. These are evidently cases of "nerve-stretching"; and I think we have got at the true scientific explanation of the success of the popular proceeding in those cases; and with the distinct object of "stretching the nerve", and "breaking up any existing adhesions", we may adopt with advantage, and much greater chance of success, the popular proceeding. In severe cases, the proceeding must be very painful; but with chloroform, or any other analogous preparation we may prefer to fall back upon, this objection of pain can be obviated, and kneading, or forcible movements sufficient for our object, can be freely put in practice.

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FORTY-EIGHTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in CAMBRIDGE, Aug. 10th, 11th, 12th, and 13th, 1880.

FIRST GENERAL MEETING; AUGUST 10TH.

THE first general meeting was held in the Senate House. Dr. DENIS O'CONNOR, of Queen's College, Cork, took the chair. The hall was filled with members, and the galleries with ladies and undergraduates. The Vice-Chancellor and the members of the Senate were also present.

The Minutes of the last Annual Meeting were taken as read, and confirmed.

Address of the Retiring President.—Dr. O'CONNOR said: Before I descend from the elevated position in which you have kindly placed me, I beg to express the gratification which has been afforded to me and to those who were united with me, in inviting the Association to Cork, to find that neither the remoteness of the locality, nor the inconveniences of a sea journey, prevented the meeting from being thoroughly successful. [*Hear, hear.*] I may infer that from the great numbers who attended, amongst whom many foreigners from most of the countries in Europe and America honoured us with their presence. I may also infer it from the number of addresses delivered by the presidents of Sections, and the communications that were made, which I am sure, if published, would make a very valuable volume of medical literature. Anyone who was present, and heard the addresses, or read them afterwards, of Dr. Hudson and Mr. Savory, will say that they were quite equal to the great occasion on which they were delivered. Both these men brought to their subjects the highest reputation, and both of them left the meeting with their reputations, if possible, enhanced. Dr. Hudson's eulogium on Laennec was a task of love for him, because he has devoted most of his life to the subject which was illustrated by his lecture. Mr. Savory charmed by his eloquence those whom his arguments could not convince; and even myself, who have no personal connection with surgical operations, felt equally interested. At the same time, it is impossible for light to be shed on any branch of science without being reflected on every other, so interwoven are they under a common pathology and a common physiology; and I could not help thinking, in hearing what he said, of the lesson that may be learned even by the physician; for, from the earliest times, I noted that, although the most contagious of diseases in our country is typhus fever; and that, when once it enters the hut of a poor man, it never leaves until it has attacked every individual, yet I never knew, in a respectable, well ventilated house, an instance of a second person being affected with typhus fever. I kept this fact under my notice, and I thought to myself, if pure atmospheric air is capable of destroying the subject matter of fever in the air, it would destroy the contagium that emanates from the bodies of patients with typhus. William Hunter, who observed this fact, said he believed that the emanations of the body were not poisonous or contagious till they had rested in dense atmospheric air for some time. I think I have noticed that, since chemical antiseptics have come so much in vogue as they have done, that people get to regard less the great antiseptic of nature, flowing down in successive currents, designed to purify the surface of the earth of the impurities produced by decomposing septic matter. I do not enter into this great subject, which has been discussed by many eminent men—men who have no purpose except the purpose of truth. Although they may differ in opinion, to work out the truth is their ultimate aim. [*Cheers.*] Whatever our success in Cork, I know it will be nothing compared with your success on this occasion; for I see the great and increased number of Sections and Subsections, and the most brilliant names attached to them. But so let it be. So should the British Medical Association go on increasing still in dignity and in utility; not looking for great discoveries, for they do not come every year, nor always every century, but being satisfied to extend our knowledge. This, I may say, is the characteristic of the generation in which we live, not alone to advance knowledge, but to disseminate it, till it comes closer to those who are engaged in using it for the purposes of life. It is in this way that knowledge may be called power; and there is no institution that has aided so much in the dissemination of knowledge as that which has opened its venerable halls for our meeting. By their local examinations, by their minor scholarships, and in sundry ways, they have been satisfied, although they have been the nursery of giants for centuries, to descend to the humblest that will partake of their knowledge. And never have they proved their utility better than by receiving and fostering within their walls the medical profession, whose interests we are met to advance to the utmost of our ability. [*Cheers.*] In this University, medicine becomes associated with classical literature, which has been the solace and comfort of a hard-working profession, and particularly at a period of life when a man's working day is past; and associated with it are the stricter sciences, that are so necessary to enable the physician to reason well about the problems that come before him, to distinguish truth from error, to distinguish assertion from proof. [*Cheers.*] And if the same thing is carried out by the Medical Council, after a little time we shall all be able to say with truth that we belong to a learned profession. [*Cheers.*] Now, gentlemen, my duties are done. I have simply to introduce to you the President of the coming year, Dr. Humphry. *Laudari a laudato viro*—to be praised by a man who is himself the object of praise—enhances the value of it; and to be praised and introduced by a man who was himself well known, would be very natural. But in this case, that is all reversed. The man whom I introduce is known by his medical learning, by his zeal in the advancement of the profession in every way, particularly in the teaching of medical men; and, in fact, there is nothing that can be more appropriate than to have him Chairman or President of this great assembly. He is worthy of the assembly, the assembly is worthy of him, and the occasion and the place suit equally. [*Cheers.*] I beg, in retiring from the chair, to thank you most sincerely for the kindness and forbearance you have exhibited to me. [*Cheers.*]

Dr. O'Connor then retired from the chair, amid universal expressions of kindliness.

President's Address.—Dr. HUMPHRY, amid renewed cheers, took the chair, and delivered his inaugural address (which is printed on page 241).

Mr. HUSBAND (Bournemouth) remarked that it was not usual to give a vote of thanks to the President of the Association until he had done his work, and until the members were satisfied that he had earned their thanks for his management of the Association during his tenure of office. But the address just delivered had been singularly happy in many respects, and especially in suggestions which should not be allowed to fall to the ground, but which should be practically considered, with a view to decided action. [*Hear, hear.*] It was a noble idea, he thought, as the Chairman had suggested, that the strength of this Association should be brought to bear upon the accumulation of facts, so as to rescue them from the oblivion into which they too often fell. No more valuable suggestion had come before the Association, and it was to be hoped that this one would, like seed upon good ground, be cultivated, and made to bring forth good fruit. The Committee of Council ought to be asked to consider practically the subject contained in the address of the new President; for the Association had now, he was rejoiced to say, the means—the intellectual means and the pecuniary means as well—of doing that which was necessary for the welfare of the Association. [*Cheers.*] The President's eloquent exposition would have a force to which words from him (the speaker) could add no strength; and he would simply move:

"That the thanks of this meeting are due to the President for his valuable suggestions respecting collective action in accumulating the data of medical knowledge, and that the Committee of Council be requested to consider how such suggestions can best be carried out to a practical result."

Mr. LISTER, who was received with great cheering, said he had simply to discharge the duty of seconding the motion, and this he did with the greatest possible pleasure.

The resolution was carried unanimously.

Dr. WATERS (Chester) remarked that the members of the Association could easily understand that, after the admirable and suggestive address of the President, any member would feel a peculiar difficulty in addressing the assemblage upon any subject; and he, for himself, felt that difficulty. The resolution which he had the honour to propose was one which recalled the most pleasing recollections in the history of the Association. It carried their memories back to that period when, for the first time, the British Medical Association—in some degree through his own instrumentality, combined with that of the late General Secretary, Mr. T. Watkin Williams—determined that it should endeavour to extend the field of its operations to Ireland. That endeavour was not simply successful, it was in the highest degree so; and the members were gratified to the utmost by having, on the first visit to the Green Isle, the universally beloved and world-renowned Dr. Stokes as the President. The Committee of Council of that time of which he spoke, felt that a great work was being done by the holding of the meeting in Ireland. They felt that this action really welded the profession of the United Kingdom into but one body, which all had desired to see it; and nothing had weakened the sympathies of the profession in Ireland with that in England but the want of cohesion which existed before the extension of the Association to Ireland. Scattered as the

members of the profession were, they could but feel as missionaries in their relation to the general population; and it was to be hoped that the kindly feeling which existed now by inter-visitation between the Irish, English, and Scotch members of the profession, would extend to the whole population of these countries of the United Kingdom. [*Cheers.*] The hospitality and kindness shown to the members at the Dublin meeting would not readily be forgotten by those who were present. [*Cheers.*] On the occasion of the Dublin meeting, Sections were for the first time found necessary in consequence of the growing numbers and importance of the Association. [*Hear, hear.*] These remarks did not immediately apply directly to the resolution which it was his pleasing duty now to propose, and this was to bring to the recollection of the members the successful and pleasant gathering of last year in Cork. [*Cheers.*] The late President had spoken of Cork as a "remote locality"; but the geniality, the hospitality, and the scientific success of that gathering, would long live in the memory of those who visited the sister isle last year. [*Cheers.*] Dr. Waters then moved:

"That the thanks of the Association be accorded to Dr. Denis O'Connor for the courteous and able manner in which he had filled the office of President of the Association during the past twelve months, and that he should be, and was thereby elected, a Vice-President of the Association for life."

Mr. WHEELHOUSE (Leeds) seconded the motion, and remarked that, to those members who went to Cork last year, no words of his were necessary to remind them of the geniality, hospitality, and cordiality shown to them by their worthy hosts; while those who did not go lost what would have been the greatest treat in their lives. It was the duty of the Association, in return for the Irish cordiality shown, to record an English vote of thanks. [*Cheers.*]

The resolution was then carried by acclamation, the PRESIDENT adding a few words by reminding and endorsing a remark made by the late President of his predecessor: "His face tells no ill of him."

Dr. O'CONNOR thanked the meeting very much for the great honour they had conferred upon him. He should have held himself as undeserving of these renewed thanks, but he felt that the compliment thus given reflected upon his brother practitioners of Cork and his fellow-citizens. [*Cheers.*] He had simply done his duty, and therefore he needed no thanks; but, standing there as the representative of Cork, they might honour him as much as they liked. [*A laugh.*] He had never, in connection with the meeting, heard any vote of thanks proposed without wishing the name of Dr. Macnaughton Jones to be associated with it; for he had shown the most untiring energy, and the most perfect accord was between all—a fact to which the success of the meeting was due. [*Cheers.*]

Report of Council.—Dr. ALFRED CARPENTER, President of Council, presented the annual report. It was as follows.

"After an interval of sixteen years, your Council has much pleasure in again meeting you on the classic ground of this great University, which has always recognised the importance of medical education.

"Some modifications in the arrangements of the meeting have been adopted by increasing the number of Sections to eight, with Otology as a sub-section of Surgery. Your Council trusts that the scientific value of the proceedings will be largely increased by the arrangements thus made for the fuller discussion of the important subjects to be brought under the notice of the members.

"Your Council reports to you with much satisfaction the continued prosperity of the Association. At the close of the year ending 31st December, 1879, not only was the furniture, plant, and alteration of premises paid for out of income, but a sum of £2000 was invested in 3 per cent. Consols, by the advice of the Finance Committee, and the reserve fund is thus increased to £5000. A further sum of £1000 has been invested this year. In the Balance Sheet the liabilities have been reduced by £1617, and the assets increased by £513. The expenditure, with a larger Journal, increased rent, rates, and taxes, and charges upon plant and lease, has been £12,055 against £12,137 last year, while the revenue has been £15,246 against £13,801 in 1878. The surplus for the year, after writing off for deaths, resignations, bad debts, depreciation of plant, and for repayment of the cost of alteration of premises, is £2311.

"Your thanks are due to the Treasurer and the Journal and Finance Committee, who have so thoroughly succeeded in placing the Association in a more satisfactory financial position.

"The number of new members elected from January to December 1st last was 672, of which number 297 have paid 10s. 6d., having joined at the half-year. The resignations have been 127, while the deaths, your Council regrets to report, reached the large number of 107. The total number of members on the list on January 1st, 1880, was 7534; since that date, 518 new members have been elected, making a total of 8052 now upon the register.

"The Medal of the Association for distinguished services has been awarded to Dr. W. Farr, C.B., F.R.S., and your Council feels assured that the award will meet with your cordial and unanimous approval. The resolution was in the following terms.

"Resolved: 'That the Gold Medal of the Association be awarded by the Committee of Council of the British Medical Association to W. Farr, C.B., M.D., F.R.S., etc., as an expression of their high appreciation of his long, unwearied, and successful labours, on behalf of statistical and sanitary science, and as a recognition of the light he has thrown upon many physiological and pathological problems, and on account of the extraordinary services his work has rendered to the advancement of the health of the nation.'

"The subject of Medical Education was brought before the Committee of Council in a series of five resolutions or suggestions, by the Metropolitan Counties Branch; these were submitted to the Branches for their views upon them. The resolutions, together with the replies of the Branches, are still under the consideration of the Committee of Council.

"Amongst the most important events of the past year which your Council has to report, is the formation of the Adelaide and South Australian Branch, and the Sydney and New South Wales Branch, and the preliminary steps for the formation of the Victoria and Melbourne Branch. There has thus been formed an influential organisation of more than two hundred members in Australia, and your Council welcomes most cordially the members of the Association now proposing to constitute these three Branches. Your thanks are due to Dr. Cawley of Adelaide, and Dr. Louis Henry of Melbourne, and others, who have carried out the movement in their respective colonies. Your Council has also to report that, by the recognition of the Worcester and Hereford Branch the birthplace of the Association, Worcester, is likely to become an active centre of Branch work.

"The JOURNAL has, during the last year, been the subject of comment in various foreign countries, as well as in the colonies; it has been discussed in America, Australia, Canada, and France; in all instances, it has been the subject of favourable observations, and been referred to as a type of the highest class of medical periodicals. The President of the American Medical Association devoted a large part of his annual address to a description of the character and organisation of the JOURNAL, which he commended to the sister Association as a type for imitation. It is satisfactory, also, to notice that many of the leading features which have marked its progressive development—especially the large representation which it has given of provincial medical societies, provincial hospitals and asylums, and the creation of special departments of the JOURNAL for the Army and Navy, Poor-law Medical Services, and the Health Service of the country, have been adopted recently in other leading medical journals.

"The suggested regulations for the conduct of annual meetings, which were brought forward at the Bath Meeting in 1878, but which have since been reconsidered, will now be placed before you for adoption. Your Council has every reason to believe that they will be of value in the organisation of future meetings. Many of them have long been in use; but have not previously been placed on record as by-laws of the Association.

"The scientific grants annually made by the Association, promise to be productive in this, as in other years, of good original research.

"The work of the Medical Reform Committee of the Association during the past year was interrupted by the dissolution of Parliament. The labours of the Select Committee, which had sat during the last two sessions of the late Parliament, on the Medical Bills introduced into the House of Commons, were thus abruptly brought to a close before the examination of all the witnesses was concluded. Progress of the most decided character has, however, been made, by the prominence give to the question by the legislature; and material of the greatest importance towards the formation of a correct judgment on the various points involved will be found in the evidence given before the Select Committee and contained in the Blue Books published by order of Parliament.

"The shortness of the present session of the new Parliament, has rendered further progress impossible before next session. The new Government has promised to take the subject into consideration during the recess, and the re-appointment of the Medical Reform Committee of the Association is as important as at any previous period in the history of the Association. The details of the work of the Committee will be given in its report to the Association.

"The Committee for procuring legislation for habitual drunkards has held a conference with a Committee of the society formed for the purpose, and it was decided that an effort should be made to establish an insti-

tution for the purpose of treating inebriates according to the provisions contained in the Habitual Drunkards' Act of 1879, upon an ultimately self-supporting basis. It is hoped that such an institution will be shortly opened; but the law is at present only permissive, and the impediments to its adoption are great.

"The Hospital Out-Patient Reform Committee has been waiting to hear the result of the suggestions which have been placed before the weekly boards and managing committees of the various hospitals. The Committee trusts to continue its labours during the coming year.

"The Joint Committee on State Medicine has not met during the past year. It was felt that at present nothing could be effectively done in the matter of sanitary reform, and the question has been allowed to rest. It may be desirable at an early date to convene a meeting of the Committee to determine what steps, if any, should be taken, with a view of urging on the President of the Local Government Board some necessary improvements in the existing sanitary laws.

"At the last meeting of the Registration of Disease Committee it was suggested that the subject should be referred to the Parliamentary Bills Committee, with the view of framing a Bill or clauses in a Bill relating to it. This reference was made, and the subject has been fully considered by the last named Committee, and a preliminary report has already been published. A deputation on the subject of the Registration of Diseases also waited upon Mr. Sclater-Booth in February last. The Committee will not therefore ask to be re-appointed. The thanks of the Association are due to Dr. A. Ransome for his very valuable work in connection with this Committee.

"The Parliamentary Bills Committee has, during the past year, been occupied in promoting the interests of the Army and Navy Medical Services; in investigating and suggesting amendments of the law relating to the Registration of Infectious Diseases; and in investigating and discussing Vaccination with Calf-lymph, and the propriety of the introduction of this mode of vaccination as part of our national system.

"It was mentioned last year that the Chairman of the Parliamentary Bills Committee had been asked to supply a departmental Committee of the War Office with a statement of the principal grievances under which the army medical officers still labour, and of the remedies which were desired. In drawing up this memorandum, care was taken to ascertain the opinions of the most qualified persons; and, in the result, the main desiderata urged were: abolition of the short service system; improved pay, forage allowance, and retirement; and the retention of competitive entrance examinations, and of the Netley training school. The whole of these propositions were successfully maintained, and have been embodied in a Royal Warrant, which has given great satisfaction; it has materially improved the position of the army medical officers, and will, it is hoped, restore contentment and efficiency to the service. Following upon this, the Chairman of the Parliamentary Bills Committee prepared a scheme which had for its object the remedy of similar grievances existing in the Navy Medical Service, which have of late years prevented a due supply of efficient candidates for the service. This scheme was submitted to and approved by the Committee, and, after much correspondence, was reduced to a form in which it appeared to meet with very general approval in the service. At this juncture, the Chairman received a communication from the Admiralty, asking for a copy of the scheme; and, on this being forwarded, the Board of Admiralty at once referred it to a departmental Committee, which has taken evidence from various officers in the service, and from one civil surgeon. It is understood that its report will shortly be presented, and there is reason to believe that it will grant very substantial boons; meantime, however, it is undesirable and unsafe to anticipate with certainty any conclusions of the sort until they have been ratified by the Government and the Crown; and the present state of the Navy cannot be pronounced to be such as to make it a desirable service for medical men.

"On the subject of Vaccination with Calf-lymph, a detailed report was prepared by Mr. Ernest Hart, showing the progress which this practice had made throughout Europe, and intimating the desirability of establishing in this country a means of supplying calf-lymph from the Central Government Vaccine Establishment to practitioners who desire to renew their stocks, with a view to continuing satisfactorily arm-to-arm vaccination within their own districts. Two largely attended conferences were held in London, and resolutions were passed in favour of the conclusions of this report, which was subsequently submitted by deputation to the President of the Local Government Board.

"Dr. Cameron has recently brought forward a resolution in the House of Commons, adopting the conclusions arrived at in this report, and confirmed by the Conference; and Mr. Dodson has announced in Parliament the intention of the Government to accept those conclusions and to act upon them, so that, in the course of a short time, the recommendations made by the Parliamentary Bills Committee on this subject will be carried out by the Government.

"The Registration of Infectious Diseases, an object at which the Association has long aimed, is now carried out in thirteen towns and cities under thirteen local Acts, the provisions of which have been analysed by the Parliamentary Bills Committee, and a model clause has been submitted to the President of the Local Government Board.

"The President of the Local Government Board has recently introduced a Bill reviving the clause struck out of the Vaccination Act of 1871, for limiting the accumulation of penalties inflicted upon persons refusing to allow their children to be vaccinated; this clause, which had been carried in the House of Commons by a large majority, was struck out by the exertions of a Committee of the Association, by a majority of *one* in the House of Lords. It is believed that it will materially interfere with the progress which had been made in the extension of the advantages of vaccination as a protection against small-pox. On this account, the Parliamentary Bills Committee has resolved to oppose it; several of the medical corporations and learned bodies have taken the like course, and your Committee of Council has also petitioned against the Bill.

"Your Council has again to regret the death of many eminent members of the Association, amongst whom may be named: Mr. Henry Hancock, the well-known surgeon; Surgeon-Major Porter, Chief of the Medical Department in Afghanistan, who died at his post of duty; Mr. Michael Foster, one of your oldest members; Dr. William Budd of Clifton, distinguished by his investigations on typhoid fever; Dr. Lockhart Clarke, so well known for his scientific researches on the nervous system; Sir Dominic Corrigan, M.P., an energetic and eloquent advocate of medical reform, and a most brilliant clinical observer; Dr. Ed. Copeman, the President at Norwich in 1874; Dr. Sharpey, the physiologist, who assisted at the first deliberations of the Scientific Grants Committee; Dr. Heaton of Leeds, who took a prominent part in the annual meeting held there; Dr. Swayne Taylor, the eminent medical jurist, to whom the Parliamentary Bills Committee are indebted for invaluable assistance; Inspector-General Domville; Mr. C. F. Maunder; Mr. Callender, for three years Chairman of the Scientific Grants Committee; Dr. W. M. Burke, the late Registrar-General of Ireland; Dr. Arthur Leared; Mr. Soelberg Wells, and many others scarcely less well known.

"Your thanks are due to the Honorary Secretaries for their able and courteous assistance in the work of the thirty-three Branches of the Association. Your Council regret to record the death of Dr. Procter of York, who for upwards of twelve years held the office of Honorary Secretary to the Yorkshire Branch; and the retirement of Dr. Pitt (Norwich), Mr. Board (Bristol), and Dr. Maclaren (Carlisle). These gentlemen merit your warmest thanks for their successful labours in their respective Branches."

[The statement of accounts was published in the JOURNAL of April 24th.]

A MEMBER suggested that, as the report was in the hands of the meeting, it should be taken as read. This was seconded.

Dr. CARPENTER said he would, as Chairman of Council, simply move the adoption of the report.

Mr. HUSBAND (Bournemouth) seconded the motion.

Dr. A. P. STEWART (London) considered that the general meeting was adopting a dangerous precedent in taking the report "as read". It must be quite fresh in the minds of all that there was a great outcry against the Committee of Council at one time, who were charged with an endeavour to burke discussion. Now, this feeling had swung round to what was virtually a vote of unlimited confidence in the Committee of Council. He warned the members that, if they thus adoped reports without consideration, they would deeply regret their action before many years were over their heads. [*Hear, hear.*]

The report was adopted unanimously.

Regulations of the Annual Meetings. Dr. B. FOSTER (Birmingham) moved that the regulations for the conduct of the annual meetings, as suggested by the Committee of Council, should be adopted. These regulations, which had been published in the JOURNAL, needed no arguments to press their importance upon the meeting; and the adoption of these regulations would save the Association from the position of adopting committee reports which had not been seen. The other regulations had also been published; and, if they were carried into effect, they would save the Association, at the annual meetings, from some of those confusions which had marked their career in the past. [*Hear, hear.*]

Mr. BARRON (Ryde) seconded the motion; and referred to a proposed amendment by Dr. Norman Kerr. The speaker said that this amendment was directed to the non-including of wine in the cost of the ticket for the dinner. What he had to suggest was that, on this question, there should be the exercise of "local option". He did hope there

would be no restriction passed upon social intercourse; and this, he believed, depended upon wine being placed before all guests, whether they took it or not.

Dr. ROYLE (Manchester) thought that a wide power was being placed in the hands of the Committee by the rule which limited motions. If this rule (No. 8) were adopted, it would have to be construed liberally.

Dr. NORMAN KERR (London) proposed an amendment to Regulation 3, to this effect, "That the price of the dinner-ticket shall not include a charge for intoxicating liquors". He said he had great diffidence in bringing this proposal forward. He would at once say that it had nothing to do with the "temperance question", but was an endeavour to correct an evil which had existed for a very long time. There were some members of the Association who could not, without yielding up their most cherished convictions, take part in this annual dinner; for they felt that, by so doing, they were taking part in the responsibility of the whole drinking system of the country. ["*No, no,*" *and* "*Hear, hear.*"] He did not hold that any educated body of men, such as were the members of this profession, should ask men to pay for wine consumed by others, and thus violate their consciences upon this drink question. He was not there asking for mercy, but for the redress of a wrong. He asked for equity, right, and fairness, in this matter; that the Association should adopt a fair measure of justice—in a cause, too, in which the Association's influence for good would be widely beneficial to the public at large.

Dr. MACNAUGHTON JONES (Cork) seconded the motion as a non-abstainer. He seconded it as a matter of justice; for it was not right that members should be called upon to pay for what others consumed. At one time, he thought it would be difficult to provide as good a dinner under the proposed change as now; but inquiry had shown him that there would be no difficulty in this respect.

Dr. FAWCETT supported the amendment.

Dr. WIGG (Derby) proposed, as a second amendment, that there should be two classes of tickets for the dinner—one class including wine, the other without. This was seconded.

The PRESIDENT pointed out that there could not be two amendments before the meeting. To be regular, one must be withdrawn, or the two must be run into one.

Dr. NORMAN KERR pointed out that his amendment left the matter in the hands of the Council.

Dr. RIDGE (Enfield) remarked that the proposal made by Dr. Norman Kerr was only on a level with what was done in every Branch in the Association; for, in the Branch dinners, those who had wine paid, while others could go without.

Dr. BACON, assuming that it was supposed Dr. Kerr considered the Local Committee were not acting in a just manner, denied this supposed allegation.

Mr. T. WATKIN WILLIAMS (Birmingham) pointed out that the last speaker was acting under a misapprehension, inasmuch as Dr. Kerr did not desire to interfere with the dinner at Cambridge, which was already arranged, but to have a different arrangement regarding the dinner of 1881.

Dr. A. CARPENTER suggested that Dr. Kerr should allow the original resolution—for the adoption of the regulations—to pass, and to move the amendment as a suggestion to the Committee of Council.

Mr. HUSBAND (Bournemouth) also deprecated passing the amendment as an amendment.

After some discussion, the amendments were withdrawn. The original resolution was then carried.

Dr. N. KERR moved:

"That, in the opinion of this meeting, the price of the dinner-ticket should not include charge for wine; and the Committee of Council are requested to provide for this in future."

This was carried *nem. con.* The meeting thereon adjourned.

Service in King's College Chapel.—At 4 P.M., there was a service with choral music in the chapel of King's College, and a sermon was preached by the Lord Bishop of Ely, who selected as his text the rendering of the bitter waters of Marah wholesome by the casting into them by Moses of a certain wood. The chapel was densely filled by members of the Association and others.

SECOND GENERAL MEETING, WEDNESDAY, AUGUST 11TH.

The Second General Meeting was held in the Senate House, at 11 A.M. on Wednesday; Dr. HUMPHRY, F.R.S., President, in the Chair.

Address in Medicine.—Dr. BRADBURY delivered the Address in Medicine, which is printed at page 244.

Dr. GAIRDNER (Glasgow), in proposing a vote of thanks to Dr. Bradbury for his Address, said that the fact of such an address being read in Cambridge by Dr. Bradbury was at once an illustration and a justification of the admirable remarks made by the President last night, as to the proper function of Cambridge and of the Universities generally in respect of medicine as an art. It was difficult, now-a-days, to recall the state of practical medicine before the introduction and use of such instruments of precision as the stethoscope, microscope, etc.; but one thing was perfectly clear, that the use of such instruments more generally throughout the profession was serving to draw the line more deeply and widely, from year to year, between the well-trained physician, who was, as his name implies, a seeker after the truth of nature, and the quack, who was a seeker after mere profit and reward; and the Universities could not be better occupied than in multiplying the points of contact between the art of medicine and such observation of nature and fact as is implied in, and required by, the study of physical science. It might be a long time yet before the ideal was reached to which Dr. Bradbury pointed, when the public would, without reference to severe or startling illness, consult and duly remunerate the medical profession for such advice as would form a security against the occurrence of serious disease; but, in the presence of the few ladies who had favoured them, he might venture to remark, that it was not very uncommon for ladies, even now, to pay an annual visit—or perhaps even a much more frequent visit—to the dentist, with a view to the preservation of the teeth; and perhaps the day might come when, even in the case of ladies, the great issues of life and death, and the preservation of the bodily health, might receive the same kind of attention that is now bestowed upon the preservation of what contributes to comfort and personal appearance.

Dr. SAMUEL WILKS begged to second the motion, and remarked that in times like these, when a member of Parliament could be found to declare in the House of Commons that there was, so far from there being anything scientific in medicine, "a peculiar adaptation of the mind of man" to it—[*a laugh*]—the professors of the art were much indebted to a man like Dr. Bradbury for an address which showed the scientific basis of medicine. [*Cheers.*]

The PRESIDENT, in submitting the resolution, said that it would be easily understood that much time and labour had been given by Dr. Bradbury; for such a *résumé* could not have been produced without vast labour, and the meeting would fully appreciate the manner in which Dr. Bradbury's task had been discharged. [*Cheers.*]

The vote was given with full accord, and the proceedings terminated.

Honorary Degrees.—At 12.30, a convocation was held in the Senate House, when the honorary degree of LL.D. was conferred on Dr. C. E. Brown-Séquard of Paris; Dr. Donders of Utrecht; Dr. S. D. Gross of Philadelphia; Sir W. Jenner, Bart., K.C.B., F.R.S.; Sir W. Gull, Bart., F.R.S.; Sir G. Burrows, Bart., F.R.S.; Mr. W. Bowman, F.R.S.; the Rev. S. Haughton, M.D., F.R.S.; Mr. J. Lister, F.R.S.; Dr. D. C. O'Connor; Mr. J. Simon, C.B., F.R.S.; and Dr. Andrew Wood, F.R.S. The Senate House was densely crowded during the ceremony.

Soirée.—At 9 P.M., a *soirée*, which was very largely attended, was given by the President of the Association and the Reception Committee at the Fitzwilliam Museum.

THIRD GENERAL MEETING, THURSDAY, AUGUST 12TH.

The Third General Meeting was held on Thursday, at 10 A.M.; Dr. HUMPHRY, F.R.S., President, in the Chair.

Dr. A. CARPENTER, as President of the Council, reported that the Committee of Council had elected the following gentlemen as members of the Committee of Council for the ensuing year, 1880-1881: Dr. T. C. Allbutt, F.R.S.; Dr. L. Borchardt; Dr. R. Farquharson, M.P.; Dr. B. Foster; Dr. E. Long Fox; Dr. C. Holman; Mr. J. R. Humphreys; Dr. D. J. Leech; Mr. C. Macnamara; Mr. F. E. Manby; Mr. Frederick Mason; Mr. R. H. B. Nicholson; Dr. G. H. Philipson; Mr. Henry Power; Dr. E. H. Sieveking; Mr. Henry Steer; Dr. A. P. Stewart; Dr. W. F. Wade; Dr. A. T. H. Waters; and Mr. C. G. Wheelhouse. He had also to report that the subject of the annual meeting for the year 1881 was considered; and it was moved by Mr. W. D. Husband, seconded by Dr. Borchardt, and resolved, "That it be remitted to the Committee of Council to consider the place of meeting of 1881; and that it be authorised to pay the expenses of such meeting, if required." He now begged to move that this resolution should be confirmed by the general meeting.

Mr. HUSBAND seconded the motion, which was carried unanimously.

The Report of the Medical Reform Committee.—Dr. WATERS (Chester) read the report of the Committee. He explained that but for the "whip" on the Hares and Rabbits Bill, the depu-

tation to the Government would have been most influentially attended by members of Parliament, some members of the late Cabinet having engaged to attend. It would be seen that the result of the House of Commons Committee's work had been to effect some little change in public opinion. It must be said that the conjoint scheme had somewhat lost in public opinion, owing to the difficulty in carrying it out; and it was felt that certain bodies, which exerted no decided influence upon the profession, would have their existence prolonged if the conjoint scheme were carried out. The Committee of the Association felt that one object they had in view—preventing men from being allowed to enter the profession unless qualified in all branches—had gained in general assent. [*Cheers.*] There was no doubt, too, that the question of direct representation had gained in favour. [*Cheers.*] These facts were apparent from the statements of the witnesses examined before the Committee of the House of Commons. There were, certainly, some who opposed it; but the general opinion was in favour of it. He begged to move the adoption of the report, and the reappointment of the Committee: Dr. E. Waters, Dr. Wilbraham Falconer, Mr. Wm. D. Husband, Dr. Alfred Carpenter, Dr. M. M. De Bartolomé, Dr. C. Chadwick, Dr. J. G. Davey, Dr. Balthazar Foster, Mr. Ernest Hart, Rev. S. Haughton, Mr. H. Nelson Hardy, Dr. D. J. Leech, Mr. F. E. Manby, Mr. W. H. Michael, Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. W. F. Wade, Mr. C. G. Wheelhouse.

Professor HAUGHTON seconded the motion, and said that something might be said on the other side of the subject of the pay of the Medical Council. The report said that it cost sixteen shillings a minute. He had made a calculation since he had been in the room, and he found that his share of the sixteen shillings was ninepence, and he thought he was worth it. [*Cheers.*] It was calculated that certain preachers had thirteen shillings a minute; but then they did not go on preaching for a fortnight. [*A laugh.*] He agreed with the latter remarks of Dr. Waters, and thought that the subject of direct representation had made progress. Mr. Forster, who was brought face to face with other questions—(*a laugh*)—was greatly impressed by some of the evidence on this question. It was endeavoured to block the question out by the difficulty as to money; but it was submitted that the corporations should pay their representatives; and even then they would have sufficient left to pay for the inspection of examinations. [*Hear, hear.*] That would have been the opinion of the House of Commons Committee, if they had come to a vote. Upon the question of the conjoint scheme, he thought the Association should not hold out for this being attained in its own way; that it should be as acceptable to the Association, if the same object were attained in a different manner. [*Hear, hear.*] He found that the opinion of statesmen on this subject was moving in the direction of a State Examination in the three branches; and that the corporations which had resisted reform, would be met by a minimum State examination; and this, he thought, would be a step in the direction of attaining what the Association had long been labouring to attain. [*Cheers.*]

The PRESIDENT said: Before I submit this report to you, I must ask you to erase one passage, which contains a reflection and misstatement in regard to Dr. Struthers. The report says, in the third paragraph: "while that of Dr. Struthers, who, before admission to the General Council, had been a decided supporter of direct representation, suddenly avowed himself opposed to it for the sole assigned reason that he found another member of the Council was opposed to it, and that thereby his independent judgment in favour of it was changed—not the only instance of a seat in the Council being followed by the change of advocates of direct representation into opponents". This is a very curious statement, for Dr. Struthers was never a member of the General Medical Council.

Dr. WATERS expressed his willingness to erase this portion; and stated that, in drawing up the report, he had been guided by the Blue-book, of the evidence before the Committee of the House of Commons.

Dr. BATEMAN (Cambridge) commented upon the failure of the London University to facilitate the taking of medical degrees; and he urged that, if the Manchester University had a charter, its grants of medical degrees would arouse the University of London into action.

Dr. A. P. STEWART remarked that Dr. Bateman had been directing his attention to the men who did not want looking after; for the most intelligent men would look after themselves. It was the less intelligent that the Association and the profession were interested in looking after, and in seeing that they did not find their way easily into the profession. That these persons had found their way into the profession was a proven fact, and was an evil over which the profession desired to have control.

Mr. HUSBAND expressed his gratification at hearing from Dr. Haughton that statesmen were now giving their attention to the subject of a State examination. It was one of the fundamental principles of the Association to attain some reform in the shape of uniform and conjoint examination, which would make it compulsory for everyone who entered the profession to have passed examinations in the three branches. After a man had passed these examinations he would easily obtain his degree.

Dr. A. H. JACOB (of Dublin) desired that it should be known that an error was committed in bracketing Scotland and Ireland as opposed to reform, for he would say that three out of the four corporations of Ireland warmly supported the reform questions. Then, too, the Irish Association had taken other steps to assist this Association in pressing on this reform, and hoped by next year to have the signatures of two-thirds of the profession of Ireland in support of it. [*Cheers.*]

The report was then adopted.

NOTES ON BOOKS.

The Student's Guide to Surgical Anatomy. By EDWARD BELLAMY, Surgeon to King's College Hospital and Examiner in Anatomy, Royal College of Surgeons of England. Second Edition. Mr. Bellamy's excellent little book has quickly reached a second edition. It fills up with much advantage a hiatus in our literature. The mode of studying human anatomy in this country is singularly arid, unsuggestive, and unscientific. To isolate man from the animal kingdom, and study his anatomy in what is sometimes vainly called minute scientific detail, apart from its morphological relations on the one hand, and its surgical relations, is a piece of folly especially characteristic of the narrow education of British surgeons and anatomists generally, and the empirical methods by which the system of medical schools and medical teaching now prevailing in England has been arrived at. It is a pleasant relief from the absolutely dull and feeble text-books of human anatomy, and which the examining bodies take as the basis of their examinations, to turn to a little text-book which breathes meaning and relational value into the study of human anatomy from the surgical side. We need not in this stage discuss the details of Mr. Bellamy's excellent little book: he has mastered the contents of the best continental treatises (of which Tillaux's last edition is, we may observe in passing, by far the most useful), and has collated them with nature by the light of his own accurate knowledge and considerable experience. Mr. Bellamy has thus produced a work bearing its own stamp of originality and usefulness. We shall hope to see this excellent little book greatly extended in a future edition.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FLEXIBLE SPRAY-PRODUCERS.

SIR,—Messrs. Mayer and Meltzer wishing to make it appear by their letter, appearing in your issue of July 31st, that the Patented Flexible Spray-Producer can be imported by them or any other respectable instrument maker, I, as the patentee of this invention, beg to give an unqualified denial to that assertion, and to state that Messrs. Arnold and Sons, of 35, West Smithfield, London, who, by a clerical error, have been described as the sole manufacturers, have been appointed by me as the sole vendors of the article in the United Kingdom, and should have been described as such.—I am, sir, yours faithfully,

August 3rd, 1880. E. MEYERSTEIN.

NELSON'S BEEF-TEA.

WE have had opportunities of testing this useful dietetic article recently, not only for the purpose of the sick room, but for ordinary use, and especially had reports of its use by travellers during long journeys. The peculiarity of Nelson's beef-tea is, that it includes the solid albuminoid materials and gelatine as well as the creatin and soluble extracts of flesh. It has the form of small shreds: it is usually soluble in hot water without the beef-tea being boiled, and is thus very portable, very nutritious, and at once ready for use; it is also agreeable in flavour, and will no doubt have a considerable measure of popularity.

IN Paris, last week, 38 fatal cases of small-pox, 57 of diphtheria and croup, and 41 of measles were recorded.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 14TH, 1880.

THE ANNUAL MEETING AT CAMBRIDGE.

THE forty-eighth annual meeting of the British Medical Association has been held this week at Cambridge, under circumstances than which none could be more auspicious for the future progress of medicine, nor any more gratifying as testimonies of the useful work and high standing of the British Medical Association in its relations to scientific medicine at the present moment. The burden imposed upon the Town and University of Cambridge and the medical profession of the district, on the occasion of the present visit, is far greater than on the last occasion when the Association was welcomed to Cambridge. The numbers of the Association have multiplied fourfold in the course of the decennium. The scientific transactions, which were then limited to the business of the general meeting, are now carried on in nine sections; and, at the suggestion of the local organisers of the meeting, a new section has this year been added to the meeting, which will probably continue to hold a permanent place in future annual meetings—the section of pathology.

It is not our object at this moment to speak of the distinguished *personnel*, of the officers of sections, and the readers of addresses. In this respect, the present meeting presents an array of distinguished names which has never been surpassed, and could hardly be surpassed, in this country. Those who read the pages which are spread before them to-day will see how amply the promise of these great names has been fulfilled in the addresses with which they have opened the business of the sections entrusted to their presidency, and in the orations delivered before the Association in general meeting. The opening address of the President, Professor Humphry, must, however, be regarded as perhaps the chief event of the meeting, for it teaches much more than an ordinary oration of whatever eloquence, learning, or brilliancy; it embodies a principle of the most vital importance to the University in which it was delivered, and to the profession to whom it was addressed. The question with which it opened is one of the most momentous which can be put to any profession, and one which at the present moment has the stamp of the most vivid actuality. "What", asks Professor Humphry, "in these long years, with its might of intellect, and with its forcing power of wealth, has Cambridge done for medicine?.....Has not Cambridge, more than any University in the world, with perhaps one exception, banished medicine from its walls, and the men of medicine from its schools?.....How much greater would have been the benefit, not to medicine only, but to the University and to the public, had a thoroughly well organised study, and a vigorous teaching, of the various branches of medicine been cultivated within the academic walls?" Cambridge has now, in the course of the last thirty years, instituted theological, law, historical, Semitic, and Indian language triposes. Why not a medical tripos also? To each of the questions and to the answers which Professor Humphry suggested rather than gave, a thoroughly sympathetic audience responded with earnestness; the enthusiasm was deep, rather than loud; and seldom, perhaps never, have the successive sentences of any opening address to this Association produced a more profound impression, or been welcomed with more grateful earnestness, than the periods in which Professor Humphry guardedly but earnestly dwelt upon the shortcomings of his own University in the past. He indicated its debt to medicine in the future, and the means and methods by which it is slowly advancing to acquit that debt to science and to humanity. Like most speeches delivered with whatever earnestness from an official chair, and in the presence of those who must have felt how deep is the implied censure which its words conveyed, the address was almost as remarkable for that which it purposely omitted, as for that which it openly said. In the opening sentences, in which he spoke of Cambridge as having, more than any other University in the world, with perhaps one exception, banished medicine from its walls, he evoked the great shadow of the sister University of Oxford, which has sinned more deeply than Cambridge in the past, but has not yet made up its mind even to begin the work of amends for the future. It is true that Cambridge has not yet risen to the height of its mission, or completed the organisation which is necessary for the restoration of the University to its place as Alma Mater of biological science, and of the profession which employs that science as the handmaid of the great mission of healing. But, as a proof that Cambridge is alive to the requirements of medical and scientific education; that she is endeavouring to fulfil her mission in fostering medicine (just as divinity and arts have long been fostered within her walls), Professor Humphry was able to point to the building of the new museums which are now in the course of completion; to the dissecting-rooms, filled with a hundred students actively engaged in the prosecution of the study of anatomy; and to the physiological laboratories and galleries already crowded with students, to whom human physiology is taught with a scientific completeness and with a simple demonstrative system which promises to create a new era in the study of physiology in England. The work which Professor Humphry has done in restoring to Cambridge the study of human anatomy and clinical surgery; which Dr. Paget, Drs. Bradbury and Latham have done in reviving clinical medicine and therapeutics, and systematic medicine; the lecture-rooms of experimental physics, botany, and physiology, and the staff of professors and demonstrators, could be pointed to with pride as an evidence of the impulse which the teaching of these sciences has lately received in the University of Cambridge. When the further buildings are completed on the same plot, it is hoped that the chemical and medical schools will receive a still further expansion. Meantime, Cambridge has opened her arms to the students of medicine; she provides an education of the highest class, arranged to fill the first three years of medical study in such a manner as to add but little to the expenses of an ordinary medical education for any of the existing diplomas; while the whole advantages of the University, its culture, its scientific spirit, its staff of professors and demonstrators, its connection with the liberal arts and letters, are freely placed at the disposal of the student who desires to approach medicine through the academic avenues which, leading from a common centre, diverge to all the liberal professions. The great work achieved testifies to the energy of those who have accomplished it; to their large-mindedness, their thorough comprehension of the true interests of the University and of the science of medicine. It speaks much for the tact, discernment, and force of character of those who have brought home to the University a new set of ideas, and who have been able to achieve for medicine at least its partial restoration to the centre of learning and culture, from which medicine had so long been divorced. It is not possible that what Cambridge has effected with so much credit, with so much ease, and so much advantage to herself and the profession, should not have its influence in showing that a sister University, which possesses a much larger share of medical endowments, can and ought to enter upon the same path.

There are many lessons to be learnt from the brilliant meeting this week in progress in Cambridge. Its scientific interest is greater than that of any meeting which has yet been held. Favoured by the brilliant weather no less than by the local attractions which the University itself has to offer, and by the liberal hospitality of the colleges, the meeting is one which promises to be worthy of enduring and gratifying remembrance. But nothing will, in its influence, be more profoundly felt or longer survive than the lessons to be learnt from the address with which Professor Humphry inaugurated the meeting.

THE ADDRESS IN MEDICINE.

In an University, the home of learning and once more aspiring to be a centre of research, and at a meeting of medical and scientific men from all parts of the world, no subject could be more appropriate than that chosen by Dr. Bradbury. At an University which is striving to rescue medicine from the neglect into which it had fallen at English academical centres of learning, and to which we now look to become a nursery of English scientific medicine, what more profitable or agreeable task could there be than to show that the reproach so often brought against the healing art, that there is "no science of medicine", is daily becoming less true. Dr. Bradbury limits himself to recording the progress made during the last ten years, and aims at showing that the old notion of medicine, that it is a collection of recipes for symptoms, belongs to the traditions of the past, and that in its place is growing up a theory and practice based on a rigid examination of facts elucidated by accurate methods of scientific observation. To be able to interpret the phenomena of the human body in health and disease, a knowledge of physics and mathematics is now required of the medical student who would practise his art with intelligence; and not only do these sciences assist in the right interpretation of vital phenomena, and the accurate estimation of the morbid or normal conditions present, but they are also our handmaids in treatment. It is this idea which is developed in Dr. Bradbury's thoughtful Address. Regarding the various instruments of precision now used in clinical medicine as one outcome of the practical application of physical science to medicine, he reviews the progress which has been made by means of their use during the last ten years. These instruments are principally the microscope, the thermometer, the ophthalmoscope, the laryngoscope, the sphygmograph, the aspirator, and apparatus for the application of electricity. Though the number of years reviewed is small, the harvest reaped in their course has been great; and it could easily have been shown to have been even greater than that recorded by Dr. Bradbury did not the imposed limits of time within which an oration must be given render it impossible to enumerate all the scientific gains of medicine during the short period selected. Dr. Bradbury has therefore strictly confined himself to the practical and clinical results accomplished. The address is rendered more picturesque and interesting, though less catholic, in that Dr. Bradbury's illustrations are mainly drawn from his own practice; he might, perhaps, have gathered together from all parts of the world a more comprehensive record of what has been done by means of instruments of precision; but, in so doing, the value of these agents as methods of diagnosis or treatment would scarcely have seemed so striking to his hearers as it is made by the account of the uses he himself has been able to make of them in clinical work. The clinical uses of the microscope in discovering the condition of the blood in idiopathic anæmia and leukæmia are demonstrated at length; and an interesting case is given in which the diagnosis between these two diseases was made solely by a microscopical examination of the blood. The instruments for counting the blood-corpuscles and for estimating the amount of hæmaglobin present are alluded to; also the value of the microscope in establishing the diagnosis of trichinosis. We regret, however, that in speaking of the blood, no mention is made of the remarkable discoveries of the spirilla in its causal relation to relapsing fever by Oberstenier, the filaria in its relations to chyluria, and to varied conditions of Helminthiasis, by Lewis, Manson, and Vandyke Carter; the discoveries of Pasteur of the *bacterium anthracis* and its direct application to the prevention of malignant pustule and splenic disease, or to other work in the same direction, including Dr. Bell's most striking observations of the specific blood infection of "woolsorter's" disease.

In considering the clinical uses of the thermometer, Dr. Bradbury declares himself in favour of the method of cooling the body by cold or tepid water bathing in febrile conditions. Recent researches on local temperature in pleurisy and in cerebral diseases are discussed at length. The value of the ophthalmoscope in aiding the diagnosis in cases of cerebral mischief in Bright's disease, in syphilis, and in other diseases is discussed, and is shown to be considerable. Cases are also given showing that, by its use alone, symptoms erroneously considered to be serious and produced by cerebral causes may be found to be due simply to some anomaly of refraction. From the important results obtained, Dr. Bradbury says "the eyes should be examined with the ophthalmoscope as a matter of routine, just as we feel the pulse or look at the tongue". Regarding the laryngoscope, its use to detect the presence of laryngeal phthisis before there are yet any signs of tubercle in the lung is dwelt upon; also its value in early diagnosing syphilis of the epiglottis, and the presence or absence of the membrane in croup and diphtheria. Its larger uses in daily practice of ordinary laryngeal diseases are left to be inferred. Of the value of the sphygmograph as an aid in diagnosis and prognosis of arterial disease, there can scarcely be doubt in any practitioner's mind; but Dr. Bradbury gives a very interesting and little known example of its use as an instrument of diagnosis. He cites numerous authorities to show that, by it, we can obtain the first indications of commencing Bright's disease before albumen has appeared in the urine, or any destructive changes have commenced in the kidney. In this early stage, the diagnosis can be made by the sphygmograph giving the curve of high arterial tension; and, according to Dr. Bradbury, if the disease be recognised in this initial stage, it can be arrested and cured. It is well known that the discovery of the morbid condition of the arteries in angina pectoris, and the effects of nitrite of amyl and nitro-glycerine on arterial tension, were due entirely to sphygmographic observations.

To the aspirator, Dr. Bradbury does but scant justice. The capillary aspirator, and its use in the treatment of pleurisy, empyema, pericarditis, hydrocephalus, spina bifida, ascites, retention of urine, abscesses, and in making exploratory punctures, has been entirely the growth of the last few years. Dr. Bradbury chiefly mentions it as most valuable in the treatment of hydatids of the liver, of which he has had numerous successful cases in his own practice. The more recent applications of the instrument in cases of cerebral abscess, the position of which has been diagnosed by symptoms indicating limited localised pressure, and in emptying purulent vomicæ in the lungs, are not recorded.

Concerning electricity, it would be impossible to deal fully in a short address with a subject so vast, and of which the applications to medicine are so numerous and so rapidly increasing. Dr. Bradbury, therefore, contents himself with noticing some of the more marked gains to medicine recently made by electricity, such as its use in helping to establish the diagnosis between spinal and cerebral lesions in cases of paralysis, and between peripheral and central nervous lesions. As a therapeutic agent, Dr. Bradbury speaks favourably of its value. Of electrolysis in the treatment of aneurism, he gives no record of the results hitherto obtained, nor indeed any opinion of its efficacy—having, as he says, never had sufficient courage to try it in his own practice. Of the labours of the physicians, both here and abroad, engaged in investigating the large and interesting subject of metallo- and magneto-therapy, a short *résumé* is given; and Dr. Bradbury states his opinion that the theory of "expectant attention", invented to explain away the abstruse and delicate nervous phenomena which have been investigated with so much scientific patience and skill by Charcot and his followers in France, Germany, and England is insufficient and superficial.

By the younger members especially of the profession, this Address will have been heard and will be read with keen interest; it is well to be assured from time to time that the outcome of pure scientific research is of benefit to the whole human family; that laboratory investigations into the expansion of fluids, the refraction of light, the life-history of germs, will result in the saving of human life, and the increase of human happiness; that science and medicine are not divorced, but that we tread on firm ground when we base our medical art on the foundation of scientific research. On the other hand, the older practitioners are apt to feel that these new methods of making accurate observations are but ingenious and beautiful toys; that the "tactus eruditus" gives better information than the sphygmograph, the facies of the patient than the surface-thermometer, and the general diathesis safer indications for treatment than analysis and examination of the fluids and excretions of the body; that

medicine, in fact, is wandering away from her mission to cure disease to become engrossed in interesting investigations into phenomena, forgetting the patient whilst the disease is studied. We do not deny that this is a danger of which modern medicine must beware. Complaints are not infrequently made against the modern system of medical education that young practitioners may be found fully equipped with all the scientific knowledge of their generation who are yet incapable of treating ordinary diseases; in fact, often incapable of recognising them. This is to be regretted, but it only shows that the education, though scientific, has not been complete. It is in the reconciliation of the two views—the scientific and the practical—that the safe course of medicine lies. If to the tact, the sympathy, and the practical common sense of the old school of practitioners, be added the scientific methods of examination, the delicate analysis, and the accurate registration of facts taught by the modern school, we may hope to see medicine not only winning and holding the confidence and respect of the lay public, but gaining, at last, acceptance as an exact science in virtue of its power of diagnosis, prediction, and precise achievement. No better illustration of the complete harmony that may exist between science and treatment can be given than that quoted by Dr. Bradbury regarding the discovery of the use of nitrite of amyl in the treatment of angina pectoris. By sphygmographic observations, the actual condition existing in the arteries during the paroxysms of angina was discovered; also, by means of sphygmographic observations, in a laboratory investigation, the change in arterial pressure, produced by the action of nitrite of amyl, were ascertained. These were isolated facts; it needed but the synthetical intellect of an intelligent physician, anxious to cure disease, to bring them together, and to establish a successful method of treatment based on scientific research. In surgery, the conditions are simple, the relation of causes and effects more easy to trace; but in medicine, though baffled again and again in our pursuit of truth through the processes of life, the minute changes that constitute health and disease, the physiology of cell absorption, elaboration, and secretion, seem to elude our most searching investigation, and to demand still more and more delicate and exact methods of examination; yet, to the laborious student, nature slowly reveals her secrets; and it is the privilege of the modern physician to be able to arm himself with reasoned knowledge, instead of with empiricism, in his war with death and disease.

THE ADDRESS IN SURGERY.

Mr. Holmes's address, though it may not gratify any probable expectation of vigorous controversy, cannot fail to excite lively interest amongst surgeons, and to demand their full consideration. In the place of a general review of surgical progress, and with but incidental reference to the engrossing subject of antiseptic surgery, we have here an address devoted almost wholly to a special subject—that of excisions in the lower limb. Mr. Holmes has endeavoured, by the choice of this subject, to celebrate the achievements of Sir William Fergusson, and by his treatment of this topic he has certainly attained his object with much success. The address, beyond being an important contribution to the literature of practical surgery, is, as a whole, a warm tribute to the memory of "the only one", it is held, "of all departed surgeons since Brodie's death, who had passed the line which separates eminence from greatness".

Good service has been done to surgery by Mr. Holmes in his endeavour to direct fresh attention to the subject of excision of the knee and hip. The first-named operation, which formerly excited so much interest and had so many warm advocates, cannot now be regarded as one in very much general favour; and, though its value has never been positively determined, it is no longer a subject of much interest to the majority of surgeons. This comparative neglect is to be accounted for partly by the fact that so much interest has been excited by other subjects, as those of infective processes, antiseptic surgery, and abdominal operations; and partly by the reaction that inevitably follows the indiscriminate and too eager advocacy of any novel procedure. Moreover, since the introduction of the antiseptic method, other plans of treatment have been applied with success to diseases of the knee which in former years would probably have been treated by excision. Mr. Holmes thinks it necessary to bring this subject again under the notice of the profession, and, in the main portion of his address, deals with the results of inquiries as to whether excision of the knee has kept its ground in the large metropolitan hospitals, to what extent it has replaced amputation of the thigh, and how far it can be applied in the treatment of diseases not necessitating removal of the limb. Mr. Holmes confines himself to cases of disease of the joint, as he thinks that adequate experience of excisions in traumatic cases has not yet been acquired in civil practice.

A very short experience of excision of the knee convinced even the warmest supporters of the operation that it could not be used to any great extent as a substitute for amputation. Its range of application to such cases of active disease of the knee as were formerly always treated by amputation has during the past twenty years been much restricted; whilst, on the other hand, it has been applied more frequently as a substitute for the expectant treatment, and for the relief of distressing ankylosis. Attempts have of late been made to limit the place of excision by incision of the joint and drainage, and by other partial methods. Mr. Holmes, though stating that such methods deserve more extensive trial than they seem as yet to have obtained, does not, evidently, regard such treatment with favour, and confesses "to a certain want of confidence in the permanency of the cure obtained by incision and drainage in a tolerably large proportion of the cases". This objection, it may be stated by the way, seems rather of the nature of prejudice, as it is based mainly on the fact that little is known of the subsequent course of such cases after their discharge from hospital, and on a "strong impression". Mr. Holmes says that those cases of ankylosis are the soundest which are the quickest and the most complete. Incision and drainage, together with other operative procedures less severe than excision, will probably come more and more into favour in this country; but at the present time the latter operation holds the position which is well expressed by Mr. Holmes in his division of surgeons into those who, using excision of the knee chiefly or wholly as a substitute for amputation, rarely perform the operation, and those who, using it as a substitute for the expectant treatment, apply it more frequently than Fergusson himself ever did.

Mr. Holmes, though scorning numerical statements in surgical matters, gives a tabular statement of the particulars and results of excisions of the knee performed during the past five years at five metropolitan and two provincial infirmaries. This table shows that excision of the knee, though it has lost so much of its interest during late years, is still extensively practised in some institutions. At Guy's Hospital, the operation was performed during the past five years in as many as eighty-nine cases, and at St. Thomas's in sixty-two cases.

We find that in the large hospitals, where excision is performed, there is an increasing tendency to use it less as an operation of urgency than as one of expediency, and rather for the purpose of superseding the expectant treatment than as a substitute for amputation. Hospital surgeons, we think, will agree with Mr. Holmes in his conclusions as to this tendency, and will probably be disposed, with most of the readers of this address, to regard as the most important result of the numerical table the proof it affords of the great diminution of mortality that has of late attended the performance of excision of the knee. A comparison of Mr. Holmes's tabular statement with the tables published by Mr. Swain, in 1869, will show that there has, during the past ten years, been a reduction in the death-rate of the operation from about twenty-four to less than ten per cent. Mr. Holmes does not attempt to account for this reduction, or to explain what is pointed out as "a gratifying impunity to life" attending the modern practice of excision of the knee, beyond pointing out that the mortality of all surgical operations has of late greatly diminished, and that, in amputation as well as in excision, this has been the case to a very remarkable extent. The operation of excision of the knee, as it is now so often performed on an unbroken surface, seems to be one well adapted for testing the claims of antisep-

tic surgery; but Mr. Holmes does not seem disposed to take part with either the advocates or opponents of this method. He speaks warmly and eloquently of the great services rendered to practical surgery by Fergusson's successors at King's College, and points out that out of one hundred and thirteen cases of excision of the knee performed at two hospitals on the strict antiseptic system, seven only were fatal; but at the same time shows that in the practice of one surgeon almost equally good results have been attained without such treatment, and reminds his hearers that the mortality of surgical operations has been steadily diminishing in the practice of those who do not, as well as those who do, accept Mr. Lister's teaching.

The followers of Sir William Fergusson will peruse with much gratification some weighty remarks by Mr. Holmes on the absurd and frivolous objections that have been raised from time to time as to the condition of the limb after excision of the knee.

The main interest of Mr. Holmes's remarks on excision of the hip consists in a seasonable, and it is to be hoped a not ineffectual, protest against our hospital out-patient system. The operation, it is held, ought to be very rarely required if the disease were treated properly at its commencement; and a graphic comparison is drawn between the results attained in an institution where hip-joint disease can be carefully and systematically treated from beginning to end, and those which follow a necessarily intermittent and irregular course of treatment at a large hospital.

AN UNIVERSITY IN WHICH THERE IS NO MEDICAL EDUCATION.

Dr. John Ogle, in that portion of his Harveian Oration which appeared in our columns on the 31st ultimo, allowed himself to make use of some extreme expressions in reference to the part which we have taken, in conjunction with leading residents at Oxford and eminent medical men in London, in drawing attention to the neglect of medical education by the University of Oxford. Dr. Ogle objects to the use of the phrase "Lost School of Medicine", and states that its employment is due either to gross and culpable ignorance, or to a calumnious spirit. He further quotes from an anonymous friend the phrase, "abominable tissue of malignity and folly which has been woven together on this subject".

If we ignore the undignified phraseology with which Dr. Ogle has been misguided enough to disfigure the periods of a Harveian oration, and simply inquire what it is that he means, we find that, in his judgment, the statements which have been published in this and other journals, exhibiting the perversion of trusts destined for the support of medical education in the University of Oxford, and the neglect of all instruction in subjects proper to a medical curriculum in that University, are incorrect.

We shall not condescend to discuss with Dr. Ogle the charge of "malignity" which he ingeniously levels at us under the shelter of an anonymous correspondent; but Dr. Ogle must either prove that the following statements are incorrect, or must retire from the position of champion of Oxford abuses—convicted of having used a great public occasion for the purpose of making a statement which he is unable to substantiate.

A. Certain endowments exist at Oxford originally bestowed for the purpose of making Oxford a school of medicine. They have been deliberately allowed either to become the support of sinecures, or have been diverted to other purposes. They are as follows.

1. The Regius Professorship of Medicine, as at present constituted, is worth about £500 a year. The items are: (1) from the Queen's Exchequer, £35; (2) as Master of Ewelme Almshouse, £250; (3) as Aldrichian Professor of Medicine, £120; (4) examination and graduation fees, £70 to £100.

2. Lord Lichfield's Clinical Professorship, which is not united with the Regius Professorship, is worth £200 a year.

Dr. H. W. Acland for a long series of years held both the Regius and the Clinical Professorships: no instruction is given by Dr. Acland in either capacity.

3. The Linacre Professorship of Physiology and Anatomy has absorbed the old foundations for the encouragement of human anatomy, namely, the Tomlinsian Prælectorship and the Aldrichian Professorship. It is worth £800 a year, the sum which Merton College pays in place of the original endowment entrusted to it by Thomas Linacre, founder of the College of Physicians, and once a lecturer on medicine in Oxford. The Linacre Professor is engaged in teaching comparative anatomy to candidates for the B.A. degree.

4. A separate demonstratorship of anatomy, worth £200 a year, also still exists, and was intended by the Commissioners of 1854 to provide for the teaching of human anatomy, as designed by Tomlins and Aldrich. The gentleman who holds this post is Curator of the Museum of Comparative Anatomy, and does not teach human anatomy.

5. The beautiful old Physic Garden, founded by Earl Danby in 1622, is another heirloom of the Medical Faculty of Oxford. The chair of Botany was endowed by Dr. Sherard, and the College of Physicians of London elect the professor. By special provision, the clergy were excluded from this professorship, and £ [illegible] *given in trust to be given to a medical graduate.* The chair is now worth, with later additions, about £400 a year. It is not held by a medical graduate.

6. Lastly, a very important trust fund is administered by the governing body of Christ Church, the bulk of which was left by Dr. Matthew Lee in 1755 to provide for anatomical teaching in relation to medicine *exclusively.* Dr. Lee's expression of his intentions is very clear and precise. He assigns, in his will, £50 a year to the support of Westminster students; then, £100 a year as the salary of a reader in anatomy; £50 for expenses of two bodies and dissection; £30 to a reader in mathematics and physics; £50 to the Dean and Chapter for management, and the remainder to be given in annual prizes of £10 each, to scholars from Westminster School. The trust is now worth £3,400 annually. It is spoken of in the return made by Christ Church to the Commissioners of 1854, as "Dr. Lee's Benefaction for Senior Students in Natural Science" This is not quite accurate: firstly, because Dr. Lee designed the major portion of his benefaction for students in anatomy as bearing on medicine, and not for natural science generally; and, secondly, because Christ Church uses nearly half of Dr. Lee's trust money to pay classical scholars from Westminster School; whilst the remainder is used to support a most efficient chemical laboratory, and to pay, in part, the salaries of the accomplished chemist, zoologist, and physicist who are styled "Lee's Readers". No part of Dr. Lee's bequest is now assigned to medical studies, though it should be stated that the present application of Dr. Lee's fund has obtained Parliamentary sanction.

B. The University Commissioners of 1854 made certain arrangements by which the teaching of some branches of physical science was instituted at Oxford. They also made provision for the teaching of human anatomy and physiology as required for a medical curriculum. In spite of this, neither human anatomy nor physiology, as required for a medical curriculum, are taught by any professor or lecturer at Oxford at this date.

C. Medical education, either partial or complete, is so wholly ignored by the University of Oxford at the present time, that the following petition has been addressed to the Commissioners, and a similar petition to the Council of the University. These petitions have been signed by very eminent persons intimately acquainted with what is going on in the University of Oxford; for instance: James Bryce, D.C.L., M.P., Regius Professor of Civil Law; T. E. Holland, Professor of International Law; M. Lawson, Professor of Botany; J. H. Green, Professor of Moral Philosophy; A. H. Sayce, Deputy Professor of Comparative Philology; besides Messrs. Esson, F.R.S., Moseley, F.R.S., Lankester, F.R.S., Boyd Dawkins, F.R.S., Frederick Harrison, and others, who are, or have been, resident in the University and connected with its teaching arrangements, and also by such Oxford graduates in medicine as Dr. Frank Payne, Dr. Reginald Southey, Dr. J. H. Bridges, Dr. W. H. Corfield. Does Dr. Ogle mean to

deny that these gentlemen have signed the petition in question? or does he mean to say that they do not know what they are doing when they declare that "the contributions made by the University to the science of medicine, and its influence on the profession, are so slight as to be practically insignificant"? Are the gentlemen we have named supposed by Dr. John Ogle to be actuated by a calumnious spirit? It seems more probable that Dr. John Ogle has made reckless statements, than that so many able and respected men as are named above have done so. The following is the petition signed by these and many other distinguished men.

We, the undersigned professors and teachers of medicine and the allied sciences, professors, tutors, and lecturers in the University of Oxford, or graduates of Oxford, beg respectfully to submit to the Commissioners the following statement respecting the relations between the University and the medical profession.

We cannot but see that the contributions made by the University to the science of medicine, and its influence on the profession, are so slight as to be practically insignificant; and believe that the small numbers of the Oxford graduates who enter the medical profession are mainly due to the absence in the University of any adequate working organisation for medical education or the promotion of medical science.

We believe that a more intimate connection of the University with the medical profession would be of advantage in many ways:—To the University itself, as giving it wider interests and stronger claims on national sympathy; to the profession, as raising its standard of general culture; to the progress of medical science generally; and also to the progress of those sciences which are usually regarded as ancillary to medicine, more particularly of biology. On all these grounds we regard the question as one of national importance.

We believe that other European Universities, with scarcely an exception, recognise the preparation of young men for the medical profession and the advancement of medical science as among the most important of their academical functions.

We therefore regret the present imperfect condition of the Medical Faculty at Oxford, and think it highly desirable that this imperfection should be remedied, unless it should be found to depend upon unavoidable causes.

We do not feel competent to express any opinion, collectively, upon points of detail, such as whether all, or only some, branches of medical science, can be profitably pursued in Oxford, but we desire to call the attention of the Commissioners to the fact, that such obstacles as may be thought likely to stand in the way of medical education at Oxford appear to be actually surmounted in other Universities similarly situated.

We therefore most respectfully beg the Commissioners to consider the promotion of medical science and medical education in Oxford as among the wants of the University, and to take these objects into account in the distribution of University and College endowments.

(Signed) Joseph Lister, F.R.S., Professor of Surgery at King's College, London; W. R. Sanders, M.D., Professor of Pathology in the University of Edinburgh; J. S. Bristowe, M.D., F.R.C.P., Physician and Lecturer on Medicine at St. Thomas's Hospital; W. H. Broadbent, M.D., F.R.C.P., Physician and Lecturer on Medicine at St. Mary's Hospital; E. H. Sieveking, M.D., F.R.C.P., Physician and late Lecturer on Materia Medica at St. Mary's Hospital, Physician Extraordinary to the Queen; O. Sturges, M.D., F.R.C.P., Physician and Lecturer on Medicine at the Westminster Hospital; F. de Havilland Hall, M.D., M.R.C.P., Assistant Physician and Medical Tutor to the Westminster Hospital; T. Lauder Brunton, M.D., D.Sc., F.R.S., F.R.C.P., Assistant Physician and Lecturer on Materia Medica at St. Bartholomew's Hospital, Examiner in the Universities of London and Edinburgh; Henry Power, M.B., F.R.C.S., Lecturer on Ophthalmic Surgery at St. Bartholomew's Hospital, and Examiner in Natural Science in the University of Oxford; David Ferrier, M.D., F.R.S., Professor of Forensic Medicine, King's College, London; Richard Davy, M.B., F.R.C.S., Surgeon and Lecturer on Anatomy to the Westminster Hospital; Robert McDonnell, M.D., F.R.S., President of the Royal College of Surgeons, Ireland, Member of Council of Trinity College, Dublin; Samuel Wilks, M.D., F.R.S., Physician to Guy's Hospital.

Oxford Graduates in Medicine.—G. T. Fincham, M.D., F.R.C.P., Physician and Lecturer on Medicine to the Westminster Hospital; Reginald Southey, M.D., F.R.C.P., Physician and Lecturer on Forensic Medicine at St. Bartholomew's Hospital; A. B. Shepherd, M.D., F.R.C.P., Assistant Physician and Lecturer on Histology at St. Mary's Hospital; H. B. Donkin, M.B., Assistant Physician and Lecturer on Materia Medica at the Westminster Hospital; C. T. Williams, M.D., F.R.C.P., Physician to the Hospital for Consumption, etc., Brompton; Heywood Smith, M.A., M.D., Physician to the Hospital for Women, Soho Square; Robert Bridges, M.B., Physician to the Great Northern Hospital; J. W. Browne, M.B., M.A., Fellow of Worcester College; E. H. Lendon, M.B., M.A.; J. F. Payne, M.B., F.R.C.P., Fellow of Magdalen College, Assistant Physician and Lecturer on General Pathology at St. Thomas's Hospital; E. Long Fox, M.D., F.R.C.P., Consulting Physician to the Bristol Royal Infirmary; J. H. Bridges, M.B., F.R.C.P., late Fellow of Oriel College, Medical Inspector to the Local Government Board; W. H. Corfield, M.D., M.A., late Fellow of Pembroke College, Oxford, Professor of Hygiene at University College, London; Thos. Whipham, M.B., F.R.C.P., Physician to St. George's Hospital; Edward I. Sparks, M.B., M.A., late Radcliffe Travelling Fellow; G. F. Blandford, M.D., Oxon., Lecturer at St. George's Hospital.

Oxford Graduates in Art and Law.—James Bryce, D.C.L., Regius Professor of Civil Law; T. E. Holland, D.C.L., Chichele Professor of International Law; M. A. Lawson, M.A., Professor of Botany; G. C. Brodrick, M.A., Fellow of Merton College; W. Esson, M.A., F.R.S., Fellow of Merton College, Mathematical Tutor of Merton and Magdalen Colleges; C. J. Faulkner, Tutor of University College; H. F. Tozer, M.A., Tutor of Exeter College; H. F. Pelham, M.A., Lecturer of Exeter College; Ingram Bywater, M.A., Tutor of Exeter College; C. W. Boase, M.A., Tutor of Exeter College; W. W. Jackson, M.A., Sub-Rector and Tutor of Exeter College; H. N. Moseley, M.A., F.R.S., Fellow of Exeter College; P. F. Willert, B.A., Fellow of Exeter College; R. W. Raper, Fellow of Trinity College; E. Ray Lankester, M.A., F.R.S., Fellow and Lecturer of Exeter College, Professor of Comparative Anatomy in University College, London, Examiner in the University of London; T. J. Puckle, B.A., Exeter College; Edward Bond, M.A., Fellow of Queen's College; C. F. Yule, M.A., Fellow and Tutor in Natural Science, Magdalen College; W. Boyd Dawkins, M.A.Oxon., F.R.S., Professor of Geology in Owens College, Manchester; J. R. Thursfield, M.A., Fellow and late Tutor of Jesus College; Frederic Harrison, M.A., late Fellow of Wadham College; Henry Thornton Wharton, M.A.; J. C. Galton, M.A.Oxon., M.R.C.S.; Evan H. Hare, M.A.Oxon., M.R.C.S.; F. Dawtrey Drewett, B.A., Ch. Ch.; T. H. Green, M.A., Whyte's Professor of Moral Philosophy, Oxford; John Nicol, M.A., Professor in the University of St. Andrew's; A. H. Sayce, M.A., Deputy Professor of Comparative Philology; Charles Sankey, M.A.

We shall be pleased to receive from Dr. Ogle either the proof that the above paragraphs, A, B, C, are false, or an apology and withdrawal of his foolish denunciation of the efforts of good men to obtain the recognition of medicine, and the restitution to her of money, the means of study no less than the sinews of war.

That our efforts and those of our associates in this work have produced already some good results is shown by the references in Dr. Ogle's oration to what certain acquaintances of his in the University of Oxford now think of doing in the future. That the condition of things described by us was truly described is admitted when, as a consequence of that description, promises are made for reform and rearrangement. The Council of the University of Oxford, in consequence of "the lost school agitation", appointed a Committee, which has made a report advising the removal of some few of the abuses which we exposed. One such abuse was promptly remedied by the gentleman in whom it was embodied. Dr. Acland, who till last year held the two professorships of medicine at Oxford, one worth £500 a year, and the other worth £200 a year, and who gave no instruction in either capacity, has, in consequence of the "lost school agitation", resigned one (the less valuable) of the two sinecure professorships. We believe that, at this moment, the lost school agitation has had at least this result: it has prevented the total destruction of those traces of a medical faculty in the University of Oxford which survive in the form of certain endowments. The Commissioners were to be invited (we have it on undeniable authority) to demolish even the nominal connection of medicine with the University. The Regius Professorship of Medicine was to be

suppressed, and its endowment applied to other purposes. The work of destruction has been arrested. We have now to insist on new formation. The Commissioners must be urged, and Parliament must be urged, by the united voice of the medical profession, to compel those who at this moment chance to be the occupiers of the common home of theology, medicine, and law, to make full and complete arrangements for the studies of these three great faculties equally, justly, and generously, as is done in all the great universities of the civilised world.

That there are forty-six Oxford graduates in arts who are studying medicine elsewhere is not evidence that Oxford is doing what she ought to do for the advancement of medical science and medical education, although Dr. John Ogle would seem to be of the opinion that it is. It could be claimed for Oxford, on precisely similar grounds, that she is promoting the study of agriculture, because some of her graduates become gentlemen-farmers; or for Eton or Harrow that they are centres of medical education, because there are old Etonians and Harrovians amongst the medical students of the London hospitals.

OBSTETRIC TEACHING.

DR. PLAYFAIR has seized upon the occasion of his opening address to remind the Association that medical students are still left without proper instruction in diseases of women and midwifery. He points out, what has been pointed out often before, that while the General Medical Council, which controls the curricula in the metropolitan schools, is constituted only of eminent physicians and surgeons, obstetric medicine still remains deprived of her just rights. We fear that some of the spirit which prompted the hopeless remark of a late well-known surgeon at a Council meeting at the College of Surgeons, to the effect that "he thanked his God that he knew nothing of midwifery", still hovers round, and steals into the chamber of the Medical Council.

To attempt to deliver a course of lectures on midwifery in three months is as feasible as to try to pour a quart of fluid into a pint pot. But the question of time is not all. The student who, as Dr. Playfair remarks, sees midwifery relegated to a summer course along with such, professionally speaking, unimportant subjects as botany, practical chemistry, κ.τ.λ., naturally assumes it is not more important to him and his future unlucky patients than they are. He thus not only has an inadequately short time in which to acquire a smattering of knowledge, but is led, by the very shortness of the time itself, to consider the subject not worth acquiring. This idea is further fostered by his finding that the College of Surgeons thinks the subject so unimportant as not to examine him upon it when he presents himself for his diploma.

The remedy for this unfortunate state of affairs is, the presence of at least one professor of obstetric medicine on the General Medical Council. The attainment of this simple act of justice to obstetric medicine and security to the public is not likely to be the result of any voluntary action on the part of the Medical Council. The weight of the opinion of the profession at large will alone induce the Council to invite the co-operation of an obstetric member.

IT is stated that the Marquis of Ripon intends to institute a careful inquiry into the grievances of the Indian Medical Service.

THE fourth annual meeting of the American Dermatological Association will be held at Newport, on August 31st, September 1st and 2nd.

LORD HARTINGTON announced in the House of Commons, on Monday evening last, that the Vaccination Bill of the Government would not be persevered with during the present session.

THE list of those present at the deputation to Lord Spencer should have included the name of Dr. Charles Parsons of Dover, honorary secretary of the South-Eastern Branch of the Association.

THE Indian Compulsory Vaccination Bill has been passed by the Supreme Legislative Council, after an important modification in the penal clauses had been made at the suggestion of the Viceroy.

THE Governors of the Royal Berkshire Hospital, at Reading, have decided to expend over £10,000 in providing additional comfort and accommodation for the inmates of the institution.

PROFESSOR A. W. HOFFMANN has been appointed Rector, and Professor Schroeder Dean of the Faculty of Medicine, in the University of Berlin.

M. VERNEUIL, surgeon to La Pitié Hospital, and Dr. Charcot, chief physician of the Salpêtrière, have been made officers of the Legion of Honour.

DURING the past five weeks, the metropolitan death-rate has averaged 21.9 per 1,000, against 25.0 and 17.7 in the corresponding periods of 1878 and 1879.

THE proceedings of the first general meeting of the Association in Cambridge were marked by a singular readiness to take the whole Report of the Council on trust, and to adopt it *en masse*, without its having been considered or understood by the members. Dr. A. P. Stewart very wisely reminded the meeting that this was not really complimentary to the executive, whose record of their labour during the year was thus treated as of little account, and accepted as unworthy of discussion or deliberation. This was probably partly on account of the late hour at which the report was brought up, and the impatience of the members to separate after Professor Humphry's Address, with the knowledge that a friendly reception awaited them at a neighbouring college. But the precedent is in every way a serious one; and it must be hoped that it will not be repeated. Under the guise of easy and superficial confidence, it betrays an indifference to very serious interests, and it is an ill reward of the labours of the Committee of Council throughout the year.

THE resolutions which were subsequently passed with like unanimity and *laissez-faire*, without comment, for the future regulation of the annual business—very judicious and advisable regulations as we believe them to be in their present amended shape—will partially remedy the tendency to carelessness of official details by the provision now enacted, that reports of Committees shall be printed in the JOURNAL of the week previous to the meeting. But this provision does not extend to the most important document of all, to which we have referred above; and thus there will still remain the advisability of guarding against an occurrence which can but be regarded as inadvisable in the best interests of the Association.

A MOTION of Dr. Norman Kerr, seconded by Professor Macnaughton Jones, was carried in the form of an instruction to the Committee of Council, to endeavour to arrange in future that, at the annual dinner, gentlemen who do not desire to drink wine shall not be called upon to pay for it. Of course, more than the minor financial question was there at stake. What was intended was a formal recognition by the Association of the fact that those who habitually abstain from wine as an article of diet are now a section of the community whose numbers are sufficiently considerable in the medical profession, as their motives are certainly sufficiently praiseworthy, to make their habits and wishes worthy of public recognition. The carrying of such a resolution —and we rejoice to say that it was carried almost unanimously in a very crowded meeting—was a testimony by the British Medical Association of its profound respect for, and sympathy with, those who, like Dr. Norman Kerr, bear witness by their lives and works, as well as by their words, to the duty which falls upon all citizens, and upon medical men especially, to stem, by whatever means appear to them most effective, the tide of intemperance which swallows up so much of the strength, health, and morality of the people. It is good that no opportunity of bearing such testimony should be lost, directly or indirectly. The vote may be inconvenient; and we are inclined to think it will sometimes prove to be so; and this side of the question was put before the meeting; but it is evident that the Association is not unwilling to bear some inconvenience in behalf of a cause which it highly esteems.

On Wednesday, the honorary degrees were conferred on the distinguished gentlemen whose names have already been published in the JOURNAL. Highly appropriate observations were made, in presenting each candidate, by the Public Orator, whose elegant Latinity was much admired, and who acquitted himself of a difficult task with admirable grace. Among those who received the honorary degree of LL.D. was Dr. O'Connor, the late President of the Association.

THE NURSING CASE AT GUY'S HOSPITAL.

THE sentence of the judge in this case appears, when the proved facts of the case and the antecedents of the accused are considered, to be far from erring on the side of over-severity. The evidence of Sir William Gull has created a very painful impression throughout the profession. No little surprise is felt that Sir William Gull should have thought it right to go into court to give evidence against a colleague upon a document which that colleague had never seen, and without any prior conference with him as to the actually observed facts, or his interpretation of them; and, still more, that he should entertain the opinion that the prolonged immersion in cold water, and the physical and moral shock inflicted on the unhappy woman, had no share in the sudden exacerbation of her symptoms, and the acceleration of her death. Dr. Pavy has intimated his intention of submitting the facts to the consideration of the Censors of the College of Physicians. Meantime, the opinion of the profession, as expressed on all hands at Cambridge, whether privately or publicly, is one of such extreme and unanimous indignation at the course pursued by Sir William Gull, that it may be hoped he will find some opportunity of stating formally what it is which in his mind constituted the justification of the at present inexplicable evidence which he gave. We can but cherish the hope that this explanation may be forthcoming, and that it may be such as will satisfy the conscience of the profession, which, he must now be well aware, is grievously wounded by what he has done and said in this matter.

THE JAPANESE GOVERNMENT AND THE ENGLISH DRUG TRADE.

IN the question put by Mr. Fowler to the Under Secretary of State for Foreign Affairs (reported in our Medico-Parliamentary Notes) as to the interference of the Japanese Government in the drug trade, the memorial referred to as having been presented to Lord Salisbury 12 months ago stated the facts as follows:—That the memorialists were exporters of drugs from England; that the Japanese Government, contrary to the treaty of 1858, had established at the treaty ports officers for the examination of drugs, chemicals, pharmaceutical and patent medicines; that such examinations had delayed the sale of such goods for months, causing serious loss to the exporters; that the Japanese officials were men wholly unfitted for and incapable of correctly analyzing such goods, as shown by frequent letters and certificates, and had ignorantly condemned as impure the high class manufactures of British subjects engaged in the sale of drugs, chemicals, and medicines; and that such condemnation had cast unjust suspicion on the memorialists, and was calculated to damage them as traders. The memorialists prayed Her Majesty's Government to take such steps as would prevent a continuance of such injuries and impediments to lawful trade and commerce.

WOOLSORTERS' DISEASE.

AN inquest was held at Queensbury on the 30th ult., on the body of Samuel Field, a woolsorter. From the evidence, it appeared that deceased had recently been employed in sorting grey mohair, and, previously to that, white mohair. The mohair was not washed, and was taken out of the bale by Field. He worked at this up to Saturday morning, when he complained of an aching pain across his chest, and did not return to work again. Breathing became very difficult to him on Tuesday, and he died on Wednesday. The medical evidence showed that the blood-system of the deceased swarmed with anthrax poison. The jury returned a verdict of "Death from woolsorting", and endorsed Dr. Bell's recommendation that the bales should be steeped previous to sorting. In connection with this disease, Dr. Roberts of Keighley stated, at the meeting of the local board of that place, that a small quantity of blood taken at the *post mortem* examination of a case which occurred in June had been sent to Professor Greenfield at the Brown Institution. He proceeded to inoculate a cow and a guinea-pig with this blood, and it produced splenic fever. We are glad to learn that the Bradford Medico-Chirurgical Society has appointed a Commission, chosen from its own members, to thoroughly investigate the nature of this disease. The Commission is composed of Messrs. R. H. Meade, W. Burnie, E. T. Tibbits, J. H. Bell, H. Butterfield, A. Rabagliati, W. H. Ellis, J. P. Aston, J. Appleyard, and D. Goyder; the last-named gentleman acting as secretary. The best results as to the investigation and prevention of this industrial scourge may be anticipated from the zeal and intelligence of the gentlemen named for the purpose.

PECULIAR PEOPLE.

WE commend the following to Mr. Dodson's legislative mind. At Staines Petty Sessions, Martin Richard Catlin, 62, described as a person of independent means, residing at Holly Lodge, Staines Road, Bedfont, was brought up on remand, charged with culpable negligence in neglecting to call in medical aid to his wife, Hannah Catlin, thereby causing her death on or about July 9. A verdict of manslaughter had been returned against the prisoner by a coroner's jury. The facts of the case, which have been already reported, showed that Mr. and Mrs. Catlin lived together alone; and a medical man stated that, when he saw the body of the wife, she had been dead almost a week, the defendant's account of the matter being that she had set herself on fire on one day and had died on the next. There were bruises and burns on the corpse, and death had been caused by shock to the system and coma. Her life might have been prolonged or saved if medical attendance had been provided. The prisoner was asked if he had anything to say in defence, but he made no reply, and the magistrates committed him to take his trial at the Central Criminal Court for manslaughter. Inspector Rawling asked if they would certify for legal aid to prosecute? The Chairman: "I certainly think it is a case for the Public Prosecutor." There is a class of "Peculiar People" who have "conscientious objections" to afford medical assistance to sick or dying children or adults, and we may probably expect next session an amending Bill to relieve them from prosecution. But the peculiar people have not yet got their society, their lecturers, and the other means of noisy agitation and outcry which appear so quickly to affect the minds of some of our legislators.

THE PUNISHMENT-BATH.

WE are happily absolved, by the absorption of our space with the proceedings of the annual meeting of the Association at Cambridge, from devoting much space to the unhappy proceedings in connection with the trial of the nurse Ingle for manslaughter of a patient at Guy's Hospital, in the wards of Dr. Pavy, by the prolonged administration of a "punishment-bath", which produced an immediately injurious effect upon the patient, and accelerated her death. A few observations must, however, be made upon the facts before the public. In the first place, it is inconceivable in these days that there should have existed in the mind of any hospital nurse the theory that, under any circumstances whatever, she could be authorised to administer what is, to our amazement, spoken of calmly, and as a matter of justificatory description, as a punishment-bath. There are bad old traditions of the administration of torture of this kind in the bad old days of lunatic asylums, and in prisons; but they lingered in the recollection only as extinct abuses, classed with the gone-by horrors of the cruel jailer and the harsh keeper of an age which has passed away. A punishment-bath has long been recognised as a means not less dangerous than cruel, even when administered to strong and healthy persons. If we had heard of a punishment-bath ten years ago in a workhouse infirmary of the extinct class, as they existed before Dr. Anstie and Mr. Ernest Hart let in the light of day upon them, and swept away the abuses which still lingered in them as the worst and most corrupt existing refuge for the sick, we should have pointed to such an abomination as of itself enough to condemn the

administration and its officers. To hear of the secret administration of torture or "punishment" by the bath by a nurse in one of our great public hospitals, the pride and glory of the metropolis, one of the chief seats of medical education, and where some of the greatest living medical men preside—or, as it now seems, are supposed to preside—over the wards, is not less surprising than it is shocking. We have said nothing on this subject while the trial was pending, lest it might seem to in some way prejudge the facts and prejudice the case of the prisoner; but, now that the case is over, we must say that the proof that such an act as the administration of a "punishment-bath", whether of an hour or an hour and a half, or indeed of ten minutes, could be possible in a metropolitan hospital, is a revelation. It is a revelation of the most grievous and startling kind, that the "lady-superintendent" of any hospital should so arrange the system of nursing, or should permit the existence of such a theory or spirit of nursing, as to make it possible that any nurse should think herself entitled to inflict physical punishment on sick people. That a nurse should drag an unwilling patient to a bath, is in itself an assault of an aggravated kind. That she should, as an act of punishment, immerse her in water for a prolonged period, is an assault of a peculiarly dangerous kind; and, whatever had been the issue, whether fatal or not, it cannot be said that a short term of imprisonment is too severe a punishment for so gross an offence. It reflects most severely upon the whole spirit existing in the nursing establishment of Guy's, that such an act should be possible. Even in prisons, when physical punishments are inflicted, the medical officer is informed beforehand, and his authority is recognised. But, happily, hospitals are not prisons or houses of correction; and it certainly is not the intention either of the public or of the medical profession that they should be converted into places of punishment for the sick. The theory that the nurse is to be told whether, in the opinion of the doctors, there exists in each patient a substratum of hysteria or the seeds of brain-disease, in order that she may of her own wisdom and mercy adjust the severity of the punishment which she may think it well to inflict to the capacity of endurance of the patient's diseased constitution, is altogether a new one. As the ingenious defence of an advocate, driven to invent a theory for the escape of the prisoner whom he is shielding, it is not devoid of striking originality and audacious effect. As a working guide for hospital management, it was reserved for the present lay administrators of Guy's Hospital to see such a state of things brought to light as to make it necessary for an able advocate to manufacture this theory on the floor of a criminal court, to mitigate the punishment awaiting the acts which have been proved to have occurred. We may well hope that such a state of things will soon cease. The sacrifice of principles to persons has surely been carried far enough; and this last ineffable disgrace to one of the greatest and most noble of our hospitals, whose history has been bound with traditions so very different, must surely point to the necessity of reversing a policy which has recently been one of personal bravado of the counsels and wishes of the medical officers, whose opinions and wishes ought certainly to be supreme in all that relates to the nursing of the patients, for whose well-doing they are mainly responsible. Two resignations would restore peace and efficiency: when will they be tendered?

DEATHS FROM DIARRHŒA.

THE deaths referred to diarrhœa in the twenty large English towns, which had steadily increased from 51 to 577 in the seven previous weeks, further rose to 711 last week; they were equal to an annual rate of 5.2 per 1,000 in London, and to an average rate of 4.7 in the nineteen other towns. In London, the deaths referred to diarrhœa, which had steadily increased from 16 to 330 in the eight preceding weeks, further rose last week to 367, which exceeded the corrected average number in the corresponding week of the last ten years by 47, although the temperature was again below the average, and the rainfall showed an excess. The 367 fatal cases included 271 of infants under one year of age, 71 of children aged between one and five years, and 13 of persons aged upwards of sixty years. The rate of mortality from this disease showed the largest proportional excess in the Central and South groups of registration districts. The deaths of 9 infants and of 5 adults were referred to simple cholera or choleraic diarrhœa. The death of a female, aged 26 years, at 51, Eltham Street, Walworth, was certified from "malignant cholera, eight hours".

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending July 31st, it appears that the death-rate in the eight principal towns was 18.4 per 1000 of estimated population. This rate is 0.8 above that for the corresponding week of last year, but 2.2 below that for the previous week of the present year. The lowest mortality was recorded in Aberdeen—viz., 16.1 per 1000—and the highest in Greenock—viz., 24.9 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.7 per 1000, being 0.4 above that for last week. In Dundee and Greenock, there was an increase in the number of deaths from diseases of the bowels. Acute diseases of the chest caused 59 deaths, being 10 fewer than the number for the previous week. The mean temperature was 57.3, being 0.9 below that of the week immediately preceding.

SMALL-POX AT GREENOCK.

A VESSEL which arrived in the Clyde from Quebec on the 3rd instant, was found to have two cases of small-pox on board. She left Quebec on July 6th; and, four days thereafter, one of the crew, a native of Shetland, was seized with small-pox, and died in less than a fortnight. Subsequently, two other members of the crew were attacked with the same disease; and, on the arrival of the vessel in the Clyde on the 3rd instant, the men were conveyed on shore at Greenock, and placed in the small-pox hospital.

THE GLASGOW SCHOOL BOARD ON TEMPERANCE.

THE School Board of Glasgow have just taken a very important step in reference to the question of temperance, in its bearing upon the education given in the public schools. With a view of directing the attention of the head masters to the subject, they have presented to each Board School a copy of a work on physiology in its bearing on temperance, and have accompanied it with a letter asking the head masters to examine carefully the work, and urging on them the importance of practical and systematic teaching on the subject of temperance. A report is to be subsequently asked for from each head master as to how the matter can be best carried out.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH.

THE examinations for the double qualifications of the Colleges of Physicians and Surgeons of Edinburgh were held last month and in the beginning of this. Twenty-seven candidates passed the first professional examination. Fifty-four passed the second professional examination, and received the diplomas L.R.C.P. and L.R.C.S.E. For the single qualification of the College of Surgeons, three candidates passed the first professional examination, while six passed the second professional examination, and received the L.R.C.S.E. For the Dental Diploma, three candidates passed the first examination, while one passed the final, and was admitted licentiate in Dental Surgery.

NEW ROYAL INFIRMARY, EDINBURGH.

THE autumn arrangements made by the managers of the New Royal Infirmary differ somewhat from those which obtained in the old house, inasmuch as several of the University clinical medicine wards are kept open; while in the old house, for some years, a much more limited number of beds were retained during the autumn recess. The wards all through the old building annually required a considerable amount of cleaning and whitewashing; and the vacated university wards were utilised by putting in patients whose own wards were being put in order; in the new house, this is not at present necessary. The annual closing of

several wards at this season is warranted by the diminished sickness during this season of the year, and effects a considerable saving in expense. None of the wards of the ordinary physicians have been closed.

IRELAND.

A BAZAAR and Fancy Fair in aid of the funds of the Belfast Royal Hospital, the Children's Hospital, and the Convalescent Home, will be held in the Ulster Hall, Belfast, on the 16th, 17th, and 18th December next.

AT a meeting of the Cork Dispensary Committee, held last week, Dr. Crowley, one of the dispensary medical officers of the union, stated that, in a case of scarlatina which had taken place in Hughes' Lane since last meeting, the house, containing five apartments, was inhabited by thirty-one persons, a family with several children being in each room; no closet, yard, ash-pit, nor any other sanitary accommodation whatever being present; whilst the cubic space of air, so essential to the health of children, was sadly wanting.

PENALTIES FOR NON-VACCINATION.

THE Public Health Committee of the Corporation of Dublin last week forwarded, for the consideration of the Town Council, a Bill in reference to vaccination which the Government had introduced, and which, they considered, contained many objectionable features. The third section of the Act was to the effect that no person should be liable to be punished for not having his child vaccinated, if he had previously paid a fine of twenty shillings in regard to the same child for its non-vaccination; and the Committee believed that the clause was one which should be opposed. The Lord Mayor regarded the Bill as one which would enable a man to leave his child unvaccinated if he were willing to pay £1, and was a Bill for licensing the spread of small-pox; for, if the law were thus altered, the efforts of the Public Health Act would be paralysed to stop the disease spreading. After some discussion, a petition against the Bill was adopted by the Council.

DR. DAVISON OF DROMARA AND THE BANBRIDGE BOARD OF GUARDIANS.

AT a meeting of the Banbridge guardians held last week, the resignation of Dr. Samuel Davison as medical officer of Crossgar Dispensary District, was considered in reference to a notice of motion given by one of the guardians. The motion referred to the state of Dr. Davison's health as no longer permitting him to fill the duties of medical officer of Crossgar Dispensary; and proposed to record the approval of the Board of the manner in which he had filled such office for a period of forty years; but, under the circumstances, the Board could not grant a retiring allowance. An amendment was proposed, that a superannuation allowance of two-thirds of Dr. Davison's salary be allowed him; but the motion refusing a retiring pension was passed by a majority of thirteen votes. Dr. Samuel Davison was obliged to resign, from ill-health, the appointment of dispensary medical officer, which he had held for forty-one years; and, during that long period of service, he had to encounter the toils and perils of the famine, fever, and cholera of 1846 and 1847, on several occasions being attacked with fever, contracted in discharge of his duties to the sick poor. We may also add that, during the whole of his long service up to last December, he never put the union to any expense for substitutes engaged; all of which circumstances, one would have thought, might have weighed with the guardians to have granted him what he was so well entitled to after his long and faithful services. The Board, however, thought differently; and, indeed, the feeling of several of those present was shown by an amendment, which was proposed and afterwards withdrawn, to the effect that the complimentary part of the resolution should be omitted. We trust that the example thus shown will not speedily be followed by boards of guardians, of treating an old and faithful officer in the way the Banbridge guardians have done; and we hope the law will permit of the Local Government Board sending a sealed order to compel the payment of the superannuation to which Dr. Davison is justly entitled.

REPORT OF THE COMMITTEE FOR PROMOTING LEGISLATIVE RESTRICTIONS FOR HABITUAL DRUNKARDS.

YOUR Committee are unable to report any definite progress in the meat sures for restricting Habitual Drunkards. The Act which was passed last year affirms a principle, and establishes a machinery, by means of which it can be put into operation; but the liberty of the subject is so hedged round with conditions which impede the application of the Act to individual cases, that your Committee are afraid it will greatly hinder its operations, whilst the bad times have prevented voluntary and charitable contributions towards a scheme which may satisfy the requirements of the new Act, and yet meet with the approval of the patients themselves. Two private retreats are licensed under the new Act.

On January 8th, your Committee held a conference with the Committee of the Society for promoting Legislation for the Control and Care of Habitual Drunkards, as to the best course to be followed to give practical effect to the Act of last session, when the following resolutions were passed:—

"That in the opinion of the joint-committee, an effort should be made to establish an institute for the purpose of treating inebriates according to the provisions contained in the Habitual Drunkards' Act, 1879."

"That the proposed institution be established by the aid of voluntary contributions, and afterwards supported by payments from the patients."

"That the name of the institution be the 'Dalrymple Retreat for the Treatment of Inebriates under the Habitual Drunkards' Act, 1879'."

"That the following gentlemen be a sub-committee to carry the foregoing resolutions into effect:—Dr. A. Carpenter, Mr. C. A. Govett, Dr. N. Kerr, and Mr. S. S. Alford, with power to add to their number.'

Dr. Cameron, M.P., has since been added to this Committee. Mr. S. S. Alford is acting as Honorary Secretary; all communications can be sent to him at 61, Haverstock Hill, London, N.W.

About £800 is already promised towards the Dalrymple Retreat for Inebriates. It is hoped that an institution for the working and lower middle classes, when once started, by sufficient but small payments may be made self supporting; especially as the managing committee will be strictly honorary. But the sub-committee do not feel justified in opening a Retreat until £2000 is promised to start it, and ensure its action for two years. The recent elections and bad times have been a serious obstacle to obtaining funds.

Your Committee under these circumstances ask for re-appointment.

ALFRED CARPENTER, M.D., Chairman.
STEPHEN S. ALFORD.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, August 6th.

The Drug Trades in Japan.—Mr. ALDERMAN FOWLER asked whether the Government had taken any steps to put an end to the interference on the part of the Japanese Government in the drug and chemical trades, which was the subject of a memorial, signed by several influential firms, to Lord Salisbury in August last.—Sir C. DILKE: A copy of the memorial was sent to Her Majesty's Chargé d'Affaires in Japan, with instructions to take such action as might be necessary for the protection of importers of drugs in case there should be proper grounds for the intervention of Her Majesty's Government.

Monday, August 9th.

Epidemics.—Mr. HOPWOOD asked the President of the Local Government Board by whose authority a "Note" was appended of information not ordered by this House to the return on mortality (general and infant), dated the 16th of June 1879; whether the note was not misleading, as it compared epidemic years 1838-42 with years consisting of epidemic and many non-epidemic years, and omitted the years 1843, 1844, 1845, and 1846, which were non-epidemic years, altogether; and whether he would give consent to a return of deaths from small-pox for England and Wales during the years 1843, 1844, 1845, and 1846.—Mr. DODSON: The note in question was added by the late Registrar-General. Its object was to show the average rate of mortality from small-pox in the whole series of years for which the information is available, both before and after vaccination was compulsory. The note was inserted to prevent the public being misled by a comparison of two periods of seven and nine years, the latter of which includes the epidemic of 1871 and 1872. The years 1843-46 were omitted because they are the only years since 1837 for which the causes of death have not been abstracted and classified, but there appears no trustworthy ground for the assertion that these were non-epidemic years. There is no objection to giving the return for those years except the trouble and expense of extracting deaths from small-pox from about 1½ millions of deaths from all causes.

Importation of Diseased Cattle From America.—Mr. BOURKE asked the Vice President of the Council whether he could give the House any more information with respect to the importation of beasts from America that were infected with splenic fever.—Mr. MUNDELLA said that he had received from Professor Brown the following communication:—"As to splenic apoplexy among American cattle at Liverpool, there have been six more cases in the same cargo, and I have sent an inspector down this afternoon to make inquiries. Meanwhile, I do not apprehend any danger. We shall deal with maimed and diseased parts, and the sanitary authorities at Liverpool, with whom I communicated early on Saturday, destroy all the carcases as unfit for food, so that all is being done to limit the mischief. The inspectors at ports where American cattle are landed, have been warned."

The Vaccination Bill.—In answer to a question from Sir S. NORTHCOTE, Lord HARTINGTON said the Vaccination Bill would be dropped.—Mr. P. TAYLOR: gave notice that in consequence of the withdrawal of the Vaccination Bill, he would move, early next Session, to the effect that it is inexpedient and unjust to impose penalties upon those who regard vaccination as unadvisable or dangerous.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

LUNACY FEES IN THE PARISH OF ST. MARY ABBOTTS, KENSINGTON.

SOME months ago, we drew attention to a very unwholesome condition of things existing in this union, whereby it would appear that the relieving officers are in the habit of deducting a portion of the fee paid to the district medical officer for the certification of cases of lunacy. Two of the medical officers, Mr. Lilly and Mr. Liddard, resisted this practice, with the result that all cases of lunacy were diverted from them to those who assented to the demand. We expressed our belief at that time that, if the matter were brought to the attention of the guardians, steps would be taken to prevent this improper practice; but it was not to be so. A few days ago, Sir Trevor Lawrence put a question to Mr. Hibbert, in reference to the statement which had appeared on the subject in the BRITISH MEDICAL JOURNAL, when he obtained for answer that there was no foundation for the statement. Since then, we have noted that the *West London Observer*, in reporting the proceedings at the last meeting of the board, publishes the outline of a letter addressed by the clerk, Mr. Rushington, to the Local Government Board, in which that officer asserts that an investigation had been made as to the allegation, with the result that there was no truth in it. On that statement, Mr. Hibbert, no doubt, relied. Messrs. Lilly and Liddard have forwarded us a copy of a letter addressed by them to the President of the Local Government Board, in which they traverse the assertion of the clerk, repeat their allegation, and request an official inquiry. It is improbable, under the circumstances, that the department will refuse this request.

MILITARY AND NAVAL MEDICAL SERVICES.

A Royal Warrant has been promulgated in reference to the promotion of army veterinary surgeons for distinguished service. It provides that "in a case of distinguished service a veterinary surgeon, if qualified, may be promoted to the rank of first-class veterinary surgeon, without reference to seniority."

TWENTY medical officers have, it is announced, been specially detailed for service in Afghanistan with the five thousand men recently placed under orders. This number is, of course, exclusive of the usual reliefs which at about this season of the year proceed to India, and is composed of one deputy surgeon-general, seven surgeons-major, and fourteen surgeons. The deputy surgeon-general will not go out from this country, but will be provided from amongst the supernumeraries now in India. As the Indian establishment is always kept up to its full strength, no matter what may be the deficiencies at home, any temporary strain upon its resources can be readily met.

IN accordance with the provisions of Her Majesty's Orders in Council of February 22nd, 1870, and February 4th, 1875, Fleet-Surgeon William Hoggan has been placed on the Retired List from the 30th ultimo, with permission to assume the rank and title of a Retired Deputy Inspector-General of Hospitals and Fleets in her Majesty's Fleet from that date.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 5th, 1880.

Bousigna, Joseph Ludovic, Trinidad, West Indies.
Emerson, Thomas Benjamin Franklin, Scotter, Lincolnshire.
Fairchild, Robert Lionel, Twenty-Third Street, New York.
Fazebrother, William Arthur, Winchester Street, Pimlico.
Legge, William Heneage, Queen Anne Street, W.
Mahomed, Arthur George Sulliman, St. Thomas's Street, S.E.
Richards, William Blagdon, Pembroke Castle, Carmarthen.
Weston, George Edward, Bognor, Sussex.

The following gentlemen also on the same day passed their primary professional examination.

Callaway, James, St. Bartholomew's Hospital.
Clark, Matthew G., St. George's Hospital.
Dyson, Herbert J., St. Mary's Hospital.
Dadachanji, Edalji K., Grant Medical College, Bombay.
Hepburn, William Alexander, Aberdeen University.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

PALROTHERY UNION.—Medical Officer for Ballaggan Dispensary District. Salary, £125 per annum, with £6 10s. 8d. as Medical Officer of Health, registration and vaccination fees. Election on 24th instant.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, etc. Applications, with testimonials, to the Secretary, not later than August 21st.

BRAINTREE UNION.—Medical Officer and Public Vaccinator to No. 1 District. Salary, £— per annum. Medical Officer and Public Vaccinator to No. 2 District: salary, £— per annum. Medical Officer and Public Vaccinator to No. 3 District: salary, £30 per annum. Applications, with testimonials, on or before August 20th.

*BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Salary, £— per annum, with furnished apartments, coals, gas, etc. Applications, with testimonials, to the Secretary on or before August 31st.

CAVAN UNION.—Medical Officer for Killashandra Dispensary District. Salary, £— per annum, with £— yearly as Medical Officer of Health, registration and vaccination fees. Election on 17th instant.

*CHILDREN'S HOSPITAL, BIRMINGHAM.—Assistant Resident Medical Officer. Salary, £40 per annum, with board, washing, etc. Applications not later than September 1st.

GLOUCESTER COUNTY LUNATIC ASYLUM.—Medical Superintendent.

MARTLEY UNION.—Medical Officer of the Knightwich District.

MOHILL UNION.—Medical Officer for Rynn Dispensary District. Salary, £120 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on 17th instant.

NEWRY UNION.—Medical Officer for Donaghmore Dispensary District. Salary, £— per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on August 20th.

NORTH KENSINGTON AND KENSAL TOWN PROVIDENT DISPENSARY.—Resident Surgeon. Salary, £— per annum, with apartments, etc. Applications, with testimonials, to the Honorary Secretary not later than the 14th of August.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £— per annum, with apartments, attendance, diet, gas, etc. Applications, with testimonials, to the Secretary on or before September 1st.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN.—Registrar. Applications, with testimonials, not later than September 1st.

ROYAL INFIRMARY, MANCHESTER.—Resident Surgical Officer. Salary, £— per annum, with board and residence. Applications, with testimonials, on or before September 1st.

UNIVERSITY COLLEGE, London.—Surgical Registrar. Applications, with testimonials, to the Secretary, on or before August 30th.

WINDERMERE HYDROPATHIC ESTABLISHMENT.—Resident Surgeon.

MEDICAL APPOINTMENTS.

*Names marked thus * have been elected Members of the Association.*

BULLOCK, Joseph Emmet, M.D., appointed R.M.O. and Public Vaccinator to the Bishop's Stortford Union, vice Wells.

KING, Philip Horace, M.B., C.M.Edin., appointed Junior House-Surgeon to the Carlisle Dispensary, vice Dr. Dickson, resigned.

LAWRENCE, Edmund, M.B., C.M., appointed Assistant Physician to the Royal Lancashire Asylum, Meerbrook.

LOCKE, T., M.D., appointed Consulting Surgeon to the Children's Hospital, Pendlebury, Manchester.

MYERS, F. D., F.R.C.S., elected Honorary Surgeon to the Wolverhampton and Staffordshire General Hospital, vice C. A. Newsham, M.R.C.S., resigned.

NEWSHAM, C. A., M.R.C.S., appointed Consulting-Surgeon to the Wolverhampton and Staffordshire General Hospital.

OLIVER, S., F.R.C.S., appointed Honorary Surgeon to the Metropolitan Convalescent Institution, Walton-on-Thames.

STOCKS, Alfred Francis, M.A., M.B., appointed House-Surgeon at the Royal Infirmary, Manchester.

WRIGHT, G. A., M.B., appointed Surgeon to the Children's Hospital, Pendlebury, Manchester, *vice* T. Jones, M.B.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

THOMSON.—At 9, Burnbank Gardens, Glasgow, on the 4th inst., the wife of A. T. Thomson, M.D.—a son.

MARRIAGE.

LEECH—TOMMAS.—On the 10th inst., at St. Cuthbert's, Birmingham Heath, by the Rev. W. H. Tarleton, M.A., Vicar, Henry Richard Leech, L.R.C.P., L.R.C.S., only son of Henry Leech, Nantwich, to Catharine Elizabeth (Katie), eldest daughter of Robert Tommas, Winson Green.

DEATH.

WILLIAMS.—On the 6th instant, at his residence, Hayes Lodge, Cheltenham, William White Williams, M.D., F.R.C.P., late Medical Superintendent of the County Lunatic Asylum for Gloucestershire. Friends will please accept this intimation.

BEQUESTS, ETC., TO MEDICAL CHARITIES.—The Wolverhampton and Staffordshire General Hospital has received £500 under the will of Mr. John Cooper.—The National Hospital for Consumption, etc., at Ventnor, has received £242 under the will of Mr. Henry Christopher Schneidt. The Royal Exchange Assurance Company have given £25 to the Charing Cross Hospital.

PUBLIC HEALTH.—During last week, being the thirty-first week of this year, 3,959 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 24 deaths annually in every 1,000 persons living. The annual death-rate was 17 in Edinburgh, 21 in Glasgow, and 35 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bradford 17, Newcastle-upon-Tyne 18, Bristol 19, Sunderland 19, Wolverhampton 21, Oldham 21, Nottingham 22, Hull 23, Sheffield 23, Leicester 23, Portsmouth 23, Leeds 23, Plymouth 24, London 24, Norwich 24, Birmingham 24, Brighton 25, Liverpool 26, Manchester 28, and the highest rate 31 in Salford. The annual death-rate from the seven principal zymotic diseases averaged 6.9 per 1,000 in the twenty towns, and ranged from 3.5 and 3.7 in Newcastle-upon-Tyne and Bristol, to 10.0 and 12.1 in Leicester and Salford. Scarlet fever showed the largest proportional fatality in Norwich, Salford, and Sunderland; and whooping-cough in Liverpool. Small-pox caused 2 deaths in London, but not one in any of the nineteen large provincial towns. In London, 1,698 deaths were registered, which exceeded the average by 47, and gave an annual death-rate of 24.2 per 1,000. The 1,698 deaths included 2 from small-pox, 26 from measles, 50 from scarlet fever, 12 from diphtheria, 33 from whooping-cough, 20 from diffferent forms of fever, and 367 from diarrhœa—being altogether 510 zymotic deaths, which were 18 above the average, and were equal to an annual rate of 7.3 per 1,000. The 50 fatal cases of scarlet fever were 27 fewer than those in the previous week, but exceeded the average by 6. The 26 deaths from measles also showed a decline, and were 9 below the average; they included 4 in Woolwich. The deaths referred to lung-diseases, which had been 161 and 200 in the two previous weeks, declined again to 175 last week, but exceeded the average by 27; 100 were attributed to bronchitis and 47 to pneumonia. The deaths of a child, aged four years, in Kensington, and of a male adult in Streatham, were referred to sunstroke and heat-apoplexy. Different forms of violence caused 57 deaths; 46 were the result of negligence or accident, including 15 from fractures and contusions, 2 from burns and scalds, 17 from drowning, 2 from poison, and 7 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 60.2°, and 2.5° below the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 8.3 miles per hour, which was 2.3 below the average. Rain fell on three days of the week, to the aggregate amount of 0.72 of an inch. The duration of registered bright sunshine in the week was equal to 15 per cent. of its possible duration. The recorded amount of ozone was considerably below the average during the week.

PRESENTATION.—On August 6th, a testimonial was presented to the senior medical officer of the City of London Infirmary, consisting of an elegant silver salver, which bore the following inscription: "Presented to Charles Hope Buncombe, F.R.C.S., by the officers and assistants of the Infirmary of the City of London Union. August 1880." The address bore the signatures of the whole staff. The following is the inscription: "To Charles Hope Buncombe, Esq., F.R.C.S.—We, the undersigned officers and assistants of the Infirmary of the City of London Union, beg to offer you our sincere congratulations on the dismissal of the unfounded charge of manslaughter brought against you; and, as a slight memento of our sympathy for the anxiety and annoyance you have passed through, we ask your acceptance of a silver salver, with our best wishes for your future health and happiness."

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30 Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

WE are compelled by pressure on our space to defer until next week many important communications.

ERRATUM.—In the JOURNAL of last week, p. 238, col. i, *for* "citrate of potass, gr. v" *read* "℈v"; *for* "terre" *read* "terve"; and "argente" *for* "urgente".

THE DEGREE OF M.D.

SIR,—Can you inform me whether either of the new universities—Victoria or Irish—intends granting their degree of M.D. to practitioners after examination, without insisting upon a term of residence? I am, etc. INQUIRER.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MORBID SENSE OF SMELL.

SIR,—I have met with several cases similar to that described by M.D.; and they have all been traceable to the syphilitic poison. There probably exists some slight ulceration which avoids detection. I would advise M.D. to pass a curved brush through the nares into the throat two or three times a week, smeared with the following ointment: R Iodoform 3ss; tannic acid ℈i; attar of rose mii; vaseline to ℥i. The patient may apply the same every night with a camel's hair brush. Ten grains of iodide of sodium might be taken daily with advantage.—I am, etc.,

LLEWELYN THOMAS, M.D., Surgeon to the Central
15, Weymouth Street, Portland Place, W. Throat and Ear Hospital.

CONGESTION OF NOSE.

SIR,—Your correspondent F.R.C.S.I.Dublin calls attention to the treatment of a troublesome affection—congestion of the nose. I think he will find that the painting of the part with strong liquor ferri perchloridi will be of much benefit in relieving the congestion, about every other night. This, with a mild saline aperient, will generally affect a cure, the functional disorder your correspondent alludes to having been attended to.—I am, yours truly, JAMES STARTIN.
17, Sackville Street, W., August 9th, 1880.

TURPENTINE AND ACETIC ACID LINIMENT.

SIR,—If "Pharmacist" will mix the following, he will get a liniment such as he requires. Mix in a bottle, and shake well: one raw egg, one gill of vinegar, one ounce of spirits of turpentine, two ounces of spirits of wine, two drachms of camphor.—Yours, etc., W. FRENCH.
Seaham Harbour, August 9th, 1880.

SIR,—In answer to the inquiry of "Pharmacist" in the JOURNAL of August 7th, the liniment he refers to is called St. John Long's liniment, and composed as follows: Oleum terebinthinæ, one ounce; acid acetic fat, half an ounce; one yolk of egg; water sufficient to make six ounces.—Yours truly, O. T. EVANS.
The Lodge, Brymbo, August 9th, 1880.

THE EXAMINATION FOR M.D. ST. ANDREWS.

A CANDIDATE asks: What books ought to be read for the M.D. St. Andrews for candidates above forty years of age—the modified examination?

CUTANEOUS AFFECTIONS FOLLOWING VACCINATION.

SIR,—Dr. Robert Lee, in his very interesting letter on this subject in the BRITISH MEDICAL JOURNAL of July 31st, has not alluded to a form of cutaneous affection that is sometimes met with as a sequela of vaccination. Among my patients at the Hospital for Diseases of the Skin, Blackfriars, there are occasionally babies and young children who present examples of this condition. Their histories are generally very similar. No unusual deviation from health has occurred prior to vaccination. That disease has followed its ordinary course; but, from two to six weeks after vaccination, an eruption of vesicles, with all the characters of chicken-pox, has shown itself. These vesicles are limited chiefly to the back, the extensor surfaces of the limbs, and the palms and soles, and are attended by violent irritation. There is no evidence of contagion. Such a rash is generally supposed to be chicken-pox; but, instead of passing away as that exanthem usually does, it persists, and may last for years. The vesicles gradually cease to form, and are succeeded by papules accompanied by intense pruritus. The unavoidable scratching of the little sufferers may give rise to excoriations and sores; and, finally, the complaint may pass into a state indistinguishable from the later stages of the affection, to which the name of Lichen Urticatus is commonly given. It is but little amenable to treatment. It must not be forgotten, however, that such a skin-affection as this may arise independently of vaccination, and is sometimes found as an attendant on undoubted chicken-pox and other exanthems. Mr. Hutchinson has called attention to this curious circumstance, and has most ably described it.

Skin-affections may follow vaccination under two other conditions also. 1. They may occur as a result of the transference of pus-cells, if suppuration have taken place in the seat of the vaccination, similar to what happens in the conditions to which the late Mr. Startin gave the name of porigo, and by which it has since been recognised at the Hospital for Diseases of the Skin. 2. Skin-rashes—*e.g.*, erythema—may follow vaccination, as they may arise after any disease which lowers the general health or interferes with nutrition—*e.g.*, measles, etc.

I have not alluded to the rare cases in which gangrenous inflammation has followed vaccination, and which presupposes some condition peculiar to the individual, or to those cases in which specific disease may have been transmitted by vaccination. None of these skin-affections that may arise subsequently to vaccination are peculiar to vaccination, but may spring equally from other causes. It is well, nevertheless, to bear in mind the possibility of such an occurrence, so that, if such a cutaneous disease shows itself, an explanation of its real import may not be wanting.—I am, sir, your obedient servant, WYNDHAM COTTLE.
3, Savile Row, W., August 1880.

SIR, I noticed a letter by Dr. Robert Lee in the BRITISH MEDICAL JOURNAL of July 31st in reference to the above subject, in which I take him to suppose that the present agitation be made as clear as possible. I think it should be especially so at the present moment, when what has elsewhere been called "the iniquitous Vaccination Bill" has been brought into Parliament, and, in my opinion, if it pass, will do away altogether in future, although it may be years before it is seen. Now, if we could meet forty or fifty years of age have nothing to dread but look in the face [illegible] and mark, it will convince them that something has lessened the [illegible] of small-pox; and what else can it be but vaccination and revaccination?

In regard to the cutaneous affections following vaccination, I have for the last sixteen years paid great attention to the subject. I have come to the conclusion that vaccination does not positively produce the skin eruptions; but I admit that, if there be a tendency to such, vaccination both increases and accelerates the affection. But I [illegible] from whether any harm has been done the child, sooner or later the eruption would show itself. One reason why I like to vaccinate children between [illegible] and three months old, is that I think at that period they are less liable to eruptions after vaccination than when older. I do not believe that vaccination does any harm to parents, and carefully guarded at. I have known numerous cases where children have been brought to me for vaccination, and I have pointed out a tendency to eruptions; and in some cases the child has never got better of the eruption; and, if I had vaccinated the child, of course I should have been blamed. As Dr. Lee points out, anyone not in a good state of health, or deficient in cleanliness when suffering from a wound, surgical or otherwise, is very liable to eruptions of the skin. Yours obediently, ROBERT HARRISON.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

CHELIUS' SURGERY.

SIR,—Familiar as I am with the above work, I find that I made a mistake in my paper on "Movement as a Therapeutic Agent", in saying that there is no index to the book. There is a very copious "Analytical Index" at the beginning of the first volume. I had not referred to my "Chelius" for some years until the other day, when I was preparing my paper for the JOURNAL; and it was only natural that I should look for the index at the end of the second volume.—I am, etc.,
Bath, August 9th, 1880. JOHN K. SPENDER, M.D.

TREATMENT OF CUTANEOUS NÆVI.

SIR,—At page 202 of your JOURNAL, Mr. Malcolm Morris relates his experience o. the failure of scarification in treating port-wine marks. I could also tell of failure in the use of ethylate of sodium in treating small nævi; also of cure by the constant use of strong collodion. Would not the application of collodion have been of service after scarification in Mr. Morris's cases?—I am, etc.,
RICHARD NEALE, M.D.Lond.
60, Boundary-Road, South Hampstead, N.W., August 9th, 1880.

SIR,—Mr. Malcolm Morris sends you a report this week of a series of cases of lupus and acne rosacea, and claims his method as being somewhat original. May I draw his attention to the "Treatment of Acne Rosacea" by me in the *Lancet* of 1878, when I advocated the division of the capillary by the knife, and the application of acid nitrate of mercury and nitrate of silver. As early as 1846, the late Mr. Startin taught, in his lectures at Blackfriars, that the division of the capillary and the treatment by acid nitrate of mercury would cure the congested form of acne rosacea.—I am, yours truly, JAMES STARTIN.
17, Sackville Street, W., August 9th, 1880.

NOCTURNAL INCONTINENCE OF URINE.

SIR,—A gentleman, a patient of mine, aged about 45, has for the last five or six years suffered from the most unpleasant and disagreeable annoyance of his urine coming away involuntarily at night. During the day, and while he is awake, no urine comes away, and he has full control over the bladder; but, immediately sleep takes place, notwithstanding that every precaution has been taken to empty the bladder previously, the urine commences to flow and to wet the bed. It is a most disagreeable affection, and almost causes the gentleman's life to be miserable, as he cannot visit from home or go into a strange bed. It is right to state that, both in quality and quantity, the urine is healthy and normal. Could anything be done, or any treatment suggested, to remove the complaint?—Your obedient servant,
August 3rd, 1880. A. K.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Thin, London; Mr. H. W. Bourns, London; Mr. J. C. Sargeant, London; Mr. S. F. Murphy, London; Dr. J. Styrap, Shrewsbury; Dr. W. M. Grailly Hewitt, London; Mr. J. B. James, London; Dr. H. L. Snow, London; Mr. A. Newsholme, London; Dr. Gilbert Lynch, London; Our Glasgow Correspondent; Mr. MacCormac, London; Our Dublin Correspondent; Mr. A. Harkin, Belfast; Dr. C. Clay, Manchester; Our Edinburgh Correspondent; Dr. C. B. Fox, Ilfracombe; Dr. J. K. Spender, Bath; Dr. J. F. Payne, London; Dr. J. C. Johnstone, Cupar; Mr. T. Holmes, London; Mr. J. A. E. Stuart, Dunse; Messrs. Arnold and Sons, London; M.R.C.S., London; Dr. C. Dutton, London; Mr. O. T. Evans, Brymbo; Dr. H. J. Hardwicke, Sheffield; Mr. James Startin, London; Dr. R. Neale, London; Dr. W. W. Webb, Paris; Dr. Rabagliati, Bradford; Dr. W. G. Coombs, Winford; Dr. J. Lloyd Roberts, Denbigh; Mr. W. Johnson Smith, Greenwich; Dr. C. H. Roberts, Westbourne Park; Mr. H. J. L. Bennett, Dewsbury; Dr. J. E. Bullock, Tunbridge Wells; Dr. McKendrick, Glasgow; Dr. A. E. Sanson, London; Mr. P. Brereton, Limerick; Dr. W. E. S. Stanley, Bath; Mr. C. J. Harris, Kilburn; Dr. J. Moorhead, London; Mr. C. Haubury, London; Mr. A. Ransome, Altrincham; Dr. Norman Kerr, Felixstowe; Dr. J. S. Belcher, London; Mr. W. Hardman, Blackpool; Mr. W. Pogson, Leeds; Mr. W. Sykes, Sheffield; Dr. Louis Henry, Melbourne; Mr. A. Ball, Spalding; Dr. G. S. Keith, Edinburgh; Mr. John Kilner, Bury St. Edmund's; Dr. Gerald Yeo, London; Dr. C. Parsons, Dover; Mr. Lawson Tait, Birmingham; Dr. J. Althaus, London; Dr. Bagshawe, St. Leonard's-on-Sea; Mr. C. Underhill, Edinburgh; Dr. C. Puata, Radna; Dr. C. Aveling, Lower Clapton; Mr. W. Merriman, Ryde; Mr. T. Constable, Cambridge; Mr. Eastes, London; etc.

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ADDRESS IN PHYSIOLOGY.

DELIVERED AT THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN CAMBRIDGE, AUGUST 1880.

BY

MICHAEL FOSTER, M.D., F.R.S.,

Prælector of Physiology in Trinity College, Cambridge.

RELATIONS OF PHYSIOLOGY AND PATHOLOGY.—THE PROFESSIONAL ASPECT OF PHYSIOLOGY.

MR. PRESIDENT, GENTLEMEN,—When I took the invitation to deliver the Address in Physiology out of the hands of your Council, it was in my mouth sweet as honey; but, as, I suppose, my predecessors in this honourable position know, bitterness came afterwards, when I began to consider what I should say. While pondering over the choice of the words which I might address to you, I began to be haunted with a fundamental question. On the background of my troubled and obscure thoughts, there stood out, with vivid and importunate distinctness, the sentence, *What is this Physiology* which is to form the subject of the address? And I felt that no words would be given to me until I had framed some satisfactory answer to this initial question.

Looking around for a firm basis to start from, we find it admitted on all hands that physiology is a branch of the science of living beings. Looking more closely into the matter, we find that all living beings are capable of being studied under two aspects. In the first place, they possess characteristics of form—external and internal, superficial and deep—which distinguish them from things which are not living. In the second place, they act upon, and are acted upon by, the world around them in ways which are not possible to lifeless things. The former considerations supply the basis of the science of morphology; the latter, that of physiology proper. All living things may be studied independently from either of these points of view. Were it possible to arrest for a while, without collapse, the multitudinous movements of the universe, were the whole sum of things to fall into a sleep deeper than that fancied by the laureate in his poem of the *Day Dream*, a sleep which also stayed all growth and stilled the molecular whirlpools of the tissues, there would still be ample material for collecting data and elaborating laws of form, distinguishing the things which we now call living; there would still be scope for the morphologist, though, in absence of all action, the physiologist would be without employ. Conversely, we can readily imagine a state of things in which the pulses of the movements of a living being might be investigated, the products of chemical activity determined and measured, its actions and reactions studied, though it itself was never seen, and its outline and structure remained unknown. Such a condition would exemplify a physiology existing without any corresponding morphology.

Here, probably, some one will object to me that form is an essential factor in many physiological problems; that, for instance, in the movement of a limb, the character of the result is determined by the relative positions of the bones, tendons, and muscles. That is undoubtedly true; and the same objection may be urged in reference to many other physiological problems. But it is also true that the distinguishing token of the movement of the limb of a living being—that which differentiates it from the movement of the limb of a dead machine—is the fact that the movement is brought about by *muscular contraction;* that mysterious molecular changes in a peculiar tissue, and not the burning of fuel in a furnace, or the falling of water from a height, or the blasts of the wind, supply the energy of the movement. The true physiological problem involved in the swinging of an arm is, how it is that certain muscles suddenly grow short, and not how it is that the shortening manages to produce the particular movement in question; the latter problem might occur in any dead machine, and is a purely mechanical problem; the former is the only one distinctive of the living being, and, for its solution, study of form, so far, has given us no help.

The two branches—morphology and physiology—run their several courses along lines which at present seem parallel; I say, at present, because we can even already see that in the future they will converge and meet. The science of morphology will receive the crowning of its edifice when the forms of living beings can be fully explained by the action of the environment on the living substance; and the science of physiology will similarly be perfected when the actions and reactions of a living organism can be predicted from the molecular structure of its constituent tissues, just as now the superficial character of some of its motions can be explained by the mere mechanical relations of its constituent parts. But that time is still far distant, and we may at present rest content with the view that physiology is the study of the actions and reactions of living beings; and the instance I gave just now of the movement of a limb may be taken as a type of all physiological problems. Whatever action of living organism we examine, whether of a vegetable or of an animal, be it a matter of the circulation, or of digestion, or of that as yet almost unknown territory, the central nervous system, we find that the problem suggested by that action is incrusted, it may be, with a shell (sometimes thick and hard to crack, sometimes thin and easily brushed away) of questions of a purely mechanical or physical or chemical nature—questions which might present themselves in reference to any action of either living or not living matter; but that within the shell there is the kernel question; and that, whether it be the contraction of a muscle, or the changes of a secreting cell, or the molecular agitations of an excited nerve, is the true physiological question—the question which cannot be studied elsewhere than in a living frame, the question towards the solution of which knowledge of form and shape (short of molecular construction) gives little or no help.

But, if this be admitted, it is obvious that such a conception of the nature of physiological problems is irreconcilable with an older conception, possibly still prevalent in some places, of the living body as a group of machines called organs, each doing a work called its function, the several machines being bound together in a more or less orderly manner into a bundle called the individual. That conception may have been fruitful in times past; but it has long ceased to be the guiding idea of physiologists. It received its death-blow when Claude Bernard made known the fact that in the liver, that organ of which we were previously content to say that its function was to secrete bile, a mysterious formation of glycogen took place; and all modern inquiry sets its face more and more away from such a view.

The animal body may, indeed, as a whole, be likened to a machine, inasmuch as it is full of intricate and delicate harmonies of checks and counterchecks, whereby the turmoil of its molecular throbbings, the swift whirling of its inner wheels, are cunningly adapted to work out the smooth result which we call healthy life. The animal body, moreover, is full of deft contrivances, it is studded with bits of apparatus—mechanical, hydraulic, optic, acoustic, and the like. But the physiologist who is pressing forward to the solution of the wider problems opening up at the present time before him no longer enters on his work in the spirit of one who, placed in the midst of a collection of ingenious inventions, sets himself to discover the purpose and working of each; on the contrary, he becomes day by day more convinced that the key which will unlock the mysteries of life is an understanding of the broader laws of that conflict of atoms which is going on in every tissue; that perpetual building up and breaking down; that molecular strife which appears now as the piling up of material in growth, now as the rush of a secretion, or the shock of a muscular spasm, or the thrill of a nervous impulse. Whatever part of physiology he may take up, sooner or later he finds himself face to face with problems of this kind, compelled to desert the question of special function, driven to search into the more general characters of living matter. The physiology of function and organ forms but the outer court of the science itself. The discovery that the secretion of gastric juice is the function of the stomach, of the gastric glands, of the central cells of those glands, is hardly more than the prelude to the inquiry into the nature of those changes in the protoplasmic network of the cell, whereby, amid the coming and going of granules, the shrinking and swelling of the cell, the crumpling and unfolding of the nucleus, water containing salts and the mysterious pepsin trickles into the lumen of the gland; and that search leads the inquirer away from the gastric cell to the parotid or the lacrymal cell, and from that to the hepatic cell, and thence to the renal cell, and before long possibly he will be seeking an answer to his question of the gastric gland by knocking at the door of the muscular fibre or the retinal epithelium. The discovery that the function of the gastric juice is to digest proteids is but the first step of the inquiry, What is the nature of proteolytic digestion? and that leads away to a far reaching search into the structure of the proteid molecule and its relation to cyanic radicals. The discovery that the function of the cerebellum is to co-ordinate movements thrusts us at once into a quest after clearer notions of the nature of co-ordination, and that beckons us on to studies of the molecular oscillations which we call sensory and motor, and these bring us back again to the muscular fibre, and then to the simpler protoplasm of the undifferentiated cell.

I might multiply to weariness illustrations such as these of the tendencies of modern physiology. I will, however, content myself with pointing out that these extensions beyond the simple inquiry into organ and function are not mere idle speculations. It little boots either the sick man or the sound man to know that the function of the stomach is

to secrete pepsin, or of gastric juice to digest proteids, unless he be master of the conditions affecting the character of the secretion or the potency of the juice. And the extensions of which I am speaking are simply efforts to understand these very conditions, to explore the laws by virtue of which the amount, and the character, of each drop of juice which falls into the cardiac pouch is determined by the tremors of a cerebral cell, or the labours of the hepatic tissue, or the heating and cooling of the cutaneous nerves.

But if this conception of physiology be admitted, a most important deduction follows—no less an one than this, that all distinctions between pathology and physiology are fictitious and unreal; for what are the things which we call pathological, if they be not the deeper strata of phenomena of which I have been speaking thrust up to the surface by some catastrophe great or small? Indeed, if we even simply look at the matter from an *à priori* point of view, we must arrive at the same conclusion. For what should we say of the kindred science of meteorology, if it were divided into a normal science of bad weather, and an abnormal separate science of fine weather? Undoubtedly, there are bad days and good days; there are happy conditions which we may call health, and there are unhappy conditions which we may call maladies; and the one may present superficial problems which are absent from the other; but directly we leave the outside of each, directly we attempt to grapple with the fundamental questions lying at the bottom of each set of conditions, we find we are in each case struggling with the same things. Thus, as an example, if there be one word which is more clearly the "note" of pathology than any other it is the word "inflammation". So long as the questions about inflammation were of the outside, of the shell only, so long a cabalistic doggrel *tumor, turgor, rubor, et dolor*, formed the centre for the pathologists' discussions, so long as the physiologist was content to tarry in the mere mechanical problems of the circulation, each might fitly go on his own way heedless of the other's doings. But directly the pathologist put to himself the question, What are the processes which lie at the bottom of, which are the causes of, this *tumor* and *turgor?* directly the physiologist began to ask himself, What are the fundamental laws governing the capillary circulation? each found himself working at the other's problem. It was as a physiologist, working by methods purely physiological, that more than a quarter of a century ago, one who has since achieved the highest renown as a practical surgeon, but whose career physiologists selfishly deplore as having withdrawn from their midst a puissant captain—I mean Joseph Lister—carried out those remarkable researches which opened up an epoch, on the one hand, as regards inflammation, on the other, as regards the circulation. It has been through methods purely physiological at the hands of Cohnheim and others, that our knowledge of inflammation has since been advanced. On the other hand, the physiologist who is inquiring into the abstruse problems of the capillary circulation, finds that the only path to progress lies through the study of changes of a more or less inflammatory nature, naturally occurring or purposely induced. And what I have said of inflammation may also be said of other so-called morbid processes; indeed, of all the phenomena, both structural and dynamical, of disease. The famous cellular pathology is in reality a physiological essay; and for these many years past the progress of pathology has been marked by investigations, pathological it may be in name, but physiological in scope and in method.

The view, then, which I would venture to urge respectfully on your serious attention to-day is, that physiology is not a collection of curious problems concerning the living organism in an abstract ideal condition, called health; it is not simply the answer to a series of questions, what is the normal function of this and that organ? Fundamental as distinguished from superficial physiology has before it the task of investigating the elementary properties, we might say the molecular movements of living matter (including matter which is becoming alive, and that which is ceasing to live), those movements, the varied combinations of which come to light in the effects which we may, if we like, call functions. In this investigation it recognises none other than the most superficial distinction between the normal and the abnormal, the healthy and the diseased; it joins hands with pathology, for its aims, its subject matter, its methods are the same. Both are sciences partly of observation, partly of experiment; that is to say, while both find a certain amount of material on which to work in phenomena which present themselves without interference on their part whether it be the play of the [illegible] which, running easily in the grooves of the universal machine, we call normal, or in the irruptive, troublous, often times horrible phenomena of disease, which an older writer, in prophetic irony of the [illegible] schools of to-day, on [illegible] called nature's experiments—while both, I say, find oftentimes food enough for reflection in the events which nature herself brings before them, both find themselves helpless to gain the solution of their problems, unless they themselves intervene and directly bring about the state of things which they desire to study. The physiologist in his daily walk, or the pathologist in the hospital ward, observes an incident, and at once sees that a variation in that incident will afford a complete or partial solution of the phenomena. If he goes into the laboratory, he may artificially produce that variation while the problem is still fresh, still troubling his mind. Otherwise he must wait carefully, storing up in his mind the memory of the incident and its suggestions, till in some other walk or ward he meets with the desired variation; he may not meet it till old age has dimmed his memory and enfeebled his mind, or he may never meet it at all. It may be granted that generations of alert, active minded men, ever observing, ever recording, ever reading and making use of the records recorded, might, in the long course of ages, have an opportunity of observing as natural occurrences all the phenomena of living beings, including everything that may be brought to light by laboratory experiment; for nature is an unrelentless, untrammelled vivisector, and there is no secret of the living frame which she has not or will not, at some time and place, lay bare in misery and pain. This may or might be granted; but life is short, and how long would the search be which thus waited at every step for nature's signal. Life is short and also painful, and even on mere so-called humanitarian grounds we may refuse to sit still as fatalists, and let the ills and wrong of life accumulate till nature in some wayward mood does for us the experiment which we might ourselves do to-day.

A physiology and pathology founded on observation alone, may not be impossibilities; but that progress of science which is demanded by human needs, and which at even its best is slow, is impossible without experiment.

If what I have urged be admitted, then it is obvious that the pathologist, and I need hardly say that by the pathologist, I mean the inquirer, the investigator, will do well to get himself early trained in physiological studies. He will thereby not only learn under simpler conditions the methods and the means of which he will hereafter make use, but he will be practised in the solution of problems identical in absolute nature with, but of an easier type than, those to which he may afterwards direct his labours. Conversely the physiologist, though his own narrower field affords material ample enough for his best energies without his ever leaving it, is unworthy of the name if he affects to despise or neglect evidence because it is of pathological origin.

I may, perhaps, to some of my hearers appear to be threshing well-trodden corn. They are willing at once to admit as a commonplace truism all that I have urged. But, if what I have said be so commonplace in words, how is it that, when I look around, it does not appear to me to be so commonplace in deed? I speak under correction, but, surveying our numerous medical schools, reading our medical literature, and watching the results of medical inquiry in this country, I cannot avoid the conclusion that pathology, as commonly understood amongst us, even when it does not mean a barren discussion of the doctrines of the schools, better fitted for the dialectic energy of the leisurely school-men of old than for the practical needs of our busy age, is regarded as identical with a pathological anatomy, in which a luxuriant, I might perhaps say a rank growth of facts and minutiæ, cultivated for the sake of their clinical importance, has choked the tender plant of rational, *i.e.*, physiological interpretation.

If what I am urging is a truism, if it be acknowledged on all hands that pathology is an experimental science which, though entering on its inquiries from a somewhat different standpoint, and seeking the solution of questions arising from somewhat different combinations, deals with the same fundamental phenomena as physiology, uses the same methods, works in the same spirit, and in the end resolves the same problems, where, I would venture to ask, are the pathological laboratories fitted with due appliances, where researches in this science are being carried on? Is it not the case that England possesses at this moment not one institute wholly devoted to pathological inquiry, the nearest approach to such an institute being one placed under such unfortunate conditions that lately the choice, or rather the rejection, of a director had to be decided on other than scientific grounds. Thanks to the foresight and the insight of John Simon, the sinews of war have not been wanting to young inquirers; but surely if the profession does recognise the need of the real study of pathology, every school of medicine should take its share of labour, and not leave almost the whole task at the uncertain bidding of a Government, whose ways, however admirable in other respects, are not altogether the ways of science.

If physiology be such as I have so feebly attempted to pourtray, I trust I shall not be considered as abusing the honourable position in which you have placed me to-day, if I venture now to offer a few

remarks on the relation of this physiology to the medical profession at large. Nay, rather I feel encouraged to do so by the reflection, that it is the consciousness of the prime importance of physiology to medicine which has led our authorities to place the address in physiology on a level with those of the master arts of medicine and surgery.

Of the relations borne to physiology by those members of our profession who are actively engaged in the investigation of disease, to the professional pathologists, whether they happily can give their whole time to laborious investigation, or snatch moments for inquiry from the midst of practical duties, I need say nothing. It will be clear that I recognise them as brother physiologists in deed, if not in name.

Nor need I tarry to speak of those who, having achieved high success, and, resident in this or that metropolis, live among the latest results of science, and can keep themselves abreast with the progress of physiology by spending an occasional hour at a society, or utilising the opportunities of their dinners and their clubs; nor of those younger men who, placed in much the same position as that of their chiefs, save that their success is still in the future, hold free converse with the younger workers in science. I desire, rather, to say a few words on the relation of physiology to the great backbone of our profession (for ours is a vertebrate body), the general practitioners scattered all over the United Kingdom, those who, above all others, bear the heat and burden of the medical day.

Such men have little time for prolonged inquiry. Few of them can be pathologists in the sense in which I have used that word to-day. Far be it from me to depreciate in any way the intellectual value of the healer's calling. Happily, the phenomena of disease are so many and diverse, that it is impossible for the art of medicine ever to become a mere trade of curing patients by rule of thumb. Happily, even the most obscure practitioner in the most secluded village is driven to reflect, is forced to take his patient's case in hand as a scientific problem to be solved by scientific means. The salt which secures our profession its savour is the fact, that every doctor worthy of the name is stimulated by the facts of his daily life to reason on their why and wherefore, to cultivate a real spirit of pathological inquiry. But his inquiries, save in a few cases, are inchoate and fragmentary. It is rarely in his power to carry out the tedious, the time-consuming, the continued investigations by which even nature's meanest secrets have to be wrung from her. His researches and reflections are, as a rule, rather salutary, inasmuch as they maintain the high spirit of his calling, than fruitful, by reason of the abundance and value of their results.

It is in reference to the practitioner, not as a pathological inquirer, but as a busy healer of the sick, that I would venture to put the question:—What has he to do with physiology?

Looking at the matter from one point of view, the answer might seem simple and ready enough—"Nothing at all". I can easily imagine a practitioner who learnt his physiology twenty or thirty years ago, listening while some eloquent young physiologist of a few years' standing explains his views concerning this or that abstruse physiological contention, and the reasons of his divergence from his German brethren, and then going away and reporting to his brother practitioner, "It was all Greek to me; you and I have no more to do with such stuff as that than we have with four dimensions in space, or the inflections of the Telugu tongue." And yet, under another aspect, a quite different answer, it seems to me, has to be given. I spoke just now of the practitioner as a virtual, though not a professional, pathologist. His daily practice is at every step determined by pathological doctrines. Whether we admit it or not, we are all of us, as intellectual beings, the puppets of theories and beliefs; all our actions which do not spring from passion or instinct are the outcome of dominant views. Both the ignorant and the learned as thus alike governed. The village nurse opposes, and often circumvents, the doctor, on the strength of theories which a study of her nomenclature reveals to be broken traditions of the advanced pathological teaching of a century ago; the so-called "practical" man is the most abject slave to theory of all, for his theories are unknown tyrants, hidden from himself. The hand of the practitioner, even the most empirical, is, directly or indirectly, guided by pathological views. His results will, in the long run, be successful in proportion as his views are in accord with those of nature; and assuredly the satisfaction in his calling will be the greater, in proportion as an increasing mastery over the rational interpretation of morbid phenomena transforms his daily task from a dull routine into scientific inquiry and intellectual effort.

But there are doctrines and doctrines. Not every view which is put forward is true, and even those views which hold a central truth often present a thick crust of error. Biology, moreover, like other sciences, is not an edifice built up by adding brick to brick, the older courses remaining as they were laid to form the support of the later ones. It may rather be compared with the growth of an animal through metamorphosis, but a metamorphosis more protean than that of any living thing. The butterfly is often more like the grub than is the finally accepted form of a doctrine to the crude shape in which it was first put forth. It is not easy to grasp the essential feature of a doctrine as it passes through its several phases; and not once or twice, but often, the creature has been confounded with its envelope, and the cast integument treasured as the body itself. Not only are there shortcomings and errors even in the views advanced by men most competent by their training and their talents to make known their results, but theories and doctrines are promulgated by men who have little or no fitness for the task. No one can study our medical literature for any length of time without observing that again and again some hybrid pathological or physiological theory is thrust upon the world: a hybrid gained, it may be, by fertilising with the pollen of false observation or deduction a true physiological doctrine: a hybrid, like other hybrids, of showy character, destined to win for a while perhaps public favour, but, like other hybrids, destined after a while to wither away without producing fruit. Knowledge is doubtless increasing; but errors are likewise abundant. How is the practitioner, living often in isolation, obliged to trust in the decisions of his own judgment, how is he to guard against delusive views?

I was urging just now the fundamental identity of pathology and physiology. No serious advance is made in physiology which is not sooner or later translated into the language of pathology. No real independent advance is made in pathology which does not either show itself to be in accordance with the solid nucleus of sound physiological doctrine, or compel the current physiological teaching to widen its doors and admit a new truth. The best test of a new physiological doctrine is that, if true, it will in nearly every case, when properly applied, help to solve some hitherto insoluble pathological problem. The best criterion of a pathological doctrine is that it will stand the ordeal of searching physiological criticism, and show itself in accord with the trustworthy results of independent physiological inquiry. And possibly no function of physiological science is more important than this, of serving as a touchstone by which to try the value (whether they be true or false) of the pathological theories which flutter down on the pages of our medical literature thick as the falling leaves of an autumn day.

But what is this to the active practitioner? Am I urging that those few golden moments of leisure with difficulty wrung from a hard day's work, which are not given up to the study of pathology itself, should be spent in poring over miserable physiological books? Hardly; though I think I am not overstating the case when I say that many a practitioner, when he has come to maturer years, arguing to himself somewhat in the line which I have taken to-day, strives by private reading to revive that knowledge of physiology which he neglected, or for learning which he had scanty opportunities in his youth; desirous of some firm standpoint to serve as an outlook over the flood of the new pathology, he seeks to be informed concerning the teachings of modern physiology. But is it not also true that, when he takes up current physiological literature, he finds it to a large extent written in what has to him become almost an unknown tongue? Though a good deal may be old and familiar, a good deal more is new and strange. He remembers, perhaps, hearing in his youth some of the things of which the writers make so much; but he also remembers that, hearing them, he judged them to be subtleties or novelties, interesting doubtless to the lecturer, but not likely to be made the subjects of questions in the examination-room; certainly having no relation whatever to the practical career before him, and therefore matters which might fitly be dismissed from his mind. Now he is chagrined to find that the refinements, the ingenious speculations, the heated controversies of the physiology of his youth, at his lecturer's enthusiasm over which he used to smile with the smile of practical wisdom, have become the corner-stones of important doctrines of to-day, and form the supporting structures of acknowledged—even of fashionable—pathological views. But it is now too late for him to retrace the long and time-consuming steps of physiological study; he must rest content with a narrower sphere, a more restricted horizon.

This desire of the practitioner is, I take it, an approval and practical proof of the soundness of the argument which I am venturing to urge, with deference, on my present audience; and which may be more succinctly formulated in some such way as this. Pathology, that is, the scientific interpretation of the phenomena of disease, is not only the necessary basis of the rational art of healing, and, as such, must be cultivated by those who are seeking the advance of our profession, but also forms a no less necessary part of the intellectual equipment of every practitioner who is unwilling to remain a mere machine for the application of therapeutic agents. The salutary use, however, of pathological doctrines implies the possession of a critical power,

so that the false may be sifted from the true; and the building of this critical power—without which each new pathological discovery or conception becomes a sharp two-edged instrument, cutting the hands of him who would attempt to use it—is one of the chief functions, and, for the active practitioner, the most important function of physiological study. This, at least, is the conclusion forced upon us, if we admit what I have attempted to urge to-day—that pathology is a special development of physiology. For physiology, when we attempt to distinguish between the two, is the older, more general study. It deals with simpler, less intricate phenomena; its conclusions are wider and broader, less likely to be disturbed by the perturbations of practical demands, or to be confused by a temporary and delusive practical success. The phenomena on which its doctrines are based are always at hand, and may, in other countries than our own, be called up for demonstration at any time and any place. Each new pathological doctrine, in turn, when it becomes stamped as true, is received into the common body of physiological teaching. And we have every reason to think that, as in the past, so in the future, the truths of physiology will serve, on the one hand, as the starting-points of pathological inquiry; and, on the other, as a tribunal before which each new pathological theory must at its birth be tried.

Two conditions, however, must be observed if the study of physiology is to bear this fruit of critical power.

First: The study must be carried on in early years, while the medical mind is being formed.

Secondly: The study must be an adequate one, having for its end this very object—the acquisition of critical power.

Within the last few months, there has passed away from our midst a man who, great in many things, was perhaps especially great as a teacher of physiology. I need hardly say I speak of William Sharpey. And if it be asked, what it was that made Sharpey's teaching so successful, I think this answer might be made. It was not the eloquence of his words, the fluency of his speech. It was not the profusion or the beauty of his stained sections and preparations, nor the exactness, success, and multitude of his lecture-experiments and demonstrations. It was not that he poured out upon his audience all the treasure of physiological knowledge with which his remarkable memory was stored; for he often withheld much that another might have given. Nor was it because he avoided doubt and confusion by teaching only that which had been ratified by nine years' keeping; for he often expounded to his class the very newest discoveries, and worked his way through many a tangled discussion. It was rather, as I have ventured to say elsewhere, because his method was to lay before his hearers, in plain straightforward language, just how the thing appeared to himself, describing the facts with scrupulous accuracy, putting down the arguments as they were arrayed before his own reason, and leaving on the students an impress, sometimes strong, sometimes feeble, according to the nature of the material, of the working of his own mind. In this way, it came to pass that his hearers, often unknown to themselves, not only acquired that superficial knowledge of physiological facts and doctrines which will pass muster at an examination, and serve other subsidiary purposes, but also acquired the art of physiological reasoning, and caught the true spirit of physiological judgment. And this I take to be the true end of all physiological teaching for the medical man. As we all know, each learning has its own logic—to think in chemistry is not the same thing as thinking in biology. A man may be an accomplished mathematician, or a profound theologian, or a great scholar, and yet may speak words of foolishness when he goes out of his way to pronounce opinions on biological problems. In order to pass a sound judgment on the phenomena of living beings, a man must have become familiar with these phenomena, and have accustomed his mind to the workings of their problems. The value of physiology as a study preliminary to practical medical education, is not, I would venture to urge, to be gauged simply by the consideration that a knowledge of broad physiological facts is a necessary antecedent to any intelligent comprehension of the nature of disease and the rules of the medical art, important as that consideration may be. Something of more value than a bare knowledge of facts may be gained by adequate physiological teaching, namely, a training into good habits of physiological criticism, the building up of a physiological judgment. The formation of the physiological mind, which, if there be any force in the arguments I have advanced to-day, is also the pathological mind.

But it is obvious that, if this view of physiology be admitted, the teaching of physiology must not be confined to the mere didactic exposition of the more generally received dogmas, to the thumbing of some physiological horn-book. The student must be brought face to face with the problems of the science, and be trained in the methods of their solution. And from this point of view, these discussions and controversies and speculations, which are often made a reproach to physiology, have a value of their own.

If physiology be considered as mere positive knowledge of direct practical utility, it may seem a waste of time that the student should spend any days of the few months at his disposal in such recondite or disputed matters as the phenomena and nature of a nervous impulse or a muscular contraction, the action and reactions of vaso-motor machinery, the molecular changes of the secreting cell, and the like.

But the question assumes a different aspect when the teaching of physiology is looked at from the point of view of training. The problems involved in the matters of which I have spoken are types of the pathological problems with which he will have to deal in after life, and the solution of which will determine his practice for the better or for the worse. By being trained to deal with them, the mind of the student will be fashioned into an intellectual sieve, by which, even in after-years, he will be able to sift the chaff of medical literature from the grain—even in after-years, for the critical faculty will remain long after the facts on which and by which it was formed have grown dim to memory or vanished quite away.

Moreover, it must be remembered that the physiology which he learns in the first two years of his medical study is that which must last him his lifetime. He cannot again, in maturer years, sit day after day at the feet of the lecturer, or again work in the laboratory. The physiology which he learns must be of the kind which will wear, and no physiology will wear which is not worked into the mind of the learner. If the student be merely taught in didactic fashion the current physiological dogmas of the day, if these be simply packed away into his memory in more or less artistic manner, with the view of easy reproduction in the examination-room, they will soon forsake him, even if he do not leave them behind him in the ordeal itself, literally exchanging his knowledge for his diploma; and when, in after-years, he strives to grasp the physiological basis of some pathological doctrine, which demands the entire reversal of his previous practice, he will find an impassable gulf between the physiology of his youth and that which he desires to comprehend.

On the other hand, if he had entered into the true spirit of physiological study, had laid hold of physiological methods, had risen to a comprehension of the real meaning and true value of physiological dogmas, he would find a genetic continuity between the doctrines of successive generations, and enter easily into even the newest conceptions of his time. Nay, rather he would promptly recognise, in the dominant teachings of the day, views familiar to him as the subject of what, in his youth, practical minded persons derided as idle and transcendent speculation or profitless controversy. For physiology, in spite of the feebleness of its workers, in spite of the obstacles which block its way, and the restrictions which cripple its efforts, is a progressive science. True, it seems to be for ever casting its skin; but that very exuviation is a sign of growth. I dare say, to some of my hearers, many of the questions which are agitating physiologists at the present day may seem idle and transcendental questions; nor would it be easy to point out the immediate practical utility of such themes as whether electric currents are naturally present in nerves and muscles at rest; whether, in the typical cell, there exists a meshwork continuous with the meshwork of the protoplasmic cell-body; what are the exact changes induced in proteid matter by the action of trypsin and the like; and it may seem sheer cruelty to demand that the student, into whose few years of study so many new and strange topics are crammed—a few years of study, moreover, the commercial profit of which, in after life, does not promise a very heavy percentage of profit on money invested—should be harried with these and similar questions.

And yet, not by any spirit of prophecy, but in simple reliance on the abundant analogies offered by the progress of our science, it may be safely predicted that the solutions to these questions, or to questions equally transcendent and idle in their present aspect, will become part and parcel of the pathology of the future; and will, in perhaps not so very many years, help to form the equipment of every village practitioner.

But I hear some one asking, In thus demanding for the medical student larger and fuller teaching of physiology, are you not adding a new burden to a creature this long while already overburdened far too much? By no means. No one opinion do I hold more strongly than this, that our youth, not medical only, but of all kinds, having been for many years past over-examined, are now year by year being more and more over-taught; one of the most urgent needs of medical education seems to me to be, not a multiplication, but a simplification, of medical studies. And, if a wider scope is to be given to physiology, something must be given up to afford the necessary room.

Much might be done by clearing away with a bold hand the traditional encumbrances whose uselessness is acknowledged by many, if not by all. Others have argued more forcibly than I can do against the practice of compelling the student to spend precious hours in acquiring know-

ledge which might admirably qualify him for a situation as buyer to a wholesale drug-house, or which might stand him in good stead if it fell to his lot to settle in practice in the wilds of Africa; and against introducing into a professional examination scraps and fragments, *disjecta membra*, of such studies as comparative anatomy, which ought to find their place in preliminary studies only, if anywhere. I would, however, to-day be hardy enough to spend the few moments left to me in attacking a tradition more honoured than any of these.

I think I am not overstating the case when I say that, in the two years (or less than two years) which the medical student devotes to studies other than clinical, 60 or 70 per cent. of his time — in some cases even more—is spent on the study of topographical anatomy. That study may be regarded in two lights—as a discipline, and as practical useful knowledge. The late Dr. Parkes, in a remarkable introductory address which he delivered at University College, London, many years ago, insisted most strongly that its value as a discipline was far higher and more precious than its direct utility; and I imagine that the more one reflects on the matter, the more clearly this will appear. The details of topographical anatomy have this peculiar feature, that, though they can only be learnt with infinite pains and labour, unlike other things hard to learn, they vanish and flee away with the greatest ease. I would confidently appeal to my audience of practical men, how much of that huge mass of minute facts, which in their youth they gathered with so much toil, remained fresh in their minds two years after they passed the portals of the College; and how much now remains to them beyond a general view of the parts of the human frame, and a somewhat more special knowledge of particular regions, their acquaintance with which has been maintained by more or less frequent operations. I would confidently ask them what is the ratio, in terms of money or any other value, which the time spent in those early anatomical struggles—say over the details of the forearm—bears to the amount of that knowledge remaining after twenty, or ten, or even five years of active practice, or to the actual use to which that knowledge has been put.

No, it is as a discipline, and not for its practical utility, that anatomy has been so useful; and this, indeed, may frequently be recognised in the questions set at examinations. When the candidate is expected to describe, within the error of a few *millimètres*, the structures traversed by a bayonet thrust obliquely through the neck, or is invited to reproduce written photographs no less exact of the parts which, from skin to skin, underlie a triangle or quadrangle drawn in ink on the front or back of the thigh, it is clear that the examiner has in view, not the needs of practical life, but an easy means of testing the proficiency of the student in mnemonic gymnastics. Of the value of anatomy as a discipline, there can be no doubt. In past years, it has served as the chief culture of the medical student—as the chief means by which the rough material coming up to our great medical schools were trained to habits of accuracy, of exactness, of patient careful observation; and their memories strengthened by exercise for the subsequent strain which would have to be put upon them by more strictly professional learning. In this aspect, the very sterility of the subject was a virtue. The mere fact that the separate details seemed to hang loosely, isolated in mental space, held together by no theory, by no ideas, inasmuch as it made the learning a harder task, increased its disciplinary value. Most wisely did the leaders of our profession insist that no trouble or expense should be spared to afford the neophyte this preparatory scientific training; and that, as far as examinations and the like can go, no pains should be spared to compel him to avail himself of the opportunities offered. Indeed, viewed as a branch of education, the machinery of anatomical instruction has for many years past not been equalled by any.

It must not, however, be forgotten that, at the time when our anatomical teaching was instituted, not only did not the student in most cases come to the hospital a raw lad, whose chief intellectual training had been the mechanical routine of an apprentice's duties, but no other subject matter for a moment comparable in value with anatomy was available as a means of discipline. All things suffer change. Is that which was best fifty or thirty years ago to be considered always as best? Whether the student serves an apprenticeship or no, the struggle for professional existence renders it every day more and more incumbent that he should, before joining the profession, receive an adequate training in physics and chemistry. He thereby gains a discipline identical, up to a certain point, with that of anatomy; for who dare deny the value of physics as a training for accuracy and patient observation, or of chemistry for equal accuracy and mnemonic practice? and when he has joined the profession, he must, in addition to his anatomical studies, traverse the ground of a portion at least of that physiology which the progress of events has transformed into something hardly recognisable as the lineal descendant of physiology two generations ago. His time, in fact, in the initial years of study, ought to be divided between two chief subjects—anatomy and physiology. The one is a limited subject, which long ago reached perfection. For years, it has been admirably taught, carefully protected, zealously defended, and its power is dominant in the council boards of the profession. The other is a broader, an almost unlimited, subject, restless, fermentative, slowly, though surely, settling down into a body of admitted proven doctrine. For years it, as a younger brother, has had little of the fruition of power; it has had to sit in the lower seat; and has too often been imperfectly and badly taught, and in a still more imperfect way examined in.

It would be foolishness to maintain that physiology taught in a fragmentary makeshift, at times injudicious, manner, its study carried on in a corner, without due appliances, at scanty moments snatched from other labours, can for a moment be regarded as an adequate preparatory discipline for the complex duties of the profession. But if there be any truth in what I have urged to-day, then I would make bold to affirm that if physiology be served in the future with half the zeal with which anatomy has been served in the past, if it be taught seriously and thoroughly, if the study of physiology be allowed to mean that the student should be really made to comprehend the conclusions at which science has arrived and is arriving at concerning the phenomena of living beings, to understand the trains of reasoning which have led to those conclusions, then whatever habits of accuracy and of patient observation, whatever strengthening of the mind, is gained by anatomy can be gained by physiology too.

So far am I from wishing to depreciate anatomy, that, were time long enough, and means ample enough, I would above all things desire that the demands of anatomy should be maintained with all their present imperiousness and importunity; nay more, I would gladly make it incumbent on every practitioner that every one year in seven he should return to the dissecting-room and revive his knowledge and rejuvenate his mind by twelve months spent again in anatomical studies; but since it is clear that the grasping necessities of our time, which are unceasingly narrowing us in, as the bounds of science widen, will not permit an equal and contemporary development of these two great initial studies, I would, in all respectfulness, urge that it will be in the long run the best for the profession if the present relations of the two are reversed, and anatomy made secondary to physiology.

And if what I have advanced be true, that physiology well and carefully taught (and I fully admit the immense responsibility which, in such a case, will rest on the teacher to take heed that the study is a serious one, and does not degenerate into a peep-show play with carmine and logwood, or a tedious trifling with reagents and recorders) is in disciplinary worth the equal of anatomy; if we add to this the consideration that beyond all doubt the former engenders habits and strengthens faculties, which the latter does not touch—habits and faculties which are in repeated, in constant demand in the daily tasks of the profession; the habit of reasoning securely on data of mixed and uncertain value; the faculty of struggling to a right conclusion out of the confusion of conflicting facts and views; and the reflection that it is possible to be a most accomplished topographical anatomist, and yet remain in almost complete ignorance of other sciences, while physiology is so bound up with physics and chemistry that to know the one is to have learnt at least something of the others—there cannot, I humbly submit, be much doubt as to the justice of my position.

In conclusion, I feel that I owe my audience some apology for the words which I have spoken. I fear that I have taken an undue, a selfish advantage of the honourable position in which I have been placed to-day to set up on high the horn of the physiologist. The only excuse which I can offer is, my love of the science to which I have given my life, a love strong enough to raise a zeal sometimes perhaps not according to knowledge. I would also venture to remind you that we physiologists, who are every day becoming more and more separate, but who, I trust, will never be estranged from the practical callings of the profession, are a folk not only few but feeble. Our lot is at present a hard one; outlawed by the law of the land, our chief token of blessedness is that men and women, some of them representative and distinguished, revile us and say all manner of evil against us, some even of our own brethren of science cast the stone at us, many pass us by. In ourselves there is little help: it is to you, the great medical profession, we look for aid and support; and, as our guardians, I crave your pardon for having used this occasion to lay before you something of our hopes and our wants.

THE annual festival held by the Ancient Order of Foresters on Whit-Monday and Tuesday last, in aid of the funds of St. Mary's Hospital, realised the sum of £147 14s. 1½d., which has been duly handed to the authorities of the hospital.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association, in Cambridge, August 1880.

BY HENRY W. ACLAND, F.R.S.,

Regius Professor of Medicine in the University of Oxford; President of the Medical Council; Hon. LL.D. Cambridge and Edinburgh; Hon. M.D. Dublin; Hon. D.C.L. Durham; President of the Section.

WHEN I had the honour of addressing this Association, as President, at Oxford, in 1868, any complete national health organisation was still a thing of the future. Now, "the general working of the Public Health Administration in Great Britain and Ireland" is to be brought before the present meeting as the first subject for discussion. This arrangement makes it unnecessary that I should occupy time with any lengthened remarks from the chair upon the present state of such administration; but, it may assist the objects of the discussion, if I remind the meeting, very briefly, of some of the steps by which the public health administration in this country has reached its present position. This may be best done by referring to a passage in the eighth report of the Local Government Board (1878, cxxviii).

"In 1871, the Local Government Board was established, and the powers and duties of the Poor-law Board under the Poor-law Acts, of the Secretary of State under the Registration Acts, the various Sanitary Acts, and the Local Taxation Return Act, and of the Privy Council under the Prevention of Diseases and the Vaccination Acts, were transferred to the new Board thus created; while, in the following year, the powers and duties of the Board of Trade under the Alkali Acts, and the Metropolis Water Acts, and of the Secretary of State under the Highways and Turnpikes Acts, were in like manner transferred to the department.

"In 1872, the whole country was, by an Act passed at the instance of the then President of the Board, divided into urban and rural sanitary districts, and each district was placed under the jurisdiction of one sanitary authority, and one only; and provision made for the establishment of a port sanitary authority for every port in England and Wales.

"In 1874, we introduced a Bill providing for various amendments in the sanitary laws, which our administrative experience had shown to be imperatively required.

"In 1875, a measure prepared by us was passed for consolidating the whole of the sanitary laws into a single statute, thus reducing into a methodical and complete whole provisions which hitherto had been scattered over no fewer than twenty-two separate Acts of Parliament.

"In 1877, we issued complete sets of model by-laws, relating to almost all the various matters which local authorities are empowered to regulate by by-laws under the provisions of the sanitary law.

"Thus it will be seen that, during the last seven years, a single central authority has been established and organised for superintending the administration of the laws relating to the public health, poor relief, local government, and local taxation.

"Secondly: that the entire country has been divided into sanitary districts, and a local authority for sanitary purposes established for every district, so that no area is now without such an authority, or has more than one.

"Thirdly: that the sanitary law has been amended and reduced into methodical form for the guidance of the several sanitary authorities referred to.

"Fourthly: that they have been supplied with a code of subsidiary regulations, which, when adopted, will enable them to give full effect to the more general provisions of the law.

"So far, therefore, as regards the organisation of the central department, the establishment of local sanitary authorities, the consolidation of the law, and the framing of by-laws, the work may be said to be complete; what now chiefly remains, at least for the present, is to encourage, instruct, and guide the local authorities in the discharge of their responsible duties."

Now, in order to estimate the correctness of the inference in the last sentence, it will be well, first, to go a little further back into the history of the formation of the present central authority in this country; and, second, to make some allusion to changes that have taken place of late years in the general appreciation throughout the world of the importance of attention to national health.

It is needless to consider the history of sanitary legislation prior to Mr. Chadwick's report published in 1842. This may be taken as the foundation of all complete modern sanitary work in this country. It is, however, worth remembering that it was only as recently as 1840 that the first Vaccination Acts were passed; in 1846, that the first of a series of Nuisance Removal Acts was enacted; and, in 1848, that a central board of health was established. This board, with various modifications, having continued till 1858, then expired. The Home Office took up the work, with a special Local Government Department, directed by that true-hearted man, Tom Taylor—certain duties being still assigned to the Privy Council, to which Mr. Simon, the paid Medical Officer of the expired Board of Health, had been transferred. From that time to 1870, no fewer than thirteen more or less comprehensive sanitary Acts were passed, the Royal Sanitary Commission having, in large measure, through the efforts of this and the Social Science Association, been appointed in 1869.

They, however, who desire to correctly estimate what has been the progress of sanitary affairs since 1870, should carefully weigh what it is possible to accomplish in a free country, depending on public opinion, in the short space of one decennial period.

In 1871, the Sanitary Commission insisted on certain principles, which substantially covered the whole ground of the sanitary legislation of the future. This appears from two resolutions contained in its second report:

First: That there should be one local authority for all public health purposes in every place, so that no area should be without such an authority, or have more than one;

Second: That the central authority, upon or without the application of a local authority, or other interested party, should, after local inquiry, have power by absolute order in unopposed cases, and by provisional order in opposed cases, amongst other things:—

1. To unite or combine districts and authorities for all or any purposes of their constitution;
2. To divide districts;
3. To make additions to and separation from them;
4. To dissolve and readjust them.

And in each case by absolute or, as the case may be, provisional order, to prescribe the necessary terms and conditions.

There is, now, no place, not the least hamlet on a lone hill-side, which should not have, and which, by the Acts of 1871 and 1872, has not, the power of obtaining such advice and such direction for sanitary purposes as it may need.

It comes, then, to this: Can we, looking to the extent of legislation, culminating in the consolidating Public Health Act of 1875, and to the fact that (1) there is now a *central authority* and *one*, (2) and everywhere a *local authority* and *one*, say that these authorities have respectively fulfilled the just and reasonable expectations which were formed by sanitarians? Some would emphatically answer No; some, with a qualification, Yes.

The uncertainty in these answers depends more than on any other causes (1) on the estimate formed of sanitary science and practice by the central authority, and the respondents respectively; (2) on the character of the local sanitary committees where they exist; (3) on the general local authority where they do not; and (4) on the officers of the several localities. In some places, there is nothing further reasonably to be desired, as hundreds of observers could testify in various parts of England, urban or rural. In some, nothing can be more futile than the labours of the more earnest of the residents. In some, as, for instance, in parts of Ireland, the accumulated evils have been so extensive that many years must elapse before they can be removed by any agency whatever.

It had been foreseen by the Sanitary Commission that time would be required to procure instruments suitable for carrying on and completing the work. They say:

"That for the more convenient performance of their duties, and exercise of their powers, all local authorities should be enabled to appoint committees of their own body, and to delegate to them defined duties and powers; and the acts of such committees should be reported to the appointing authority, and be either absolute or require confirmation, as that authority should, on their appointment, direct."

But, at the same time, they observe that:

"The system of self-government, of which the English nation is so justly proud, can hardly be applied with success to any subject, unless the governing bodies comprise a fair proportion of enlightened and well-informed minds; and if this be true as a general proposition, it is especially true in regard to matters affecting public health.

"In the next place, many sanitary questions of vital importance are, from their very nature, incapable of being completely provided for by any amount of legal enactment, however minute and explicit. So large

a discretion must of necessity be left to local authorities as to details, that in practice much will always depend on the energy and wisdom of those who compose such authorities. Moreover, there are limits to the power of any central authority to remedy the evils produced by local inefficiency. It may control, stimulate, and in many cases supplement, the efforts of local bodies, but it cannot be a substitute for them."

On the education, then, and voluntary action of the people, depends now, before all things, their sanitary condition. They have the means of obtaining knowledge; they have the means of obtaining power. If they have the will, they can obtain both. There are good books now, and to spare. The subject is popular. For any purpose of engineering, of chemical science, of prevention of disease, excellent opinions may be had. Do the people honestly seek these? Are there impediments in the way when they do so?

Those who had to do with the cholera epidemics of 1832, 1849, 1854, must acknowledge how wholly different is now the state of things as far as organisation and knowledge are concerned. In very many districts, also, the state of preparedness of the people is as satisfactory as is possible in any dense self-dependent population. It remains, therefore, to consider in what direction defects of arrangement or loss of power, capable of remedy, are to be detected.

Now, it is to be noted that dissatisfaction seems to exist in the minds of some writers and speakers on several points, some of which may be briefly named; for instance:

1. That the relief and health departments should not be united in the central authority.
2. That there should be a minister of health separate from the relief minister, and not in the Cabinet.
3. That the medical department is inadequately represented.
4. That Government grants should be more freely given for scientific research bearing on health.
5. That the areas for medical sanitary administration should be made larger than they now generally are.
6. That the formation of these larger areas should be not, as now, voluntary, but should be imposed on the districts, without the necessity of an order requiring confirmation by Parliament.
7. That the authority of a Local Government area should be the authority for all local purposes for which the area is fit (engineering, highway, and all ordinary functions of county and municipal government).
8. That the tendency to imperial centralisation is becoming too great, and that county boards will avail to regulate it.
9. That county boards are the only local boards that can ensure attendance of persons of wide experience in affairs.
10. That the prevention of disease should be a profession separate from the treatment of it.
11. That the Poor-law medical officers are incapable of acting as sanitary advisers.
12. That the guardians are unfit to be the rural sanitary authorities.
13. That the urban powers should be more constantly extended to rural districts.
14. That the arrangements for analytical health-laboratories need consideration.
15. That water-analyses may or may not be a true test of the potability or non-potability of the waters.
16. That more pains should be taken to secure good water-supply through the powers of Brown's Public Health Amendment Act.
17. That, in rural districts, the burial-grounds demand greater attention.
18. That the expense of sanitary improvement should devolve in just proportion on the occupier and owner respectively.
19. That the growing sanitary expenditure demands watchful care.

These are examples of opinions and objections more or less valid, which are honestly felt. Many more might be cited.

Now, on these and many other important topics, it is useful to have free discussion; but it would serve little purpose that I should now venture to record any opinion upon them in detail. It is well known here what labour has been bestowed on these and on innumerable details, medical, engineering, legal, statistical, by Committees of this Association; by the Social Science Association; by the joint committee of both; by the Society of Arts, the Sanitary Institute, the medical officers of health in England, Scotland, and Ireland, and by individuals too numerous to be named. On two points only, however, I would hazard some brief remarks.

The first is one that will not, I fear, meet with entire approval, for it runs counter to one of the assumed dogmas of some modern sociologists. It is, that compulsory powers should only be exercised by the central authority in the most extreme cases, and that this should be clearly understood to be the principle of action; but, as a corollary, the central authority should with the utmost freedom collect the best information, and disseminate it in the freest way. If the Treasury should not sanction the gift of reports, every local official should receive notice of all government health-publications, with the statement of the contents, cost, and where to obtain them, immediately on their issue. This would promote progress of education, and would quite certainly be done, and is the least that would be done, *mutatis mutandis*, by any large private company dealing with the subject. It is being done to some extent by the model by-laws recently issued, but should be done much more extensively.

Then, secondly, dissatisfaction is more often expressed concerning the areas of medical inspection and the constitution of local authorities, than on any other subjects. It is necessary, however, to bear in mind that the present position herein is confessedly tentative and provisional, and, after due experience of the present working, will quite certainly be altered in some way. The constitution of the health department of the central authority and of the local authority necessarily hang together. The greater the number of highly skilled experts, medical, scientific, or engineering, attached to the Board in London, and available for duty in every part of the country, the fewer will be needed in the outlying districts. The larger the areas of work for the chief local officers, the more need for an official relation between them and either the union or some local medical officers. Critics seem sometimes to overlook the evil to the mass of country practitioners, and therefore to the public at large, if they should have taken away from them every inducement to pay attention to the progressive scientific attainments and practical knowledge that are bound up with preventive medicine, and always to cast off such questions on an officer who is not in practice. Much of the old conception of medicine being only a curative art is, as Dr. Bristowe and others have very plainly stated, becoming a thing of the past; though I must here observe that language on this point is often exaggerated, and liable to cause grave and mischievous misconception.

Rather than further pursue controverted subjects, it will be well now to briefly consider some of the work that actually has been done by the authorities that were constituted in 1871 and 1872. The retrospect is assuredly full of interest.

And, first, as to *Medical Officers of Health*. As the result of the Act of 1872, there are now appointed for combined districts 45 medical officers of health, and for single districts 1,320, or altogether 1,365. Of these, 920 are partly paid by the Local Government Board, and 445 are not so paid. In combined districts, 11 inspectors of nuisances have been engaged, and in single districts 1,212, in all 1,223, of whom 883 are partly paid by the Local Government Board; 340 are not so paid. Forty-five medical officers of health and 43 inspectors of nuisances are at work in the highly important port sanitary districts, every one of which is now a separate sanitary authority. Parliament pays £34,000 a year to the medical officers of health, and £30,000 a year to the inspectors of nuisances, being one-half of the salaries paid in those sanitary districts, which agree to accept part payment from the central authority. Some of the larger towns do not accept the central payment, and in those cases the central authority does not sanction the appointments. In the counties, 52 public analysts have been appointed; and in boroughs, exclusive of the metropolis, 139. In the metropolis, there are 39, making in all 230.

Second, as to *Water-Supply*. According to a parliamentary return (No. 371, Session 1879), it appears that the outstanding debt for permanent works for the supply of water in 258 urban sanitary districts was over £19,000,000. Since 1871, loans to the extent of £2,342,135 have been sanctioned by the Local Government Board for the water-supply of urban districts, and £314,269 for rural districts; and, in the same period, £6,800,087 have been sanctioned for sewerage in urban districts, and £1,087,408 in rural districts, or a *total* of loans for both purposes in urban districts of £9,142,222, and in rural districts of £1,401,677; in all, for both purposes in both districts, £10,543,899. It is, moreover, interesting to notice that, in urban districts, the loans rose between 1871 and 1879 from £205,399 to £1,444,368 for sewerage; and in the same time, in rural districts, from £8,150 to £288,997; and the loans for water-supply in towns rose in the same time from £16,321 to £285,022, and in rural districts from £500 to £76,153. These figures do not touch moneys raised in large towns under local Acts.

And one other test of growth of sanitary ideas and practice may be named; viz., in the case of hospitals. Under the Sanitary Acts, authorities may provide hospital accommodation for the isolation of infectious disease, though not compelled to do so. Since 1871, these have been provided in many cases. Fifty-one urban, ten rural, three port authorities, in all sixty-four, have provided permanent hospitals. Twenty-three urban, six rural, two port authorities, in all thirty-one, have provided temporary hospitals. Sixty-nine authorities have contracted with

existing hospitals for the reception of cases; and seventy-three authorities have united together, urban with rural, port with urban, or rural, or both, in obtaining thirty-one hospitals; so that altogether two hundred and thirty-seven authorities have provided hospitals of one kind and another, on the scale deemed necessary in each case, in the last nine years for infectious diseases.

Reports are required to be sent to the central authority annually by every medical officer in the country; and these reports, sometimes of considerable value, sometimes too meagre to be of any service, form a good criterion of the state of public opinion, and hence also of the condition of every district of the country.

And, lastly, the admirable yearly volumes of Dr. Buchanan, Medical Officer of the Local Government Board, give earnest that annually a complete summary of the work he has done, or has had done, and by inference and suggestion of work yet to be done, will be within reach of all who have inclination, leisure, or duty to watch this development of the national economy.

For the facts above stated, I am chiefly indebted to the ever ready kindness of Sir John Lambert, of whose worth as a long tried officer of the State it would not become me here to speak.

When, then, these circumstances are impartially considered—first, the existence of one comprehensive central department; second, all pervading local authorities; third, active diffused interest as to the extent of sanitary requirements, and how to meet them; and, fourth, uniform progress in every department upon the whole—the best answer is given to those who take a pessimist view of the growth of ideas as to national health.

Yet most are agreed that some development of the central and some change in the local authority are required; and that there are arrangements which, excellent while provisional, have not the qualities needed for permanence.

This is not a suitable occasion for comparing the sanitary progress of other European nations with our own; but there are two countries not European of which I may ask leave to say a few words. No sanitary work at the present moment exceeds in interest the proceedings in respect of health organisation and administration inaugurated last year by the National Board of Health in the United States.

In the words of the Act of Congress, "The duties of the National Board of Health shall be to obtain information upon all matters affecting the public health; to advise the several departments of the Government, the executives of the several States,.....on all questions submitted by them, or whenever, in the opinion of the Board, such advice may tend to the preservation and improvement of the public health"; and they were required to submit a plan for national public health organisation, which plan shall be prepared after consultation with the principal sanitary organisations and the secretaries of the several States of the United States.

And then there were constituted the following standing committees: 1. On rules and interpretation of the constituting Act; 2. On finance and accounts; 3. On epidemics and contagious diseases; 4. On adulteration and deterioration of food and drugs; 5. On registration and vital statistics; 6. On state and municipal and local sanitary legislation; 7. On diseases of domestic animals.

Besides these seven committees there is an executive committee, with three as a quorum, including the president. This committee is held to be in permanent session. Arrangements were made whereby the executive is fully informed of all the proceedings of the other committees. Care is taken that all proceedings shall be confidential, except such as are communicated to the press by the proper officer of the board.

The board publishes a weekly bulletin, with occasional supplements, on matters of importance. These official bulletins, of which one volume is now complete, will gradually become a medium of intercommunication between all the States of the Union, on such subjects as possess an interest common to them all; and for this special purpose it is recommended "that the monthly review and statistical abstracts of the record of mortality in every bureau of vital statistics and in every board of health office shall be regarded as an indispensable duty, and that in every city or township, and in whatever country precinct or parish, where there is a local bureau or office of registration of deaths, the monthly review of the records shall be maintained in accord with methods that shall be sufficiently uniform for comparison with similar abstracts and reviews in the cities and States throughout our country."

It is necessary to bear in mind that the United States are "by no means an homogeneous whole", but have all sorts of climates, and all sorts of people as regards education and occupation; that the laws of the different States (except as regards foreign affairs, post office, and customs) are made by the States themselves, and the Central Government at Washington has no control over the individual States except in those particulars.

Philosophically viewed, therefore, the attempted system of health organization is one dependent for its success on the wise adjustment of the central and local interests respectively—that is, on a tempered and temperate recognition of Home Rule or Local Government. And at present there is no sign that the practical wisdom of the American people is likely to fail them here, for the central board is advisory, and is only executive at the wish of the local authorities.

The work of this board is one of great interest from its magnitude and complexity, partly owing to the mobility and variety of condition in the population, and partly from the fact that it is undertaken when the united medical profession throughout the world has become fully alive to the vast importance of preventive medicine, and therefore is desirous to obtain precise information, and reasonable regulations in respect of sanitary laws.

The States and territories contain more than three-and-a-half millions of square miles, extending nearly 3000 miles from N. to S.W. on the Atlantic coast, 1,500 miles on the west, and more than 3,000 miles across from E. to W.

The kind of information bearing on human health, which will be systematically accumulated, is such as will have had no previous parallel.

It is hoped that it may be not improper to observe that the best sanitarians of the United States fully recognise the debt which is due to the self-denying and active persons who, since 1842, have laid the foundations in this country of complete sanitary administration of the science of public health, and made our regulations as complete as they are.

It is worthy of notice, that the United States Health Department is truly and practically a board, every member except the Solicitor-General being selected on grounds of special fitness for sanitary work. Our Local Government Board is not a board in the same sense, nor composed in the same way of persons chosen for their special knowledge. I say this, of course, under reserve, and with some diffidence. But it is understood that our five Secretaries of State, the Lord President, Lord Privy Seal, and Chancellor of the Exchequer, do not and cannot take any active part in the proceedings in the board of nine, the number of the American board. In what relations the legal, engineering, medical, statistical, relief departments stand to the board as a board, does not appear on the face of the constitution of the English board. The committees in the United States are essentially subdepartments of the common board, which unites under the president for all general consultative purposes. But into full particulars of this kind it were beside the present object, and indeed not proper, to enter, in this place, or on this occasion.

Nor can I fail to allude to another sanitary bureau which has been in operation for five years—that of the Imperial Japanese Government. I will not enter fully into the history of this bureau, of which the first and second reports have been obligingly given to me by Mr. Lennox Peel, the active and accomplished clerk of the Privy Council. But it is to be noted that its code is constructed on the model of codes in Europe and the United States. It publishes a magazine of information on home and foreign affairs. It is engaged in a work of great difficulty, in consequence partly of the large proportion which uneducated bear as yet to educated physicians; but it is carrying on this work in a temper of equal prudence and of zeal which is worthy of all praise. And I will conclude this brief notice and this tribute with two extracts from the report of Nagayo Sensai, director of the bureau.

"The first and most important measures to be taken for carrying into effect sanitary regulations in each city and prefecture, are the appointment of private citizens as sanitary committees in each town and village, and also that of local sanitary officers in each district. Without these local sanitary committees, and a requisite number of local sanitary officers in each city and prefecture, no success can ever be hoped for in matters of sanitary improvement."

"Great praise should be awarded to the zeal of the local authorities who appointed the local sanitary committees, without any compulsion from the central government; but the manner of appointing these officers, and of stationing them in the different parts of the jurisdiction, varied in different prefectures; and in some instances, the methods adopted by these prefectures was not in accordance with the views of the bureau, chiefly owing, however, to want of sufficient funds, and of persons competent properly to discharge the functions of sanitary committees. The duties of the local sanitary committees, bringing them into immediate relations with the people, it is useless to hope for the diffusion of information on the important subject of sanitary improvement and of the proper measures to be adopted in various emergencies, unless the committees are themselves properly qualified. It appears,

therefore, that the next step to be taken is the establishment of a local sanitary office in each locality, with officers properly qualified, both by education and practice, the perform the duties attached to the office."

After what has been said of the great progress of our western authorities, as now constituted, it may seem almost superfluous to remark on the good sense of these two paragraphs. But it is really interesting to find the same difficulties as some of those which affect us here, appreciated by a very different but remarkable people, at an opposite portion of the globe, and to find them met in the same manner.

Their words are, in fact, an echo from statements of our most thoughtful statesmen. I have only to refer, for instance, to Mr. Stansfeld's opinions, repeatedly expressed, and lately renewed at the Society of Arts as his latest convictions. For he it was whose promptitude and moderation carried the Acts of 1871 and 1872, the effects of which are, and will be, so important.

The reference which has been made to the health reports of the United States and of the Empire of Japan leads me, in conclusion, to revert to the expediency of founding a chair of comparative national health, proposed many years ago, and fully explained at a meeting of the Social Science Association at Plymouth, in 1872. This vast department of knowledge and inquiry was at that time described as "a science which has reference to that health which is affected by the circumstances of the whole world, which seeks to compare one nation with another—to ask why one people is more or less healthy, one more or less long lived; which aims at presenting to the mind a correct conception of the circumstances, and the fluctuations in the health of the whole of mankind. The factors, indeed, are derived from subjects of which some are as yet incomplete, as meteorology, physical geography, ethnology, laws of descent, of ascent, of species, and many departments of sociology—as education, crime, reformation, value of human life as life, poor-law, and the intermixture of races."

The value of the elaborate investigations into the conditions of healthy and unhealthy life carried on by our brethren in India was on that occasion discussed. In that triangular space, containing 1,400,000 square miles of the earth's surface, so many conditions of race, climate, and occupation occur, that it is a great field for biological and scientific study, extending to nearly 240,000,000 souls, and presenting a problem more difficult than that of the Uuited States, with its 3,500,000 square miles. When we superadd these new devolopments of sanitary problems to the older, but still incomplete arrangements of the European continent, we must feel convinced that there is no time to be lost in giving a career to persons who will devote themselves exclusively to this department of biology, sociology, and statistics. I am not unmindful that Dr. Buchanan's office handles these subjects, and watches the course of epidemics; that the late Government sent last year a special mission to examine into the circumstances of the plague in Southern Russia: or that the question of the laws of leprosy and of cholera have long occupied the Colonial Office and the Royal College of Physicians. But I confess the desire to have a fully endowed chair, by which, with adequate comparative health library at hand, the subject may be one of steady study and frequent record. Nor can I omit here to say that I doubt how far the intentions of the late Government, in making a grant of £4,000 a year for scientific research to a committee containing the Presidents of the Medical Council, of the College of Physicians, and College of Surgeons, have yet produced their full fruit in the direction of scientific medicine and of pathology.

There are many other subjects on which it would be pleasant and perhaps instructive to dwell, but your short time must not be further occupied. Dr. Billings, the mainspring of the United States Sanitary Board, says:—

"We want our citizens and cities, counties and States, to take care of themselves in sanitary as in other matters as far as possible; but there should be some power competent to interfere in the exceptional cases in which ignorance, selfishness, or terror lead either to danger of pestilence or to obstruction of commerce. This power, however, cannot be established arbitrarily, or in advance of sufficient education of the business portion of the community, to create a powerful public opinion to support it. Whether it is possible to give this education otherwise than through the lessons which epidemics themselves give, is the problem which the sanitarians of this country are at present practically trying to solve."

This is the same note which is struck by almost all who deal in the present day with the growth of nations. Instruct, educate, persuade—do not attempt to coerce. In this country, the seat just now of severe competition and great commercial strain, it must be a duty to steadily keep down all taxation for objects which are not productive or necessary for security. But as regards sanitary laws, whether political or material, we have to remember that, as sound health-conditions may be counted to be urgently required for the maintenance of morality in the individual, so not less are morality, contentment, and virtuous life essential for national health; and that, in the complex conditions of modern civilization, many health-conditions can only be provided by the state, and cannot be obtained through any individual exertions by the mass of people.

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

DURING the last year, the Parliamentary Bills Committee have been chiefly occupied with *(a)* the consideration of subjects affecting the welfare of the Army and Navy Medical Services, and the Medical Services of the Indian army; *(b)* the state of the law affecting coroners; *(c)* the progress of legislation concerning Registration of Infectious Diseases; *(d)* the modifications necessary to improve the provisions and widen the scope of the Infant-life Protection Act; *(e)* the investigation of the present state of knowledge concerning our use of calf-lymph in Vaccination, and the application of conclusions derived from this investigation to the modification of our national system of Vaccination; *(f)* and, finally, with the consideration of a Bill introduced by the present Government for the purpose of abolishing multiple penalties for neglect of Vaccination.

The action of the Committee in respect to each of these matters may be briefly summarised as follows.

Army Medical Department.—Your Committee, in their report to the Association last year at a meeting at Cork, were able to express their satisfaction that the recommendations which had been laid before the Government, in a paper prepared by the Chairman of the Committee for the information of a Departmental Committee of the War Office, had been ultimately adopted by the War Office Committee as the basis of a report; and that the report in question would, it was believed, recommend that the short service system, to which your Committee, on behalf of the Army Medical Department, has strongly objected, should be abolished, and that corresponding advantages should be given to medical officers who had already joined the Service under the obnoxious ten years' rule, and that rates of pay, pensions, honours, and good-service rewards, should all be considerably increased. Your Committee expressed the belief that if a warrant should be issued embodying these recommendations it would meet with general approval, and would restore contentment to the Army Medical Service. Your Committee have the satisfaction to state that not only is such a warrant being issued in the terms anticipated, but that the particular recommendation of the War Office Committee, to which your Committee objected—viz., the proposed abolition of entrance examinations for the army—has not been adopted. The objections which your Committee expressed to such abolition became the subject of discussion at the last general meeting of the Association, and a distinguished officer of the Department, on behalf of the head of the Department, defended the proposal to substitute the system of nomination for that of admission into the Army Medical Department by entrance examinations. The Association, at that general meeting, warmly endorsed the opinion expressed by your Committee that such a substitution of a system of nomination would be most injurious to the character of the Service, and would destroy an important safeguard for the welfare of the soldiers and the security of the public. Happily, this view has prevailed largely—it is believed owing to the influence of the discussion then taken and the endorsement by the Association of the views of your Committee—and the entrance examination still subsists, and with it the valuable training at Netley which forms part of that system. It is highly satisfactory to be able to report that the opinion of your Committee, that the entrance examination was by no means in itself an impediment to the popularity of the Service, and that the restoration of satisfactory conditions of *pay*, *rank*, *promotion*, *retirement*, and *honours* would bring forward abundance of candidates well capable of passing good examinations, has been amply justified by the events of the year. The recent examinations for the army have brought forward a large number of excellent candidates—the applications at the present moment for the British Army Medical Service are more numerous than they have been for a long series of years; and the examinations passed are of a higher standard than they have ever yet been. Thus your Committee has the satisfaction of being able to report that, while their recommendations have proved to be such as the War Office on careful examination has found to be acceptable, and has in the main adopted, on the other hand the adoption of them has resulted in bringing forward an excellent supply of high-class candi-

dates. Your Committee have the satisfaction to report that the Chairman has received numerous communications from members of the Army Medical Department, many of them from men of the highest position, as well as from some of the youngest officers of the Service, expressing a grateful sense of the success of the exertions which have been made on behalf of that Service by your Committee and its Chairman during the last few years. These letters describe the general sentiment of the medical officers of the Department as being aware that the influence thus exercised on their behalf, and the care with which only defensible and acceptable propositions were brought forward, have largely contributed to the highly successful results which have been obtained. A large acquisition to the Association of army medical officers has taken place during the last few years; and there is ground for satisfaction that the civil and military members of the profession are now numerously brought into intimate weekly communication through the JOURNAL, which now regularly reaches members of the Service scattered throughout all parts of the world, and receives from them frequent communications.

Indian Army Medical Department.—Recent changes in the regulations affecting the Medical Service of the Indian Army have been productive of grievances which are much felt by the existing officers of the Service, and are likely injuriously to affect its future efficiency and popularity. An influential deputation waited in July upon Lord Hartington, the Secretary of State for India, to make representations to him upon the subject. At the request of the members of the Indian Medical Service, the Chairman of your Committee attended with the deputation, and expressed the interest which the British Medical Association feels in the just and generous redress of grievances affecting this department of the public Medical Service, and especially commended the case of the Indian Medical Officers to the consideration of the Indian Government. The Marquis of Hartington undertook to make a thorough inquiry into the matters complained of; and it is satisfactory to add that a telegram, received from Calcutta this week, announces that the promised inquiry has been ordered. A member of the Indian Medical Service will attend the meeting of the Association to make a statement on the whole subject, which will continue to receive the attention of your Committee.

Naval Medical Department.—It has been felt that, while the conditions of service in the Army Medical Department have been undergoing revision, and have at length been brought into a satisfactory state, the conditions of service in the Navy have remained in a very unsatisfactory condition. Shortly after the publication of the new Army Warrant, to which reference has just been made, the Chairman of your Committee began to collect information from members of the Navy Medical Service, of various rank and status in their profession, concerning the causes which have led to the extreme unpopularity under which the Medical Naval Service has recently suffered; and which have brought its ranks at the present moment to a state of extreme depletion. The Navy Medical Service has now for some time grown so unpopular with those who serve in it, and that unpopularity has extended so generally to the medical schools, that with difficulty can a few candidates now be scraped together for the large number of vacancies existing. More than one examination has been postponed for want of candidates, and at the present moment there are not more than half-a-dozen candidates for many scores of vacancies. It is obvious that a Service so unpopular must suffer in the quality as well as in the quantity of candidates, and that such a state is at the same time dangerous to the welfare of the Navy and unjust to the whole Service.

As the result of a mass of communications received, Mr. Hart prepared a draft scheme for the improvement of the Navy Medical Service, which was printed on page 222 of the JOURNAL of February 7th, 1880. That scheme proposed mainly: that the pay of naval candidates at Netley should be equalised with that of candidates for the army; that the promotion of Staff-Surgeons should not be later than twelve years from entry into the Service; and that seven years should be sufficient to attain the rank of Fleet-Surgeon, instead of twenty years on full pay as heretofore; that the pay and half-pay should be not less than the new army scale: that retirement should be granted on twenty shillings per day after twenty years from entering the service, and at the other epochs as laid down in the new army scale, and at the same rates of retiring pay as there laid down; that compulsory half-pay time should count; that the Senior Fleet-Surgeons should have pay, half-pay, and retiring pay at least equivalent to that of a Brigade Surgeon; and the Junior Fleet-Surgeons should have pay, half-pay, and retiring pay at least equal to that of a Surgeon-Major of over twenty years' service; that the requirement of qualifying service, which now so often interferes to affect due advancement into the inspectorial and deputy-inspectorial ranks, should be modified or removed; that cabin accommodation should be provided according to rank and seniority; and that sick-leave on full-pay should be granted to Naval Medical Officers as to Military Medical Officers. This draft became the subject of public correspondence in the JOURNAL, and the whole matter attracted the attention of the Admiralty. It was officially suggested to Mr. Hart that he should at once formally communicate the details of his scheme to the Lords of the Admiralty. This scheme was accordingly forwarded on February 14th; and the First Lord of the Admiralty having undertaken to give to this scheme his most serious attention, it was referred by the Board to a Departmental Committee, constituted of officers belonging to the Naval Medical Department, to the combatant and administrative departments of the Admiralty, and to the Treasury, who took evidence and prepared a report, which will, it is believed (should it be acted upon by warrant), concede in principle the majority of the suggestions embodied in the scheme submitted, and will include a liberal addition to the rates of pay and retirement, as well as important concessions in the matter of cabin accommodation and distribution of honours. It was hoped that a warrant of this character would have been issued before this date; there is reason to hope that it will not be long delayed; but the uncertainties attending the ultimate shape of any such official document remain until the last moment, and nothing can be counted as really gained until the warrant has been definitely issued. Meantime, the condition of the Medical Naval Service is one which is fraught with danger to the country and discredit to the administration.

Coroners' Bill.—The Coroners' Bill of 1879 was introduced into the House of Commons, with various amendments imported into it by the Select Committee of the House. Several of these amendments were in accordance with suggestions made to that Committee in a report, prepared by the Parliamentary Bills Committee of the previous year, with the valuable aid of the late Professor Alfred Swaine Taylor, Professor Maclagan, Dr. Hardwicke (Coroner for Central Middlesex), and a number of other coroners and teachers of medical jurisprudence and toxicology in the medical schools. Great improvements were provided by this Bill in the election of coroner; provision was made for the appointment of adequate medical evidence; and generally the jurisdiction and mode of investigation by the coroner was much amended; but on some important points, however, the Bill was not in accordance with the views which your Committee believe to be those which are justly in favour with the medical profession. Thus the Bill provides that the qualifications of a coroner should always be legal, and it would in future shut out medical coroners. Your Committee believe that this would be very unadvisable. They consider that medical knowledge is of the first importance to a coroner. The primary question as to whether an inquest should be held, is one which can be settled with much greater readiness by a medical man than by a member of any other profession. Such an one is far better able to understand the importance of the various circumstances attending a sudden or suspicious death, and therefore, after a few inquiries, more competent to decide the question whether or not an inquest is necessary. A few simple primary questions would be sufficient to satisfy a medical coroner at once, in many instances, that further investigation was unnecessary; and many useless inquests would thus be avoided. To restrict the office of coroner to members of the legal profession would therefore, in the judgment of your Committee, have the effect of perpetuating and increasing an abuse which notoriously exists at the present time, namely, the holding of large number of unnecessary inquests. Again, in the conduct of an inquest, in a very great majority of cases, the whole inquiry turns, or ought to turn, upon the cause of death. Not only is a medical man better able to appreciate the valuable of scientific evidence, but his technical knowledge frequently enables him to detect a flaw in the statements made before him in cases in which—as generally happens—counsel are not engaged. The fact that it may have occasionally happened that a medical coroner has committed an error for want of judgment or of legal knowledge, is of very small importance against the every-day facility which medical knowledge gives to a coroner in the discharge of his office. Of the one circumstance, however, cases have unfortunately been brought prominently before the public, whilst of the other nothing is known outside the coroner's court and the limited bounds of the medical profession.

These considerations acquire now more force than ever, since the legal functions of the coroner may be still more limited by this Bill, which would be the case if a clause were added to Section 7, so as to limit a coroner's inquest to an inquiry into the cause of death alone, in those cases in which a prisoner is charged with murder or manslaughter before another court. Under the present system, whether the coroner be legal or medical, it is found necessary in all criminal cases of importance involving charges of murder to have a concurrent inquiry before a magistrate or magistrates, and it is upon the depositions then taken that the case goes to trial. By limiting the inquiry before a coroner to the cause of death, a conflict of jurisdiction and opinion

would be avoided. The expenses attending these inquests would also be greatly reduced.

On other subjects—such as the perpetuation of the present injustice by which the resident officers of public institutions are obliged to give evidence before the coroner without fee, and the concurrent holding of double inquiries by coroners and by magistrates, respecting the criminal aspect of the same case—your Committee also made representations on the basis of a report prepared for them by Dr. Alfred Swaine Taylor and Mr. Sibley. Representations to this effect were made by deputations to the late Home Secretary, Sir Richard Cross; but the change of Government having led to the subsequent abandonment of the Bill, it will be necessary that such representations should be renewed to the present Home Secretary, Sir W. G. Harcourt, in anticipation of the resumption of propositions to legislate on this subject, which urgently calls for it.

Infant Life Protection Act.—Repeated trials having occurred of women who have been found guilty of manslaughter of infants by neglect of such infants who had been placed under their charge by parents, either in homes or in individual houses, for pay, your Committee thought it desirable officially to call the attention of the Home Office to the necessity for extending and strengthening the provisions of the Infant Life Protection Act. The passing of that Act was largely due to the revelations made in the BRITISH MEDICAL JOURNAL as the result of a systematic inquiry into the practice of baby-farming, and the proof which was then afforded that legislative restrictions were required for the supervision and inspection of public "farms" and houses where children are taken to nurse for hire. In the evidence given before the Select Committee of the House of Commons by the Chairman of this Committee and by Mr. J. B. Curgenven and Dr. Wiltshire, great stress was laid upon the necessity of extending such inspection and registration to women who took for payment nursed children, whether singly or in numbers. The Select Committee, however, ultimately restricted such registration and supervision to those who took two or more children at a time; and no provision was made at all for the inspection of any such house, if it called itself a home, or had the semblance of a public institution. The consequence of these defects has been painfully apparent in many recent prosecutions. A deputation, consisting of your chairman, Dr. Norman Kerr, and Dr. Wiltshire, was therefore deputed to wait upon the Home Secretary and make suggestions, 1st, for the registration of persons taking one child to nurse for the purpose of gain; 2nd, concerning the advisability of making the Act compulsory upon all local authorities; and 3rd, for the inclusion within the purposes of the Act of homes and other public institutions for the reception of foundlings and nursed children. The deputation was promised that due weight should be given to their representations; but here again the change of Government has made it necessary that these representations should be renewed.

Registration of Infectious Diseases.—The subject of the notification to sanitary authorities of the occurrence of cases of infectious disease has been for some years before the Association, and a Special Committee of the Association, of which Dr. Arthur Ransome was chairman, has had the subject under repeated consideration, and has brought before the Association reports in which the principle of compulsory registration of infectious diseases has been approved. In 1877, the Committee of the Association on the Registration of Disease made a reference through the Committee of Council to the Parliamentary Bills Committee, to consider "in what form the enforcement of the registration of all cases of infectious disease on the method already approved by the Association could be best dealt with by the legislature". The subject was specially discussed by your Committee during 1879 at two of its meetings; and subsequently the Chairman of your Committee entered upon a careful examination of the existing state of the question in relation to legislation; and submitted to your Committee a report showing that nine local Bills containing clauses as to the notification of infectious diseases had been passed into law with the clauses intact. A comparative examination of the clauses contained in these Bills was marked by considerable varieties in the method of reporting; especially it was noted that in such Acts an undue preference was shown for what is known as the Bolton or dual mode of reporting, in which the duty of making the notification is a duplicate duty, alike on the occupier and on the medical attendant. This was the principle of the Bolton Act, the Jarrow, Llandudno, Warrington, Blackpool, Rotherham, Leicester, and Derby Acts. In the report on this subject adopted by the Association in 1876, the principle was affirmed that the householder or the person in charge of the case should be the person responsible for the declaration of the presence in his house of diseases likely to be injurious to the community. This plan has been in operation at Nottingham. By the Nottingham plan, the medical attendant is required to fill up, sign, and deliver to the occupier or person having the management or control of the building, or in case such person is suffering from infectious disease, to the person in charge of the patient, a certificate, which must be forthwith delivered by the person to whom it is given to the medical practitioner at the Town Hall, to a clerk or servant of the corporation. If no medical attendant be called in, the occupier or other person is, so soon as he becomes aware of the existence of the disease, to give notice to the corporation forthwith. In the event of the sufferer not being a member of the occupier's family, the head of the family (resident in such building) to which the patient belongs, or, if there be no such head, the patient himself (unless prevented by such disease or by youth) is to give notice of the existence of the disease to the occupier or other person as above.

This plan seems to carry out satisfactorily the views of the majority of the Association, and, with some modifications in working, to be likely to meet the public requirements of the case. A model clause was therefore prepared by the chairman, based partly upon the Nottingham Act and partly upon general experience of the working of the system. This report was adopted by your Committee, and forwarded to the various sanitary authorities and to medical officers of health. It met with the approval of Dr. Ransome, of Dr. Bristowe, the President of the Society of Medical Officers of Health, of various other associations of medical officers of health in England, and has led to an important discussion in the Dublin Branch of the Association and to a subsequent proceeding which is now in course, in which the Irish College of Physicians is taking part, with a view to obtain adequate means for the registration of infectious diseases in Ireland. The principles which your Committee have adopted in this matter have been those which have been repeatedly approved by the Association, and which have met with a large assent of the medical officers of health generally as well as of the Local Boards of Health; and the principle of the registration of infectious disease has been now so universally accepted as one of great importance to public health, and has been so extensively introduced into recent local Acts, that there can be no doubt that the time is not far distant when in an amended Public Health Act it will form part of the general sanitary law of the country. Hence the desirability of establishing satisfactory precedents in local Acts, which may in the meantime provide clauses for the purpose of carrying out this principle. A document embodying the chairman's report, with an analysis of the local Act and the suggested model clause, was extensively distributed among the sanitary authorities of England, and has since been the subject of correspondence with several of them.

Vaccination from the Calf.—It was announced in the last annual report of your Committee that, in the view of the introduction of the Bill by Dr. Cameron, M.P., in the House of Commons, for the purpose of obtaining personal and accurate knowledge of the existing state of the practice of animal vaccination at various continental places, your chairman had made two visits to Brussels, and personally investigated the manner and extent to which vaccination with calf-lymph is carried out in Belgium, where it has for many years been in general operation; how far this practice is in favour with the profession in Belgium; and what is the evidence of its success or non-success in the various countries of Europe. Subsequently, the chairman in the recess visited the animal vaccine station of Holland, and, as the result, he submitted to your Committee a detailed report founded upon these personal investigations, and upon extensive documentary evidence obtained from other countries, giving the results of vaccination from the calf, as shown by such documents, in the various countries of Europe, in India, and in America. This report terminated with proposals which he drew up for the establishment of a central government station for the continuous supply of fresh calf-lymph to public vaccinators in Great Britain. This report, which was printed in the BRITISH MEDICAL JOURNAL of November 26th, was laid before a Conference which your Committee thought it desirable to call in order to consider the whole question, with a view to bringing to bear upon it the experience of the most distinguished experts, and of public vaccinators, and the profession generally. The report was reprinted in pamphlet form for the use of the Conference which was held on December 4th, 1879, at the rooms of the Medical Society of London, and at subsequent dates. To this Conference the President of the Local Government Board, Mr. Sclater-Booth, deputed the attendance of Dr. Ballard, one of the most experienced and able inspectors of the Board, in order to report to him the general course of the debate and any conclusions which might be arrived at, as well as to communicate to the Conference the views of the Government upon the subject. In summoning the Conference, your Committee had the assistance (which they desire to acknowledge with thanks) of the Metropolitan Counties Branch of the Association, who employed their machinery for the purpose of communicating the documents to their members, and made a small grant for the purpose of defraying the expenditure of summoning the Conference. The Conference was attended by Dr.

Warlomont of Belgium, who presides over the State Vaccine Institution of Brussels for vaccination from the calf, and whose services and experience in this matter are probably greater than those of any other person in Europe. The readiness with which Dr. Warlomont accepted the invitation of your Committee, and the able statement with which he favoured the conference, was of essential service in contributing to clear up the difficulties of the subject. Sir Thomas Watson, Dr. Cameron, M.P., Mr. Ceely (Aylesbury), Mr. Greene (of Birmingham), Dr. Stevens (Local Government Inspector), Professor Simmonds of the Veterinary College, and many others, took part in the discussion, which lasted over three sittings. The proceedings of this conference were widely reported, and attracted great public attention as well as professional interest. The results of the conference were such as to justify your Committee in adopting the conclusions of the report which had been laid before the conference by the chairman of your Committee as a basis of discussion, and in urging them upon the attention of the Local Government Board. This they did by deputation, suggesting that a national vaccine establishment should distribute lymph direct from the calf in a like manner as is done in the Belgian Vaccinal Institute, so that by these means medical men, who might be obliged to appeal to Whitehall for material to start their vaccination, would not feel that they were inoculating their patients with matter of which they must take the previous history for granted; and the Government, on the other hand, would be able to assert much more satisfactorily than at present, that the lymph which it sent out was absolutely pure. Under such a system, the Government would establish a central vaccinal establishment, at which a small series of calves would be maintained, and from week to week fresh vaccinations of such heifers would be made. This would take the place of central vaccination stations now maintained by Government, the services of the present able vaccinators [illegible] for this new work. The lymph collected would be distributed upon demand, as at present, without payment, to public vaccinators, for maintaining arm-to-arm vaccinations at their stations, and probably to all registered private practitioners on payment of a small fee, such as sixpence per tube or per ten points—a rate of payment now recognised by the Local Government Board under certain circumstances. In this the public vaccinators would always have at their command, for the [illegible] new strains, a supply of lymph of undoubted purity of source and protective energy; while the private practitioner could, for an insignificant sum, secure for his patients the like privilege. This would place the vaccination system of the country on a larger and firmer basis than it now occupies, and would relieve both public and private vaccinators from many of their present difficulties, while it would cut away all solid ground for that mischievous agitation against vaccination which gives so much trouble to legislators and magistrates, and does much to interfere with the "means necessary for the extinction of small-pox". The representations of the deputation to this effect were received with attention by Mr. Sclater-Booth, but he was unable then to undertake to accede to these suggestions, and the reply which he gave afforded reason to fear that further efforts would be necessary before the Government could be induced to adopt them. Very shortly afterwards, however, Dr. Cameron substituted for his previous Bill a resolution affirming the desirability of a system such as that suggested in the above-mentioned report by the chairman of your Parliamentary Bills Committee; and he introduced it into the House of Commons, and supported it by a long and able speech, the resolution being further supported by Dr. Farquharson and other members of the House. The new President of the Local Government Board, Mr. Dodson, announced that the Government would accede to the proposition, and his predecessor, Mr. Sclater-Booth, expressed his approval of the course pursued. This result is extremely satisfactory to your Committee, and is, it is believed, gratifying to the Association and the profession at large. The machinery of the Association has been successfully employed in the first instance in subjecting to a careful sifting examination, by the most qualified persons, the materials diligently prepared for their consideration by the [illegible] of your Committee; and the influence of the Association has been felt in the rapid influence exerted upon public opinion, and in the speedy official introduction of administrative improvements [illegible] matured and examined at the conference, and the conclusions then ratified by so weighty an assemblage. Great thanks are due to Dr. Cameron for the energy with which he undertook the treatment of this subject, and for the course which he [illegible] during the progress of the [illegible] Committee, and approved by your conference, by his subsequent Parliamentary action. The Local Government Board [illegible] the proposition for establishing a central department for the supply of calf-lymph to public vaccinators; they have, however, demanded time in order to make the necessary preparations in the best possible manner, so as to afford the most complete guarantees that the calf-lymph is secured from the best sources, taken in the best manner, and distributed under conditions which afford the best guarantees of success. Up to the present time, no public announcement has been made, nor any date fixed for the opening of the new Animal Vaccine Station; but no doubt this will take place without undue delay, and its results will be looked forward to with very great interest.

Vaccination Acts Amendment Bill.—At the same time that Mr. Dodson made in the House of Commons the satisfactory announcement that he would establish a central station for the cultivation and distribution of calf-lymph, he intimated that he proposed to make a concession to the outcries of the limited class of persons known as "anti-vaccinators" by introducing a measure for the abolition of multiple penalties for neglect or refusal of vaccination. Shortly afterwards, he redeemed this pledge by introducing a Bill which proposes to terminate all proceedings, provided that the recusant has been fined once twenty shillings or twice in a less sum (say sixpence on each occasion). It was evident that any such relaxation of compulsion in vaccination, especially when made by a special permissive Bill of this kind, and in response to speeches in the House of Commons denunciatory of the whole principle of compulsory vaccination, would be likely to have a seriously injurious effect upon the progress of vaccination throughout the country, and would be interpreted by the antivaccinating league as a concession to the proceedings by which they aim at abolishing vaccination altogether in the future, and in the meantime limiting it as much as possible by evading or defying the compulsory law. It would, in fact, be regarded as a measure for the sale of indulgences from vaccination for a sum not to exceed twenty shillings. That it has been so interpreted, has become evident from the proceedings of a deputation of these gentlemen, who, while denouncing compulsory vaccination altogether, intimated to Mr. Dodson that they would accept this as an instalment of future legislation in that direction. Your Committee felt it right to make a very active opposition to this pernicious measure. In order that it might not be supposed that your Committee were proceeding upon a merely professional impulse, and without due knowledge of all the facts, the chairman of the Committee prepared a detailed report on "Vaccination legislation in relation to the principle of compulsion"; showing the history of the first English vaccination law of 1840, which was the immediate outcome of the labours of your Association (then known as the Provincial Medical and Surgical Association); and detailing the steps by which, in the Vaccination Act of 1853, the principle of compulsion was established and regulated; examining the proceedings of the Committee of 1871, and showing that in 1874 Parliament had by a further Act regulated the duties of guardians and their offices, in relation to the instituting and conducting of the proceedings to be taken to enforce the working of the Vaccination Acts in a satisfactory manner. The Bill of 1871 had contained a similar provision to that which Mr. Dodson revived in the present Bill; but your Committee were influential in procuring the rejection of that clause in the House of Lords on that occasion, and they resolved on this occasion to elicit such an expression of the opinion of the profession and of the public as might, it was hoped, be conclusive, and prevent at least the reintroduction of any such measure for some time to come. With this view, the opinions of the profession were largely taken; communications were opened with the Branches of your Association, and with boards of guardians and local sanitary authorities generally; and as the result a highly influential deputation from the Association waited upon Mr. Dodson on July 26th, in which your Committee was supported by a strong expression of the opinions of Sir William Jenner, Sir George Burrows, Sir Thomas Watson, and other persons of weight, while Dr. Quain and Mr. Erasmus Wilson were able to put before Mr. Dodson statements as to the opinions of the Colleges of Physicians and Surgeons of England, which greatly aided the influence of the representations of your Committee. The deputation was also largely attended by hospital physicians and surgeons of London, and by many members of the Association from the provinces, including Dr. Chadwick of Tunbridge Wells, and Dr. de Bartolomé of Sheffield, former presidents of the British Medical Association. Your Committee have to acknowledge on this, as on many other occasions, the warm aid of many members of Parliament; and especially their thanks are due for assistance rendered to them during the course of the year by Dr. Cameron, M.P., Sir Trevor Lawrence, Bart., M.P., Dr. Lyons, M.P., and Mr. Mitchell Henry, M.P. They have also on this year, as on all former occasions, always received ready kindness, valuable counsel, and influential aid from the Right Hon. Lyon Playfair, M.P., who, though not himself a medical man, has always devoted his attention most readily, and given his warm and highly influential assistance in Parliament, to all matters affecting the general interest of the medical profession and the public service. It is believed that the weighty representations which have been made to the

Government of the injurious character of the above measure, and the widespread opposition which has made itself felt throughout the country, from lay as well as from medical persons, will induce the Government to abandon the Bill, and will make them very unwilling to reintroduce a measure so little called for by any considerations whatsoever, and so highly injurious to the general health prospects of the country. Your Committee recommend that the best thanks of the Committee be given to the members of Parliament mentioned, and that they be nominated as honorary members, by virtue of their connection with the medical profession, and their position as members of the House of Commons.

ERNEST HART, Chairman.

POSTSCRIPT TO ABOVE REPORT.

Your Committee cannot conclude this report of the proceedings during the past year without expressing the debt which they owe to their Chairman for the very large amount of time and attention which he has given to the consideration of the important public interests of the profession involved in the matters here discussed; for the careful and laborious reports which he has prepared and issued as materials for judgment on each of the principal subjects treated; and for the judicious conclusions arrived at in each case, as is evidenced by the fact that in all instances the conclusions of such reports have in the end been adopted by the authorities who have ultimately been called upon to decide the respective questions. The amount of trouble involved is by no means apparent even on the perusal of these reports, which together constitute this year a moderate-sized volume of permanent interest in sanitary literature. Large correspondence has been necessary in connection with many of the questions so treated, some of them being questions of great complexity, and involving a large number of varied interests; and your Committee believe that they are only expressing the opinion of the Association at large in doing that which they have hitherto abstained from doing, by expressing their own warm sense of indebtedness to the Chairman for the labour which he has voluntarily incurred, and for the conspicuous ability, judgment, and public spirit with which he has dealt with so many great questions on behalf of the profession and the Association, and has brought them, for the most part, to a rapid and highly satisfactory conclusion. The work of the year has been unusually onerous and extensive, and its results have been proportionately useful.

REPORT OF THE MEDICAL REFORM COMMITTEE.

IN the report of the Medical Reform Committee, laid before the Association at the brilliant and highly interesting meeting at Cork, in August of last year, it was suggested "that the long sustained struggle of the Association on behalf of the profession, might reasonably be expected at no very distant period to be crowned with success". The action of the Medical Reform Committee during the preceding year, as for many previous years, was approved *nem. con.* by the general body of the Association, and the Committee was re-appointed, with power to add to their numbers. The Committee have availed themselves of this power, and have thereby obtained the valuable services of Mr. Ernest Hart as a member of the Committee. They have, however, to regret the retirement of Dr. Grimshaw, who, having been selected by the Government to fill the post of Registrar-General for Ireland, did not feel himself free to act any longer on the Committee, although the labours of the Committee, of which he had proved himself a zealous and active member, continued to receive his sympathy and approval. At the time of the meeting at Cork, various Bills, including one introduced by the late Government, had been before Parliament for more than one session. These Bills embodied the various shades of opinion of the parties by whom they were promoted, and had been referred to a Select Committee of the House of Commons. This Select Committee had not concluded the examination of all the necessary witnesses before the prorogation of Parliament in 1879, and could not, therefore, report on the question; but it became manifest, during the sitting of the Committee, that the Association and the profession had recovered the influence and power which had been gained by steady persevering action on the part of the Association before the passing of the Act of 1858, when the Government of that day applied to the chairman of the Medical Reform Committee of the Association for counsel and guidance in the passing of the Bill of 1858. The Association failed to make that Bill as perfect as it desired, but, in the face of powerful opposition from some of the chartered corporations, it was driven even to accept even that modest modicum of reform, in the hope of one day realising a better state of things. The most strenuous efforts of the Association, even to make the double qualification an essential condition for admission to the *Medical Register*, were defeated, although indispensable for obtaining any Poor-law appointment.

The evidence taken before the Select Committee was ordered to be printed by the House of Commons, and contains much important matter. In addition to the President of the General Medical Council, who appeared in somewhat of a judicial capacity, seven other members of the General Medical Council were examined, of whom four were in favour of the conjoint scheme, and three against; three decidedly in favour of direct representation, besides Professor Turner, who sympathised with it and thought it desirable, and the same number against. The exact cost of the meetings of the General Medical Council was also given in evidence by Mr. Miller at £414 15s. for a session of one day; £190 as the average cost per day, or 16s. per minute; and one session of thirteen days, that ending May 14th, 1877, when the debate on conjoint boards took place, cost £2,204 4s. 11d. This expenditure, derived from the profession, and not from the universities and corporations represented in the General Medical Council, stands out in striking contrast to the self-denying and unremunerated services of the members of the Committee of Council of this great Association.

Since the last annual meeting of the Association, the action of the Medical Reform Committee has been much trammelled by the uncertainty clouding the political atmosphere. During the month of January last, rumours of the impending dissolution of the late Parliament were rife. It was doubtful even whether Parliament would meet, and, in case of meeting, whether the session would be of sufficient duration to admit of progress being made. Parliament, however, did meet, and all the Medical Bills of the preceding session again passed the second reading, and were again referred to a Select Committee of the House of Commons. Further evidence was taken, that of Dr. Gairdner from Glasgow, and Dr. Struthers from Aberdeen. The evidence of both was against the Conjoint Scheme; that of Dr. Gairdner might be considered rather in favour of Direct Representation. In this conjunction, the Medical Reform Committee met in London on February 23rd, to consider the propriety of suggesting further witnesses before the Select Committee, and it was resolved that Dr. Alfred Carpenter, the President of the Council of the Association, and Dr. Wade of Birmingham, should be tendered to the Select Committee by Mr. A. Mills as witnesses on behalf of the Association; Dr. Barnes to represent the obstetrical branch of the profession, and Dr. Grimshaw as an independent witness.

About this time, however, the late Parliament was dissolved, and of the members whose names were on the back of the Medical Act Amendment Bill (No. 2) the Right Hon. Mr. Childers became a Cabinet minister, and our able, warm, and devoted advocate Mr. A. Mills was thrown out of Parliament.

When the new Parliament met, the Government were asked by Mr. Errington whether they would re-appoint the Select Committee. The Right Hon. the Vice-President of the Privy Council, when replying in the negative, stated that it was the intention of the Government to consider the subject during the recess in all its bearings.

The Reform Committee, having been advised that it would serve no useful purpose to re-introduce a Bill on behalf of the Association amidst the great pressure of Parliamentary business, decided to seek an interview with the Government.

The General Medical Council were about to hold their annual session, and the Medical Reform Committee therefore deemed it wise to delay approaching the Government until the result of the session, as regarded medical examination and other points of medical reform, became known. The Council met, and from the report of its proceedings it may fairly be concluded that, as far as the Conjoint Scheme is concerned, it is, in as much as depends on the Council, as far off as ever, and the prospect of an uniform minimum qualification as an entrance to the profession is not likely to be attained unless pressed for from without the Council.

All hope from the action of the General Medical Council being thus dissipated, the Medical Reform Committee, on behalf of the Association, applied for and obtained an interview with the Right Hon. Earl Spencer, Lord President of the Privy Council, on Friday, the 31st ultimo.

The Lord President was accompanied by the Right Hon. Mr. Mundella, the Vice-President. The proceedings at this interview have been fully reported in the JOURNAL, so that the action of the Association may be fully known in all its details to the whole profession.

During this interview, it transpired through the President of the Privy Council, that the President of the General Medical Council and other members of the General Medical Council had communicated unofficially with him; the nature of the communications did not transpire, so that, when the deputation were asked by the Vice-President whether they were in agreement with these gentlemen, the deputation was unable to give any answer.

It is with deep regret that the Committee observed on the part of the Government a decided reluctance to attempt legislation from a fear of

the power of the corporations in Scotland and Ireland; but the Committee hope, when the Government have ascertained the general feeling of the profession throughout Ireland and Scotland, as well as in England, in favour of medical reform, that then hesitation will vanish.

The Lord President distinctly admitted that the subject is an important one, and that the Government are bound to deal with it, if only they see their way through it; and his lordship also stated that if they did enter on the subject he undertook to enter into communication with us, and hear distinctly, plainly, and categorically, all the views that the Association may wish to lay before him.

The Committee have to thank the members of Parliament who introduced and supported the deputation. The remarks of Mr. G. W. Hastings, son of our founder, Sir Charles Hastings, were peculiarly interesting and effective.

The Committee are happy in being able to inform the Association that their proceedings have gained to the cause of the Association many able and influential members of the legislature. Under the circumstances, the Committee have to recommend their re-appointment, with power to add to their number. EDWARD WATERS, M.D., Chairman.

FORTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CAMBRIDGE, Aug. 10th, 11th, 12th, and 13th, 1880.

THIRD GENERAL MEETING, THURSDAY, AUGUST 12TH.

[Continued from p. 272 of last number.]

Report of the Scientific Grants Committee.—Dr. WADE presented the report of this Committee. (It was published at page 223 of the JOURNAL for August 7th.) He moved:

"That the report be received and adopted; that a sum not exceeding £300 be granted for the purposes of the Committee; and that the Committee be reappointed as follows, with power to add to their number: Dr. Wade, Dr. A. Carpenter (President of Council), Dr. Falconer, Mr. W. D. Husband, Mr. Alfred Baker, Dr. Lauder Brunton, Dr. C. Chadwick, Dr. Michael Foster, Mr. Ernest Hart, Dr. R. McDonnell, Dr. W. Rutherford, Dr. Burdon Sanderson, Dr. Edward Sieveking, Dr. A. P. Stewart, Dr. E. Waters, Mr. C. G. Wheelhouse, Dr. S. Wilks."

In proposing this, he wished to repeat what was said in the commencing paragraph of the report respecting the loss sustained to the Committee, to science, and to the profession, in the death of Mr. Callender. The feeling of the Committee was, that no one had served the cause which the Committee had at heart with greater devotion and assiduity than had Mr. Callender. [*Hear, hear.*] The work of the Committee was not, to say the least, diminishing in importance; and some of the results, which had been given to the meeting, of the Committee's labours, as well as those to come, would convince the members of the Association that the money spent was well spent; for the reports were as important in their results as any which had preceded them. [*Cheers.*] He would particularly refer to the report of the Glasgow Chloroform Committee, of which the third report would be presented by Dr. Newman of Glasgow.

Dr. MAPOTHER (Dublin) seconded the motion.

The Rev. Dr. HAUGHTON (Dublin) remarked that he could not advise the Committee to take up investigations which the Royal Society had undertaken; for the Royal Society could spend £5,000 where the Committee could only spend £50.

The report was then adopted, and the Committee reappointed.

The Joint-Committee on State Medicine.—Dr. A. P. STEWART moved:

"That the Joint-Committee on State Medicine of the British Medical and Social Science Associations be appointed as follows, with power to add to their number, viz.: Dr. J. T. Arlidge, Dr. Edward Ballard, Dr. F. T. Bond, Dr. W. H. Corfield, David Davies, Esq., T. J. Dyke, Esq., Dr. R. W. Felkner, Dr. W. T. Gairdner, Ernest Hart, Esq., Alfred Haviland, Esq., Dr. James Lewis, John Liddle, Esq., Dr. H. F. Parsons, Dr. G. H. Philipson, Dr. Arthur Ransome, Dr. M. K. Robinson, Dr. Joseph Rogers, T. Heckstall Smith, Esq., Dr. J. W. Tripe, Dr. N. Tyacke, Dr. Edward Wilson, William Clode, Esq., *Honorary Secretary;* W. H. Michael, Esq., Q.C., *Honorary Secretary;* Dr. A. P. Stewart, *Honorary Secretary.*"

He said that the was a very important subject, dealing with the questions which came under the denomination of "State Medicine". During last year, the Committee might be said to have been in abeyance so far as work was concerned, for the reason that there was no Parliamentary work, no Bills of the nature with which the Committee dealt being before Parliament. Next year, it was expected that there would be very important work before the House of Commons; and, therefore, he moved the reappointment of the Committee as named, with power to add to their number.

Mr. ERNEST HART seconded the motion, which was carried.

The Address in Surgery.—The President then introduced Mr. TIMOTHY HOLMES, M.A., who was received with very warm applause, not only by his professional brethren, but by his fellow members of the University, he having received his education in Cambridge. Mr. Holmes, who wore his Master's gown, delivered the address, which was printed at page 252 of last week's JOURNAL.

Sir H. THOMPSON said that he felt very happy in being entrusted with the task of proposing a vote of thanks to Mr. Holmes; and, before a single word in support of that was said, he was sure that the meeting would completely endorse it. [*Cheers.*] Though this was so, he could not allow the resolution to be placed before the meeting without saying a word or two; and, in saying this word or two, he would say, first of all, that he was sure they would join with him in classing this admirable address as one of the most thoroughly practical they had listened to; and that it was worthy of the orator in the position of Mr. Holmes that day, who was standing before his *Alma Mater*, and showing her one of her sons who had gained the great distinction and honour of being chosen to address this great Association—the greatest medical society in the world—in the Senate House of his ancient University. [*Loud cheers.*] And while they were rejoicing at the sight of Cambridge welcoming back to her bosom one of her alumni, with his well won honours and distinctions as a metropolitan surgeon, they would also join in congratulating their worthy President, Professor Humphry, upon the efforts he had made, and was making, to establish in that eminent seat of learning the medical school to which Cambridge was entitled. [*Cheers.*] It would be merely a trite observation to say that it was of immense importance to the profession that those who were to be members of it should have a first-rate education; an education such as was received by the members of a first-rate university. [*Hear, hear.*] He hoped the example would not be lost on the sister university of Oxford. Those who came to this ancient seat of learning as its guests, could not but see how great were the advantages to any man, of commencing his career in connection with an old university; and they all would desire that the utmost success should attend the organisation of medical schools there, and at Oxford as well. [*Cheers.*] On the subject of the address they had just heard, he would make a remark upon what Mr. Holmes had termed "conservative surgery", in paying the tribute he had paid to Sir William Fergusson—a tribute in which all would join. [*Cheers.*] The term "conservative surgery", however, should not be passed by silently, for what was not "conservative" in surgery—"conservative" in a true sense—was not worthy the name of surgery; and all improvements in the art went in the direction of "conservative surgery"; for all the practical results of any value in improvement were in the direction of saving life, of saving limbs, and of lessening pain. [*Loud cheers.*] And, while he was glad to accept all improvements which came from abroad, yet he must point out that a vast deal of the knowledge now possessed, and the results now attained, had originated in these islands. The success in these particulars was a sign of the strongly marked characteristics of the Saxon character; but, while he said this, he could not but remember that these little islands formed not the only home of our race, but that these characteristics followed the race in the Greater Britain, whence had come across the sea the Nestor of surgery (Dr. Gross), whom he saw upon the right—one of the great leaders of the profession across the Atlantic. [*Cheers.*] And the Association did not desire to speak of the triumphs of English surgery; but they would speak of the triumphs, on behalf of suffering humanity, of the surgical art of the English-speaking race throughout the world. [*Cheers.*] He moved:

"That the best thanks of the Association are due and are hereby given to Mr. Holmes for his able and interesting Address in Surgery."

Mr. CADGE (Norwich) seconded the motion, and said it was only natural that, when the meeting was to be held at Cambridge, the choice should have fallen upon Mr. Holmes to deliver the Address in Surgery, he being an eminent surgeon of St. George's Hospital in London and a graduate of the University. [*Cheers.*] To compose an address of this character required a vigorous grasp of the subject, a clear intellect, and severe critical acumen; and all these qualities were combined in Mr. Holmes. Many there must have felt, in the course of the address, the severe critical powers of Mr. Holmes; but, at the same time, they would have felt that his criticism was devoted to the maintenance of what he felt to be the truth, and that it could be generous and large-hearted. [*Cheers.*] There would be great pleasure felt by all at listening to the justice rendered to the memory of the great surgeon who had

departed, and the tribute paid to the powers of the great surgeon who had succeeded Fergusson at King's College—[*cheers*]—in an address which would live long in the memory of all who had the advantage of hearing it. [*Cheers.*]

The PRESIDENT declared that the meeting had already passed the resolution; it was passed in their minds before it was proposed, and the thanks given by the acclamation with which those eloquent remarks were received, as well as by their attention, by the pleasure with which they obviously received that admirable address, for, during the whole time, not one person left the Senate House, and not an eyelid drooped. [*Cheers, and a laugh.*] It was evident that the Association was proud of Mr. Holmes, and the University was proud of her former pupil. [*Cheers.*] She welcomed him back heartily to the Senate House, to the scene of his former efforts, and the scene of the great and well-earned triumphs of his early manhood. [*Cheers.*]

Mr. HOLMES made his acknowledgments in a few words, amid loud cheers, and resumed his seat.

Presentation of the Gold Medal.—The Senate House was then the scene of an interesting ceremony, in the presentation of the gold medal of the Association, as voted, to Dr. William Farr. The House was well filled, and many ladies were present. The award was made by the Committee of Council in the following terms.

"That the gold medal of the Association be awarded by the Committee of Council of the British Medical Association to William Farr, M.D., F.R.S., D.C.L., C.B., as an expression of their high appreciation of his long, unwearied, and successful labours, in behalf of statistical and sanitary science; as a recognition of the light he has thrown upon many physiological and pathological problems, and on account of the extraordinary services his work has rendered to the advancement of the health of the nation."

The PRESIDENT, addressing Dr. ACLAND, said: Professor Acland, you have been requested by Dr. Farr to receive, on his behalf, this gold medal, which is the highest honour which the Association has the power to give, or our profession to confer. In conveying it to him to whom it has been voted, you will kindly tell him that this medal is voted only for the very highest services in the profession. He has given, in the knowledge of all men, these highest services; and they have been long continued; for he has given a life-long labour to sanitary work and to vital statistics—labours which, in themselves, have had little that was attractive; labours which have brought to him but barren rewards; but they have been labours which lie at the foundation of all researches in medical science. [*Hear, hear.*] It is a great grief to the Association that Dr. Farr has been unable to be present in person, and that this, like many other rewards in life, has come when life's labour is nearly done; but it will be a great solace to him, Dr. Acland, that this will be conveyed to him through yourself—through one who is held in high estimation, who stands so high in public and professional regard, who has spent the greater part of his life in an endeavour to raise the study of natural science in Oxford, and thus place professional education upon a broad basis. [*Cheers.*]

The presentation was then made, amid loud cheers.

Dr. ACLAND, in reply, said that he would, to the best of his ability, convey to the valued friend of them all, Dr. Farr, the gold medal which had been thus received; and would inform him that it was the highest testimony which the profession could give of esteem and regard for the great services he had rendered to the profession and to the country; indeed, it must be said for services rendered to the world. [*Cheers.*] The speaker proceeded to narrate the circumstances under which he had been deputed by Dr. Farr's daughter to receive the medal on her father's behalf; and then, dealing with his knowledge of Dr. Farr's character, assured his audience that Dr. Farr would receive this medal, as it was offered, as a token of sympathy with his unwearied scientific work—a work which was ill-recognised and scarcely paid; and it also betokened that Dr. Farr's professional brethren in this great Association had only made an acknowledgment which would be shared by the whole civilised world. [*Cheers.*]

The ceremony then ended. The gold medal was accompanied by an engrossed scroll on vellum, bearing a copy of the resolution.

FOURTH GENERAL MEETING, FRIDAY, AUGUST 13TH.

THE Fourth General Meeting was held in the Senate House, at 10 A.M.; Dr. HUMPHRY, F.R.S., President, in the Chair.

Address in Physiology.—This address was delivered by MICHAEL FOSTER, M.D., F.R.S., Trinity Prælector in Physiology. It is published at page 285.

Professor LISTER said that the pleasing duty had been imposed upon him of moving a vote of thanks to the reader of the address; and he felt that all would be glad to join in thanking Dr. Michael Foster for the luminous address he afforded them on the nature and scope of physiology—that noble science which must ever underlie the practice of medicine and surgery. [*Cheers.*] Dr. Michael Foster must be considered the foremost teacher of physiology in the British islands; and the audience had to thank him for the suggested modifications of the curriculum of the medical student, suggestions which came with all the more force as coming from his practical experience. The speaker felt the utmost sympathy with the last suggestion of Dr. Foster; for, while he was convinced that nothing would compensate for lack of labours in the dissecting-room, yet it was a great mistake to compel the student to keep his mind filled during the whole of his student career with the details of dissecting-room work. [*Hear, hear.*] Professor Lister also drew attention to the reverent spirit evinced by Dr. Foster, and concluded by moving:

"That the best thanks of the Association are due, and are hereby given, to Dr. Michael Foster for his able and eloquent Address in Physiology."

Dr. ANDREW WOOD (Edinburgh) said he had never expected that he should be called upon to "wag his pow in a pulpit"; but he did not remember ever having a task more in consonance with his feelings than that of seconding the vote of thanks to the reader of the most suggestive address to which they had just listened. He would not presume to speak upon the scientific part of the question; but, as a very old general practitioner, he would say that, when he looked back upon what physiology was when he started, and remembered that it was, with many other things, ridiculed, and when he saw what it was now, he could not but say that, in all the progress which medicine had made, it had advanced in nothing more than it had in respect to physiology. Many of the older practitioners had neither the time nor the ability to enter into such investigations as had been entered into by the eloquent lecturer; but they could turn to the book of Dr. Michael Foster on *Physiology;* and, if they were inclined to be students, they would be carried along with him, and learn a great deal of what he, in his collegiate position, had been enabled to gain for the profession. [*Cheers.*] The speaker was inclined to go with Dr. Michael Foster in what he had stated in regard to the present system of examination. The students of the present day were over-educated in being taught many things, though the many things were not very well taught. Then, too, in regard to examinations, they were now almost pushed to their utmost limits, and should not go much beyond those limits. To have the curriculum at present imposed, and the examinations on them compressed in a four years' course, was "cruelty to animals". [*A laugh.*]

The PRESIDENT said that, before he put the resolution—which really needed no remark—he would say a word or two upon the matters which had been alluded to in Dr. Michael Foster's address. The audience had just been listening to a member of the General Medical Council; he himself was another; and the President of that Council had just come to him (Professor Humphry) and said, "This should be printed in letters of gold; and let us take it into consideration in the General Medical Council". [*Cheers.*] The General Medical Council was not so deaf to the voice of the profession, and not so thoughtless of the real needs of the profession, as it was sometimes imagined to be. But that was a part of a very large subject, and would be dealt with by the body to which he had referred. [*Cheers.*] In this address, the audience had been taken into the inmost courts of that greatest of all temples, the Temple of Physiology; and, if they had not been shown the secrets of it by their lecturer, who had said so little of himself, and was so modest and diffident regarding himself, yet he had indicated the secret of his own success. They could see that Dr. Foster knew how to blend real humour with deep philosophy; and they must have noted his possession of good nature, consummate ability, and marvellous good sense. Good nature, great ability, and good sense would, indeed, not make any man a Michael Foster, but would make a Foster a success. [*Cheers.*] In Dr. Michael Foster, the audience had been addressed by one who was not long since a general practitioner, and knew, from his own experience, what were the wants of the general practitioner. Dr. Michael Foster was a general practitioner in the country—in Huntingdon; and on calling upon him some years ago, to consult him about a patient, he (Professor Humphry) found him in the laboratory—[*cheers*]—that laboratory being the best room in his house—a room given up to physiological experiments, where, at the time of the visit, Dr. Foster was contriving to create those odours which physiologists, of all men, knew best how to create. [*Laughter.*] Thus, as a general practitioner himself, Dr. Michael Foster had spoken to them as general practitioners; and he was otherwise well qualified to speak of the real wants and requirements of those in general practice. [*Cheers.*]

The vote was carried by acclamation, and the proceedings terminated.

Concluding General Meeting.

The concluding general meeting was held in the Senate House at 1.30 P.M., Dr. Humphry, F.R.S., presiding.

Report of the Habitual Drunkards' Committee.—Dr. A. Carpenter, President of the Council, presented this report. It was published at page 281 of the Journal for August 14th.

Dr. Carpenter, in moving that the report be received and adopted, and the Committee reappointed, said that the only thing gained by the Act of Parliament was the Parliamentary recognition of the principle for which the Association had been so long striving, for what Parliament had given with one hand it had taken away with the other. It was possible that the Committee might, as they suggested in the report, obtain the funds to establish a "home" for inebriates, and some result would follow; but not the extensive results to which they had in bygone times looked for.

Dr. Morgan seconded the motion, and said that the legislature would see that more power was needed than was given at present.

Dr. Fitzpatrick (Liverpool) did not see why the profession should be called upon to assist in making abortive legislation practical, and he ridiculed the idea of the profession raising £2,000 to deal with the inebriates of the country.

Mr. S. S. Alford (London) explained that the only purpose of the Committee was to aid in the establishment of a home for inebriates, and not to deal "with the inebriates of the country". If a home were established and worked with the end of restoring to usefulness and to society the victims of this terrible vice, the practical character of the work would be seen. Magistrates would then be brought to assist the work by offering the persons who were brought before them charged with frequent drunkenness, with the choice of spending a time in an inebriate home or in prison. The late Parliament, which had given this imperfect piece of legislation, was in unlawful connection with the sale of drink; but the measure could be made to work. The sum of £2,000 was not expected from the profession, though something would be got towards it in the profession, and the effort would be followed by others throughout the country.

The report was adopted, and the Committee reappointed.

Dr. Joseph Rogers (London) proposed a resolution on the report:

"That the support of the Association be requested, with the view of obtaining from the legislature some provision whereby habitual drunkards who become chargeable to the rates should be placed under such restraint as may lead to their being reclaimed."

The mover spoke from his experience as having been the medical officer of two workhouses, and as having come face to face, as such, with a very large amount of drunkenness. He spoke of the class of people who were "in and out" of the workhouse, being brought in when their drunken habits had incapacitated them from remaining in the ranks of life; and then, when they were better, they discharged themselves, only to return after a time, as bad as ever. Some of these people had continued this course for more than twenty years, and the guardians had no power to restrain them or to detain them; but, as the ratepayers had to pay for the support of those persons who brought themselves into this condition, the power should be given to those who had to support them to restrain them from injuring themselves. [*Hear, hear.*]

Mr. Wickham Barnes (London) seconded the motion.

Mr. S. S. Alford supported the motion.

Dr. Royle (Manchester) supported the motion, and hoped that the Committee would set their wits to work for suggestions whereby the present evils would be remedied.

The resolution was carried unanimously.

Dr. A. Carpenter moved that Dr. Joseph Rogers be added to the Habitual Drunkards' Committee.

This was seconded and adopted.

Report of the Parliamentary Bill Committee.—Mr. Ernest Hart presented this report. (It is published at page 293). Mr. Hart remarked that the bases of the report had appeared at successive periods in the Journal, and it was rather a voluminous document, summing up a great deal of work; but, as it contained no new proposition—a very important reason, which did not apply on previous occasions—he suggested that the report be taken as read. He remarked that, during the ten years the Committee had been at work, he did not think it had ever worked so efficiently and usefully as it had this year. Besides carrying through calf-vaccination as a measure of State, quashing the Vaccination Acts Amendment Bill, and many other parliamentary proceedings, the Committee had extracted from the Government the improvements in the Army Medical Service, and were now informed that the warrant for the Naval Medical Service, promised at this time, was drawn up, and that it was merely waiting for the calculations. Although this warrant was so near completed, the Committee had urged candidates for the Naval Medical Service to hold back until the warrant was issued; and he had heard that there were only five candidates to meet one hundred vacancies. It was satisfactory to see that the young men in the schools would not join the service until the conditions of the service were improved; but it must be unsatisfactory to the country, in showing that the conditions of the service were not acceptable to the medical profession. He believed that the work thus recorded in this report would be of no small value to the Association, and of no less value to the country; and he must add that the Committee's work had a large direction towards the interests of the country generally. [*Cheers.*] He trusted that the profession would make this principle felt; that they had no separate interests to advocate; that what the profession sought to attain was for the interest of the country at large.

Dr. J. Crichton Browne (London), in moving the adoption of the report, said that it was in reality a Committee of Public Safety, and strove for the good of the public generally. He reviewed the various acts of the Committee, and then proceeded to speak of the services of Mr. Ernest Hart, to whom he said the Association and the profession owed an immense debt, which could never adequately be repaid; and who had shown a conspicuous ability and power of massing and mastering details in his elaborate reports not less remarkable than the sound judgment and diplomatic skill with which he had framed and urged the conclusions expressing the public and professional requirements. Such services demanded a substantial recognition. Nothing was more remarkable than the rapidity with which each movement under his guidance had been carried to a successful result; and the speaker then moved the adoption of the report, with an addition by the Committee speaking of Mr. Hart's personal services.

Dr. Macnaughton Jones (Cork), in seconding the motion, said that there was ample evidence that the Committee had done their work well, and every officer in the Royal services would consider it a duty to become a member of the Association, so that the Association would be greatly strengthened by the Committee's work. He congratulated the Committee upon its action in regard to the Vaccination Bill, for the Association had, through the Committee, shown the Government that they were making too much concession to the demands of agitators. It should be pressed upon the Government that to assist in the spread of contagious diseases was a crime.

Dr. Fitzpatrick (Liverpool) said the guardians throughout the country had opposed the Vaccination Bill, and their services should not be ignored; but all the credit was due to Mr. Hart that Dr. Crichton Browne had claimed for him; and, indeed, he considered that Mr. Hart ought to have been a Secretary of State for one of the great departments.

Surgeon-Major Partridge expressed his anxiety to arouse sympathy on behalf of the Indian Medical Service, and commented upon the life of self-abnegation passed by the members of that service. [We shall publish at length in a future number the important observations made by this gentleman.]

The motion for the adoption of the report was then carried, with the addition of a special resolution of the cordial thanks of the Association to Mr. Ernest Hart for his services as chairman of that Committee.

It was also moved, seconded, and carried, that the name of Mr. Partridge should be added to the Committee.

Mr. Ernest Hart acknowledged the personal compliment paid to himself; and mentioned facts illustrative of the direct influence of the course which he had taken upon the authorities of the Admiralty and War Office, in relation to the various warrants.

Report of the Hospital Out-Patient Reform Committee.—Mr. Timothy Holmes presented this report. (It was published at page 224 of the Journal for August 7th.) He said he could not move the adoption of the report without saying a few words upon the subject-matter of the report. The Committee was appointed four years ago, and he was asked to preside over it—an office which he accepted with great pleasure. The objects of the Committee were twofold—to investigate certain plans as to the provident dispensary system at Manchester, and to secure at the same time improvement of the out-patient departments of the hospitals in London. As to the first object, the Committee had reported; and the Committee had reported on the second that the out-patient relief at hospitals was unsatisfactory, and justly complained of by the profession. The reason of the partial failure of the dispensary system at Manchester, he took it, was owing to its not being self-supporting; and he believed that no system of the kind would be satisfactory in London which did not pay its own way. [*Hear, hear.*] The reason why the Committee could do nothing in the way of the out-patient reform was because it was divided into two parties, each hold-

ing opposite views. He desired to speak of the views of his opponents with great respect; but he still maintained that no action could be taken to reform the out-patient department of the London hospitals until there was a system to take its place. [*Hear, hear.*] The opinion of some members was, that the Committee had nothing to do with anything else than the subject of reforming the out-patient departments, and that the Committee should content itself with addressing the hospital authorities. Well, he had addressed himself to the hospital authorities until he was sick of them, and they of him. [*A laugh.*] The Committee could make no impression upon them until it could be shown that there was a system to take the place of the out-patient department, which had now been in work for more than forty years. The fact was, the public had been pressed all these years to come to the out-patient department; and the hospitals had pressed their claims for support, not upon the quality of their treatment, but upon the fact of the numbers which had flocked to the out-patient department. These numbers were advertised in the papers—"Patients relieved, 150,000 within"—particular periods. The department offered treatment to all classes and to all diseases; and if the patients did not get any efficient aid, they got about as much as could be expected under the circumstances. This system would not be reformed without something to take its place, and nothing had been suggested in its place except the dispensary system—the club system. Until a satisfactory scheme of this kind had been adopted, he should despair of acting upon the hospitals with success for a reform of the out-patient department. The report he now presented was not an unanimous one, and he had hoped there would be a discussion in the present meeting on the subject of the extension of the provident dispensary system to the whole of London. The basis of this extension was in the co-operation of the friendly societies, and, in order to obtain their co-operation, certain principles had to be assented to; they must be allowed to purchase the medical attendance as cheaply as possible, and that no investigations were to be made regarding the circumstances of the purchasers. He moved the adoption of the report and the reappointment of the Committee in the usual terms.

Dr. FOTHERGILL (London) seconded the motion for the adoption of the report.

Dr. BORCHARDT (Manchester) moved, as an amendment, that his name be omitted from the Committee; and the reason he did so was, that he did not see that there was any work for the Committee. It was found in Manchester that the dispensary system had not abolished the out-patient system.

Mr. T. WATKIN WILLIAMS (Birmingham) said the fact was, the hospital authorities would not move in lessening the out-patient system until steps were taken to erect a provident dispensary system; and this provident dispensary system could not be a success while the hospital authorities continued to keep the doors of their out-patient departments wide open. [*Hear, hear.*]

The PRESIDENT said an amendment was not required to take Dr. Borchardt's name off the Committee, for it would necessarily be taken off at Dr. Borchardt's request.

The motion was then adopted.

Votes of Thanks.—Mr. HUSBAND (Bournemouth), in rising to move the first of the usual votes of thanks, said that, when the Association was invited to Cambridge, they all felt the meeting would be a great success; but those who were present year by year at the meetings would agree that no more satisfactory gathering had been held than that in which they had taken part that week. He expressed warm gratitude on behalf of the Association for the favours which had been shown by the authorities of Cambridge, and moved:

"That the cordial thanks of the Association be given to the Vice-Chancellor and University of Cambridge, for placing the Senate House and the University buildings at the disposal of the meeting, and for granting the use of the Fitzwilliam Museum for the *soirée*."

Dr. GIBSON (Hull) seconded the motion, which was adopted unanimously amid cheers.

Dr. A. CARPENTER (Croydon) moved:

"That the warm thanks of the Association be given to the Lord Bishop of Ely for his eloquent sermon, and that he be requested to allow it to be published."

Dr. BATEMAN (Norwich) seconded the motion, which was carried in like manner.

Dr. FELCE (London) moved:

"That the warm thanks of the Association be given to the Mayor and Corporation of Cambridge for the use of the Guildhall and Corn Exchange."

Dr. T. EYTON JONES (Wrexham) seconded the motion, which was also carried with accord.

The PRESIDENT stated that the Mayor desired it should be known that the Corporation were not responsible for the state of the streets of Cambridge; for the tramway-company, which had pulled up the roads, were acting under an authority over which the Mayor and Corporation had no control.

Mr. J. HOUGH (Cambridge) moved:

"That the warm thanks of the Association be given to the Master and Fellows of Peterhouse for allowing their grounds to be thrown open upon the evening of the *soirée* at the Fitzwilliam Museum."

Dr. HARRIS (Redruth) seconded the motion, which was adopted unanimously.

Mr. HOAR (Maidstone) moved:

"That the thanks of the Association be given to the Provost and Fellows of King's College for allowing the opening service to be held in their Chapel."

Dr. DICKINSON (London) seconded the motion, which was also adopted.

Dr. BLANDFORD (London) moved:

"That the thanks of the Association be given to the Master and Fellows of Trinity College for the use of their hall for the dinner of the Association."

Dr. COSSAR (Edinburgh) seconded the motion, which was adopted.

Mr. WATKIN WILLIAMS (Birmingham) moved:

"That the hearty thanks of the Association be given to the several Colleges, the Masters and Fellows of Colleges, for the hospitality they have shown to the members of the Association, as well as for their kindness in opening the libraries, chapels, and other buildings for the inspection of the members of the Association."

Dr. LANGMORE (London) seconded the motion, which was adopted amid cheers.

Mr. HUMPHREYS (Shrewsbury) moved:

"That the thanks of the Association be given to the Masters and Fellows of St. John's College for the kind manner in which they have granted the use of their College and grounds for the *conversazione*."

Dr. RODEN (Droitwich) seconded the motion, which was adopted.

Mr. E. CARVER (Cambridge) moved:

"That this meeting most cordially recognises the presence of so many distinguished medical foreigners, and gratefully thanks them for their scientific contributions, which have added so much to the success of the meeting."

Dr. E. H. VINEN (London) seconded the motion, which was adopted unanimously.

Dr. WADE (Birmingham) moved:

"That the best thanks of the Association be given to the local Executive and Reception Committee, and to the Treasurer, Dr. Fawcett, and the Honorary Medical Secretary, Dr. Bushell Anningson, for their successful labours in organising the meeting at Cambridge."

Dr. HACK TUKE (London) seconded the motion, which was adopted, and acknowledged by the President.

Dr. BORCHARDT (Manchester) moved:

"That the warm thanks of the Association be given to the profession and inhabitants generally of Cambridge for their generous hospitality upon the occasion of the forty-eighth Annual General Meeting of the members of the British Medical Association."

Mr. MALCOLM MORRIS (London) seconded the motion, which was adopted.

Dr. BRADBURY (Cambridge) moved:

"That the cordial thanks of the Association be given to Mr. A. P. Humphry for his arduous and successful labours as Honorary Reception Secretary."

Dr. Bradbury said that, when Mr. A. P. Humphry undertook the local secretaryship, the Committee felt that success was assured; for Mr. Humphry was as successful in organising as with the rifle at the target.

Mr. A. JACKSON (Sheffield) seconded the motion, which was carried amid cheers.

The PRESIDENT said his son had worked hard, but the acknowledgment made for his services was a reward of which he would be proud.

Dr. GAIRDNER (Glasgow) moved:

"That the best thanks of the Association be given to Mr. Wallis for his most successful efforts in the organisation of the museum of the Association, and for the organisation of the excursions, to Dr. Creighton for the pathological museum, and to Dr. Armistead for the exhibition in the sanitary department."

Dr. J. THOMPSON (Leamington) seconded the motion, which was carried amid cheers.

Dr. STRANGE (Worcester) moved:

"That the warm thanks of the Association be given to the President

and to the Reception Committee for their *soirée* at the Fitzwilliam Museum and in the grounds of Peterhouse."

Dr. DICKSON (London) seconded the motion, which was adopted.

The chair was then vacated by the President.

Dr. A. CARPENTER, who, as President of the Council, presided, said the duties of the meeting were then ended; but, before they separated, he should ask them to give the cordial vote of the Association to the President, Professor Humphry, F.R.S., for the very able way in which he had presided over the forty-eighth annual meeting, which had been a most brilliant and successful gathering; and, the speaker added, he was only prevented by the presence of the President from expressing, as far as he was able, his sense of the great benefits the Association had received from Professor Humphry. He moved:

"That the cordial thanks of the Association be given to the President, Professor Humphry, F.R.S., for the very able way in which he has presided over this, the forty-eighth annual meeting of the British Medical Association."

Mr. HUSBAND, as the Treasurer of the Association, said he rose with no ordinary feelings to second the motion—feelings which would be shared by all who knew how Professor Humphry had fought the battle of medical education, and the lustre he had thrown upon the profession. It was an honour to the Association that it should have had for its President a man like Professor Humphry, whom they were all proud to admire and esteem. [*Cheers.*]

The resolution was carried by acclamation.

The PRESIDENT, in acknowledging the vote, said the labour he had had was one of love from the first moment on which he had entered upon it. It had been an enormous pleasure to him to make some return to his profession for the great kindness it had shown to him through now what was a long life, for the varied help it had given him, and for the many warm friendships it had brought him, and for the many happy hours it had afforded him. From the time he entered the profession, he had loved it more and more, and a great part of his happiness in it had arisen from his being a member of the Association. The success of the Association at this meeting had not been due to him to the large extent which had been claimed for him by kindly speakers, but to the fact that he had been assisted in the warmest manner by those connected with the Association, all of whom had assisted in the success of the meeting with single-minded earnestness. [*Cheers.*] He also acknowledged the services of the Executive Committee, and thanked the Association for the vote they had passed.

Three cheers were then given for Professor Humphry and Mrs. Humphry, and the meeting of 1880 ended.

THE DINNER.

THE annual dinner of the Association was held on Thursday, August 12th, in the Fellows' Dining-hall of Trinity College. The President of the Association (Professor Humphry) presided, and was supported by the Lord Bishop of Ely, the Vice-Chancellor, the Mayor of Cambridge, Sir James Paget, Bart., Professor Gross, Dr. A. Carpenter, Professor Donders, Professor Longmore, Professor Acland, Dr. Brown-Séquard (Paris), Dr. Paget, Dr. Beard, the Rev. Dr. Haughton, Mr. Savory. The company at the Master's table also included the Public Orator, the Senior Proctor, Professor Reyher, Drs. Clark, J. Crichton Browne, Bradbury, Embleton, Marion Sims, Lister, Waters, Stewart, Denis O'Connor, Mr. Spencer Wells, Mr. Ernest Hart, Mr. W. D. Husband, and Mr. Cobb. The company at the Dean's table included Professors Macnaughton Jones, Marey, Bowditch, Preyer, Liveing, Westphal, and Ranvier; Drs. Toussaint, Worms, Strange, Stokes, Shann, Ogston, Warlomont, Lucas-Championnière, Weber, Wood, Playfair, Wade, Durrant, Lancelott, Roberts, White-Cooper; Messrs. Fowke, A. H. Gross, Critchett, Holmes, Langley, Hulke, Chiene, John Wood, Hurrell, Cadge, J. W. Clarke, and Balfour. A number of other resident members in the University and town, also many local members of the profession, were amongst the company, which numbered about 380 guests. The tables were supplied with plants from nurseries of Mr. G. Willers, of Trumpington, who also supplied the floral decorations at the Guildhall and the Fitzwilliam Museum. Grace was sung by Messrs. Bilton, Robson, Booth, and Poole; and between the toasts, some glees and madrigals were sung by members of Trinity choir.

The loyal and patriotic toasts were proposed by the PRESIDENT in graceful and eloquent terms, and duly honoured. Professor LONGMORE (Netley) responded for the "Army and Navy", and thanked the Association for the moral and material support which had been given to the medical departments of those services.

Professor PAGET proposed "The Bishop and Clergy", and said that in doing so he had to return thanks on behalf of the Association for the Bishop's very eloquent discourse in King's College Chapel on Tuesday afternoon. [*Hear, hear.*] Not that the Bishop required thanks for it. He made an allusion to science which might have been made by the very wisest. He would only say this: that though the Bishop might have feared that the medical discoveries of these days were not always used by them as gifts of God, they were always treated as gifts of God, because all discoveries made in the medical profession were invariably given freely for the benefit of our fellow men; and the man who should use discoveries for selfish purposes in the medical profession would be covered with disgrace. It was with satisfaction that he heard something fall from his lordship in reference to the services of their professional brethren who had the charge of the sick poor. He spoke of their gentle kindness, and their conscientious attention to the poorest of their patients. He thought that the men who did these things were not likely to fail to appreciate the labours of the ministers and clergy in the same field. They were not less gentle and kind, under difficulties not less discouraging. He held it an honour to belong to the profession who did their duty in such a manner among the poor, working together with the clergy, and both following, however imperfectly, the one great example of their Master. Both doctors and clergy, the one with the other, risked their lives in the course of their hourly work, and sometimes died that most glorious death, death from fever caught while in attendance on the poor. [*Applause.*]

The BISHOP of ELY, in responding, said he felt most deeply indebted to Professor Paget for the kind words in which he had introduced his name, and to their equally kind acceptance that evening. With regard to the sermon with which it was his privilege to open, as he might say, the proceedings of this congress, he could assure them that he never preached with greater anxiety, knowing the intellectual character of the audience which he should have to address, upon subjects rather belonging to them than to himself; and also feeling a desire that he should know of their acceptance upon those subjects of the views which he conscientiously held to be true. [*Applause.*] He was very much afraid that he must have inflicted upon many who were kind enough to gather together at service on Tuesday afternoon, the penance of sitting to hear only an inarticulate voice. [*No, no.*] However, as the building was unfavourable to a speaker, so it was favourable to the musician, and they were rewarded by hearing, to greater advantage than elsewhere, the noble music of Wesley. [*Hear, hear.*] He must not forget that Professor Paget had coupled with his name the clergy, and he would undertake to reply on their behalf. The clerical profession and the medical profession were twin professions; or it might better be said of them that they were two orders of the same profession, devoted to ministering to the family of men in times of their deepest necessities. [*Hear, hear.*] And the two professions, if he might also say so, were in regard to ministrations really necessary to each other. On the one hand, discretion as well as zeal on the part of the clergyman was, he believed, most essential, in order that the art of the medicinal minister might not be marred, but have its full force. [*Hear, hear.*] And on the other hand, it was when that art had had its force, and health had returned—it was then that the most precious time set in for the parish priest to sow those principles which would lead a man to spend the remainder of his life to greater and nobler effect than before. His lordship did therefore rejoice that in this country there was no jealousy, but rather a strict personal friendship, between the members of his own profession and those of the medical profession. Wherever he had gone in great towns, he had always found the medical men his greatest allies; and one of the pleasantest sentences he had heard in that room was remarked across the table, when, upon their being invited to listen to the Bishop of Ely, a former parishioner of his said in an undertone, "my old vicar". [*Applause.*] He did, therefore, take this toast, not as a mere idle compliment, but rather as an expression of a wish and pledge on their part that this alliance, which he believed was so important for the good of the English people, should be maintained and increased, and he would only add his hearty hope that it might be cemented and established by the gathering of this week. [*Applause.*]

Professor ACLAND (Oxford) in proposing "The University of Cambridge," pictured the thoughts which must have been stirred in the minds of such a body of men as the Association on coming to such a place as Cambridge, with its wonderful architectural and picturesque features, in the midst of which was laid the dust of the noble departed. He knew no institution of which the example better deserved to be followed than the University of Cambridge, and which more deserved to be blest for the work it was doing. [*Applause.*] Dr. Acland enlarged on the glorious associations connected with Trinity College Chapel and other collegiate buildings, and spoke of the marvellous knowledge, and the astonishing amount of scientific research, exhibited by the late Master of Trinity, Dr. Whewell.

The toast was drunk enthusiastically.

The VICE-CHANCELLOR, in responding, said he was quite sure that, by the way in which they had received the toast so eloquently proposed by Dr. Acland, they had given expression to a kindly feeling towards those members of the University who, like himself, had the good fortune to be here during the long vacation. It meant, also, that they had been unable to escape that wonderful fascination which was felt by all intellectual minds, in reflecting on the past history of an University which dated from a time he could not attempt to define. In speaking of the University training system, the Vice-Chancellor said the University had no narrow views, but desired the help of all scientific and literary men to give them their advice. He concluded by proposing "The British Medical Association".

Dr. A. CARPENTER, the President of the Council, said he rose on that occasion with a deep sense of his inability to do justice to the toast, which applied to upwards of eight thousand members. If it were a great privilege to stand up in that room to respond to the toast, it was at the same time a great responsibility. He felt it to be a great privilege to preside over the Committee of Council; and he could speak of the debt which the Association owed to the members of that Committee of Council, for some of them travelled hundreds of miles several times a year to do the work of the Association, and this without the slightest fee or reward. The names of these members were "as household words" in the history of our time. Their time was of the utmost value, and yet they untiringly and unselfishly gave that valuable time to the service of the Association. There were others engaged in the work of the Association—the paid officials—who devoted their lives to the service in which they were engaged. [*Hear.*] It was unnecessary for him to mention the services of the General Secretary, Mr. Francis Fowke; but, if it were necessary, he could dwell upon the value of those admirable services, as he was brought into contact with them as the Chairman of the Committee of Management. Then there were some thirty Branch Secretaries, who worked, like the Council, without fee or reward, except a reward of a vote of thanks. In these Secretaries, the Association had an able and spirited staff, zealous for the Association's work; and that fact made the Association strong. [*Cheers.*] Before the Association came into existence, the profession was like so many grains of sand. The Association had been the connecting tissue, and had been the means of electrifying the ganglions of existence in the profession—shown by the fact that year by year it could bring out such wonderful things as they had seen and heard at that meeting. [*Hear.*] The meeting, like all the meetings of the Association, showed that there were some wonderful nerve-cells in the association of the profession, and a vast power which could be exerted for the benefit of the profession, the country, and the human race generally. [*Cheers.*] What had been spoken at that meeting would go forth, and would have its effect in the advancement of the profession, for the benefit of the country; and no one could have been at the luncheon at Cavendish College that morning without feeling that the advance they looked for was being made. [*Cheers.*] It had always been his view, that the members of the medical profession should have an university education. He could not see why the parish doctor should not have his degree like the parish clergyman—that sister profession. [*Cheers.*] When the Cavendish College was opened, medical men would be able to send their sons and grandsons there, and thus assure them that sound university education in which all men had such just pride. [*Cheers.*] He was proud that the Association had instituted the gold medal, this year worthily voted to Dr. Farr. Hitherto there were no great amount of honours opened to the medical profession to gain; but now the Association had instituted that which would be regarded as its Legion of Honour; and he thought that the institution of that medal would be a prized honour by a profession distinguished for its unselfish devotion to the public good. [*Loud cheers.*]

Mr. HUSBAND, Treasurer of the Association, then proposed "The Mayor of Cambridge".

The toast was drunk with honours, and the Worshipful the Mayor responded.

Sir JAMES PAGET, who rose amid great cheering, then proposed the health of "the President", and expressed the fervent hope that the health and life which had been so well employed might be long continued. Sir James stated that his knowledge of Professor Humphry extended over forty years. The speaker sketched the career of the President, and said he came to Cambridge to be surgeon of Addenbrooke's Hospital, and succeeded Professor Clark, then the leading anatomist of Europe, so well, that Cambridge and the world were hardly aware of the loss sustained by the death of Professor Clark. The speaker then dwelt upon the enormous influence for good which Professor Humphry had had upon Cambridge, and in advancing the interests of the profession; and said that this influence was never better shown than in the fact that Professor Humphry made his men to be well founded in the beginning of science by which they could go on learning; for the knowledge which men achieved for themselves was the best of all knowledge. [*Cheers.*] Sir James, amid cheers, reminded the gathering that the president had a son, Mr. A. P. Humphry, who, Sir James said, was his own godson. He, however, had not been taught rifle-shooting by his godfather—[*a laugh*]; but his business aptitude had been shown by his discharging the duties of local secretary; and the Association were deeply indebted to his father for having such a son. [*Cheers.*]

The toast was drunk with three times three.

The PRESIDENT thanked the gathering for their hearty acceptance of a toast so nobly and so kindly proposed. Sir James had told them many things; but he had left out the fact that what his knowledge was he had acquired from Sir James, and that his coming to Cambridge had been the work, and at the advice, of Sir James Paget. [*Cheers.*] He had grievous misgivings about the Association's coming to Cambridge, and his acceptance of the honour of the presidency; but when it was added that his son would take the working part, his fears were at an end; for he knew how well his son would discharge whatever he undertook. [*Cheers.*] His son entered earnestly into the work, for his heart was as true as his aim at the target; and they had an excellent staff, who all worked so heartily together, that the meetings had been real merry meetings, without the slighest ruffle or tremor. [*Cheers.*] The University granted everything that was asked; the Colleges had opened widely their doors, without an exception, with great hospitality—[*cheers*]; and the individual members of Colleges came with heart and hand and pockets open. [*Cheers.*] The town, too, had not been backward; for the Corporation had granted the use of their buildings; and his son had told him that he was struck with the conduct of the people of the town, in that there had been no attempt at overreaching, but that all were courteous to the strangers. [*Cheers.*] It was no wonder, therefore, that this had been a great and auspicious meeting; and he trusted that the members who had attended it would carry away with them recollections of addresses, of noble services in college chapels, and of pleasant holiday events—recollections which, while enlarging their knowledge, would make their lives the happier for the visit. [*Cheers.*] He then proceeded to propose the toast of "Our Guests"; and, dwelling upon the kindly relations existing between the profession of this country and the profession on the Continent and in America, he coupled the toast with the names of Professor Brown-Séquard and Professor Gross.

Dr. BROWN-SÉQUARD replied at length, and warmly reciprocated the compliments paid the foreign profession by their British *confrères*.

Dr. GROSS reminded his hosts that he had visited the annual meetings in 1868 and 1872; and said that he had braved the waves of the Atlantic to shake hands with his British friends once more, in thanks for the high honour they had always done him. He warmly urged the cultivation of social intercourse between the two great nations represented by the Association and by himself; and he assured his hearers of the sympathy of the profession in America.

Dr. A. P. STEWART proposed the toast of the health of "The Readers of Addresses, and the Officers of Sections."

This was acknowledged by Dr. BRADBURY and Mr. SAVORY, the latter of whom, referring to the foundation of Cavendish College, rejoiced to see the wise culture of the art in Cambridge made worthy of its home.

The Rev. Dr. HAUGHTON said he had now a very disagreeable duty to perform after the beautiful music they had just heard, and the poetical speeches; for he had to recall them from the heights of Olympus to our common mother earth, in speaking of some matters of importance in the past, present, and future history of the Association. There were a great many great men who lived before Agamemnon, but unless they had a poet to sing their praises they were not remembered beyond one or two generations after the time in which they lived. The present great British Medical Association could not have continued unless it had had some mouthpiece or organ to make it known to the world, and that mouthpiece was the BRITISH MEDICAL JOURNAL. [*Cheers.*] It was now his duty—having been called upon to perform it by authority—to sing in his own humble hexameters the praise of the JOURNAL and its editor, Mr. Ernest Hart. [*Cheers.*] Dr. Haughton proceeded to say that he could claim to speak with authority on journalism, for among the gifts of an Irishman were those of writing, and his right to take, sometimes, both sides of the question. [*Loud laughter.*] They had heard the *Times* called a "great organ", the "great Colossus", but some affected to know all about it and not to believe in it. Now he would let them into the secrets of that "little Colossus", the JOURNAL. It had for many years a delicate constitution. [*A laugh.*] It had a great deal of "physicking". [*A laugh.*] It had, moreover, change of air, change of scene, and continual change of nursing. [*Loud laughter.*] Now the great change which strengthened it, and brought it to its pre-

sent vigour, was when its present editor, Mr. Ernest Hart, was appointed as its dry nurse. [*Loud cheers and laughter.*] That happened in the year when the Association had its meeting within the walls of Trinity College, Dublin. The English members had come over there, and they found that the Irish were an exceedingly pleasant set of fellows to come amongst—[*laughter*]—and the Irish members found that the English were good men, and quite open to be introduced to anything good, including John Jameson's whiskey—[*laughter*]—or anything else that was good. Now the JOURNAL had a committee of management, a very excellent principle, no doubt, and the thing worked well or ill, according to the wisdom and knowledge of the committee. If he were editor and had a bad committee, or an interfering committee, he should kick over the traces and pull his head out of the halter in no time—[*cheers*]—but if he had a wise committee—that was to say, a committee which had the discretion to trust to his discretion—[*a laugh*]—he should pull "right away", as Mr. Hart did, for the good of all. [*Cheers.*] Now the Association needed an editor with common sense. He did not undervalue common sense; but some people had nothing but very common sense; but he liked to have a sprinkling of genius with the common sense. [*Cheers.*] The result of the choice of Mr. Ernest Hart as editor was seen in the fact that, from that very moment, the JOURNAL, in size and circulation, had begun and steadily continued to grow enormously. [*Cheers.*] It had proved to be the bond of association between the members who could not come to the annual meetings and those who came, and it was, besides, now the great journal of the medical profession. The JOURNAL was not a mere advocate of a trades-unionism, it was not the mouthpiece of the rights of associated members, or of a profession against the greater public—a public which would not submit to any such principle; but it was, under wise management, and, as Dr. Bradbury, the reader of the address in Medicine, had pointed out, under the editorship of Mr. Hart, the organ of the rising modern scientific medicine, which, without disparagement to the great master, Hippocrates, must be called the medicine of the future—the science of calculation, observation, and study—a science which was opposed to empiricism. [*Loud cheers.*]

Mr. ERNEST HART said he was certain he should have the sympathy of his audience when he stated that he was experiencing the feeling that

"[illegible]"

The late hour into which the proceedings had been prolonged made him feel that he should forbear to deliver any speech; but he must thank Professor Haughton for the manner in which he had proposed the toast, and the company for the manner in which they had expressed their approbation of what Dr. Haughton had said. It was twelve or thirteen years since he became what Professor Haughton termed "dry nurse" to the then already antiquated baby of thirty-four years old; for the JOURNAL, when he became its editor, had reached that age, and had only a circulation of little more than two thousand. Now it had reached nearly ten thousand in circulation; and next year, when they met, its numbers, he hoped, would be still higher. [*Cheers.*] He had to thank the Committee of Council and the Association for the uniform kindness and courtesy with which he was received; and he promised them that the influence of the JOURNAL should continue to be used for the advancement of the interests of the profession, which were identified with the public interests. [*Cheers.*]

The PRESIDENT, in proposing the toast of "Trinity College", said he felt as if there had been an omission in what he had said; for he considered the Association was deeply indebted to Mr. Francis Fowke, the courteous and assiduous General Secretary of the Association, who had rendered him throughout the utmost and most painstaking assistance, for which he now begged to give his acknowledgments. [*Cheers.*] The toast of "Trinity College" was coupled with the name of Dr. MICHAEL FOSTER, who briefly responded.

Dr. WADE proposed "The Reception Committee and Secretaries", to which Dr. ANNINGSON responded, and the meeting separated.

THE PATHOLOGICAL COLLECTION.

The exhibition of pathological microscopic specimens was held in the [illegible], a room [illegible] and twenty microscopes being in use. A large number of microscopes were kindly lent by the University of Edinburgh, and brought to Cambridge by Dr. D. J. Hamilton; Mr. E. A. Schäfer sent twenty microscopes from the physiological laboratory of University College, London; Dr. Julius Dreschfeld brought some from Owens College, Manchester; and a large number were provided in Cambridge by Professor Humphry, Dr. Michael Foster, Mr. F. M. Balfour, and Dr. Creighton. Several microscopes with high powers were also lent by Mr. Crouch, optician.

A large number of specimens were shown by Dr. D. J. Hamilton; they included specimens of some rare forms of sarcomatous tumours, admirably prepared and mounted from well-chosen cases; and specimens of tubercle in the lungs, and of catarrhal pneumonia. Dr. Hamilton gave a demonstration of his specimens on Wednesday morning to a succession of visitors. Dr. Stephen Mackenzie exhibited, on Thursday morning, an extensive series of preparations illustrating his investigation on pyæmia. Dr. Byrom Bramwell's admirable preparations of sclerosis of the brain and spinal cord were exhibited, perhaps, too late to receive as much attention as they deserved. Dr. Dreschfeld's instructive preparations related to cirrhosis of the liver and of the kidney; and Dr. Leech of Manchester made out a good case, by means of his preparations and drawings, for his views on the implication of the glomeruli in nephritis; side by side with the latter being several more or less corroborative specimens, brought by Dr. Silver. Dr. Thin's contribution to the exhibition related to certain difficult cases of breast-tumours, in which he believed the process to be seated mainly in the ducts of the gland; he showed also an interesting specimen of the so-called eczema of the nipple associated with cancer of the breast. Mr. Frederick Eve's specimens related to the fruitful theme of the relations of ichthyosis of the tongue and other chronic irritations to epithelioma. Dr. F. C. Turner's were from the spinal cord in hydrophobia, and in anterior poliomyelitis in a child. Dr. Radcliffe Crocker showed very clearly, by means of his preparations and drawings, the condition of the hairs in leptothrix of the scrotum. Mr. Greig Smith (of Bristol) illustrated certain peculiar changes in the articular cartilage in arthritis. An extremely interesting and almost unique specimen of the *Bacillus Malariæ*, obtained by cultivation from malarious soil in Sicily, was shown by Dr. Lauchlan Aitken of Rome, for Professor Tommasi Crudeli, the well known authority (along with Professor Klebs) on the pathology of malaria. In the same department of pathology, Dr. Greenfield showed several specimens of the *Bacillus Anthracis*, along with the negative photographs exhibited as transparencies.

The open space on the ground-floor of the Museum of Human Anatomy and Pathology was used for the exhibition of other pathological specimens, and of drawings and photographs. The most elaborate and extensive set of preparations were those of Professor Busch of Berlin, on experimental ostitis and necrosis. Dr. Isambard Owen brought down from the museum of St. George's Hospital several rarities from among the latest additions to that collection. Dr. Thomas Barlow brought about a dozen skulls, showing the uniformly occurring condition of the parietal bones in congenital syphilis. Mr. Jonathan Hutchinson exhibited a large series of coloured drawings of those rarities of skin affections and of new growths, of which he is so indefatigable a collector. Dr. Braidwood had, as on former occasions, a collection of admirably executed coloured microscopic drawings, to illustrate infective processes. A large number of microphotographs of great size were brought from America by Dr. Clifford Mercer, on behalf of Dr. Woodward and Mr. Theodore Deecke. A collection of coloured drawings of rare skin-diseases was shown by Mr. James Startin. The extensive series of coloured microscopic drawings, on a large scale, of the nerves and lymphatics in leprosy, exhibited by Dr. George Hoggan, were examples of skill and diligence in a somewhat thankless task, which it is to be hoped the profession will not be slow to appreciate. Of more immediate interest, and relating to a controverted point, were the series of casts of the teeth in congenital syphilis, made and exhibited by Dr. Kirkwood of Peterborough.

THE HONORARY DEGREES.

THE following is a copy of the Public Orator's speeches in the Senate House of Cambridge on the occasion of the conferring of honorary degrees on August 11th.

In ipso limine orationis nostrae nihil auspicatius esse arbitramur quam ut vos, qui consiliorum vestrorum sedem hanc curiam elegistis, totius senatus nomine omnes salutemus. Qui salutem aliis totiens attulistis, vosmet ipsos omnes salvere iubemus. Athenienses quidem olim vestro illi Hippocrati auream coronam in theatro publice decreverunt; nos autem, ut nostram erga vos omnes benevolentiam aliquatenus indicemus, e tot viris de humano genere bene meritis, nonnullos, velut exempli gratia, nostra corona qualicunque hodie ornare volumus, qui honos idcirco illis laudi est quod vestra omnium frequentia illustratus, vestro omnium, uti speramus, consensu comprobatur.

Dr. C. E. BROWN-SEQUARD, F.R.S., *Professor at the College de France, Paris.*—Erat nobis in animo Reipublicae Gallicae senatorem illustrem, virum de investigandis humani generis varietatibus optime meritum, nostra laureola hodie decorare. Atqui lauren illa in cupressum mutata est; ille enim, qui ipsum fontem et originem loquendi indicavit, ipse inter omnium dolorem, morte immatura abreptus, conticuit et obmutuit. Quo autem maiore animi aegritudine illum desideramus,

eo maiore gaudio eiusdem Reipublicae civem salutamus, qui (ne plura commemorem) ipsam arcem sentiendi in cerebro positam, ipsam carinam illam corporis quae medulla spinalis nuncupatur, fortiter exploravit. Ceterum in tali materia non omnia nobis subtiliter disputanda, non omnia (ut de amicitia Tullius) 'ad vivum' resecanda. Vobis igitur praesento Medicinae Professorem insignem, Edvardum Brown-Séquard.

Dr. F. C. DONDERS, *Professor of Physiology at Utrecht.*—A Rheni Traiecto ad Cami ripas transire dignatus est vir qui pulcherrimo studio dedicatus, disciplinae mathematicae qua nos quoque gloriamur scientiam accuratam cum oculorum humanorum exploratione exquisita coniunxit. Laetum profecto est auspicium quod oculis nostris nunc demum contemplari contingit virum societati nostrae Philosophica honoris causa iamdudum ascriptum, Physiologiae Professorem illustrem, Doctorem Donders.

Dr. S. D. GROSS, *of Philadelphia.*—Trans fluctus Atlanticos, trans Oceanum non iam ut antea 'dissociabilem', patriae nostrae ad portus nuper advectus est vir venerabilis, quem inter fratres nostros Transatlanticos scientiae Chirurgicae quasi alterum Nestorem nominare ausim. Ergo libenter quasi fraterno amore hodie salutamus, civitatis bene ominati nominis civem, Chirurgiae Professorem Philadelphiensem, Samuelem Gross.

Sir WILLIAM JENNER, Bart., K.C.B., F.R.S.—E fratribus nostris ad nosmet ipsos transimus. Nostris e popularibus unum salutamus, Regiorum medicorum numero merito ascriptum, qui tum ceteris morbis propulsandis, tum praesertim formidolosae illi febrium cohorti profligandae fortiter incubuit, ausus ipsos mortis illius impetus morari quae pede pulsat aequo 'pauperum tabernas regumque turres'. Ergo nostro quoque titulo decoremus virum titulis iam plurimis aliunde ornatum, Baronettum illustrem, Wilelmum Jenner.

Sir WILLIAM GULL, Bart., F.R.S.—Pulchrum sane est genus illud vitae quod *θεωρητικὸν* Graeci nominant; pulchrius fortasse quod idem *πρακτικὸν* appellant; omnium, nisi fallor, pulcherrimum, humano certe generi utilissimum, et *θεωρίαν* et *πρᾶξιν* mutua quadam societate inter sese coniunxisse. Cuius rei egregium exemplar in hoc viro hodie iuvat admirari, qui physiologiae scientiam intimam ad artis medicae usum cotidianum feliciter accommodavit. Talium virorum adventu, quotiens aegrotantium lectulis nova lux affulsit! Medicorum talium auxilio, quot et quantos viros ab ipso mortis limine ad vitam rursus vocatos vidimus! Vobis praesento Regiae Societatis Socium, e Regiis medicis unum, Baronettum insignem, Wilelmum Gull.

Sir GEORGE BURROWS, Bart., M.D., F.R.S.—Unum nostris ex alumnis, nostrarum scholarum umbrae hodie paullisper redditum, vultu quam laeto excipimus. Scilicet in hoc ipso senaculo, quinque et quinquaginta abhinc annis, e studiis mathematicis lauream insignem reportavit; deinde Collegii illius vicini socius electus est cuius inter conditores medicum illum Regium, Iohannem Caium, exstitisse gloriamur; postea e nostris umbraculis egressus, etiam urbis magnae in luce laudem illustrem adeptus, non modo Regii Medicorum Collegii praeses saepenumero est creatus, sed illius quoque Reginae medicis ascriptus est quam usque ad hunc diem omnes et vivere et valere gaudemus. Vobis praesento Baronettum venerabilem, Georgium Burrows.

WILLIAM BOWMAN, F.R.S.—Sequitur deinceps vir qui adhuc iuvenis corporis humani penetralia intima curiositate minuta perscrutatus, illa quae a se ipso optime erant fundata, ab aliis animo magno reliquit extruenda. Ipse interim sese ad illam potius partem explorandam destinaverat, cuius auxilio ad ceteras investigandas feliciter usus erat; ad ipsum videndi sensum, ad ipsos oculos (ut ita dicam) oculos sustulit. Quid autem humanius quam hebescentem oculorum aciem rursus acrem effecisse? Quid, prope dixerim, divinius quam hominibus lumine orbatis lucem illam diei quae Dei donum primum est totiens reddidisse? Duco ad vos Regiae Societatis Socium, Wilelmum Bowman.

Rev. S. HAUGHTON, M.D., F.R.S., *Fellow of Trinity College, Dublin.*—Venio ad nomen multiplici scientiarum laude illustratum, Professoris scilicet Dubliniensis, viri de studiis Theologicis, Geologicis, Zoologicis, Geographicis, Physicis, Mathematicis, Medicis denique, optime meriti. Ipsa autem 'naturae rerum contemplatio,' ut ait Celsus, 'quamvis non faciat medicum, aptiorem tamen medicinae reddit'. Omnia vero illa quae intra provinciae suae fines satis amplos inclusit, hodie saltem non modo orationis nostrae terminos artiores excedunt, sed temporis quoque angustiis iniquis excluduntur. Praesento vobis virum reverendum, qui fere nullum scientiarum genus intactum, nullum inornatum reliquit, Samuelem Haughton.

JOSEPH LISTER, F.R.S.—Quam multa, quae antiqui temeraria quadam coniectura fortuito assecuti sunt, nunc demum hodiernae scientiae experimentis vera esse constat. Ipse Lucretius olim divinaverat morbos idcirco generari 'nimirum quia sunt multarum semina rerum, et satis haec tellus nobis caelumque mali fert, unde queat vis immensi procrescere morbi'. Atqui usque ad recentem memoriam incerti errabant medici, ut eiusdem verbis utar, 'expertes opis, ignari quid volnera vellent'. Nunc autem, uti nostis ipsi, per Europam totam, chirurgi fere omnes Machaonis nostri praeceptum illud praeclarum sequuntur, scilicet in volneribus sanandis nihil magis prodesse, quam noxia illa rerum primordia summa cura arcere. Itaque cum tanto viro nos quoque libenter foedus icimus, dextraeque illi intrepidae dextram hospitio iungimus. Duco ad vos Iosephum Lister.

DENIS C. O'CONNOR, M.D., *Professor of Medicine, Queen's College, Cork.*—Magnum est insularum Britannicarum medicis in consilio deliberantibus summa cum dignitate praefuisse; felix officio suo optime functum, successori dignissimo munus reddidisse. Quis autem nobis debet esse coniunctior quam is qui nuperrime reipublicae medicae gubernacula illa, uni e professoribus nostris tenenda tradidit? Illi vero e portu iam solventi, nemo magis favere potest quam hic ex alto in portum invectus est, ipse in Collegio Professor prope celeberrimum Hiberniae portum posito. O si unquam inter nemora portui illi vicina, lapidem illum fabulosum, saxum illud eloquentiae, oratori vestro contigisset osculari; tum profecto tot et tantos viros ea qua par erat eloquentia laudare potuisset. Ceterum, utcunque haec sunt, praesento vobis Professorem venerabilem, Praesidem optimum, Doctorem O'Connor.

JOHN SIMON, C.B., F.R.S.—Adest deinceps vir de sanitate populi nostri tuenda atque augenda optime meritus. Quod si huius viri laudes, uti meministis, etiam ab exteris gentibus palam praedicatae sunt, quanto magis ab ipsis Britannis tot beneficiorum auctorem animo gratissimo commemorari necesse est. Ipsum Ciceronem in libris illis quos de legibus composuit, scripsisse recordamur, populi salutem supremam esse legem. Ergo iure optimo legum Doctorem hodie creamus virum de populi salute praeclare meritum, virum litterarum quoque laude insignem, Iohannem Simon.

ANDREW WOOD, M.D., F.R.S.E.—Claudit seriem Andreas Wood, vir ex Athenis illis Caledonicis Academiae nostrae spatiis allatus, quem non modo Minervae Medicae sed ipsarum etiam Musarum inter cultores esse iuvat. Meminit fortasse Vergilianum illum Iapim cui Apollo 'citharam dabat', 'scire potestates herbarum usumque medendi' maluisse; sed suo ipsius exemplo probavit 'dulce' illud 'laborum lenimen' cum arte medendi esse consentaneum. Recordatur certe Horatium illum suum, Apollinem ipsum laudare non modo quod 'salutari levet arte fessos corporis artus,' sed etiam quia 'novem Camoenis acceptus' sit.

Restat ut vos omnes qui sociorum vestrorum laudes tanta benevolentia audivistis, tanto plausu excepistis, Academiae nomine valere iubeamus. Ipsum Medicinae Patrem dixisse meministis, vitam esse brevem, artem longam. Vos igitur, quorum arte vita totiens longior facta est, ipsi diu felices vivite. Vos qui omnium optime nostis, non vivere sed valere esse vitam,—vos inquam, mox a nobis abituri, rursus forsan redituri, ipsi interim omnes valete.

THE LOCAL GOVERNMENT BOARD AND MR. ROBERT BRUCE.—We regret to learn that the Local Government Board have found it necessary to call on Mr. R. Bruce, the Medical Superintendent of the Sick Asylum, Upper Holloway, belonging to the Holborn Union, to send in his resignation; and the regret we entertain is not lessened on perusal of the letter addressed to that gentleman by the Board. It would appear that a patient, of the name of Stapleton, was admitted into the infirmary suffering from congestion of the lungs and delirium. Unfortunately he was not seen on admission by Mr. Bruce, but only by the assistant medical officer, and in the course of that night he was put into a bath, without any order for the same by the medical officer, by two pauper attendants. Subsequently he was sent, under the direction of Mr. Bruce, we presume on account of his mental excitement, to the Gray's Inn Road Workhouse, a distance of about four miles, where he shortly afterwards died; and on *post mortem* examination, it was found that the cause of death was inflammation of the lungs. There were some other charges of want of carefulness, and of refusal to admit cases to the asylum, preferred against Mr. Bruce; and these, together with Stapleton's, above quoted, led to the Board peremptorily demanding his resignation. We would earnestly point out to gentlemen holding poor-law appointments, that they cannot be too particular in examining patients as to their fitness to bear a journey ere they direct their removal from a district to a workhouse, or from this latter to a hospital, lunatic, or sick asylum; for, if the patient should happen to die shortly after such removal, the medical officer would be apt to incur much blame. And it is not merely for their own sake, but for the credit of the profession to which they belong, that the utmost circumspection is necessary on the part of all gentlemen holding these appointments.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 21ST, 1880.

THE ANNUAL MEETING AT CAMBRIDGE.

THE Annual Meeting at Cambridge has closed under circumstances which call for the most sincere congratulation. From the first day to the last, the meeting was an uninterrupted and brilliant success. The arrangements for the scientific business, and the administration of all the details connected with the Sections and the general meeting, worked smoothly and without any noticeable friction. The gracious hospitality of the University and the Colleges, the personal interest shown by the Vice-Chancellor, the President of St. John's, Dr. Bateson, Dr. Paget, Mr. Trotter (of Trinity), Dr. Latham, Dr. Bradbury, and generally by the medical and other graduates connected with the Colleges, were both continuous and far-reaching. We have not before us at present the particulars necessary to enable us to do justice to all whose local efforts specially contributed to render this meeting an administrative as well as a scientific and social success; but it is only right at once to refer to the labours of Dr. Fawcett, the Treasurer; to the untiring, skilful, and judicious efforts of Dr. Anningson, the General Medical Secretary, and of Mr. A. P. Humphry, a son of the President of the Association, who, although a layman, and unconnected, except through his father, with the Association or the profession of medicine, spared no pains to organise the arrangements, and showed throughout an administrative capacity, courteous zeal, and sound judgment, which must be reckoned among the chief elements in the admirable result attained. Mr. Humphry was unfortunately called away by urgent public business from the public dinner, or he would certainly have received from the Association a reception which would have testified to the warm feelings entertained towards him by the members present, in acknowledgment of his enterprising and successful exertions.

We present this week the text of some further addresses, which will be recognised as reaching the high standard attained by those previously printed. We are prevented from publishing that of Sir James Paget, because no report can do justice to the polished periods and felicitous phrasing of philosophic thought which characterised that address, delivered without a single note; and we have from Sir James Paget the promise that he will himself revise the notes of his address, and enable us to present them in a perfect form to our readers at a later date. This will greatly add to the value of an address, which gave the utmost pleasure and great instruction to all who heard it; it will take rank among the most valuable publications of the year, and among the most suggestive addresses which have for a long time been delivered to a professional audience.

A word should certainly be said here in due recognition of the honour done to the profession of medicine by the university in granting on this occasion a number of honorary degrees to distinguished members of the medical profession, by way of testifying its sense of the consideration due to the Association and its members, on the occasion of their assembling in numbers so considerable in this ancient seat of learning. If the selection bear testimony to a conservative sentiment of recognition of achieved courtly and social, as well as scientific position, rather than of any special relation to the Association which met at Cambridge, or of any special services rendered by the individuals selected from the profession through the Association—a fact which did not pass without comment—it may, nevertheless, be accepted as a compliment to the Association that on this occasion the University chose to consider it as a body identical with the whole profession, and selected those on whom it desired to confer its degrees upon general professional, social, and academic considerations. Viewed from this standpoint, the list needs no comment or explanation, and certainly nothing could have been more felicitous than the short addresses with which the Public Orator, Mr. Sandys, introduced the recipients of the honorary degrees of the University.

The public receptions during the week were successful beyond anything which could have been anticipated, or which, as far as we remember, has yet been seen at any meeting of the Association. Foremost among these was the first evening spent at the Fitzwilliam Museum, in a building not less interesting in itself than in its associations, eminently fitted for public receptions, and decorated with works of classical beauty in ancient and modern art; the galleries were lit with the electric light, the grounds of Peterhouse were gay with Chinese lanterns, and were made musical with orchestral performances and the voices of glee-singers. The night was fine, and the scene was one of refined beauty. The public dinner held in the hall of Trinity College was altogether worthy of the resources of the College, and gained largely in dignity and interest by the beauty of the historic hall which was graciously lent for the purpose. Professor Humphry struck the right key by reminding the guests that they were holding their feast in a royal palace, where kings and queens had presided; and in a hall dignified with associations which are as royal in the kingdom of science as in her national history. Perhaps the most original and successful of the evening receptions was that held at St. John's; it was singularly favoured by the beauty of the night, and by the picturesque lordliness of the grounds and gardens intersected by the Cam. The company were received by Dr. Bateson in the combination-room; the fine hall was devoted to the purposes of a buffet on one side, while on the other were laid out some interesting antiquarian objects; the grounds were illuminated by lanterns and coloured fire, while the river flowing through the grounds and the bridge across it were lighted with Chinese lamps, and a choral band seated in a picturesquely lighted barge floated slowly up and down the river, passing beneath the bridges, singing old English music, which now broke fully on the ear, and then, as the barge moved slowly off, faded into distant echoes from the night. The river was enlivened with small boats decorated with lanterns which floated backward and forward; and the whole scene was one such as has very rarely been realised in this country, and suggested the pleasures of a night festival in the more favoured climates of the East. The garden party of the President, in the extensive grounds of King's College, was attended by nearly 2,000 persons. The weather during the whole of the week was brilliantly fine, and this added greatly to the pleasure of the members, who were tempted by it to wander through the lovely grounds of the Colleges, and who found time to steal away from the sections to visit the ancient Colleges of Cambridge, and the gardens and lawns which have been celebrated for centuries, and are admired throughout the world. Even this bare record of facts may appear to be tinged with a glow of roseate exaggeration to those who were not present at this meeting. It is, perhaps, fortunate for the resources of Cambridge, great as they are, that it was not possible to anticipate so perfectly a successful and singularly attractive meeting as the one just concluded has proved to have been.

Nearly eight hundred members of the Association and foreign guests were present; and, had it been possible to realise by anticipation how important, interesting, and pleasing the occasion would be, it is probable that the numbers might have been trebled; and so great an accumulation of visitors would have been difficult to deal with. Professor Humphry and his colleagues may be congratulated on having organised and carried through a professional meeting than which nothing could have been more successful, and which it will be difficult at any future time for any town or university to rival.

THE MEDICAL ASPECTS OF THE GUY'S HOSPITAL CASE.

Two very different aspects of the case of Louisa Morgan, whose death a late nurse at Guy's Hospital has been convicted of accelerating, were presented to the court at the recent trial. We purpose to contrast these two statements, and to discover, if possible, whether they were both justified by the evidence laid before the court, or whether, on the other hand, an unjustifiable and prejudiced statement of the facts was made by either of the physicians engaged, and, if so, by whom. In so doing, it is right that we should remember that Dr. Pavy had to form his opinion of the case by the aid of the clinical evidence alone, and to act upon that opinion in the treatment of his patient; while Sir William Gull had the advantage of explaining the symptoms which occurred during life by the light of the examination of the body after death—a task which is not usually a difficult one.

The two opinions offered for the guidance of the court were these. Dr. Pavy stated that, before the administration of the bath, he considered the case to be one of chronic phthisis, while it also presented certain other symptoms, the cause of which was not obvious during life; subsequently to the bath, at which time it was proved the patient received a terrible shock, symptoms of tubercular meningitis set in, and of this disease the patient died. Sir William Gull, on the other hand, was of opinion that, in addition to the symptoms of phthisis which the patient presented, there were, from the time of her admission, signs of disease of the brain; that this disease was tubercular, and terminated in what Sir William described as the "natural course of the disease"—namely, tubercular meningitis; in addition to this, Sir William Gull maintained that the bath had no effect upon the course of the disease; and he asserted that the symptoms of brain-disease were so obvious before the bath, that Dr. Pavy "ought to have diagnosed", "certainly to have suspected", its existence. These are strong statements, and we must turn to the clinical history of the case for their justification. Now, the facts of the case, as given in evidence and in the clinical report, were briefly these. The patient was a young married woman, aged 26, who had borne one child nine years ago, but none since; she had complained of pains in her abdomen and lower extremities for six weeks before admission to the hospital, and had suffered from slight cough for some time previously. On admission, slight physical signs of phthisis were found at the apex of the left lung; and, during the first few weeks of her stay up to the time of the administration of the bath, she suffered from vague pains about the abdomen and left leg, slight occasional nausea, once or twice vomiting, occasional headache (from which, for some days, the report states, she was quite free), slight and very occasional rises of temperature; in addition to those symptoms, she was somewhat emotional; there was considerable debility, and a strong objection to leave her bed. So far, we must remember we have no *post mortem* examination to guide us, not even an involuntary evacuation, or a suppositious dragging of the left leg. The symptoms enumerated above are those which existed previous to the day on which the bath was administered; and upon these alone, without sight of the patient, Sir William Gull stated that Dr. Pavy ought to have diagnosed the existence of yellow or cheesy tubercle of the brain. Let us now consider whether, in any case of phthisis, occurring in a somewhat emotional young woman, we should ourselves be surprised if there were a little headache occasionally, a little stomach-disturbance (giving rise to nausea and once or twice to vomiting), a rise of a degree or so of temperature, and some vague abdominal pains. Are these symptoms very unusual? Would they lead us to diagnose cheesy tubercle in the brain? If so, the existence of tubercular disease of the brain must be diagnosed in a very much larger proportion of cases than the teaching of pathology would sanction. We do not wish to discuss the symptoms of cheesy tubercle of the brain; but the symptoms which were present in the case of Louisa Morgan, prior to the bath, though—in case Sir W. Gull's statement should mislead others besides Mr. Justice Hawkins—let us say that, so far as our knowledge goes, so far as medical science has yet seen, this disease commonly gives rise to no symptoms whatever; it is frequently found after death quite unexpectedly; and, when it gives signs of its presence, it does so by interfering with the function of some more or less vital part of the brain, which it may compress or destroy. In this way, it not unfrequently terminates life; only occasionally it gives rise to an acute tubercular meningitis, although Sir W. Gull states that this is its "natural termination". The disease is a most chronic one; in some cases, the cheesy mass appears to become encapsuled and quiescent; in many it exists, and gives rise to pressure-symptoms, for months, and sometimes for years. It is scarcely known as running a rapid course, although Sir William Gull actually stated in the witness-box that the disease was invariably fatal, and doubted "whether a person would live six weeks with yellow tubercle".

But to return to the present case; on the morning of the bath, two fresh symptoms occurred, upon which great stress has been laid: the patient passed an involuntary evacuation, which gave rise to the administration of the fatal bath; and the nurse stated at the inquest that, in her attempt to walk, she dragged her left leg: she had complained of pain in this leg three days previously, but no loss of power was then detected. Undoubtedly, loss of control over the evacuations is often a symptom of brain-disease; but Sir William Gull says that he founded his opinion on the clinical report and the report of the *post mortem* examination. In the latter document, he must have found an account of a large suppurating cyst in the cavity of the pelvis, which had opened into the rectum. We would ask our readers whether they would not consider the presence of such a cyst, in such a position, as a sufficient cause for loss of control over the rectum, for pain in the leg, slight rises of temperature, for nausea and even vomiting, for headache, and vague pains in the abdomen. Undoubtedly, a suppurating cyst, which involved the ovarian and uterine sympathetic plexuses and pressed upon the sacral plexus, would do all these things; and the cyst in question is described as occupying just such a position. We cannot understand why Sir William Gull omitted to take this cyst into consideration when forming his opinion of the case, or why, on the other hand, he was not cross-examined upon the symptoms to which it was likely to give rise; it appears to us that this is an important element in the case.

Subsequently to the bath, the further progress of the case is comparatively simple, and about it there is no dispute. At the time of the bath, the medical evidence goes to show that the patient received a terrible shock, from which she never recovered. When removed from the bath, she was cold, collapsed, and almost speechless; she rallied enough in about five hours to give a disconnected account of the treatment she had received to Dr. Pavy. Three days afterwards, the patient developed symptoms of tubercular meningitis, which was accepted by both physicians as the cause of her death.

Mental shock is commonly mentioned in the text-books as one of the exciting causes of tubercular disease. Moreover, it is perfectly in accordance with well established pathological laws, that sudden fluxion of blood to a chronically diseased organ, brought on by over-action of the organ (in this case over-excitement of the brain), is a most frequent cause of acute progress of disease. Why Sir William Gull should have denied such an influence in the present case it is hard to say; it could hardly have been his experience in clinical medicine, nor his knowledge of pathology, that demanded that he should place himself in opposition to the opinion of Dr. Pavy. Surely it cannot have been to shield the Treasurer and Governors of Guy's Hospital from that public censure which they so richly deserve, that Sir William Gull has endeavoured to cast blame upon a colleague, and to make light of the imprudence and severity of a "trained lady nurse", whose public antecedents were of a kind which were far from calling for an overstrained sympathy, or to suggest that she should be screened by inventive ingenuity from the consequences of an act which was proved to be not without precedent premonitions in her chequered career at successive hospitals.

THE ADDRESS IN PHYSIOLOGY.

DR. MICHAEL FOSTER'S Address in Physiology was heard and will be read with great interest by the members of the Association and by the profession generally. When we look back for only a few years, and contrast the teaching of physiology at Cambridge as it was then with what it is now, we cannot but be struck with the wonderful change that has taken place for the better. Now, we find laboratories, fully equipped with all the necessary apparatus for physiological teaching and research, as complete as in any continental physiological institute or university; a staff of ably qualified teachers and demonstrators; a number of advanced students busily engaged at original research, and a still greater number of juniors earnestly attending to the instruction well imparted to them by the teaching staff, and overfilling the already too small, though only recently erected, class-rooms. Nor is physiology the only science that is in this flourishing condition; chemistry, anatomy, and embryology are equally advanced: new chairs are being founded, and new laboratories are in the course of erection. Surely, this is promising evidence that Cambridge is doing her best to encourage and forward medical science, so long neglected within her walls, and earnestly aims at making that great University the home of medicine as it is of other branches of science, art, and literature.

Dr. Foster began his address by asking "*What is this Physiology* which is to form the subject of the address?" It might be defined, he said, as the actions and reactions of living beings; differing, therefore, from morphology, which treats of the characteristics of form. These two branches of the science of living beings, though separate and distinct at present, will in the future, it can even already be seen, converge and meet, although the time when this will occur is still far distant. He showed that the physiology of function and organ forms but the outer court of the science itself; and that the physiologist has now to set himself to the task of investigating the laws of that conflict of atoms which is constantly going on in every tissue. The discovery that the secretion of gastric juice is the function of particular cells of the gastric glands of the stomach is hardly more than the prelude to the inquiry into the nature of the changes in the protoplasm of the cells, whereby water containing salts and pepsin trickles into the lumen of the glands. That this and other questions of a similar nature are not idle speculations, interesting only to physiologists, but of the greatest practical importance, is very obvious. It will avail the physician little to know that the function of the gastric juice is to digest proteids, unless he is also acquainted with the conditions affecting the characters and strength of the secretion. The close relation, therefore, between physiology and pathology is readily understood—nay that, in fact, they are one science. It was as a physiologist, working by physiological methods, that Professor Lister carried out those remarkable researches which opened up an epoch, on the one hand so far as regards inflammation, which may be considered the "key-note" of pathology, and as regards the circulation on the other. For several years past, a number of important pathological facts have been discovered by physiological investigation, and likewise much physiological progress has been made by induced pathological conditions. Both are sciences of observation, and also of experiment. Although much can be done in both by observing the phenomena brought about by nature that are daily occurring, still, for the progress of science, demanded by human needs, experiment is absolutely necessary; and the physiologist or pathologist who does not experiment, or who is prevented from doing so, is like one who sends, or is forced to send, a message by a chance messenger rather than by telegraph; or, we might say, like one who, in a case of serious illness, instead of sending a messenger on horseback to summon the physician, sends a chance bystander on foot, so as to save suffering to the horse, though perhaps at the cost of human life.

The lecturer pointed out how clear a necessity there is for the pathologist to be early trained in physiological studies and methods of research. Unfortunately, this has been much neglected in this country, and pathology has been looked upon very much either as a discussion of the doctrines of various schools, or as identical with pathological anatomy. If proof of this neglected state of true pathology amongst us be wanted, it is to be found in the fact that there is only one solitary institute in England at this present moment devoted to pathological inquiry, and that exists under difficulties, and occupies only part of the time of a largely engaged practising physician. It is to be hoped that this state of matters may soon be remedied. Doubtless the new chair of pathology at Cambridge, with fully equipped laboratories, will do much to give an onward impulse to the science in this country, and we trust that other universities and medical schools will also take their share in the work.

Many practitioners look upon anatomy and physiology as subjects entirely out of their sphere, and which they left for ever behind them in the examination-room. To correct this erroneous notion, and to show how the results of treatment of disease will be successful in proportion as the practitioner's views are in accordance with those of nature, great pains were taken by the lecturer. According as the daily work of the practitioner is changed from a dull routine into a scientific inquiry and an intellectual effort, by his becoming better acquainted with the rational interpretation of morbid phenomena, so will his interest in and successful cultivation of his profession increase. No great advance is made in physiology which does not sooner or later advance pathology also. The solutions to questions which at one time seemed idle or transcendental, have become part and parcel of working pathology, and it may be safely predicted that the same will be the case with questions which seem idle in their present aspect. Probably one of the most important functions that physiological science performs is that of serving as a means for testing the value of the numerous pathological theories which are constantly being brought forward, and of ascertaining whether they are true or false. Pathology, or the rational and scientific interpretation of the phenomena of disease, is not only the rational basis of the healing art, but also an important intellectual equipment for every practitioner who is not simply a machine for prescribing drugs in a dull mechanical manner. The salutary use of pathological doctrines, however, requires a certain critical power, and the building up of this power is one of the chief functions, for the active practitioner a most important function, of physiological study. To acquire this critical power it is necessary that the study, which must be adequate for the purpose, be carried on in early years, while the medical mind is being formed. The secret of Sharpey being such a successful teacher, the lecturer considered to be owing to the fact that he always laid before his hearers, in plain straightforward language, things as they appeared to himself, describing facts with great accuracy, and placing the arguments for and against before the student, in the same manner, and according to their importance, as they existed in his own mind. In this way his students not only acquired a knowledge of physiology, such as stood them in good stead at the examination boards, but also acquired the art of physiological reasoning and sound physiological judgment. Something more, therefore, than a bare knowledge of facts may be gained by adequate physiological teaching—a "physiological" mind may be formed which is also necessary for "pathological" inquiry. To do this, however, the student must be brought face to face with the problems of the science, and be trained in the method of solving them. The problems involved in such questions as the phenomena and nature of nervous impulse or muscular contractions, the molecular changes of the secreting cells, and the like, are also types of the pathological problems which in after-life the practitioner has to deal with, and the solution of which will determine his practice for better or for worse. If he have acquired a good physiological training, he will be able to form a just and accurate estimate of pathological doctrines. To acquire this, particular and careful physiological teaching is required, and the question will naturally be asked by many, Are the teachers generally, in this country, qualified to give this instruction? Is it not a notorious fact that, in the eleven metropolitan medical schools, there are only two professors of physiology who devote themselves wholly to physiology, the other lecturers being men busily engaged in medical or surgical practice, to whom teaching is in many cases only the means to an end, and who in some cases, there is evidence to believe, can aid the student little in acquiring that kind of physio-

logical knowledge, from which in after years the art of physiological reasoning and judgment is derived? This, no doubt, is due to the bad system of having a number of so-called complete medical schools, made up out of members of the respective hospital staffs, the result of which is that the emoluments, which would be sufficient to endow two, or even three chairs, and provide for well equipped laboratories in connection with them, are frittered away. Fortunately, in some of the universities matters are better arranged, as can be seen at Cambridge, at the Victoria University, and those of Edinburgh and Glasgow, where the chairs are filled by distinguished and specially qualified teachers.

After advocating for the medical student larger and fuller teaching of physiology, Dr. Foster inquired how this is to be attained. Is it to be added to his already overburdened curriculum, or must other subjects give place for it? The lecturer emphatically holds the latter view, and we most heartily endorse his statement that much might be done by clearing away many things which encumber the curriculum, especially the regulations requiring the student to spend many precious hours acquiring knowledge which might admirably qualify him as "a buyer to a wholesale drug-house", or which might be useful to him if it fell to his lot to settle in the backwoods of America, although we must differ in the opinion set forth regarding comparative anatomy. This subject, along with physics and chemistry, regarding both of which Dr. Foster speaks highly as a means of training the mind, and deservedly so, would most advantageously be studied after the student has passed his preliminary examination, and before he begins his anatomical and physiological studies. At this stage, comparative anatomy would prove a most useful training for the mind, and at the same time be an excellent foundation upon which both the teacher of human anatomy and of physiology might build. The traditional subject which Dr. Foster chiefly directs his attacks against is descriptive human anatomy. During the first two years of his course, the student spends from 60 to 70 per cent. of his time on topographical anatomy. The study of this subject may be regarded in two lights: firstly, as a discipline for the mind; and, secondly, as practical useful knowledge. By great authority, it has been urged that its value as a discipline far exceeds its practical utility. Its details, though they can only be learned with great pains and labour, unlike other things difficult to learn, are extremely evanescent; and to the practitioner, nothing will remain after a few years beyond a general idea of the parts of the human body, and a somewhat more special knowledge of particular regions, the acquaintance of which has been maintained by more or less frequent operations. As it cannot claim to be practically useful, it must be as a discipline that it is useful. For this purpose, it undoubtedly is so, and has hitherto been the great means of training students to habits of accuracy, exactness, careful observation, and of strengthening their minds by exercise. The training, however, of medical students, previously to entering on medical studies, is much more advanced now compared with what it was when this supremacy of elaborate detail in anatomical teaching was instituted, and a discipline identical up to a certain point with that of anatomy has already been acquired. The question that must now be considered is, whether there is no other subject which would give an equal discipline, and at the same time be more useful practically. If well and carefully taught, Dr. Foster affirms that the same accuracy, patient observation, strengthening of the mind, can be gained by physiology, as can be gained by anatomy; and that the former engenders habits and strengthens faculties which the latter does not touch, and which are constantly required in professional life; namely, the habit of reasoning securely on data of mixed and uncertain value, and the faculty of arriving at a right conclusion amid conflicting views and facts. He therefore believes that, if anatomy were secondary to physiology, it would, in the long run, be best for the profession. This view was eagerly embraced by two officially important converts, Dr. Acland, the President of the General Medical Council, and Dr. Alexander Wood, Chairman of the Business Committee of the Council; while even Professor Humphry seemed greatly to favour it. It remains to be seen how far these influential gentlemen will bring their convictions into practical effect at the Council or elsewhere.

The address—as remarkable for its earnest enthusiasm and its quaint humour as its practical suggestions—is undoubtedly a most able one, and one supplying material for reflection not only to the profession generally, to whom it was chiefly addressed, but also to medical reformers, and especially to teachers of physiology.

THE Library of the Royal Medical and Chirurgical Society was closed on Monday, August 16th, and will be reopened on Thursday, September 16th.

THE 1,054 deaths in Paris last week included 42 from small-pox, and 58 from diphtheria and croup.

THE Anthropological Society of Paris has formed a committee to collect subscriptions for a statue to the late Dr. Paul Broca, founder of that association.

DURING the past six weeks, the metropolitan death-rate has averaged 22.2 per 1,000, against 24.9 and 17.7 in the corresponding periods of 1878 and 1879.

THE Fort of Vincennes is again the scene of a serious epidemic of enteric fever, and the authorities have sent the garrison to camp out in the woods of Vincennes. It is suggested that the stagnant water in the moat may have something to do with this outbreak of typhoid.

A FINE of £5, with costs, was inflicted by Mr. Ellison at the Lambeth Police Court, on Walter Sharland, a broker, who had seized under a bill of sale, removed, and caused to be sold by auction, a pillow and blanket from a room in which lay a man suffering from small-pox.

A BEQUEST of £20,000 has been left by Dr. Daniel Tyler Coit to his Alma Mater, Yale College. Deceased graduated at the College in 1825, and afterwards became one of the most distinguished physicians in the United States. He has also left a sum of £2,000 to one of the Western colleges.

IN a paper contributed to the new number, fourteenth volume, of the *Journal of Anatomy and Physiology*, Mr. W. J. Walsham of St. Bartholomew's Hospital corrects an inaccuracy which he finds in the larger treatises as well as in the text-books of anatomy, in the description of the veins of the lesser curvature of the stomach. One vein only is generally described, and that is said to be small. Mr. Walsham finds that there are two veins along the lesser curvature, a large one running from the pyloric towards the cardiac end, and roughly corresponding in direction to the gastric artery, and a smaller one running in the opposite direction, in relation with the pyloric artery. This arrangement is depicted in a plate; and Professor Turner of Edinburgh confirms, from subsequent observation, the accuracy of Mr. Walsham's description.

FARR TESTIMONIAL FUND.

AT a recent meeting of the Executive Committee charged with the promotion of the Farr Testimonial Fund, it was announced that the subscriptions already promised or paid amounted to £938. It was decided to keep the subscription-list open for another month or two; and in the meantime, as far as possible, to bring its object under the personal attention of all members of the profession, and of those generally interested in the health progress of the nation.

THE LATE BARON VON HEBRA.

THE funeral of the distinguished dermatologist von Hebra, whose death occurred recently, was, by his wish, quiet and unostentatious; but a great crowd of mourning friends, colleagues, and pupils, paid their last tribute of respect. The students added to the wreaths and crosses which were piled on his tomb one of great size, bearing the inscription:

"Wer im Gedaechtniss seiner Lieben lebt,
Der ist nicht todt, er lebt nur fern,
Todt ist der, der vergessen wird!"

DURHAM MEDICAL GRADUATES' ASSOCIATION.

We publish in another column a short account of a meeting of the medical graduates of the University of Durham at Cambridge. They have resolved to form an University of Durham Medical Graduates' Association—a step of which we cannot but highly approve, not only believing that it will tend to the cultivation of social intercourse and good fellowship among the candidates, but having reason to hope that the medical candidates, when thus united, will be enabled effectually to carry out measures for the extension of the usefulness of the University. The University of Durham might, with great advantage as many think, undertake the function of conferring degrees, after full and adequate examination, on persons who have received diplomas of the London examining bodies, assuming towards them the same university relationship which it now assumes after fifteen years of practice. It is not at all apparent why fifteen years of practice should render medical practitioners more fitted for examination by the University of Durham. If the University desire, as many think it reasonable and wise that it should desire, largely to recruit its medical graduates by offering to the licentiates and members of the English examining bodies an opportunity of acquiring university degrees by examination, it would, no doubt, in carrying out that desire, fulfil a function which is now hardly satisfactorily filled by foreign universities, such as that of Brussels. We have repeatedly pointed out a great hardship inflicted on metropolitan medical students, who receive in the metropolis an education of undeniable medical value; but, after passing preliminary examinations in arts, and the full series of examinations in medicine, surgery, and obstetrics, stand at a great disadvantage in respect to university titles when compared with those who have been educated in Scotland or in Ireland, who acquire on easier terms the University title of M.D. by examination. There can be no doubt that Durham would largely increase the number of its candidates, if it were to take off the fifteen years' restriction under which it now admits to examination all practising medical men. The examinations of the University of Durham are supervised by the General Medical Council, and are certified to be of adequate stringency and completeness; and it is thus much more satisfactory that practitioners should, who desire an university status, acquire it at Durham, than that they should go abroad to the universities whose examinations and standard of competency are not subject to supervision by any British authority. The medical graduates of Durham, by associating themselves in an united body, will now acquire corporate interest in the proceedings of their University, and will be enabled to discuss more fully the questions affecting the welfare of the University in its relation to the medical profession; and, when they have arrived at a conclusion, they will, as an association, be enabled to put their views before the governing body of the University with greater effect than they have hitherto been able to do.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

Since we published a report on the sanitary condition of this institution, about eighteen months ago, the Public Health Committee of Birmingham have taken the matter in hand. It is now admitted on all hands that the present building is quite inadequate to meet the present requirements of the charity. The insufficient cubic space; the crowded out-patient department, under the same roof and directly connected with the wards; and the impossibility of thorough ventilation, owing to the shape of the present buildings and its surroundings, all remain. In these circumstances, the deputation from the Health Committee asked permission to visit and inspect the buildings. This request, after a somewhat angry correspondence, was refused by the Hospital Committee. The ostensible ground for this refusal being that the medical officer of health had already inspected and reported upon the insanitary condition of the institution; and that there was, therefore, no necessity for the visit of the deputation. On the face of it, this refusal would appear to be unreasonable; but politics ran rather high in Birmingham; and the Health Committee are credited with designs upon the site at present occupied by the hospital, to enable them to make a new street, upon which they have set their hearts. Be this as it may, it is customary for the managers of an unhealthy hospital to afford the sanitary authorities every possible facility they may require, to enable them to overcome the existing evils. At Norwich, at Manchester, and at Oxford, under similar circumstances, the aid of the health authorities are invited, and not opposed by the managers of the hospitals. Nothing but good can result from their inspection; and their co-operation should invariably be sought, when necessary, by hospital committees. It behoves the Eye Hospital authorities to come to some amicable settlement of the matter in dispute without delay. The present building is too small, and not well adapted to its purpose, and no amount of tinkering will make it a complete hospital according to modern ideas. Funds will be needed for the necessary extension, whatever plan is adopted; and, if money is to be raised in a town like Birmingham, it is essential that the object for which an appeal is made should commend itself to the united support of the inhabitants. For these reasons, we hope a speedy and amicable settlement will be come to in the matter.

THE INFANT LIFE PROTECTION ACT.

At a recent meeting of the Metropolitan Board of Works, the Special Purposes and Sanitary Committee reported that they had had their attention directed to an inquest recently held upon the body of an infant, which died at a home for infants, at No. 3, Battersea Bridge Road, under the management of Miss M. C. Merrington. Miss Merrington had always claimed exemption from the Infant Life Protection Act, on the ground that, as the home was founded from philanthropic motives, and was under the management of a committee, it was not an institution within the meaning of the Act. She had, however, under pressure from the Board, recently applied to be registered, and registration was granted by the Board on June 25th last. The mortality in the home had been considerable, and it was elicited at the inquest that the arrangements were very defective, that the committee had not supervised the management, that there had been no medical supervision, and that latterly no responsible matron had resided upon the premises. Although the home was now registered, it was doubtful if the Board had any power but to make suggestions as to the arrangements; and the most important suggestion yet made (to as far as possible board out the infants, instead of collecting them at the home) had not been acted upon. The jury in the case added to their verdict a rider, to the effect that there had been an absence of proper supervision and management at the home; and the committee, agreeing in that view, recommended that a communication be addressed to the Home Secretary, calling his attention to the facts of the case, and again urging the desirability of a general amendment of the Act, so as to better protect infant life. We have repeatedly, in these columns, insisted on the necessity of these homes and institutions for the care of infants being compelled by legislative enactment to register themselves according to the provisions of the Infant Life Protection Act. Repeated occurrences in them of a nature to be regretted and prevented will, we hope, convince the Home Secretary of the necessity for their inspection under the law.

UNQUALIFIED ASSISTANTS.

The employment of unqualified assistants to manage cheap "dispensaries" is becoming a growing scandal, and is attracting just censure from magistrates. Mr. George Collier, deputy coroner for East Middlesex, resumed an inquiry this week at the Fountain, Virginia Road, St. Matthew's, respecting the death of Mrs. Sarah Newman, aged 56, who resided at No. 4, Wellington Row, Bethnal Green. The inquiry had been adjourned for the purpose of obtaining the evidence of Mr. John Smith Crone, who is in charge of the Virginia Provident Dispensary, Hackney Road, and who attended the deceased till the time of her death, which took place on the 3rd instant. He now stated that, when he last visited his patient, he found her in a dying state, and he sent a messenger for Mr. Smyth, of No. 13, Colebrooke Row, City Road, who was his employer, and the proprietor of the dispensary. Witness sent for Mr. Smyth about eight o'clock, and he arrived at about eleven. The woman was then dead. Hereupon, the following

conversation ensued.—The Coroner: You say no medical aid could have saved her, but you are assuming you are infallible. You are not a qualified practitioner; and, to make matters worse, you send to the City Road for aid, when the neighbourhood in which the deceased lived is surrounded with medical men. You admit yours is a ready-money business, but it is conducted under false colours. You have no name over your door or upon your labels. The public think they are dealing with qualified men, which is a fallacy. The fact is, Mr. Smyth was not sent for at all; you sought his aid when you saw the dangerous condition of the patient. I hope the publicity given to this case will open the eyes of the public to such reprehensible and irregular practices. A juryman said attention ought to be called to the increased growth of so-called "provident dispensaries", which are supposed to be conducted by properly qualified men, while in reality they were carried on by totally incompetent and irresponsible persons, thereby misleading the public. He considered Mr. Smyth as much to blame as Mr. Crone. Mr. Smyth was then called, and said he had made a *post mortem* examination of the body, and the cause of death was an effusion of serum on the brain, and he considered the deceased had been properly treated for that complaint. Ultimately, the jury returned a verdict in accordance with the medical testimony; and added their opinion that the conduct of Messrs. Smyth and Crone was irregular and highly reprehensible.

DURHAM GRADUATES' ASSOCIATION.

A MEETING of medical graduates of this University was held at Caius College, Cambridge, on August 11th, when a Durham University Medical Graduates' Association was formed, having for its objects the maintenance of the interests and the extension of the usefulness of the medical faculty of the University, with the cultivation of social intercourse and good fellowship among its graduates. An annual meeting will be held in the north and south alternately. The first meeting will be held at Durham in June 1881, immediately after the convocation for conferring degrees. The following gentlemen were appointed officers of the Association: *President:* G. H. Philipson, M.A., M.D. *Vice-President:* Luke Armstrong, M.D. *Honorary Northern Secretary:* W. P. Mears, M.B. *Honorary Southern Secretary:* R. H. Milson, M.D. *Committee:* C. J. Gibb, M.D.; W. C. Arnison, M.D.; W. Travers, M.D.; B. Fenwick, M.B.; S. K. Powell, M.B.; W. J. Tyson, M.B.

BATHING AFTER MEALS.

TWO cases carefully studied by Dr. Naegli, and published in the *Swiss Medical Journal*, afford a striking illustration of the old warning not to bathe with a full stomach. The cases were those of two persons who died when bathing, and in whom the *post mortem* examinations revealed similar appearances, affording a certain evidence that death was due to the fulness of the stomach with food at the period of immersion. The first is the case of a lad, fourteen years old, who, on a holiday, after regaling himself with bread and sausages and a glass of beer, went into the river, with a comrade, for a swim in the evening; and was swimming gaily ahead of his friends, when suddenly, uttering only an indistinct sound, he sank below the surface; assistance was quickly at hand, and he was drawn out within three or four minutes after he had sunk. The physician was at hand at once, and the fullest hopes were entertained of being able to restore life, as the period of immersion had been so short, and the heart could still be heard to beat. Artificial respiration was at once employed, but without any success; then, without much delay, tracheotomy was had recourse to; but, on opening the larynx, instead of air rushing out with the well known sound, a stream of fluid food escaped from the wound. Every means was now attempted to remove by suction these foreign substances from the obstructed trachea, but uselessly; and, in spite of all endeavours, the lad could not be restored to life. A *post mortem* examination showed but few of the usual signs of suffocation from drowning, but the trachea was injected rosy red, contained small quantities of food, and the larger bronchi and bronchioles showed, in their lumen, small pieces of potato entangled and obstructed; even sections in the periphery of the congested lung showed the remains of food in the larger bronchioles. The second case was one of a student aged 18, who went to bathe after an evening meal consisting of cheese, bread, and beer; and, soon after entering the bath, sank suddenly, uttering a dull gurgling sound, and was only recovered a quarter of an hour afterwards from the water, being then quite dead, and incapable of being restored to life. A *post mortem* examination showed, again, the larynx and air-tubes full of fluid contents of the stomach, the bronchi and larger bronchioles extending into the lung being obstructed by small particles of cheese. These two *post mortem* examinations show that both of these unfortunate persons were suffocated by the food which had passed into their trachea and lungs when sinking; the explanation appears to be that the bathers had entered the water with a full stomach; that the pressure of the water on the abdomen, and the efforts in swimming, which not unfrequently produce in swimmers a slight feeling of seasickness, had induced nausea and vomiting. This had suddenly taken away their strength; they had sunk under the water, and, in sinking, had drawn in the food thrown up from the stomach and water into the larynx; the trachea had thus become obstructed by food; so that, even in the case of immediate help, which in this case was at hand, recovery could not be effected. The warning "not to bathe when the stomach is full of food" is certainly very strongly emphasised in these carefully observed and conclusive cases.

A DEAF AND DUMB BACHELOR OF ARTS.

M. MAURICE KOECHLIN of Mulhouse, although born deaf and dumb, has passed successfully his examinations for baccalaureat at Rouen. He was educated by M. Hugentobler, director of an institution for the deaf and dumb. M. Koechlin is only sixteen years old, and his wonderful success, in spite of such great natural disadvantages, has created quite a sensation.

TWO VOICES AND A DOUBLE EPIGLOTTIS.

DR. THOMAS R. FRENCH relates, in the *Annals of the Anatomical and Surgical Society of New York*, a very remarkable case of this kind. It is that of a man, thirty years old, by occupation a singer and contortionist at variety shows. He came complaining of a weakness of the voice; that he could not always grasp the note at the beginning of a piece or turn of a song. He can command with ease the chest and the falsetto registers, and in singing has a baritone and a falsetto voice. Neither gives him the least discomfort, and in ordinary conversation he has no preference as to which to use. In his family he uses the high voice entirely, but in business prefers the low voice. He uses either according to habit or association, and asserts that many of his friends are not aware that he has two voices. He gained the extra voice when he was sixteen years old. In singing he always uses the high voice, as with it he can command a greater compass. In the high voice he has the upper and lower range in the falsetto register, and can run the scale from A to F. The compass of the low voice is so small that he can not reach the high notes of an ordinary song with it, and in singing only uses it to break into the falsetto voice and produce a sensation. He may be said to command the lower range in the chest-register, and can run the scale from A to A. His throat externally is very prominent, on account of an angular curvature of the spine in the dorsal region. The cricoid cartilage is large, and has a deep V-shaped notch in its upper border. The mouth and throat above the base of the tongue are quite normal in shape and condition. There is a marked double arrangement of the glandular tissue at the base of the tongue. The epiglottis is double. The right half of the cartilage overlaps the left to a slight extent. The division in the mucous membrane extends down to the median glosso-epiglottic fold; but the division in the cartilage must extend further, as during the production of the falsetto voice the lateral halves move inward, as if they were hinged in the middle. The difference in the length and width of the cords, as well as the elliptical opening in the falsetto register, and apposition in the chest register, can readily be demonstrated. Whether the peculiar formation of the epi-

glottis has anything to do with his ability to command the two voices, Dr. French is not prepared to say; but it is very probable that it has, for, when the sides of the epiglottis are drawn in during the formation of notes in the falsetto register, the calibre of the laryngeal cavity is decreased to a considerable extent, and thereby probably renders the production of the falsetto voice easier.

COLOUR-BLINDNESS.

Dr. Favre of Lyons recently read a paper of much general interest on the relations of colour-blindness at the Paris Academy of Medicine. He has examined more than ten thousand male adults by different methods, and has discovered that more than ten per cent. of them were not capable of distinguishing one or several of the five elementary colours; he has also met with two cases of serious and comparatively dangerous Daltonism, and eight cases of injurious or troublesome chromatopseudopsia. The examinations made in reference to railroads, the army and navy, would be insufficient if it were necessary to determine by the examination of the sense of colour the aptitute of individuals for those commercial or industrial pursuits which involve the examination of coloured objects. It would, perhaps, be necessary, in that case, to examine two hundred or three hundred shades and colours. Amongst the very numerous mistakes quoted by Dr. Favre, several were made by woollen-drapers, tailors, jewellers, weavers, and dyers. An exact knowledge of colours is necessary to magistrates, and is indispensable to experts, who should have a very acute sense of colour. Dr. Favre quotes instances in which M. Ferraud, an analytical chemist, formerly assistant to M. Chevreul at the Gobelins, has been able to rectify in his reports very important errors committed with regard to colours in the description of inculpating objects in criminal cases. The reports had been drawn up by rural constables, policemen, or other agents of the authority. Chemists, botanists, and micrographists are often very much troubled. General practitioners and chemists suffering from dyschromatopsia know very well generally how to manage matters; they know how to make use of the persons whose sight is normal. M. Favre has sought out the cases of dyschromatopsia which have been publicly recorded, and especially those which have come before the tribunals of justice. Discussions and quarrels have occurred in schools; some cases have been brought before the tribunals. The examination of the colour-sense of the persons at issue would be sufficient to enlighten the judges. The errors of Daltonians with regard to postage-stamps have been so frequent as to determine the French authorities to increase the diameter of the figures, and to exact an examination in colours from their staff. All these circumstances go to prove that such an examination should be more generally resorted to, and that the colour-blind should be made responsible to the law for their mistakes; and, as Daltonism can for the most part be cured by exercise, the legislation required would certainly become an excellent therapeutic agent. Those persons who were past cure would be warned that they must abstain from giving any judgments on coloured objects.

FALSE IMPRISONMENT.

A rather remarkable case, that of Healey *v.* Jeffries, was tried lately before Mr. Justice Fry and a common jury. This was an action for false imprisonment, brought by a lady's maid against the master of the Abergavenny Workhouse. The plaintiff, who stated that she had previously been in the service of Lady Garth and other notable persons, alleged that, having been ordered to quit by her mistress, Mrs. Crawshay Bailey, with one month's wages in lieu of notice, she retired to her room, feeling unwell. Here she was shortly afterwards shocked by the advent of a constable, who burst open the door. He told her she was to go with him to the Union Hotel. Thither she thought she was going, and there she thought she was, until she observed a "notice to visitors" on the wall. Then first she awoke to the consciousness that she was in the workhouse, and not in the hotel. She could not leave that day, which was a Friday, but next day was forwarded (fare paid) to London, whence she wrote the following morning a letter acknowledging the kindness with which she had been treated. Subsequently she commenced these proceedings. According to the evidence of the police, the plaintiff was raving and shrieking in a semi-nude state behind her bedroom door. The doctor who examined her gave it as his opinion that she was suffering from delirium tremens, and not from hysteria. The nurse of the workhouse and the master considered that she was incapable of taking care of herself. The judge, in a rapid but clear charge to the jury, laid down the common law right of every person to liberty, unless lunatic; and, furthermore, unless dangerous either to himself or the public; neither would any *bonâ fide* belief in another's lunacy justify his detention, unless he were so in fact. Here Dr. Irving was of opinion that the plaintiff was in hysterics. Why was his opinion not made known to the workhouse surgeon, Mr. Blanch? As to her being dangerous, she made no attempt on herself or on any one else, nor did she threaten any one. Delirium tremens was a serious charge to bring against a young woman earning her livelihood, especially when no evidence had been produced against her in this trial of any taste for drink. Ultimately the jury returned a verdict for the plaintiff—damages, £80.

VIOLENT DEATHS.

The deaths referred to different forms of violence in England and Wales, during April, May, and June, were 3,943, and 161 fewer than those in the previous quarter; they were equal to an annual rate of 0.62 per 1,000, and to 3.1 per cent. of the total deaths, which was slightly below the average proportion in the ten preceding corresponding quarters. In the twenty large towns, the deaths from violence were equal to an average rate of 0.73 per 1,000, and ranged in the several towns from 0.21 and 0.30 in Plymouth and Sheffield, to 0.90 in Birmingham, 0.97 in Newcastle-upon-Tyne, and 1.21 in Liverpool.

DEATHS IN PUBLIC INSTITUTIONS.

Of the deaths registered last quarter in England and Wales, 12,108, or 9.7 per cent., were recorded in workhouse establishments, hospitals, and public lunatic asylums, showing a slight increase upon the proportion prevailing in recent corresponding quarters. In the twenty large towns, 6,018, or 15.8 per cent., of the deaths occurred in public institutions; the proportions in the several towns ranged from 6.7 and 6.8 in Oldham and Bradford, to 18.0 and 19.4 in Manchester and London. Excluding the twenty large towns, the proportion of institution deaths in the rest of England and Wales did not exceed 7.0 per cent.

A NEW CONVALESCENT HOSPITAL FOR PLYMOUTH AND DEVONPORT.

Up to the present time, there has not been any provision for convalescent patients in the neighbourhood of Plymouth. To meet this urgent want, a house has been purchased at Plympton, which is situated about five miles from Plymouth, on the borders of Dartmoor. It is well placed upon the side of a hill, in a healthy and airy situation, and has a small garden attached, where patients may sit and inhale the pure air from the moor, and yet be sheltered from the east wind. The house has been purchased, enlarged, fitted, and furnished at the sole cost of Miss Middleton of Plymouth, a lady well known in that town as a benefactor of the poor. Miss Middleton has placed the property in the hands of trustees; and two sisters of charity, who have had considerable experience at the Convalescent Home at Walton-on-Thames, are now in charge of the establishment. There is accommodation for ten patients of the female sex; and the medical men of Plympton—Messrs. Aldridge, Ellery, Miles, and Stamp—have undertaken the honorary medical charge. It is hoped that the House of Rest or Convalescent Hospital may prove of service to a numerous class of young women who are engaged in business, and who, from overwork or other causes, may require rest and change of air more than medicine for their restoration. Surgical cases will also be admitted; and it would, therefore, be a great boon to the general hospitals in Plymouth and Devonport if they could each have a bed in the Convalescent Hospital placed at their disposal. As the Home is to be kept open during the whole of the year, and, as the climate of Plympton is similar to that of Torquay, this house may prove of service to phthisical patients living in the northern and mid-

land towns, for whom a winter residence is desirable, and whose means will not permit them to winter at Torquay or Bournemouth. As there is at present no endowment, the work will have to depend for support upon the subscriptions and donations of the charitable, and such assistance is being earnestly sought by the committee. Subscribers of one guinea will be furnished with a letter which will enable them to send a patient for a period of three weeks, the patient paying three shillings per week. Patients will also be admitted at twelve shillings per week, upon the recommendation of a medical man. All subscriptions and donations may be sent to Dr. Charles Aldridge, Plympton House Asylum, Plympton, South Devon, who is the treasurer, and will be glad to answer any communication with regard to the hospital.

INQUESTS.

DURING the three months ending June last, 6,192 inquest cases were registered in England and Wales—equal to 4.9 per cent. of the total deaths; this proportion was almost identical with that prevailing in recent corresponding quarters. In the twenty large towns, the proportion of inquest cases averaged 6.2 per cent., and ranged from 1.8 and 2.4 in Oldham and Sheffield, to 8.2 both in Birmingham and Leicester.

CERTIFICATION OF CAUSES OF DEATH.

THE causes of 119,669, or 95.6 per cent., of the 125,196 deaths last quarter in England and Wales were certified by registered medical practitioners, and 6,192, or 4.9 per cent., by coroners in inquest cases. The causes of the remaining 5,527, or 4.4 per cent., of the total deaths were uncertified. The proportion of uncertified deaths showed a further slight decline from that which has prevailed in recent quarters; in the metropolis, the proportion did not exceed 1.3 per cent.; whereas, in the rest of England and Wales, it was equal to 4.9 per cent. The percentage of uncertified deaths was equal to 6.1 in Derbyshire, 6.2 in Durham, 6.9 in the West Riding of Yorkshire, 7.9 in Herefordshire, 9.8 in Cornwall, 11.8 in South Wales, and 12.9 in North Wales. In the twenty large English towns, the proportion of uncertified deaths averaged 2.6 per cent.; in London it was but 1.3, whereas it averaged 3.6 in the nineteen provincial towns. The percentages in these nineteen towns ranged from 1.1 in Portsmouth, 1.8 in Plymouth, and 1.9 in Birmingham, to 4.9 in Salford and Sheffield, 5.2 in Hull, and 6.8 in Wolverhampton. The proportion showed a considerable decline in Sunderland, Sheffield, and Salford; while the excessive proportion showed no decline in Wolverhampton. The proportion of uncertified deaths was excessively large in the registration districts of Truro, Redruth, Penzance, Keighley, Halifax, Dewsbury, Durham, Easington, Monmouth, and Swansea. The excess of uncertified deaths is mainly due to the fact that the deceased persons have been attended in their last illness by the unqualified assistants of registered medical practitioners, or by unqualified or unregistered practitioners practising medicine on their own account.

THE MEDICAL MAN AND HIS FEE: ALLEGED INHUMANITY.

UNDER this sensational heading, a local paper calls attention to a case in which Dr. Hardwicke held an inquest at the St. Pancras Coroner's Court concerning the death of Edward May, aged thirteen, of North Crescent Mews, Burton Crescent. It appears that the deceased was wheeling a costermonger's barrow along the Euston Road; when a horse and hansom cab accidentally knocked against some boards which were upon the barrow, and they struck the deceased in the stomach. Not much notice was taken of the accident at the time, and deceased went home; but, two days afterwards, as he was very ill, the mother sent for Mr. L. Franklyn, of Burton Crescent, and as the fee was not paid he refused to attend, upon which the mother, as her husband had gone to the market, borrowed the fee, three shillings, which she sent to Mr. Franklyn, and upon his (Mr. Franklyn) attending, he found that the boy was dead. Mr. Franklyn, in his evidence, stated that a little girl came to his house in an excited state, and stated that her brother was dying. He asked her if she had the fee, and on her telling him she had not, he, in consequence of having been sent for many times, and not been able to get his fee from different people that lived in the same mews, told her that directly she got the fee he would go. About a quarter of an hour afterwards, the little girl returned with the fee, three shillings, and paid him, upon which he went to see the deceased at once, and then found that he was dead. He had since made a *post mortem* examination, and found that death was due to a rupture of the spleen. The foreman of the jury said he thought Mr. Franklyn would have been showing a feeling of humanity, had he gone to see the deceased without his miserable fee. The Coroner said he thought Mr. Franklyn might have gone to see the deceased, but he would remind them (the jury) that a medical man was not bound to go whenever he was called. The foreman of the jury asked whether arrangements could not be made so that in a case similar to the present, a medical man, when called by poor persons, could be paid by the Guardians or some other public body; for it was hard that a person should die because they could not obtain the paltry fee. The Coroner said in other great cities there were stations where a medical man could be seen at any time of the day or night. The jury returned a verdict of "Accidental Death". This report will be read with interest in connection with the system of immediate medical relief on application to police-stations, together with an organised system of public succour in emergencies, which has existed now in Paris for some few years, and which, from the reports of which we from time to time publish abstracts, appears to work well. It is about to be introduced in New York. It is true that, in this country, we have an extensive system of Poor-law medical relief which meets all but emergent cases; and we hope to see such a network of provident dispensaries established in our great towns as will make insurance against sickness the rule among our working classes; so that everyone will know where to send to a medical man who has been paid beforehand, by small subscriptions, in anticipation of emergencies. This great principle of *insurance against sickness* is that which needs to be instilled into the minds, and introduced into the habits of our working classes. It is to that end that the long continued activity of many medical men, and the persistent and admirable labours of Sir Charles Trevelyan, tend; but exceptions will always exist; and it is in view of these exceptions, which, in a city so populous as London, will probably never be very few, that incidents such as are disclosed by this inquest appear to support the proposition for a system of medical relief in emergency corresponding to that now working in Paris.

HYGIENIC SCREENS.

Mr. Wentworth Scott recommends the employment of slag wool or silicate cotton, as a convenient disinfectant or odorizing medium. By impregnating the silicate with carbolic acid, thymol, or iodine for instance, and passing a current of air through the mass, which for such purpose is conveniently contained in a box or case, the opposite sides of which are perforated, the air then will be incapable of communicating disease-germs, however foul it may previously have been. If eucalyptus oil or other odorous substance be substituted for the preceding, the wool will impart an agreeable fragrance to the air-currents passing through it. The silicate may be renewed at any time, even if clogged with much dust and organic matter, by simply baking in a hot oven for a short time, and can then, of course, be charged again. Mr. Scott proposes to use these hygienic silicate screens in connection with the doors and windows of hospitals, schools, public buildings, and private dwellings. A form of safety respirator, for the use of nurses and others, on the same principle, is also suggested.

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during July, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other companies and by the Tottenham Local Board was: Colne Valley 1.1, Kent 1.6, Tottenham 1.7, New River 2.1, Chelsea 3.1, West Middlesex 3.5, East London 3.7,

Lambeth 4.1, Grand Junction 4.4, and Southwark 5.2. The Thames waters supplied by the five Companies drawing their supply from that source were of inferior quality to those delivered in the preceding month. The West Middlesex and Lambeth Companies' waters were slightly turbid when drawn from the mains, and the latter contained moving organisms. The Lea water delivered by the East London Company was not superior to the Thames water, and the New River Company's water, drawn partly from the same source, and partly from springs, was slightly turbid, and contained moving organisms. The deep-well waters, supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were of their usual excellent quality. The Colne Valley Company's water had been softened before delivery.

SCOTLAND.

HEALTH OF EDINBURGH DURING JULY.

DR. LITTLEJOHN'S report on the health of Edinburgh during July shows the death-rate of 18.30 per 1000, this being slightly lower than the average of the same month for the last five years. During the month, only three deaths from fever occurred, and, curiously enough, none of them in the Old Town. Dr. Littlejohn also reported to the Public Health Committee of the Town Council on the prevalence of diphtheria in the southern suburbs and certain districts of the New Town. The Committee instructed Dr. Littlejohn to have a general survey made of all the dairies in the county which furnish milk for consumption in the city, particularly with regard to the sanitary conditions of the steadings and the water-supply attached to them. Considering the importance that milk has assumed as a vehicle for the germs of contagion, this must be considered an important step in the right direction; the Committee followed it up still further on a further report by Dr. Littlejohn as to nuisances arising from piggeries, etc., by unanimously recommending the magistrates, before granting licences for byres or piggeries, to have the proposed sites reported on by the medical officer and by the inspector of cleansing.

THE CAMERON PRIZE.

AT the recent presentation of the Cameron Prize of the University of Edinburgh, Professor Turner, the Dean of the Faculty of Medicine, in introducing Dr. William Roberts, said:

Dr. Roberts has made an important investigation on the digestive ferments, and the preparation and use of artificially digested food. Recognising the value in the treatment of many diseases of supplying the patient with food which had already been partially or nearly completely digested, he endeavoured to overcome the two chief difficulties which have hitherto interfered with the practical application of this means of treatment. The first of these difficulties is, that when food is artificially digested by any of the methods hitherto adopted, it is converted into a substance which is neither palatable in its taste nor attractive in its appearance; and the second, that for the production of even this unsatisfactory result, the processes which it is necessary to follow are complicated, and better adapted for the laboratory of the scientific chemist than the sick-room of the patient. It is the great merit of Dr. Roberts that he has succeeded in overcoming both of these difficulties. A careful experimental examination of the action upon foods of the ferments secreted by the various digestive glands has led him to discover that the secretion of the pancreas is not only an extremely active one, but also that the products of pancreatic digestion are almost entirely free from the objectional properties that characterise those of gastric digestion, to which previously attention had been nearly alone restricted. Employing, therefore, preparations obtained from the pancreas, he has succeeded in devising formulæ for the artificial digestion of some of the more commonly used foods, which are distinguished by their great simplicity and freedom from technical requirements. Applying the results of his experiments to the treatment of disease, he has had the satisfaction of finding that food artificially digested, according to the formulæ he has recommended, is of great nutritive value, agreeable to the palate, and capable of alleviating suffering. His researches have thrown much light on the changes produced in many foods during the process of digestion, and they have thereby extended our knowledge of physiological chemistry. They have also added a most valuable means of relieving sickness and prolonging life, and have thereby increased the resources of practical therapeutics. For these reasons Dr. Roberts has been considered worthy of the recognition that is implied in the award to him of the Cameron prize for the most valuable addition to practical therapeutics during the past year.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending August 7th, it appears that the death-rate in the eight principal towns during the week was 19.8 per 1000 of estimated population. This rate is 3.2 above that for the corresponding week of last year, and 1.4 above that for the previous week of the present year. The lowest mortality was recorded in Perth—viz., 15.6 per 1000—and the highest in Paisley—viz., 38.2 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.0 per 1000, being 0.3 above that for last week. The increase was principally due to the number of deaths from diarrhœa in Glasgow. Acute diseases of the chest caused 67 deaths, being 8 more than the number for the previous week. The mean temperature was 58.3°, being 1.0° above that of the week immediately preceding, and 2.6° above that for the corresponding week of the previous year.

INSPECTION OF THE MILK-SUPPLY OF TOWNS.

ON the 16th inst., the Town Council of Glasgow received an influential deputation from a committee of citizens appointed to promote legislation for the prevention of infection in connection with milk-supply. Several gentlemen addressed the meeting; and it was stated in the course of the discussion that recently, when in London, several of the members of the Council had waited on the Lord Advocate, and brought this, among other subjects connected with public health, under his notice. As the result of this interview, it was believed that it only required further pressure to obtain the introduction next session of a measure which would give to the authorities of large towns the control of their milk-supply. The recent outbreak of fever in Glasgow shows the need of such legislative action.

THE HEALTH OF GLASGOW.

ACCORDING to the report of the medical officer of health for the week ending August 7th, there were registered 443 deaths, representing a death-rate of 20 per 1000 living, as compared with 21 for the fortnight preceding, and 13 for the corresponding period of last year. The mean temperature during the fortnight was 57.9°. The number of deaths from fever was 14, viz., 12 from enteric fever, and 2 undefined. The number of deaths from infectious diseases of children was 47. The number of cases of fever registered was 68; but, besides these, there were 61 cases of measles, 78 of scarlet fever, 25 of whooping-cough, 6 of diphtheria, and 9 of small-pox, brought under the supervision of the sanitary department. There are at present in the Belvidere Hospital 140 cases of enteric fever, 79 of scarlet fever, 13 of measles, 17 of typhus, 2 of small-pox, and 12 of whooping-cough—in all, 263, as compared with 304 during the previous fortnight.

NEW WATER-SUPPLY FOR OBAN.

AT a recent meeting of the Oban Town Council, it was unanimously resolved to apply to Parliament next session for a Bill to bring in an additional supply of water to the town, the present supply being inadequate to meet the requirements of the rapidly increasing population.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS IN JULY.

THERE were registered, in the eight principal Scotch towns during July, 2,175 deaths, of which 1,075 were of males, and 1,100 of females. Making allowance for increased population, this is 337 fewer than the average of the same month during the last ten years. The death-rate in each town was, per 1,000 of the population *per annum:* Aberdeen, 15; Edinburgh, Perth, Dundee, and Greenock, 19; Leith and Glasgow, 21; and Paisley, 28. Forty-three per cent. of all the deaths were of children under five years of age, the respective death-rates being: Aberdeen 34 per cent., Paisley 37, Perth 38, Edinburgh 41, Dundee 44, Glasgow 45, Leith 47, and Greenock 48 per cent. Zymotic diseases caused 459 deaths, or 21.1 per cent. of the entire mortality. Of

38 deaths due to fever, 3 were returned as typhus, 32 as enteric, and 3 as simple continued fever. Of course, diarrhœa figures largely as a cause of death, and 121 cases are attributed to it; while whooping-cough caused 98, scarlet fever 67, measles 67, diphtheria 17, croup 10, metria 4, and small-pox 2 deaths—the latter happily an almost exceptional circumstance in Scotland. There were 108 deaths from apoplexy and paralysis, 127 from cardiac diseases, 70 from hydrocephalus, and 50 due to premature birth debility. Phthisis pulmonalis caused 238 deaths, or 10.9 per cent. of the whole; while inflammatory diseases of the respiratory organs (other than phthisis, pertussis, and croup) caused 318 deaths, equal to 14.6 per cent. of the entire mortality. Only 2 deaths of persons over ninety years of age were registered, one, a female, being ninety-five. During the month, the births of 3,570 children were registered, of whom 1,820 were males, and 1,750 females. The mean barometric pressure was less by 0.005 inch; the mean temperature less by 0.7°; the mean humidity greater by 1°; the rain-depth greater by 0.54 inch; and the wind-pressure less by 0.25 lb., than the averages of the same month during the previous twenty-three years. The highest mean temperature was 58.7°, the lowest 57.6°. The maximum rainfall was at Edinburgh, 4.47 inches, where it fell twenty-two days; the lowest at Greenock, 3.00 inches, where it only fell eleven days; this is the opposite of what usually occurs in those two cities.

COMBE LECTURES ON PHYSIOLOGY AND HEALTH.

CARRYING out the dispositions of the will of the late Mr. George Combe, his trustees have made arrangements for courses of lectures on physiology and the laws of health, which are to be delivered in the large provincial towns and manufacturing centres during the ensuing winter and spring, and the expenses of which will be defrayed out of the funds left by Mr. Combe. Arrangements are being made for the first course of lectures (each of which will consist of from eight to ten) being delivered in Kirkcaldy, Dunfermline, Stirling, and Dundee. In each town, influential local committees have been formed to aid in the necessary arrangements. The lecturer appointed for the present by the trustees is Dr. Andrew Wilson, F.R.S.E., Lecturer in Zoology in the Edinburgh Medical School. This cannot fail to be of immense use in educating many in the sanitation of life. Other towns have already applied for the benefit of the lectures.

IRELAND.

HEALTH OF CORK.

DR. WALL, medical superintendent officer of health, reports, for the four weeks ending July 17th, that the deaths amounted during that period to 155, 26 being due to infectious maladies, and the births to 161. The annual death-rate per 1,000 inhabitants was 25.62, that from infectious diseases being 4.29, and the infant mortality 0.83. A decided and progressive decrease has taken place during the last six months in the death-rate of the urban population.

THE "FEVER" AT SWINFORD.

THE reports about the prevalence of fever at Swinford appear to have been much exaggerated, as recently the Swinford Dispensary Committee considered that they were called upon to contradict the public statements made as to the extent and prevalence of disease in their district, and to state that, considering the extent and population (over 12,000) they believed that infectious diseases this year bear favourable comparison with the past year. Dr. John Conroy, one of the medical officers of Swinford, has also certified, under date of July 27th, that there was not at that time one case of infectious fever in the town of Swinford, or within a distance of four miles of said town.

SANITARY CONDITION OF THE SOUTH DUBLIN UNION.

DR. MACCABE, Local Government Board Inspector, in a recent report states that, during the first half of the present year, the sanitary condition of the workhouse has been fairly satisfactory. The unfavourable features which he notices are the rather large number of cases of zymotic disease, including ten of small-pox, transferred from the workhouse to the sheds at Kilmainham; and the outbreaks of scarlet fever and measles among the nursery children in the months of May and June. The average daily number in the workhouse was 3,424, and the total number of deaths in the six months amounted to 483. Sixty-six infants were born in the workhouse, and of these ten died, showing an infant mortality, calculated on the first six months of life, of 15 per cent. The admissions to Kilmainham fever-sheds numbered 264, with a death-rate of 24, including 6 from pneumonia, 4 from scarlet fever, 4 from measles, and 2 from typhus fever. As regards small-pox, the admissions to the sheds came to 373, with a mortality of 31, which, excluding cases admitted when convalescent, represents a death-rate of nearly 16 per cent.

THE SANITARY CONDITION OF DUBLIN.

ON last Monday, the Corporation had under consideration a report of the Public Health Committee in reference to the recommendations of the Royal Commissioners on the sewerage, drainage, etc., of Dublin. The Lord Mayor, as Chairman of the Public Health Committee, stated that the Committee, whilst recognising the desirability of a better main drainage, and being fully persuaded that some day or other that question must be met, reported that they were of opinion that the question of street sewerage, the condition of tenement-houses, and the domestic scavenging of the city demanded immediate attention. The Commissioners considered that new sewers were required, and that the entire system of sewers and drains should be more fully ventilated, and that flushing arrangements should be formed and completed; but, in reply to this, the Committee stated that, upwards of a year ago, it was resolved to obtain a loan of £30,000 to be expended in sewerage works, and of this sum £20,000 had already been granted on a third part of the work being finished; but they suggest that a sum of £2,000 should be raised to put in ventilators. The house-drains in Dublin were proved to be most defective; and the Committee proposed that sanction should be obtained to at once institute an effective inspection and registration of all houses that required drainage and other sanitary necessities. The tenement-houses, according to the medical evidence tendered at the late inquiry, appeared to be the prime source and cause of the excessively high death-rate—being dilapidated, dirty, ill-ventilated, and much overcrowded; and without classification, registration, or proper regulations. There were about nine thousand of these houses in Dublin, most of which were in a bad condition, but to deal with them must be a matter of time and difficulty. However, a very large number of them had been closed, and there are at least two thousand more that could be similarly treated under the powers vested in the sanitary authority under the Public Health Act, if there were any place to receive the occupants. As regards domestic scavenging, the Committee concurred with the recommendation of the Commissioners, that the only way to cope with the difficulty of the removal of dirt, and so forth, was for the Corporation to undertake gratuitously the entire domestic scavenging of the city. There was only the other alternative of leaving it to individual householders; but such a scheme would not be satisfactory. The Public Health Committee have recognised the inadequate provision of baths and wash-houses for the poorer classes, and recommend that they should be established. The Commissioners recommended that, considering the extent of sanitary improvement necessary in Dublin, the Superintendent Medical Officer of Health for the city should devote his whole time to the duties of his office—an opinion which was shared by the Committee, who desired to know what salary Dr. Cameron would require for so doing. The Lord Mayor trusted that the various recommendations would be considered with promptitude, so that Dublin would soon be redeemed from the unfortunate reputation it now had attached to it of being the most unhealthy city in the kingdom. He knew that could not be done without a considerable outlay; but they would be far more than recompensed in the increased health and longevity of the people. The Public Health Committee further recommended, that a new and thoroughly systematic inspection should be made

of the condition of the house-drains, and that their reconstruction and improvement should be enforced where required. After some discussion, a resolution was adopted by the Council, in reference to reforming the condition of tenement-houses, scavenging, house-drainage, and other matters; but that no steps should be taken in the matter of main drainage pending the report of the Municipal Boundaries Commission.

HEALTH OF IRISH TOWN DISTRICTS.

THE average annual death-rate per 1,000, represented by the deaths registered last week in the sixteen principal town districts of Ireland, was 27.0, the respective rates ranging from Sligo, which was 6.0, to Dundalk, with 38.4. The deaths from the seven principal zymotic diseases in the sixteen districts were equal to an annual rate of 5.4 per 1,000, the rate varying from *nil* in Limerick to 10.8 in Queenstown. Two deaths from small-pox and 12 from diarrhœa were registered in Belfast, but the deaths recorded in that district do not include any from whooping-cough, so long fatally prevalent there.

SIR WILLIAM GULL AND THE GUY'S HOSPITAL CASE.

THE following correspondence has appeared this week in the *Times*.

"Sir,—It is with extreme regret that I learn from Dr. Pavy's letter, in the *Times* of Saturday, that he supposes the evidence I gave at the late trial of the Guy's nurse was an unwarrantable aspersion upon his professional competency.

"As senior consulting physician to the hospital, I was called upon to give evidence in the case, which I did very reluctantly. It is true that I could not read the facts as Dr. Pavy had done, and, in the interests of justice, I was obliged in court to state the convictions at which I had arrived. If in doing so I used any expression beyond the narrowest purpose of my evidence, no one would more regret it than I should.

"Dr. Pavy has a very high and well-deserved reputation, and I shall always feel it both a duty and a pleasure to bear my testimony to it; but there are occasions when personal considerations have to yield to higher calls.

"I could not in my evidence state what was right to the unfortunate nurse, and fair for her defence, so far as it might go, without setting forth facts which seemed to show that there had been some misapprehension as to the nature of the symptoms of the disease under which the poor patient was suffering.

"As what I stated was according to the conviction of my mind, and stated on oath, I am not able to retract a word, though I may deeply regret the necessity which obliged me to give expression to my opinion. —I am, sir, your obedient servant, WILLIAM W. GULL, 74, Brook Street, Grosvenor Square, W., August 9."

"Sir,—Sir William Gull's explanatory letter, in the *Times* of Thursday, needs explanation more than did the assertions he made in court against Dr. Pavy's evidence in the late unhappy manslaughter case.

"He says that, as senior consulting physician to the hospital, he was called upon to give evidence in the case. The conception he thus indicates of the duties of a consulting physician is, I believe, entirely new to the medical profession. In that profession, consultations are supposed to be held between medical men engaged upon a case, with the object of mutual assistance as to the case in point. The idea of a consulting physician who accepts consultations in the absence of, and contrary to the views of, the physician in charge of a case, is unknown to what are called the 'regular' members of the profession.

"Sir William Gull's letter would lead the public to suppose that the consulting physician of a hospital is a personage whose opinion is taken when the views of the acting staff are not satisfactory to somebody. Perhaps Sir William Gull will say who it was that put on him the irresistible pressure which he alludes to in explanation of his appearance in the witness-box. The title of consulting physician to Guy's is purely complimentary. It carries no duties or functions whatever. To speak as though a Guy's consulting physician must *ex officio* be consulted, is just as though Sir William Gull were to declare himself compelled to pronounce on civil law because he is a D.C.L. Yet, Sir William Gull comes forward publicly, and uses the empty consulting physiciancy to cover his appearance in opposition to a distinguished member of the acting staff of Guy's Hospital. His testimonial to Dr. Pavy's professional ability will be met in the medical profession with many a silent smile. '*Qui s'excuse s'accuse*', and this trite truth applies not only to self-excuse, but it is equally true that to excuse another with a testimonial does but repeat the accusation.

"No good would come of any discussion in the *Times* upon the pathological aspect of the medical differences at the trial. The facts of the case were decisive, whatever the difference in medical views. They left no proper room for any such difference. It was so indisputable that the poor victim of the nurse's severity was, up to a given time, the subject of chronic tubercle—a disease whose duration is months or years; and that her case changed at the time of the ill-usage from a chronic to an acute and rapidly fatal illness, with symptoms of inflammation. If we accept Sir William Gull's views that 'the course of the malady is continuous and universally fatal, the bath' (a prolonged cold bath) 'did not produce any injury to the brain, which is the seat of the malady, dragging the limbs would not produce inflammation of the brain', it would seem not to matter much what you do to a person rendered entirely secure by this malady. But chronic tubercle of the brain is the strict equivalent of slow consumption of the lungs; it is slow consumption of the brain; and, just as a more rapid inflammation of the lungs may be set up in chronic consumption of the lungs, so a more rapid inflammation of the brain may be set up in chronic consumption of the brain. This is the nearest parallel which the science of disease could furnish; and common sense can judge of Sir William Gull's statements. It is a very bold thing to say that ill-usage and exposure are not of a nature to cause inflammation on a brain already irritated by tubercle. This may be Sir William Gull's opinion, but it is not pathology.

"In conclusion, I am obliged to remark that while Sir William Gull is entitled to hold, and if he please to declare, a doubtful opinion as his own, and therefore true from his point of view, he has not the same freedom with matters of fact. Sir William Gull is reported by you to have said: 'The physician governs the clinical report. I was physician at Guy's for twenty years, and I always dictated the reports myself.' In answer to this, I will only say that I was Dr. Gull's clerk for three months, and he never dictated a line of report to me. I have, too, a letter from Dr. James Braithwaite of Leeds, who was my fellow clinical clerk at the time. He says: 'If Sir William Gull stated that he "always dictated his reports", he certainly could not refer to my time. I am also equally certain that Dr. Owen Rees did not dictate his reports.' As Sir William Gull endeavoured, by his above-quoted evidence, to make Dr. Pavy responsible for a clinical clerk's report before the Court, I may further add that, whereas I have been physician at Guy's Hospital for thirteen years, I have never dictated a clinical report in the whole of that time. I cannot speak with the same certainty as to Dr. Pavy's custom in this matter.—I am, sir, faithfully yours, WALTER MOXON, M.D.—August 13th."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE last ordinary monthly meeting for the session of the Council of the College was held on Thursday, the 5th inst. The minutes of the quarterly meeting of the Council, held on the 8th of last month, were confirmed. The signatures to the by-laws of members elected to the fellowship were received. The reports of the Court of Examiners and of the Committee for General Purposes were also received. It was intimated that two vacancies would occur in the Court of Examiners in November by the expiration of the terms of office of Messrs. Le Gros Clark and Savory. Mr. Clark does not seek re-election. His retirement also causes a vacancy in the Board of Examiners in dental surgery, of which he was chairman. Messrs. Savory, Jonathan Hutchinson, and Christopher Heath, were nominated for election to the vacant seats in the Court of Examiners. Sir James Paget reported to the Council the proceedings of the Medical Council during their recent session. A vote of thanks was proposed and carried to Sir James for his valuable services to the College at the Medical Council. Communications were read from the registrar to the General Medical Council, and several others. Mr. Jasper Rumboll King, of Melksham, who obtained the membership of the College in 1843, was made a Fellow by election.

HEALTH OF COLONIAL AND FOREIGN CITIES.

A SUMMARY of the weekly returns with which the Registrar-General is favoured by various authorities abroad, shows that the average annual death-rate during the second quarter of 1880 in thirty colonial and foreign cities, having an aggregate population of more than thirteen millions of persons, was equal to 28.9 per 1,000. In the twenty European cities the average rate was 32.4 per 1000, against 20.4 in twenty of the largest English towns. The lowest death-rates among the thirty colonial and foreign cities were 19.9 in Christiania, 20.8 in Philadelphia and Cincinnati, 21.2 in Calcutta, and 21.3 in the Hague; whereas the rate was equal to 39.0 in Alexandria, 39.8 in Buda-Pesth, 40.5 in Munich, and 54.8 in St. Petersburg. In Paris 691 deaths were referred to small-pox, 595 to diphtheria and croup, 485 to typhoid fever,

and 343 to measles. Small-pox was also fatally prevalent in Madras, Vienna, Buda-Pesth, and Alexandria. Measles caused 539 deaths in Bombay, and 208 in Madras; and the fatality of diphtheria was excessive in Berlin, Vienna, Rome, and New York. Diarrhœal diseases caused 2,078 deaths in Berlin, 1,169 in St. Petersburg, 1,459 in New York, and 1,043 in Paris.

ASSOCIATION INTELLIGENCE.

NORTH WALES BRANCH.

THE thirtieth annual meeting will be held at the Bulkeley Arms Hotel, Beaumaris, on Tuesday, August 31st.

The "Clio" boats will be in waiting, at 11.30 A.M., on the Bangor side of the Garth Ferry, to take members to view the North Wales training-ship.

On arriving at Beaumaris, members will be driven to Baron Hill, the seat of Sir Richard William Bulkeley, Bart, who has kindly especially opened the grounds to the Association.

On the return to Beaumaris, the ruins of the castle will be visited.

The meeting will commence at 1.15 P.M. A debate upon Dyspepsia will be opened in the President's address. It is requested that the titles of other papers may be communicated to the Honorary Secretary.

Dinner at 3.30 P.M. Tickets, 10s. 6d. each, inclusive of wine.

The return steamer leaves Beaumaris at 5.45 P.M., to meet the 7 P.M. up train. J. LLOYD ROBERTS, *Honorary Secretary*.

Denbigh, August 10th, 1880.

CORRESPONDENCE.

CREMATION OR BURIAL?

SIR,—After hearing a paper on Cremation, last Thursday, in the Section of Public Health, at the Cambridge meeting, many of the members present signed the following address to the Home Secretary:

"We, the undersigned members of the British Medical Association assembled at Cambridge, disapprove the present custom of burying the dead; and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and may render the remains absolutely innocuous. Until some better mode is devised, we desire to promote that usually known as cremation. As this process can now be carried out without anything approaching to nuisance, and as it is not illegal, we trust the Government will not oppose the practice when convinced that proper regulations are observed, and that ampler guarantees of death having occurred from natural causes are obtained than are now required for burial."

I have been informed that many more members would have signed this address if they had heard of it or seen it; and it is probable that members who were not at Cambridge, or others not members of the Association, might wish to sign it before it is presented. I shall therefore be obliged if you will allow me to make known through your columns that I shall be glad to receive, by note or post-card, the name of any gentleman who may desire to append his signature to the memorial.—I have the honour to be, yours, etc., T. SPENCER WELLS.

3, Upper Grosvenor Street, W., August 17th, 1880.

CHIAN TURPENTINE IN CANCER.

SIR,—In reply to Mr. Brown's extraordinary letter, published in the JOURNAL of August 7th, on Chian turpentine, I beg leave to state that it appears, from a careful perusal of the letter, that Mr. Brown has never used the remedy in cancer. I find, also, that only one of Mr. Brown's assumptions is supported by fact—namely, that a large number of specimens sold by chemists as Chian turpentine are fictitious—a statement with which I entirely agree; and it is probable that the "sickness and horrible loathing of the drug" of which he has heard may have arisen from the use of such impure articles. I may state, for Mr. Brown's information, that it is within my knowledge that both men and women have taken the genuine Chian turpentine for months without experiencing the unpleasant symptoms from its use which he describes: and I have the testimony of a number of patients that pain is relieved by the medicine. I regret that Mr. Brown should have thought it necessary to make use of the statement "only in Mr. Clay's hands has it been at all successful". If Mr. Brown read contemporary medical literature, he will not only find that pain is relieved by the use of the drug, but he will learn that it is not a fact that "all others have lost faith in its effects", and that it is not correct to say that "most of the patients have been disgusted with the drug and refused its administration". I am able to confirm my original statement, that "true cancer of the uterus" does disappear under the influence of the true Chian turpentine, and I am supported in this view by competent independent observers. Moreover it is certain that, in the cases referred to, the disease, after an interval of twelve months' supervision, has not returned. It is not by any means proved that the Chian turpentine exerts its influence on cancer by reason of the oil it contains. I do not ask Mr. Brown's favour "for Chian turpentine and its reputed effects"; nor do I seek to wear the laurel crown which he mentions. My object is to benefit suffering humanity, to observe facts, and to record them for the benefit of the profession. I hope to be enabled to pursue this course still, although as a consequence I may subject myself to the criticism of Mr. Brown.—I am, sir, yours obediently,

JOHN CLAY.

THE HISTORY OF OVARIOTOMY.

SIR,—I desire to express my approval of Dr. Keith's manly letter, rescuing, as it does, from an unmerited oblivion, the name of a great surgeon, to whom we owe much, and upon whom misfortunes fell to an extent larger, surely, than was merited.

The value of Mr. Baker Brown's work, and the resuscitation of its principles by Dr. Keith, have been steadily forcing themselves upon me for the last two years, since which time I have entirely discarded the clamp.

The last case in which I used it was my fifty-ninth operation (August 8th, 1878), and the patient died. Reviewing my results with the clamp, already published, they seemed to me so bad as to be entirely unjustifiable, and I determined never to use it again.

I have, since that time, up to this morning, operated seventy-three times with the ligature, and only two of my patients have died. One of these died suddenly during her recovery, the cause of death being an accident to her mitral valve; and the other died, as I believe, from the effects of thymol used in the Listerian method. It is hardly, therefore, to be considered surprising if I begin to think, as Dr. Keith evidently does, that it would have been better if we had never heard of the clamp.

The question as to whether the cautery or the ligature forms the better of the two intraperitoneal methods of dealing with the pedicle, yet remains to be settled. So far, I do not see any advantage for either plan over the other.

Dr. Keith asks, very naturally, what would antiseptics (Listerism) be without drainage? I cannot answer him, for I do not think the question worth further discussion. I never have drained one of my cases of ovariotomy, and I do not think I ever shall; and I have abandoned Listerism, as a source of more danger than advantage; and yet I am getting now success as great as Dr. Keith's.—I am, etc.,

Birmingham, August 7th, 1880. LAWSON TAIT.

SIR,—Now that you are upon the subject of ovariotomy, and disposed to do justice all round, there is one little point in the literary history of the operation about which you may as well be exact.

It was Peaslee who first made the calculation as to the amount of life gained by what had been done by ovariotomists in America. The writer of the article in the *British and Foreign Medical Review*, on three books published simultaneously on the subject in 1872, applied this mode of calculation to the operations done by Wells. Lord Selborne merely quoted this review in an unreported speech made at the Samaritan Hospital. Why, then, the incessant parading of his name in reference to the matter? The review is silenced, but the Lord Chancellor still counts for something.—Your obedient servant,

Paris, August 9th, 1880. WILLIAM WOODHAM WEBB.

SIR,—In justice to Dr. Clay, it is my duty to say that, in stating that Dr. Thomas Keith was present at one of his operations for ovarian disease, before he had operated himself, he has confounded me with my brother. I assisted at an operation by Dr. Clay in Edinburgh, when he removed a large ovarian tumour from the sister of one of our most distinguished surgeons, long since dead. I am not quite sure of the date; but it must have been about the year 1846.—I am, your obedient servant, GEORGE S. KEITH.

Edinburgh, August 7th, 1880.

SIR,—I ask you to insert the following replies to the statements of Dr. Keith, Auctor, and Mr. T. S. Wells.

Dr. Keith will correct his former communication through your columns himself.

With regard to Mr. T. S. Wells, I have nothing to do with his memory nor yet with his diary, as it is quite evident (if the latter existed) he would not need to use the words "I think" and "I may", etc. I repeat, I never invited Mr. Wells until he asked me. And

now let me ask, if, as he states, he had operated fifty-eight times before he visited me, what occasion required a London surgeon of so much experience to travel near two hundred miles to see a provincial surgeon operate? That his diary or his memory is defective, the following will show. In 1863, I read a paper on Ovariotomy before the London Obstetrical Society, in which a case of double ovariotomy was given. In 1865, about eighteen months after, Mr. Wells put forth his first volume of operations, in which he gives a case of double ovariotomy. The case was fatal. In respect to this case, he remarks, "I never heard of such a case before, except one in America"; although it was only a short time before that my paper was read, and which he states he criticised closely. Dr. Clay's case recovered, married, went to America, had three children; and, sixteen years after the first operation, the opposite ovary was extirpated by Dr. Atlee, from which she recovered, and was living years after, and may be so still. The report of my paper in the *Obstetrical Transactions*, and the discussion following, mentions no criticisms by Mr. Wells.

A few words on "Auctor". He does not try to disparage the names of Blundell, Simpson, etc., because they are above his mark, but contents himself with smaller fry, fishing among old prejudices for evidence among men who, as Dr. Blundell remarks, "knock their heads against stone walls". Then "Auctor" asks a question, often asked before, and as often answered, "What was the mortality before chloroform or ether were used?" I repeat, and can prove by documentary and living medical evidence, fourteen cases, of which four died. Then follow "Auctor's" two half-apologies, neither of which are worth acceptance.—Yours, etc.,

Manchester, August 10th, 1880. C. CLAY, M.D.

THE CONTAGIOUSNESS OF TUBERCLE.

SIR,—Taken in connection with your recent article on Cohnheim's views, the following passages, which I extract from De Quatrefages' *The Human Species*, pp. 428-430, seem to me of special interest to medical men.

....."The strange and fatal influence which the white race seems to exercise upon certain inferior races whose territories it has invaded. Nowhere is this melancholy phenomenon more striking than in Polynesia.

"In the Sandwich Islands, Cook calculated the population at 300,000. In 1861, there were but 67,084.

"In New Zealand, Cook found 400,000 Maories. In 1858, there were only 56,049 remaining.

"From a comparison of the estimates of Cook and Forster, it appears that the population of Tahiti must have been at least 240,000. In 1857, the official census gave only 7,212. These facts.....are universal.

"Not only does the rate of mortality increase in this unfortunate Polynesian race; there is also a decrease in the number of births. In the Marquesas Archipelago, at Taïo-Hal, M. Jonan saw the population fall in three years from 400 to 250, during which time only three or four births were registered. In the Sandwich Islands, from among eighty women legitimately married, M. Delapelin found that only thirty-nine had children. There were only nineteen children in the principal families of chiefs. In New Zealand, says M. Colenso, marriages are rarely fertile. The seven principal chiefs of Almriri are without children, with the exception of Te-Hapuku; but of the four married sons of the latter, three are as yet without a family. Nine out of eleven marriages were here barren.

....."Two naval surgeons, MM. Bourgarel and Bruelfert, have alone been able to throw some light upon this melancholy problem. The former found that tubercles were invariably present in the lungs of bodies submitted to *post mortem* examination. The latter tells us that almost all Polynesians suffer from an obstinate cough, and that in eight cases out of ten tuberculosis follows these bronchial catarrhs. *Now phthisis does not appear in the list of diseases drawn up by the old voyagers.* Have we, then, imported it into these islands? Developing in a new region, in a race to whom it was formerly unknown, this disease assumed a more terrible form—with examples of which we are acquainted."—Yours faithfully, HERBERT L. SNOW, M.D.Lond.

BEQUESTS, ETC., TO MEDICAL CHARITIES.—The Brompton Hospital for Consumption, etc., has become entitled to £500, under the will of Mr. John E. Chalmers, and £50 under that of Miss Astbury, and has received £105 from the Mercers' Company, £105 from the Merchant Taylors' Company, £105 from the Clothworkers' Company, £100 from the Grocers' Company, and £100 from the Goldsmiths' Company. Mr. Henry Crawter, of St. John's Wood, has bequeathed £200 to the National Hospital for the Paralysed and Epileptic. The Drapers' Company have given fifty guineas, and the Grocers' Company £50, and "J. O." £50 to the Charing Cross Hospital.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, August 12th.

Surgeons-Major of the Household Cavalry.—Captain HOME asked the Secretary of State for War whether he would consider the case of Surgeons-Major of Household Cavalry who have paid for their commissions, and were now, under warrants issued subsequent to their appointments, compulsorily retired at the age of fifty-five years without compensation; and whether these officers, being debarred from promotion to the rank of Deputy Surgeons-General, might not be allowed to serve until they reached the age of sixty, so as to prevent their being placed in a worse position than the medical officers throughout the rest of the army.—Mr. CHILDERS:—In reply to my hon. and gallant friend, I have to say that this is the first time that I have heard of the existence of the purchase system among the medical officers of the army, and I cannot undertake to recognise it. I will look into the subject of the second question, but I very much doubt whether the medical officers of the Household Cavalry have any claim to more favourable treatment.

The Indian Medical Service.—The Marquis of HARTINGTON said, in answer to Mr. PUGH, that he was not under the impression that certain orders of the Governor-General of India specified in the question contravened statutory provisions by altering terms of service and title to pay, pension, allowances, and privileges, as regarded the promotion of the officers in this service. In a dispatch, however, which he had sent to India, the grounds of complaint had been stated at full length, and he requested the Indian Government to give him early and full information on the matter.

Unhealthy Training-Grounds.—Replying to Sir EDWARD LECHMERE, Mr. CHILDERS said that the training of the Worcestershire Militia Regiment at the 22nd Brigade Depot, Worcester, had not been brought to a premature conclusion in consequence of the condition of the land. The report on it, however, was not satisfactory, and it would be necessary to expend money in its better drainage.

Small-Pox in Fiji.—Mr. Alderman M'ARTHUR asked the Under-Secretary for the Colonies whether he would lay upon the table any reports or dispatches relative to the detention of the ship *Leonidas* by Mr. Des Vœux, Administrator of Fiji, when that vessel arrived at Nasova last year with small-pox on board.—Mr. G. DUFF promised papers on the subject.

Friday, August 13th.

Hospitals and Infirmaries in Ireland.—Mr. CORBET asked the Secretary to the Treasury, with reference to the diminution of the salaries and expenses of hospitals and infirmaries in Ireland in 1879 by the large sum of £3,369 1s. 3d. as shown in the abstract of an account just issued, whether he could state the names of the hospitals and infirmaries in which the reductions had been made, the amount of such reductions, and the cause thereof.—Lord F. CAVENDISH: There has been no reduction in the grants to hospitals and infirmaries in Ireland. The amount taken in the estimates is the same every year. The apparent diminution shown in the account referred to by the hon. member is due to the fact that the period for which the account is made up is the calendar year, and not the financial year. Thus, if any issues in respect to these hospitals happened to be made after the 31st of December, instead of before, the issues in that calendar year would be diminished thereby, although there might be no difference in the issues in respect to the financial year ended March 31st following. I hope, during the recess, to consider whether this return, which is rendered under Act of Parliament, may not be made to serve some more useful purpose; and, if so, legislation may be necessary to alter the period for which it is made up from the calendar year, which was the financial year at the time of the Act, to the present financial year, and to define more exactly the charges which it is desirable to include in it.

Fever in the West of Ireland.—Mr. O'C. POWER called attention to the condition of the fever-stricken districts of Mayo, Sligo, and other parts of Ireland, and suggested various remedies, which he embodied in a resolution. In the first place, he insisted that effective sanitary arrangements should be carried out in the districts under the authority of the Local Government Board; next, that a change of nutritious food should be given to all persons receiving relief; and lastly, that a competent medical staff should be organised without delay in the fever-stricken districts.—Mr. SEXTON seconded the motion.—Colonel COLTHURST made some remarks on the injurious effects of confining the out-door relief to one description of food.—Mr. FORSTER said there was no doubt there had been fever in the distressed districts, due in a great measure to a monotonous diet and deficient sanitary arrangements; but the most pressing part of the crisis had been surmounted. Most of the recommendations referred to by Mr. Power had already been carried out, and

the accounts from every district were much better. As to the sanitary arrangements, it was not possible for the executive or the local authorities to go far in advance of public opinion, and the change in the habits of the people must be gradual. As to the boards of guardians, the experience of the last few months did not justify anything like a general condemnation of them. He expressed his willingness to agree to as much of Mr. Power's resolution as declared that the conditions of these districts required the consideration of the Government, and the resolution was agreed to, in this form: "That, in the opinion of this House, the present condition of the agricultural population in Mayo, Sligo, Galway, and other parts of the West of Ireland demands the serious and immediate attention of Her Majesty's Government."—Dr. LYONS concurred with the Chief Secretary for Ireland in the opinion that any sudden and sweeping measure of sanitary reform in reference to the dwellings of the poor in that country was not to be thought of, but that the necessary improvements in that respect must be brought about gradually. He was sure that the mover of the resolution had not the slightest idea of throwing any doubt on the assiduity, zeal, and ability of the gentlemen belonging to the medical profession who had charge of the sick poor in the districts which had been visited by fever. The medical officers who had been sent down to those districts had in their reports expressed the highest approval of the way in which the local medical men in charge of dispensary districts had performed their duties. A statement made that persons had, in some instances, to go forty miles to obtain medical assistance must, he thought, from his knowledge of the dispensary districts, be an exaggeration.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

LUNACY FEES IN THE PARISH OF ST. MARY ABBOTT'S, KENSINGTON.

IN our last week's issue, we expressed the opinion that the Local Government Board would institute an inquiry into the truth of the serious allegations brought against the relieving officers of St. Mary Abbotts, Kensington, by Messrs. Lilly and Liddard, in demanding a portion of the fee paid to the medical officer for certifying in the cases of pauper lunatics. Messrs. Lilly and Liddard have received from the department the subjoined letter.

"Local Government Board, Whitehall, August 12th.

"I am directed by the Local Government Board to acknowledge the receipt of your letter of the 3rd instant, relative to the proceedings of certain relieving officers of the parish of St. Mary Abbotts, Kensington, in connection with the certification of paupers previous to their removal to lunatic asylums.

"I am directed to state that, if you will inform the Board of the circumstances of any particular case in respect of which you feel aggrieved, and which can be substantiated by reliable evidence and the name of the relieving officer implicated, the Board would be able to deal with the matter.—Your obedient servant,

"ROBERT ROTTEN, Assistant Secretary."

Mr. Liddard has since written, and given the required information. We learn, from the *Kensington News* of the 14th instant, that, at the last meeting of the Board of Guardians, the subject was again discussed, when, instead of denouncing the conduct of the incriminated officials, the guardians proceeded to blame Messrs. Lilly and Liddard for their "want of loyal respect shown by them, in being party to an anonymous attack on the Poor-law administration of the parish, without having first brought any grievance they may have felt under the notice of the Board". This resolution was moved by Major-General Sawyer, seconded by Mr. Cockerton, and carried. Seeing the very scant consideration exhibited by this Board since the matter came to their knowledge, and the singular conduct of the clerk, we consider that the friends of Messrs. Lilly and Liddard acted judiciously in taking the course which they adopted.

THE DERBY BOARD OF GUARDIANS AND MR. GENTLES.

AT the meeting of the Derby Board of Guardians, held at the Poor Law Offices, on Tuesday, the 10th inst., the Rev. Canon Abney in the chair, the report of the committee, to whom had been referred the application of Mr. Gentles, District Medical Officer, for an increase of his stipend, was brought up and read. In their report, the Committee substantiated the correctness of Mr. Gentles' assertion, that his duties had largely increased, and recommended that his stipend should be increased from £80 to £100 a year. The chairman, in supporting the recommendation, said Mr. Gentles had always done his work well. He had given satisfaction to the board, and was well liked by the poor, and although a clergyman in former days was regarded as passing rich on £40 a year, they could not regard a well qualified practitioner as over paid at £100 a year. The resolution on being put to the vote, was unanimously adopted. We congratulate Mr. Gentles on the success of his appeal, and notably upon the fact that he has achieved the difficult duty of satisfying both the board of guardians and the sick poor.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—First M.B. Examination, 1880. Pass List. Entire Examination.

First Division.

Back, Herbert Hatfield, St. Bartholomew's Hospital.
Berry, Harry Poole, Guy's Hospital.
Beverley, John Mackie, Owens College.
Booth, Edward Hargrave, Guy's Hospital.
Brooks, Walter Farrell, King's College.
Carter, Thomas Edward, St. Bartholomew's Hospital.
Collier, Joseph, Owens College.
Cooper, George Frederick, St. Thomas's Hospital.
Dingley, Edward Alfred, University College.
Ellison, John Clement, St. Bartholomew's Hospital.
Evans, Charles Silvester, St. Thomas's Hospital.
Horrocks, William Heaton, Owens College.
Jones, Charles Montague Handfield, St. Mary's Hospital.
Lister, Joseph Herbert, Guy's Hospital.
Martin, Sidney Harris Cox, B.Sc., University College.
Moline, Paul Frank, University College.
Overend, Walker, B.Sc., St. Bartholomew's Hospital.
Price, John Alfred Parry, Guy's Hospital.
Shove, Edith, London School of Medicine for Women.
Spicer, Robert Henry Scanes, B.Sc., St. Mary's and Guy's Hospitals.
Stephens, Lockhart Edward Walker, Guy's Hospital.
Thomson, St. Clair, King's College.
Tunzelmann, Edward Waldemar von, University College.
Voisey, Clement Bernard, Owens College.
Wilkinson, William Camac, B.A.Syd., University College.
Worthington, Sidney, Guy's Hospital.

Second Division.

Adams, William Coode, University College.
Batten, Rayner Derry, St. Bartholomew's Hospital.
Beevor, Hugh Reeve, King's College.
Berry, James, St Bartholomew's Hospital.
Bertram, Benjamin, St. Bartholomew's Hospital.
Campbell, Harry, St. Bartholomew's Hospital.
Cook, Augustus Henry, University College.
Cunnington, Cecil William, King's College.
Davies, William Thomas Frederick, Guy's Hospital.
Day, John Roberson, University College.
Elgood, Charles Reginald, University College.
Faulkner, Joseph, St. Bartholomew's Hospital.
Gray, John Alfred, St. Bartholomew's Hospital.
Halliburton, William Dobinson, B.Sc., University College.
Kealy, John William Gregory, King's College.
Lewers, Arthur Hamilton Nicholson, University College.
Lynam, Robert Garner, King's College.
Marsh, Nicholas Percy, St. Bartholomew's Hospital.
Nicholson, John Williams, Guy's Hospital.
Norvill, Frederic Harvey, King's College.
Parkinson, Charles Joseph, Owens College.
Pike, Charles James, University College.
Porter, Guy David, King's College.
Rabbeth, Samuel, King's College.
Scott, Bernard Charles, Middlesex Hospital.
Waugh, Henry Dunn, B.A., B.Sc., University College.
Wilson, Arthur Henry, Royal Infirmary, Liverpool.
Wood, Louis Edmund, St. Mary's Hospital.

Excluding Physiology.

First Division.

Eady, George John, King's College.
Parry, Robert, Guy's Hospital.
Payne, Charles Alexander, St. Bartholomew's Hospital.

Second Division.

Dent, Harry Lord Richards, King's College.
Fox, Robert Fortescue, London Hospital.
Richmond, Charles Ernest, Owens College.

Physiology only.

Second Division.

Dingley, Arthur William, University College.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 12th, 1880.

Creswell, John Charles, Bromsgrove.
Fotherby, Henry Arthur, 3, Finsbury Square.
Newcombe, Frank, Derby.
Oswold, Robert James William, 245, Kennington Road.
Palmer, Harold Lewis, Haverfordwest.
White, Edwin Francis, Putney, S.W.

The following gentlemen also on the same day passed their primary professional examination.

Lane, Alexander, Guy's Hospital.
Llewellyn, Ernest, London Hospital.

UNIVERSITY OF EDINBURGH.—The following gentlemen received degrees in Medicine and in Surgery on Monday, August 2nd, 1880.

Doctors of Medicine, and Masters in Surgery, with the Titles of their Theses.—(* denotes those who have obtained prizes for their dissertations; † those deemed worthy of competing for the dissertation prizes; those commended for their dissertations.) *Dr Hugh Beach, Lancaster, M.B. and C.M., 1877: A Medico-Legal Inquiry into the Management of Parts in Wet Dock, and some Features in the Development of Growing Bone. Arthur Henry Boucher, England, M.B. and C.M., 1877: Post Partum Hæmorrhage. Adolphus Lucas Bridger, England, M.B. and C.M., 1876: Typhoid Fever. Charles Alfred Cleveland, Nova Scotia, B.A., M.B., and C.M., 1876: Asthma, with special reference to the Treatment by the Subcutaneous Injection of Atropia. Leslie Meredith Earle, England, M.B. and C.M., 1878: Pertussis a Whooping-Cough. †William Galletly, Scotland, M.B., 1876: Diphtheria. William D'Oyly Grainge, West Indies, M.B. and C.M., 1874: Fears as an Article of Diet. ***James Allan Gray, (M.A.Edin.), Scotland, M.B. and C.M., 1876. Observations on the Medico-Legal Investigation of Opium. †Alexander Stevenson Greenway, England, M.B. and C.M., 1874: An Investigation into the Histological Structure of the Skin in Small-pox in Man. ***David Berry Hart, Scotland, M.B. and C.M., 1877: The Structural Anatomy of the Female Pelvis, Fœtal in its Physiological, Pathological, and Practical Aspects. †John Morrison Hobson, China, M.B., 1878; On the Mechanism of Costal Respiration. †Elphinstone Hollis, Isle of Wight, M.B. and C.M., 1874: Tubercular Meningitis. †Henry William King, England, M.B. and C.M., 1878: The Range of Hereditary Tendencies in Disease. James Charles Logie, Orkney, M.B. and C.M., 1879: Intestinal Obstruction; its Diagnosis and Treatment. *David MacEwan, Scotland, M.B. and C.M., 1867: The Conservative Surgery of the Foot. Charles McLaren, England, M.B. and C.M., 1877: Digest on Alcohol; or Alcohol as a Food, Poison, Medicine. *Neil Macleod, England, M.B. and C.M. (with Second Class Honours), 1875: A Contribution to the Treatment of Hepatic Abscess. *James M'Naught, England, M.B., 1875: Pigmentation of the Skin. James Mowat, M.A.Edin., Scotland, M.B. and C.M., 1877: On the Management of Ordinary Labour with Difficulties found in Practice. Richard Morrison Pritchard, Wales, M.B. and C.M., 1874: Asthma. †William Cash Reid, England, M.B. and C.M., 1877: Heart Disease in Childhood (a Clinical Study). James More Reid, Scotland, M.B. and C.M., 1878: On Thrombosis. Francis Rutherford Russell, Scotland, M.B. and C.M., 1878: On Pott's Disease of the Spine, and its Treatment. *Edward William Fleming Stiven, India, M.B. and C.M., 1874: Surgical Experiences and Observations on Gunshot Wounds obtained during the Russo-Turkish War. *** John Francis Sutherland, Scotland, M.B. and C.M., 1878: Hospitals; their Construction and Hygiene. John Taylor, Scotland, M.B. and C.M., 1878: Report of Cases in Practice, with Commentaries. Alfred Hardy Watson, England, M.B. and C.M., 1875: Colour-Blindness.

Doctors of Medicine, under the Statutes, with the Titles of their Theses.—*Theodor Linde, Rotterdam: On Electro-Therapeutics.

Bachelors of Medicine and Masters in Surgery.—(*a.* indicates that the candidate has passed the examinations with First Class Honours; *b.* that the candidate has passed the examinations with Second Class Honours.)—Joseph Adams, England. Thomas Anderson Alexander, Scotland. Francis J. Allan, Scotland. William Allan, Scotland. Henry M'Caul Alston, Trinidad. (*b*) John W. Anderson (M.A.Glasg.), Scotland. James Altham, England. George William Wetton Ashdown, England. William Turnbull Barrie, Scotland. William Frederick Prichard Bassett, Australia. Harold Knowles Bean, England. James Lumsden Bell, Scotland. (*b*) John Bright Berry, England. William Llewellyn Pryce Bevan, England. (*b*) George Sandison Brock, Scotland. James Brown, Scotland. John Macdonald Brown, Scotland. Martin Luther Brown, England. Samuel Frederick Brown, Australia. George Turnavine Budd, England. Thomas Bulley, England. Alexander Cameron, Scotland. James Pemberton Campbell, Scotland. Stewart Carson, England. Benjamin Walker Cawthorne, England. George Chalmers, Scotland. Frederick Orloff Combe, England. William Maxwell Craig, India. James Stedman Craigie, Scotland. Peter Davidson, Scotland. (*a*) William Henry Dobie, England. Harry Melville Dunlop, Scotland. Eben Henry Edwards, England. John Fenton Evans, England. Henry Nathaniel Everard, England. John Ewart, Scotland. Eustace Firth, England. John Bell Fisher, England. Robert Alexander Paul Forrester (B.A.Dublin), Scotland. (*a*) James William Fraser, England. William Robert James Garson, Orkney. Alfred Gelebian, Smyrna. Charles John Gibson, England. Edward Leith Grant, Jamaica. William Charles Greig, Scotland. Alfred Harris, England. William Atkinson Harrison, England. William Hoad, Barbadoes. Wilfred Winnall Horton, England. George Minto Johnston, Scotland. Henry Hall Johnston, Orkney. Richard Jones, Wales. Gregory Jordan, India. Skene Keith, Scotland. Thomas Sharp Kerr, Scotland. Philip Horace Kidd (B.A.Madras), India. William Broad Kirkaldy, England. William Knott, England. David Lennox, Scotland. Robert Wilson Lethbridge, Australia. James Limont (M.A.Edin.), England. David Lindsay, Scotland. John Robert Logan, Scotland. (*b*) Hugh Thomas Macartney, Scotland. Wilhelm Conrad Luckhoff, Cape of Good Hope. Robert Alexander Lundie (M.A., B.Sc.Edin.), England. Colin M'Callum, Scotland. Alexander M'Cormick, Scotland. Archibald Drummond Macdonald, Scotland. Peter Donald Macdonald, Scotland. Murdo Tolmie Mackenzie, Scotland. Lauchlan Maclean, Scotland. Dugald Macmillan (M.A.Edin.), Scotland. Charles William Stanford Magrath, England. (*a*) Herbert Christopher Mahon, England. George Herbert Mapleton, England. David Matthew, Scotland. Robert Peel Mercer (M.A.Edin.), Scotland. Peter Wilson Mercer, Scotland. Wilmot George Morgan, Cape of Good Hope. Peter Nicholson, Scotland. Frederick William Nicholson, Wales. Patrick O'Reilly, Cape Colony. George Peterson, Cape of Good Hope. Robert Knox Peacock, Ireland. Henry Anderson Peddie, Scotland. George Edmund Pitcher, Cape Colony. Charles Alfred Pope, England. Robert Lister Prosser, England. Samuel Thomas Prosser, Scotland. George Stuart Purdy, England. Henry Pullen, England. (*b*) Robert Frank Rand, England. Frederick William Read, England. Petrus Jacobus Retief, Cape of Good Hope. Alexander Stevenson Rose, Scotland. (*b*) James Marcus Ross, Australia. Joseph Carter Ross, Madeira. Richard Emil Schlesinger, Australia. Lorne et Samuell Scott, England. James Scott, Scotland. Levi Prinski Scott, Poland. William Henry Irvin Sellers, England. William Henry Shirreff, India. Samuel Walker Smith, England. Charles Guthrie Stein, England. Alexander Williamson Stirling, Scotland. Charles Gordon Robertson Storie (M.A.Edin.), Scotland. (*a*) Thomas Peter Anderson Stuart, Scotland. Hugh Sutherland, Scotland. Edwin John Sykes, England. Edward George Thomas, England. Alexander Thomson, Constantinople. James Herbert Thorp, England. Richard Turner, Scotland. Arthur Breedon Wade, Isle of Wight. Benjamin Wainewright, England. Rowland Hill Weight, England. Edward de Lacy West, England. Charles Henry Wiley, England. Richard Ernest Williams, England. John Willins, Scotland. Frederick William Wood, England. (*b*) William Young, Scotland.

Bachelors of Medicine.—Walter Calverley Beevor, England. Howard Bendall, England. George Frederick Cowie, England. Thomas Gray, England. (*b*) Arthur Thomson, Scotland. Andrew Fleming Wood, Scotland.

Masters in Surgery.—Archibald Campbell Clark, Scotland (M.B. of 1879).

The Ettles Prize for 1880 was awarded to Thomas Peter Anderson Stewart, M.B., C.M.; the Beaney Prize was awarded to William Henry Dobie, M.B., C.M.; the Wightman Prize was awarded to Richard Frank Rand, M.B., C.M.; the Syme Surgical Fellowship was awarded to David Berry Hart, M.D.; and the Cameron Prize was awarded to Professor William Roberts, M.D., F.R.S., Manchester.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF EDINBURGH: DOUBLE QUALIFICATIONS.—The following gentlemen passed their first professional examination during the July sittings of the examiners.

John Burdon, Cleadon; Charles Crossley, Leicester; Michael Carmody, Limerick; John Hickling Gwynne, Staffordshire; Charles Samuel Brewer, Liverpool; Edgar Rastricke Hanson, Cornwall; Hugh Bullen Matheson, Liverpool; [illegible] St George, Dublin; John Joseph Disdale, Roscommon, Ireland; Robert Griffith Roberts, Liverpool; Frederick Francis German, Fenton, Staffordshire; Robert William Jephcott, Warwickshire; Henry Thomas Legat, South Shields; Davis Hewson Stephens, North Shields; William Evans, Pembroke, Cwm Amman, South Wales; Arthur John [illegible], Yorkshire; Samuel Ebenezer Johnson, Newport, Isle of Wight; Harold Allan Wild Batten, London; Thomas Arthur Wise, Isle of Man; Edward Appleton, Stockton-on-Tees; John McMichael, Dublin; Walter Frederick Rudolph de Watteville, Berne; Henry Wilkinson Carr, Sussex; Herbert Shortridge, Yorkshire; James Joseph Taylor, Newcastle-on-Tyne; William James Spence, Darlington; John Jackson Berry, Pendlebury.

The following gentlemen passed their final examination in July and August, and were admitted L.R.C.P.Edin., and L.R.C.S.Edin.

Charles James Wainwright, Weymouth; James Hall, Roscrea, Ireland; James Parette, Perth; Charles Crossley, Leicester; William Alexander Dunn, Manchester; Robert Owen Jones, Carnarvonshire; Richard Fowler, Dublin; Francis William Smailes, Pickering; John Minchin Whitaker, Dublin; Michael Dominic Keily, Limerick; John Osburne, Cork; John Campbell Graham, Rum, Robert George Taylor, Grahamestown, Cape Colony; George Cuthbert Cadden, Wexford; Alexander Macintyre, Stirlingshire; Luther Cooke, Sutton-in-Ashfield; John Wynne Rodgers, Negapatam, India; Richard John [illegible] Fonceca, Madras; Alexander Harkness, Belfast; Charles Torbitt, Warwickshire; James Leitch, Inverary; Mark Anthony Wardle, Stratford-le-Bow; Andrew Alexander Watson, Galashiels; Alfred Ernest Scanlan, Chester; John M'Nevin, Liverpool; James Charles Buckshaw, Staffordshire; William Doughty, Canonbie; James Alexander Close, Croydon, Ontario; Alfred Wellham, Hawarden; Robert John Boyd, Wells, Somerset; Herbert Ward, Yorkshire; John McWilliam, London, Ontario; Peter Henderson Bryce, Mount Pleasant, Canada; Adam Garrat Mitchell, Limerick; John Holt Marsh, Farnworth, Bolton; Charles Stuart Berwickshire; John Henry Lowry, [illegible]; [illegible]; [illegible];

Lucas, Edward Erskine Moore, Alexander Baillie M'Kee, Robert James Polden, Charles Saunderson Purdon.

Bachelors in Medicine.—Charles Adams, Richard John Baker, John Patrick Barry, Henry Lewis Clare, John T. Creery, John L. Cuppaidge, William S. Gordon, Archibald A. Hamilton, Fitzgerald Isdell, W. H. Line, Thomas R. Lingard, Alexander B. M'Kee, Robert J. Polden, Charles S. Purdon.

Doctor in Medicine.—Travers Boyne Barton, Albert Thomas Hickson, Lewis Jones, John Seymour Kane, Gilbert Lynch, Charles Grove Young.

Licentiate in Surgery.—George Washington Frazier-Creagh.

MEDICAL VACANCIES.

Particulars of these marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

BRIGHTON AND HOVE LYING-IN INSTITUTION—House-Surgeon. Salary, £120 per annum, with furnished apartments, coals, gas, etc. Applications, with testimonials, to the Secretary on or before August 31st.

*CAMBRIDGESHIRE COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and attendance. Applications, etc., on or before September 27th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, before October 10th.

*CHILDREN'S HOSPITAL, BIRMINGHAM.—Assistant Resident Medical Officer. Salary, £40 per annum, with board, washing, etc. Applications not later than September 1st.

DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich—Dispenser. Salary, £40 per annum. Applications, etc., on or before September 4th.

*FLINTSHIRE DISPENSARY—House-Surgeon. Salary, £100 per annum. Applications, with testimonials, to the Secretary on or before September 7th.

FULHAM UNION—Two Medical Officers for Third and Fifth Districts. Salary, £60 per annum each; also Vaccination Officer to Second District. Applications, etc., before September 1st.

HEREFORDSHIRE RURAL SANITARY AUTHORITY—Medical Officer of Health. Salary, £500 per annum. Applications on or before August 24th.

HUDDERSFIELD INFIRMARY—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, with testimonials, not later than September 1st.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Demonstratorship on Anatomy. Applications on or before August 28th.

MANCHESTER ROYAL INFIRMARY—Resident Surgical Officer. Salary, £150 per annum, with board and residence. Applications not later than September 1st.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with apartments, attendance, coals, gas, etc. Applications, with testimonials, to the Secretary on or before September 1st.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—Registrar. Applications, with testimonials, not later than September 1st.

*PARISH OF ISLINGTON—Resident Medical Officer to the Workhouse and Infirmary. Salary, £200 per annum, with furnished residence, coals, and gas; also, Resident Assistant Medical Officer and Dispenser of Medicine to Workhouse and Infirmary. Salary, £100 per annum, with board, apartments, and washing. Applications, etc., on or before September 1st.

*PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—House-Surgeon. Salary, £120 per annum, with board, washing, and lodging. Applications, with testimonials, on or before September 1st.

*ROYAL INFIRMARY, MANCHESTER.—Resident Surgical Officer. Salary, £150 per annum, with board and residence. Applications, with testimonials, on or before September 1st.

UNIVERSITY COLLEGE, London.—Surgical Registrar. Applications, with testimonials, to the Secretary, on or before August 30th.

*YORK FRIENDLY MEDICAL ASSOCIATION—Assistant Medical Officer. Salary, £130 per annum. Applications, with testimonials, to the Secretary, before September 14th.

[The announcement, in last week's JOURNAL, of a vacancy in the office of Medical Superintendent of the Gloucester County Lunatic Asylum, was an error.]

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*GLASCOTT, Charles Edward, M.D., appointed Honorary Oculist to Henshaw's Blind Asylum, Old Trafford, Manchester.

HACON, Walter Edward, appointed Resident Medical Superintendent to the Christchurch Lunatic Asylum, Canterbury, New Zealand.

ELLIOTT, Horace, M.R.C.S.E., appointed House-Physician to the North Staffordshire Infirmary, *vice* W. Shaw, M.B., resigned.

*JACOB, Ernest H., M.A., M.D., appointed Honorary Physician to the Leeds Fever Hospital.

*ROXBURGH, Robert, M.B., appointed Honorary Consulting Physician to the West of England Sanitorium, *vice* J. J. Willmott, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

DAVIDSON.—On the 17th instant, at 15, Priory Row, Coventry, the wife of Charles Davidson, M.D., of a son.

DAVIS.—On August 15th, at the Laurels, Mortimer, Berks, the wife of G. H. Davis, L.R.C.P.Ed., of a son.

MILLER.—On August 11th, at 3, Hamilton Square, Birkenhead, the wife of Hugh Miller, M.D., of a daughter.

DEATH.

STEWARD.—On the 3rd instant, at his residence, Handsworth, Birmingham, in his eighty-fourth year, John Steward, F.R.C.P., F.R.C.S., etc., late of Wolverhampton. Deeply and widely lamented.

DEATHS FROM DIARRHŒA.—The deaths referred to diarrhœa in the twenty largest English towns, which had been 577 and 711 in the two preceding weeks, further rose to 807 last week; they were equal to an annual rate of 5.0 per 1,000 in London, and to an average rate of 6.3 in the nineteen other towns. The death-rate from diarrhœa ranged from 2.1 and 2.2 per 1,000 in Wolverhampton and Bristol, to 10.4 and 11.2 in Leicester and Salford. The deaths in London referred to diarrhœa, which had steadliy increased from 16 to 367 in the nine preceding weeks, were 348 last week, and exceeded the corrected average in the corresponding week of the last ten years by 51. The 348 fatal cases included 265 of infants under one year of age, 67 of persons aged between one and five years, and 11 of persons aged upwards of sixty years. The death-rate from this disease showed the largest proportional excess in the East and South groups of registration districts. The deaths of 12 infants and young children were referred to simple cholera or choleraic diarrhœa.

PUBLIC HEALTH.—During last week, being the thirty-second week of this year, 4,096 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 20 in Edinburgh, 20 in Glasgow, and 35 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Wolverhampton 16, Bristol 17, Portsmouth 17, Bradford 23, Hull 23, Newcastle-upon-Tyne 23, London 24, Sheffield 24, Brighton 24, Nottingham 26, Norwich 26, Birmingham 26, Manchester 26, Plymouth 26, Oldham 27, Sunderland 28, Liverpool 28, Leeds 29, Leicester 33, and the highest rate 38 in Salford. The annual death-rate from the seven principal zymotic diseases averaged 7.8 per 1,000 in the twenty towns, and ranged from 2.1 and 3.9 in Wolverhampton and Bristol, to 14.1 and 15.2 in Leicester and Salford. In London, 1,670 deaths were registered, which exceeded the average by 64, and gave an annual death-rate of 23.8 per 1,000. The 1,670 deaths included 6 from small-pox, 38 from measles, 58 from scarlet fever, 8 from diphtheria, 32 from whooping-cough, 19 from different forms of fever, and 348 from diarrhœa—being altogether 509 zymotic deaths, which were 41 above the average, and were equal to an annual rate of 7.3 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 200 and 175 in the two previous weeks, further fell to 152 last week, but exceeded the corrected average by 7; 87 were attributed to bronchitis and 47 to pneumonia. Different forms of violence caused 54 deaths; 43 were the result of negligence or accident, including 20 from fractures and contusions, 2 from burns and scalds, 9 from drowning, and 7 of infants under one year of age from suffocation. Eight cases of suicide were registered. At Greenwich, the mean temperature of the air was 63.8°, and 1.2° above the average. The general direction of the wind was west and north-north-east; the horizontal movement of the air averaged 11.3 miles per hour, which was 0.8 above the average. Rain fell only on Sunday, to the amount of 0.15 of an inch. The duration of registered bright sunshine in the week was equal to 38.0 per cent. of its possible duration. The recorded amount of ozone was considerably below the average, except on Sunday.

APOTHECARIES' HALL.—At a Court meeting of the Masters and Wardens and Assistants of the Society of Apothecaries, held on August 3rd, 1880, the following gentlemen were elected members of the Court of Examiners for the ensuing year; viz.: Dr. Robert Hunter Semple; Dr. Charles Taylor; Dr. John Randall; Dr. Joseph Samuel Lavies; Dr. John Sherwood Stocker; Henry Bullock, Esq.; Dr. John Charles Thorowgood; Dr. Robert Fowler; Dr. William F. R. Burgess; Dr. Frederick John Hensley; Dr. George H. Savage; Dr. Henry Radcliffe Crocker; Thomas R. Wheeler, Esq., Secretary to the Court of Examiners. At the same Court, the following gentlemen were elected Examiners in Arts for the ensuing year; viz.: Charles Edward Armand Semple, M.B., B.A.Cantab.; Herbert William Page, M.B., M.A. Cantab.; W. Peregrine Propert, M.A., LL.D.Cantab.; Thomas R. Wheeler, Esq., Secretary to the Board of Examiners. At the recent examination for the prizes in Botany given annually to medical students by the Society of Apothecaries, the successful candidates were: 1. Joseph Baldwin Nias, student of St. Bartholomew's Hospital (the gold medal); 2. Alfred Mason Vann, student of King's College, London (the silver medal and books).

OPERATION DAYS AT THE HOSPITALS.

MONDAY..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Roya. Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 12.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 2; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS are requested to look to the Notices to Correspondents of the following week.

PAPERS, HOSPITAL REPORTS, etc. We shall be much obliged to Medical Officers of Hospitals, Secretaries of Societies, etc., for early copies of their Annual and other Reports, for which we have no space in the Journal.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names, not necessarily for publication.

MSS. cannot be returned TO RETAIN MSS. RENDERS NOT USED.

NOTICE OF INTENTION TO OBTAIN.

[illegible] A [illegible] large as his patient [illegible] A good [illegible] old [illegible] I think, according [illegible] treatment of [illegible] I am, etc., G. D.

[illegible] Vere Street, [illegible] W.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

MEDICAL ETIQUETTE.

SIR, I should feel obliged if you would give me your opinion on the following question of etiquette:—I was attending a patient for a week, when the friends became dissatisfied with the progress of the case. On the evening previous to my dismissal, I saw the patient and applied a blister to his side. I visited the house next morning, and was told by the aunt my services were dispensed with, as Dr. ——, physician, had been sent for and had visited the patient. She told me she had sent me a letter to that effect. When I returned home I found that a letter had been left in my absence.

What I wish to know is, whether the physician (consulting physician, also physician to a large provincial infirmary) treated me professionally by taking the patient whilst seeing a recent blister on his side, and passing my door without calling to inquire whether I had refused to meet him, or wished to meet him.

I have met in consultation several times the same Dr. ——, and would at any time, if requested, again.

The question involves a practical bearing to us general practitioners, who may be shipped overboard by the fidgety and dissatisfied public if aided by consultants.

I must inform you that the senior physician of the town never takes patients when a medical man is in attendance without consulting him: for in a large town where there are many "doctors of advice", people rush on sometimes without informing the surgeon in attendance of their intention; and if consultants receive them and ignore the general practitioner, it will be our interests not to put fees into their pockets unless compelled.

If all consultants would act as the senior physician does, we should get on well, and respect each other, and by doing so the public would respect us also.—I remain, sir, yours truly,

GENERAL PRACTITIONER.

Member of the British Medical Association.

*** This case involves the kind of difficulties which arise from the mixed position which "consultants" hold, even in London, and, of course, much more in provincial towns. We do not know of any pure consultants; all are in the habit, so far as we know, of seeing patients who apply to them direct, and even of taking charge of them at their houses, as well as of seeing them in consultation with other practitioners; and so long as this is the case, difficulties such as this are sure to arise. It does not appear here that the physician in question had been previously called in consultation as to this case by the practitioner who writes to us; but that he was called direct to the case, and asked to take charge. Under such circumstances, he was in the same position as any other practitioner; and it must be asked whether he did his duty, with set reference to his being at intervals a consultant. We think the case stated, and supposing it to be quite accurately stated, that he did not. Finding that the patient was under active treatment at the time, it was his duty to ask for a consultation in order to inform himself accurately of the treatment and symptoms up to that moment, to do justice to his patient, as well as to show proper respect to his professional brother in charge up to that moment. The right of a patient to change his medical adviser is undoubted; but, like other rights, it is limited by those of other people; and a medical practitioner has a right to expect that he shall not be dismissed in the middle of a case without reasonable courtesy and explanation, and his successor has a right to expect that the same respect and courtesy will be paid to him by and by those whom he is advising to his colleague and predecessor in the case.

SIR, Will you, in an early issue of your paper, give your opinion in the following case?

A. was the medical attendant of a family, and attended the wife up to the time of her death. The widower subsequently married a daughter of a patient of D. She, when requiring a medical man, wrote and asked D. to attend her. D. called, and explained that he would rather she first informed A. that such was her intention. This she refused to do, and D. agreed to attend her.

Has A. any right to complain of D.'s conduct, or has D. committed a breach of professional etiquette in accepting the patient? Yours very truly, L.R.C.P.E.

Chippenham, August 12th, 1880.

We think that D. acted in a right and proper way, and is justified in accepting the patient.

A THIRTY-THREE DAYS' FAST.

SIR, I have read with some interest the communication of Dr. Collins of Scarborough on this subject. I should like to ask Dr. Cross if any instrumental feeding were resorted to in order that his patient might be prevented from committing suicide by starvation. That the patient was at an unsound mind there seems to be little doubt, for we are told that she lay in bed perfectly motionless, talked little, and took slight notice of any person. She persistently refused food and enemata; and at the end of a week became delirious. It has been the lot of every medical man in charge of lunatics to save the lives of persons, often advanced in life, from voluntary starvation by the use of the stomach-pump; and I think many of your readers, in common with myself, would wish to know why some similar means were not adopted in this case. I am, sir, yours truly, CHARLES ATTERIDGE.

PECULIARITY OF TEST OF INTOXICANTS.

DR. STRETTON says that if a man partakes of two large quantity of good sound wine or malt liquor, he usually staggers about from side to side, his gait is very much like, and he is very grief and to Mother Earth, he generally falls on one side or the other. If he take too much whisky, especially that of adulteration which goes by the name of Irish whisky, he is almost certain to be seized with an irresistible impulse to fall forward on his face. If he get much under the influence of petty, the latter more especially, he is certain to fall down, or bump on his back, and apparently without any previous warning. He once saw a number of men, who had made too merry at a harvest feast, fall down on their backs, get up again, and fall down again in the same manner. He had never witnessed anything of the like kind before; [illegible] was present at the [illegible] was very skewed. He could [illegible] man, told him that that was the effect [illegible] produced by petty, of which this man had taken [illegible] petty. He [illegible] that there even exists [illegible] I have come [illegible] effect. It [illegible] of, [illegible] He [illegible] that there is a subtle [illegible] that [illegible] in the limbs; [illegible] the head [illegible] liquor which some cider makers "perfect" themselves. It would appear [illegible] to the very [illegible] but very slight [illegible] that the various [illegible] and different parts of the cerebro-spinal system which preside over locomotion and upon the various parts in a different manner, or why these varieties [illegible] centres of [illegible].

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE EFFECT OF MEDICINES UPON THE SYSTEM.

SIR,—Would one of your numerous readers kindly tell me if there be in the English language a book where I can find, extensively developed in particular chapters, the following subject: "Introduction of medicines into the system; modifications that they induce and that they undergo in it; elimination. I have found something, but very little, in Royle's *Materia Medica*, by J. Harley; nothing special in Waring, Garrod, Ringer, H. C. Wood's *Therapeutics*, and Stille and Meriskhes *Therapeutics*.—Most obliged yours. C. RUATA, M.D.

Padua, August 4th, 1880.

DR. TANNER'S FAST.

SIR,—I observe it stated, in your number for August 7th, that "Dr. Tanner has had no passage from his bowels since the first day of his fast". This is what I have been looking for and expecting, just as I expected it in the miner's case at Brierley Hill in 1869. It appears to me to be the strongest evidence yet given of the fast being genuine. I have no doubt, if it could be proved, that the case of the little dog, given in the *Times* the other day, would furnish similar testimony. Have we not yet to learn that as much power is possessed for good, in certain cases, by allowing the bowels to be confined, as we know we have a power for harm in a persistent diarrhœa? I have heard the late Dr. Murchison say, in his lectures at Middlesex Hospital, that if the bowels acted naturally or by artificial means at the commencement of scarlet fever, it was not only difficult to stop them, but the patient was liable to head-symptoms, which was not the case if the reverse obtained, but he afforded no explanation; and as long as the large intestine is regarded as it is, and its wonderful physiological properties are ignored and remain uninvestigated, such facts will remain unexplained, and such cases as Dr. Tanner's and that of the miner at Brierley Hill will fail to be comprehended or understood.—I am, sir, yours obediently, C. J. H.

August 11th, 1880.

MEDICAL REFORM.

SIR,—The recent deputation to the Lord President from the Reform Committee of the British Medical Association, if it has had no other effect, has brought upon me a shower of questions from members of the Alliance Association as to whether the views of that Association were correctly expressed when their president (Mr. Nelson Hardy) and Dr. Waters assured his lordship that the medical profession were satisfied with the late Government Bill for the amendment of the Medical Act of 1858; and that the profession had no desire to offer any further evidence upon the question of medical reform. I can only say in reply—and I hope you will permit me to do so publicly—that I know of no man either in or out of the Alliance who will endorse Mr. Hardy's statements. As the secretary to the Alliance, I took what appeared to me to be the best course to remedy the blunders committed by the said deputation upon the occasion I am noticing, and communicated with the Lord President upon the subject. For the information of the members of the Alliance Association, the great bulk of whom, including myself, are members of the British Medical Association, I enclose for publication a copy of that communication, and also a copy of the reply I received to it.—I am, sir, your obedient servant,

130, Stockwell Road, August 16th, 1880. R. H. S. CARPENTER.

Medical Alliance Association, 130, Stockwell Road, S.W., August 12th, 1880.

My Lord,—As the secretary of the Medical Alliance Association, my attention has been drawn to some of the statements made to you by two or three members of the deputation you received on the 29th ultimo, with reference to future medical legislation. I am most anxious to assure your lordship that the statements of Dr. Waters and Mr. Nelson Hardy, when they mentioned to your lordship that the "profession were satisfied with the Bill of the late Government, so far as it went", and "that the profession did not wish to give further evidence upon the subject of medical reform", are absolutely and inexcusably incorrect. The Medical Alliance are very earnest in their desire to rebut, by a mass of facts in their possession, much of the evidence, including that of Dr. Waters, given by several gentlemen to the Select Committee; and they are anxious, also, to give additional evidence embodying other facts, and of an altogether different character to that which has been received by the Committee. This evidence, whilst it would show the necessity of medical reform in a much stronger light than that in which it has already been placed before the Select Committee, would, at the same time, be condemnatory of the late Government Bill and the Bill of the Reform Committee of the British Medical Association.

As an apology for my troubling your lordship just now with this communication, I wish to say that we do not desire to have your lordship misled by statements of gentlemen who are not authorised to speak in the name of the profession generally, as they have professed to you to do, and who appear to be totally ignorant of the legal bearings of many of the provisions embraced by the three Bills in Parliament for the amendment of the Medical Act of 1858.—I am, my lord, your lordship's most obedient servant, R. H. S. CARPENTER, Hon. Sec.—The Lord President.

Privy Council Office, August 13th, 1880.

Sir,—I am directed by the Lord President to acknowledge the receipt of your letter of the 12th inst., and to inform you that his lordship will give it most careful consideration.—I am, sir, yours most faithfully, JOHN R. DASENT.—R. H. S. Carpenter, Esq.

SIR,—The deputation sent by the Reform Committee of the British Medical Association to Lord Spencer have most assuredly misrepresented to him the wishes of the profession. Mr. Nelson Hardy upon that occasion distinguished himself by saying that the Government did not want any more evidence concerning medical reform, which was rather a bold thing for him to do, as it is (as most people will think) for the Government themselves to decide whether they do or do not require further evidence and information upon the question of medical reform generally. Again, Mr. Hardy told Lord Spencer that the late Government Bill met with the approval of the profession. How does Mr. Hardy reconcile this statement with the opposition he gave, in conjunction with Mr. R. H. S. Carpenter, to the late Government Bill and the Bill of the Reform Committee up to the very moment of his being appointed by Dr. Waters a member of the Reform Committee? It is only necessary to look over the pages of your JOURNAL to see the change that has come over Mr. Hardy's opinions since he has joined that Committee, and it would be but fair to the profession that he should explain the cause of that change. I should like to know, as one of the profession who denies Mr. Hardy's right to represent, as he assumes to do, my opinions upon "medical reform", whether he pretends only or really does represent the opinions of the Medical Alliance Association, of which he is, I believe, the President; because, if so, I should immediately, although an old member, withdraw my name from it. Dr. Waters has uniformly obstructed medical legislation, so there is nothing new in the course he took in trying to persuade the Lord President that the profession did not want to give further evidence. The fact is just the reverse; but I suppose Dr. Waters was afraid that further evidence would be overturned; as he has had his say to the Select Committee, why try to stop his professional brethren from having theirs too? Yours truly,

The Terrace, Camberwell, August 14th, 1880. JOHN PAGE HENTSER.

VACCINATION AND REVACCINATION.

SIR,—Allow me, though late in the field, to bear my testimony to the necessity for, and the absolute protection afforded by, vaccination. On my appointment in 1871 as medical officer to the recently erected small-pox hospital in Birmingham, I at once vaccinated all nurses, under-nurses, laundry women, and male attendants who did not exhibit unequivocal marks of small-pox. During the epidemic, not one of these people contracted small-pox, though frequently ill from the intolerable stench arising from severe cases. I revaccinated all the members of my household, myself included; and my wife and only child were almost daily within four feet of the wards for a couple of hours at a time, while I was visiting the patients; indeed, on one occasion, during a thunderstorm, they sheltered in a ward containing some of the worst cases it has ever been my lot to witness, and yet with perfect impunity. Numbers of women suffering from small-pox were admitted with infants at the breast. Those children who had been vaccinated were allowed to remain with the mothers; and, although sucking the poisoned milk, all escaped the disease; while all those who had not been so protected suffered from small-pox, and only one recovered.

So far, then, from granting any indulgences to the opponents of vaccination to secure the privilege of this most loathsome and fatal disease for their children, and thus to perpetuate the complaint to the danger of their neighbours, I consider it the plain duty of our legislators to take the strongest steps to prevent the possibility of an epidemic by insisting not only on vaccination being performed in infancy, but also on its repetition at the age of ten years, when the health of the child permits of its being safely done. The baneful effects of youthful indiscretion visited upon their offspring, and only rendered more clearly visible by the disturbing effects of vaccination, afford to such parents the splendid opportunity of charging upon that operation what should have been, in all honesty, attributed to its proper cause.

"Ætas parentum, pejor avis, tulit
Nos nequiores, mox daturos
Progeniem vitiosorem."

Yours, sir, very faithfully, E. T. BURTON.

Birmingham, August 2nd, 1880.

DAVOS PLATZ.

SIR,—The profession and the public being much interested in Davos Platz as a winter residence for consumptive patients, I have thought that, after spending two winters there, I might trouble you with a few observations.

I went to Davos in October 1878, on account of the health of a member of my family, who derived so much benefit from the climate, that we decided to return last season. Accordingly, we left England on October 7th, and remained in Davos until April 10th, 1880. The result has been most satisfactory.

The winter of 1879-80 was in Davos, as elsewhere, an exceptional one. The fall of snow was not so great as usual, although it fell more frequently, neither were there so many bright days; still there were comparatively few when invalids could not go out. I have noted the Föhn wind as blowing on fifteen days from November 1st to March 15th, when the thaw began; there were cold winds on twenty-six days, sometimes rather stormy; but, in general, these high winds were during the night, and often only for a few hours.

The official weather report gives, for the winter of 1877-8, 64 fine days, 38 moderate, and 49 bad; 1878-9, [illegible] fine days, 64 moderate, 36 bad; 1879-80, 59 fine days, 28 moderate, 34 bad. Most of the days marked moderate would be considered fine in England. From December 8th to March 15th last, we had continued bright sunshine, except for ten or twelve days. During the past winter, I have marked wind on twenty-three days; also the Föhn wind on ten days, from November 1st, 1879, to March 31st, 1880. This period includes the setting in of winter, also the partial melting of the snow, which usually begins about the middle of March. There was heavy rain on March 4th, the first time since November 24th.

A snowy day, without wind, does not prevent invalids from going out. The snow is generally so dry that it shakes off the clothes like dust. As a report of the temperature has been given by Dr. Williams in the JOURNAL of July 10th, I will not enter upon it further than to say that visitors, both invalids and others, quite enjoy their walks in the coldest weather, which is really the most agreeable. The air is then perfectly still, with bright sunshine, the snow crystals glittering like diamonds. Most visitors do not feel the cold nearly so much as in England; of course, if there were wind, the low temperature would be insupportable.

The atmosphere is generally calm; so much so, that I have often placed a lighted candle on a table in the middle of the room, or on the step of a room-door, with the windows open, and the flame has burnt steadily. This stillness enables patients to sit out of doors for hours in the sun, and to sleep with open windows, thus allowing them to breathe pure fresh air. The winter climate is characterised by a cold, dry, still, and rarefied air, with intense sunlight, many days without a cloud; the sky a deep blue, darker than that of Italy, probably from contrast with the snow, which reflects the light, and makes it very trying to the eyes.

The sun-heat on bright days is very great, the black bulb thermometer sometimes rising above 140°. As the country is covered with snow for nearly six months, there is a sameness in the landscape; although there is beauty in the mountains and pine-forests, with their varied lights and shades.

For the last two or three years, Davos has been reported to by Germans and Swiss as a winter residence for those suffering from pulmonary affections. The numbers must have steadily increased, as formerly there was only one hotel, now there are seven, besides *pensions*. The number of visitors in each of the last two winters was said to be more than seven hundred; about five hundred Germans, French, Swiss, etc., the rest English and Americans. Of these, a very large proportion are invalids, more so, comparatively, than on the Riviera. In the winter of 1877-8, I observed many going about looking pinched and miserable from the cold. Some were ordered to leave: others remained the winter, but only returned home to die; two or three were English. In justice to my professional brethren, I must say these patients were not sent to Davos. I believe some went over against medical advice, having already tried other health-resorts without advantage. They naturally hoped a climate altogether different might restore them (there were very few such bad cases last year). In the same season, 1877-8, a large number, particularly those in the early stages of phthisis, did wonderfully well; many of

them are reported by Drs. Ruedi, Beeli, and Unger in the paper by Dr. Clifford Allbutt published in the *Lancet* last year That many cases of phthisis have been arrested or cured at Davos is certain. I have also seen the same at Nice during several years' practice there; but, as a large proportion of those who have done well at Davos had already tried the health-resorts of the South, this surely tells somewhat in favour of Davos, and indicates that treatment in mountain-air is the most appropriate for some cases. I have formed a favourable opinion of Davos, and believe it will be found of great service to very many invalids; yet the milder and more equable climates of the South of France and Italy are more suitable and agreeable for the greater number of phthisical patients, particularly advanced cases. The patients I would advise to go to Davos are those in the early stages of the disease, before large cavities have formed; and when there is sufficient strength to take exercise, or, at least, to sit out in the open air, these have a good hope of doing well there; and, if they feel stronger in dry cold weather in England, recovery would be more certain. If patients are obliged to remain in their rooms, they would probably be better in Nice, Cannes, or Mentone; however, I saw and heard of several who went to Davos four or five years ago so ill that they were not able to walk, had to be carried to the bedroom, remained there some weeks, but ultimately recovered; at least, they looked well, were always about, and out in all states of the weather. Others who had been there for several winters were far from well (much like invalids who return every year to the Riviera); these expressed themselves as feeling better in Davos than in other places; still there must be considerable risk in sending patients with advanced phthisis to such a climate, particularly if suffering from gastric or intestinal irritation.

In doubtful cases, it might be desirable to go to Davos in August or September, when, if not found suitable, there would still be time to go south before the winter. Many suffering from hæmoptysis did well, several did not; a few who reside there are free from it as long as they remain in Davos, but have returns of it when they go to the lower valleys or the plains. For delicate young people, who require bracing, the climate is decidedly beneficial. Some with enlarged scrofulous glands have done well; also cases of overwork where rest and quiet were necessary. With invalids who are improving, the fever and night-perspirations soon cease, cough and expectoration diminish, and chest-dulness rapidly disappears (the expectoration is sometimes so lessened, that patients fancy the cavities are healing when there is no real change for the better). With healthy visitors, there is often quickened pulse, with difficulty of breathing in attempting to ascend the mountain-paths; this soon passes off, but constipation and sleeplessness are sometimes troublesome. In the mountain airs, invalids experience an increase of appetite; they eat and digest food which they could not do in England; there is a feeling of *bien-être;* and, as they walk about, eat well, and really enjoy themselves, it is rather difficult to make them careful. They go out on bad days; and, on fine moonlight nights, walk, *tobaggin*, or drive in open sledges, often with impunity, but sometimes they suffer for their imprudence. Those affected with organic, cerebral, cardiac, or renal disease, should not go to Davos; and I fear it might be hurtful where there is laryngo-tracheal irritation. The natives are said to be exempt from phthisis. Pneumonia and apoplexy appear to be fatal amongst them. I received a statement to the effect that, out of thirty deaths, five were from pneumonia, and four from apoplexy.

Having retired from practice some years ago, I had no charge of patients at Davos, and regret that my observations cannot, on that account, be so complete as I would wish; but I send them as they are, in the hope that they may assist, even a little, in forming a proper estimate of a climate which may yet be a valuable help to us in our struggle with that dire disease, which carries off its thousands of victims in the bloom of youth, and brings sorrow and mourning into so many families.—I am, etc.,

R. CROTHERS, M.D.

St. Leonard's-on-Sea, July 22nd, 1880.

P.S.—I hope these remarks will not be understood as recommending that most invalids affected with phthisis in its early stages should go to Davos; that is not so; the winter climate has such a decided influence on the disease, either for progress towards recovery, or the reverse, that the selection of suitable cases requires very careful consideration. It is well to bear in mind that, when the snow begins to melt about the end of March, the weather becomes very unsettled (with damp disagreeable days), and continues so for some weeks. It would be better that invalids should not remain during that time.

THE APPLICATION OF THE ELECTRO-MAGNET TO THE CURE OF ANÆSTHESIA.

SIR,—The interesting communication inserted in your current number by Dr. Julius Dreschfeld, upon the use of the electro-magnet for the cure of anæsthesia, contains a slightly erroneous statement, which perhaps you will allow me to correct.

In the experiments made by Dr. Stone, which appeared in the *Medical Times* of July 14th, an electro-magnet was not directly used. A powerful compound magnet of steel was indeed saturated by means of a temporary, soft iron core, excited by a copper helix, and then applied to the anæsthetic limb, with the result of removing the anæsthesia. The essence of the experiment, however, consisted in the fact that the same mass of tempered steel as yet unmagnetised, but apparently exactly the same, had previously been applied unsuccessfully. The object was more to exclude any disturbing effect of "expectant attention" on the part of the patient, than to intensify the magnet fluid itself. Dr. Stone has for some months had a large electro-magnet in the wards, with which experiments are being carried on, but which are hardly as yet ripe for publication.—I am, sir, yours faithfully,

A. NEWSHOLME, House Physician.

St. Thomas's Hospital, Aug. 10th, 1880.

TURPENTINE LINIMENT.

SIR,—I think the following will suppl[y] "Pharmacist's" wants. R Vitellium ovi, i; olei cajuputi, ʒi, ad[d] acetic fort., ʒss; aquæ rosæ, ʒiss; spiritus tereb., ret. ʒiij. M. The first four should be well mixed in a mortar, and put in a bottle; the turpentine is then added, and shaken well. I am, etc.,

J. H. WRAITH.

Over Darwen, August 7th, 1880.

SIR,—In reply to "Pharmacist", the following is the prescription for the linimentum terebinthinæ aceticum: R Vitellum ovi, i; acid. acetic fort., ʒss; olei terebinthinæ ʒviij; aquæ, ad. ʒviij. The egg is to be whipped with a fork for a few minutes. (The whole of the egg may be used, both yolk and white, spite of the prescription.) It must be then put into a pint or pint and a half bottle, half the water and the whole of the turpentine added to it, and the bottle violently shaken for a few minutes; the rest of the water is then to be added, and the acetic acid last of all, the bottle being finally well shaken till the liniment is quite smooth and of a creamy yellow colour. "Pharmacist" will find the bottle a better vessel to mix with than a pestle and mortar, which is usually recommended, as in nearly every instance where the mortar is used instead of the bottle the egg coagulates and the liniment is spoiled. I am, etc.,

W. SYKES, M.R.C.S.

Mexborough, August 7th, 1880.

CINCHONA RUBRA IN DRINK-CRAVING.

WILL anyone who has seen benefit from the above say what preparation they have used; in what doses; how frequently administered; and from whom the drug is to be had thoroughly reliable; and oblige,

H. A. S.

"HOMŒOPATHIC" TREATMENT OF ECZEMA.

DR. E. HAUGHTON (Norwood).—We are not disposed to record here a case in which a patient suffering from eczema was recommended to be vaccinated as a means of cure. The person who is responsible for such absurd advice and its consequences should send it to a homœopathic journal.

CHOLERA AND TYPHOID FEVER IN INDIA.

SIR,—In 1878, cholera killed 226 British soldiers of the Indian Army; and in 1879 it is believed (the returns have not been published) to have killed double that number. Typhoid fever is admitted to have killed, in 1878, 206 men, but if we include the deaths reported under the head of inter- and re-mittant fever, which were almost certainly due to typhoid, it must be debited with 285 lives of British soldiers. Dysentery and diarrhœa killed 102 men. Thus in 1878, these three diseases (I count dysentery and diarrhœa as one) killed altogether 615 men, or but little short of the strength of a whole British regiment. It appears that these diseases prevailed with disastrous results at only a very few stations, though typhoid was diffused over a very wide area. The once healthy station of Jullundur had 25 deaths from the diseases mentioned in a garrison of 743. This station has had three epidemics of these diseases since 1872. Sangor had 16 deaths from them in a garrison of 369, Moray 57 in a garrison of 1,208, and Fyzabad 57 in a garrison of 866. The last mentioned station had 64 deaths in the year, 57 of the number being due to cholera. All these four stations are provided with superb barracks, which were constructed a few years ago regardless of cost. If we turn to the report of the Sanitary Commissioner with the Governor of India for an explanation of these terrible epidemics, we find nothing worthy of the name. They are attributed to "the unhealthy influences of the year" (page 25, para. 23), or "endemic or climatorial influences" (page 23, para. 20), but "frequently no sanitary effect could be discovered" (page 23, para. 21) to account for the outbreaks. From the last quotation it would seem that in many cases the sanitary condition of stations was so perfect that there was no room for improvement. If this be true, if it be really a fact that typhoid and cholera and dysentery commit their terrible ravages in spite of all sanitary precautions, the prospect of sanitary regeneration in India is indeed gloomy, and we shall have to submit, as best we may, to the existing state of things, in which from 300,000 to 500,000 people are swept away every year by the most fearful scourge, epidemic cholera. But happily things are not really so discouraging as they look at first sight, since it appears that the inquiries which failed to trace the epidemic among the troops to tangible causes "were conducted under the direction of the Quarter-Master-General" (page 69, para. 103). This accomplished officer, can hardly be supposed to combine with his military knowledge a very profound acquaintance with the most recent methods of investigating disease causes, and so there is ground for believing that if the epidemics in question had been studied with the skill of a Buchanan or a Ballard the results would have been very different, and that the destruction of the 57 soldiers by cholera at Fyzabad would have elicited a more satisfactory explanation than that given by the Quarter-Master-General, namely: that the calamity "was probably due to heavy rains after a long drought." There is little doubt, too, that the 34 cholera deaths, and the 23 deaths from typhoid and dysentery at Moray, would have been traced to some more probable cause than "want of rain" (page 104 and 105). The Sanitary Commissioner with the Governor of India declared in his report for 1872, that "cholera inquiry in England was on the wrong road, and that the sooner we confessed that we were in the same state of ignorance as we were in 100 years ago, the better." The experience of the last two years is not likely to gain adherents for the new method of inquiry which Dr. Cuningham has marked out for himself, and persistently followed for fifteen years.

I am, etc.,

SCEPTIC.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Reginald J. Ryle, London; Mr. F. S. Eve, London; Dr. R. H. Wilson, London; Dr. Constable, Leuchars; Dr. Pitman, London; Mr. F. R. Greenwood, London; Mr. J. W. Harrison, Sheffield; Dr. W. H. Tayler, Anerley; Dr. James Ross, Elgin; Mr. G. Eastes, London; Dr. J. Rogers, London; Our Edinburgh Correspondent; Dr. Joyce, Cranbrook; Dr. A. Rabagliati, Bradford; Mr. R. A. Jones, Llanfair; Dr. D. J. Rutherford, Baltasound; Dr. E. H. Vinen, London; Mr. John Priestley, Manchester; Mr. Julius Prince, London; Mr. Vose Solomon, Birmingham; Dr. Thin, London; Dr. E. Haughton, London; Dr. E. Mackey, Brighton; Dr. F. A. Mahomed, London; Mr. E. Owen, London; Mr. G. E. Wherry, Cambridge; Dr. Greenfield, London; Dr. C. E. Glascott, Manchester; Mr. F. J. Burton, Tamworth; Dr. Fairlie Clarke, Southborough; Our Glasgow Correspondent; Dr. Bruce Low, Helmsley; etc.

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REMARKS

ON PROGRESS IN THE TREATMENT OF STRICTURE OF THE URETHRA.*

By SIR H. THOMPSON, F.R.C.S.,

Surgeon Extraordinary to His Majesty the King of the Belgians; Consulting Surgeon and Emeritus Professor of Clinical Surgery to University College Hospital; etc.

In consequence of a suggestion which the Council has done me the honour to make, I venture to introduce for discussion here to-day the subject of Stricture of the Urethra.

Perhaps I may be permitted to state at the outset as, in some sort, a warrant for the course I have assented to take, that it is now nearly thirty years ago that I commenced an essay on Stricture, which, a year later, was awarded the Jacksonian Prize of the Royal College of Surgeons—the Council having selected that subject as the theme for the year. Since that date, my practical acquaintance with the management of urethral stricture has naturally been considerable. At the same time, I have carefully watched the work of others at home and abroad. It is to the history, then, of our subject in relation to treatment, during this period of about the third of a century, and to some practical conclusions to be drawn therefrom, that I propose chiefly to ask your attention. I pursue this course as calculated, perhaps more than some others I might have chosen, to accomplish the object of eliciting discussion on any point which may appear to demand inquiry at the present moment.

It may be in the recollection of some of us, perhaps, that during some years, at or about the time referred to, a long and severe controversy was held on the management of stricture between authorities in London and the late Professor Syme of Edinburgh, in which others also participated both in this country and in France.

The subjects then chiefly at issue were: 1. The value of caustic applications, which had long been used, and were at that time still much employed in the treatment of strictures which had proved rebellious to dilatation; and 2. The safety and efficiency of an operation for dividing the narrowed parts of the urethra by an adequate median incision carried through all the structures of the perinæum, and involving the whole of the narrowed urethra. This operation was then warmly advocated by Professor Syme for obstinate and chronic examples of the disease, although the stricture might be permeable to instruments—indeed, that it should be so, was a condition necessarily essential to Syme's operation. Perineal section had long been an established operation for impermeable stricture, but it was a novelty to perform it when an instrument could be passed through the stricture into the bladder; and a cutting operation was then declared by many surgeons to be unnecessary, if not unjustifiable, in such circumstances. Both modes of treatment have now almost disappeared. Are we to infer that progress in the art of treating stricture has, therefore, been made—that some better substitute for the methods alluded to have been adopted in their place? The answer to this question I propose to consider.

On carefully reviewing the course which surgical inquiry and practice have taken during the period named, and without troubling you in this brief record with names and details which, necessarily familiar to myself, would unduly extend its limits, I think it may be answered that progress has been made. The march of events in this, as in other matters, is not always in a right line, but rather in that of an advancing pendulum. With occasional devious movements, right and left of the *via media*, an undoubted advance is ultimately achieved.

The most important changes in relation to the treatment of stricture of the urethra, during the last thirty years, in this country may, I think, be classified under five heads.

1. A general recognition of the principle, that a delicate and gentle manipulation of any instruments in the urethra is alone trustworthy or permissible, in the place of that which was formerly greatly prevalent—viz., that urethral obstruction might often be overcome mainly by force.

2. The substitution of very pliable and taper instruments for silver and stiff gum-elastic instruments in much of the treatment, both in ordinary and in continuous dilatation.

3. A more general acceptance of the doctrine, that—given time, patience, and gentle handling—very few strictures should be met with which cannot be fairly and successfully traversed by an instrument passed through them into the bladder. At the same time, an undoubted improvement is to be noted in the mode of operating for those exceptional cases in which the surgeon fails to accomplish that object.

4. A more general acceptance of the doctrine, that dilatation of the urethra, whether with or without incision, may be carried with advantage to a somewhat higher degree than had for some time previously been regarded as desirable.

5. The substitution of internal urethrotomy in some form for the application of caustics, and for external urethrotomy on a guide.

All these may, I think, be accepted, and will be generally accepted, as illustrations of advance in the treatment of stricture.

I propose to make a remark or two on each of the topics named, at the same time venturing to indicate anything which may appear to me to be a sign of retrograde movement at any point.

I need say little on the first subject: viz., the substitution of gentleness and more careful modes of manipulation for those which were previously in vogue. Men of the present generation, however, scarcely know how rude, and, in some hands, almost barbarous, was the method of handling formerly employed in the treatment of urethral disease. The term "forcing a stricture" was then, as it had long been, an accepted surgical term both here and abroad, and denoted simply the systematic application of violence to an organic obstruction—the result of which, in nine cases out of ten, was, and could only be, the laceration of the canal and the making of a false passage. I suppose I am right in saying that such a proceeding is no longer a surgical one; and, if ever adopted, is intended to be an exceptional occurrence, and not within the limits of the rules of our art. If there was one thing more than another in the treatment of stricture which, at an early date, appeared to me unwarrantable, not to say shocking, it was the sight of a surgeon, firmly grasping a solid instrument and pressing its point with rigid arm against an urethral obstruction until something gave way, and the point was made to advance—somewhere. From the earliest time to the present, I have invariably taught, not merely that a narrow stricture can only be traversed by gentle means, but that nothing prevents success so much as a deviation from this rule; and I believe that the constant advocacy of it has not been without its influence in suppressing the dangerous practice which formerly was but too common.

The substitution of modern flexible instruments, chiefly of French origin, for the silver catheters almost invariably used thirty years ago, when the old wax or plaister bougies had fallen, somewhat undeservedly perhaps, into disrepute, has been an advance of enormous importance. I first learned the value of flexible instruments many years ago in Paris, and have used them ever since, and still desire to speak in high terms of their practical utility in most of the varied forms and kinds in which they are presented. To a certain, although limited, extent, some of them have aided us to achieve that very considerable advance in the treatment of stricture which was set on foot by the late Professor Syme, and consisted in the doctrine (first distinctly taught and illustrated by him), that impermeable stricture is a condition of extreme rarity. In other words, he proved that almost any stricture, however narrow, if urine passes outwardly through it, is permeable also to instruments in the hands of a careful, patient, and practised surgeon—provided only there is no crisis of actual retention present demanding immediate relief. The gain accruing to the patient through this doctrine has been very great: since, thirty years ago, a dissection through the perinæum for so-called "impermeable stricture" was a comparatively common operation in our hospitals; and one, moreover, which was frequently fatal. Very rarely, indeed, ought such a proceeding to be heard of now, since, with time and patience, a fine instrument can almost invariably be carried safely through any stricture into the bladder.

But these instruments are invaluable also in prosecuting the ordinary treatment known as "dilatation". Notwithstanding the small value set upon this method by some surgeons, who profess to regard it as scarcely worth the name of treatment, and desire to substitute urethrotomy in almost all cases of stricture, whether recent or confirmed, I see no reason whatever for discarding it. If the cutting operation necessarily conferred a cure, in the sense of preventing return of the disease, even in a bare majority of cases, the propriety of employing dilatation might perhaps be called in question. This point will be considered hereafter; meantime, there can be no doubt that such complete relief is afforded, and on terms which are easy, by the use of simple flexible bougies, or by the same supplied with lead cores, and, lastly, by well-polished tapering metal sounds, that I believe it to be in the patient's interest to employ dilatation only so long as it is quite efficient; and then, as soon as it ceases to be so, and mostly not until then, to adopt other methods of a more serious kind.

* Read in the Section of Surgery, in introducing a discussion on the subject, at the annual meeting of the British Medical Association in Cambridge, August 1880.

See page 347.

To revert for a moment to the occasional existence of an "impermeable stricture", which has just been referred to, it may be briefly said that when, as sometimes happens, the surgeon fails, after adequate trials, to pass any instrument, however small, through a narrow or tortuous stricture, the method known as "perineal section" sometimes proves a valuable resource. Like other proceedings, it has been rendered more easy and efficient, and is a far safer operation than that which was done fifty years ago. Since that time, various little improvements have been added to the details of the performance, so as to facilitate the finding of the narrowed passage.

The "calibre" or "diameter" of the urethra, or the amount of its dilatability, is a subject which has come again to the front during the last few years: this time, from attention paid to the subject in America. This is one of those points relative to which our figure of the pendulum is in some measure applicable. It has always been a subject affording matter for discussion throughout the history of urethral surgery, relative to which, had we time, I could give you some curious illustrations. The different measurements made by anatomists at different epochs—and their name is legion—are remarkable chiefly for their diversity; and the rules of practice pursued by different surgeons have similarly varied. This is a fact which need not excite surprise, considering the complex nature of the passage, the relations of which have been so largely studied. The question is one of sufficient importance to be worth considering, perhaps, more closely. A good deal of the apparent discrepancy in the measurements, in the use of terms, and consequently in the practice of different surgeons, is due, in my opinion, to a certain failure among many to recognise what are the natural physical conditions of the passage in question. We hear of its size, of its diameter, of its calibre, as if the urethra were a tube of constant capacity—as if it resembled an artery, a bronchial tube, or an intestine. But, in fact, the urethra has no constant quality comparable with that which we call "size" in any sense in which that term applies to the passages just mentioned. Indeed, the urethra has no "size" or "calibre" when it is not used as a canal; and it is only thus used during a few minutes, one might rather say seconds, during the twenty-four hours, and also when artificially opened by the passing of a foreign body into it. It is simply a long chink, the sides of which are maintained in close contact by organic muscles, and traversing a mass of complex structures, which, like itself, are susceptible of great physical changes under different circumstances. Second to its natural contractility, the most distinguishing mechanical quality of this closely shut passage is its dilatability—a still undetermined, and, I may add, an undeterminable, quality; for its dilatability naturally varies greatly in different parts of its course, in consequence of the variety in the nature of the surrounding structures; while its own delicate walls and subjacent tissues are almost indefinitely extensible under the influence of continued pressure.

During the first third of the present century, there was a strong tendency, both here and in France, to regard the urethra as a passage of greater size than the surgeons of the preceding epoch had assigned to it, and to use larger instruments in the dilatation of stricture. Boyer advocated them, and, later, Mayor of Lausanne employed them, sometimes with much force. In this country, Pearson, who had a large experience, made a point of carrying dilatation as a cure for strictures to Nos. 18 and 20, English scale, equivalent to about 28 to 32 of the French scale. One of his instruments has long been in my possession, and is here for your inspection. A good deal of mischief followed what may have been the indiscriminate use of these large bougies; hence a reaction took place, and smaller sizes were adopted, with less beneficial influence, perhaps, upon the stricture itself, but also with less evil on the constitution of the patient. Within the last few years, Dr. Otis of New York has revived the theory of "the large diameter of the urethra", and has advocated larger instruments; besides recognising as examples of organic stricture very slight deviations from what he conceives to be the normal "calibre"; or what I should regard as the possible extent of dilatability possessed by the passage. I have no intention of formally examining the views which he has enunciated relative to this matter, having no allotted time or space in this paper for the purpose. But I will venture to say, in connection with this subject, that we, on this side, may perhaps have erred somewhat during the period of reaction referred to, in not sufficiently availing ourselves, especially in the practice of lithotrity, of the large degree of dilatability which the urethra undoubtedly possesses; and that we owe to our American brethren an advantage which the latest assertion of that fact has pointed out to us. And I desire hereby to record my sense of the value of that lesson by assuring them how gratefully I receive and profit by it. But I cannot say thus much without also saying, in the same breath, that it is a very easy thing to damage irreparably some individuals by overdistending the urethra, and that such damage I have of late witnessed in several instances. I must oppose, also, another doctrine which is associated with the preceding, viz., that stricture of the urethra is permanently cured by complete division of all the diseased tissues affecting the passage. I have seen too many examples of return of narrowing in cases thus operated on, to admit that at present we possess any certainty of being able so to act on a confirmed organic stricture, as to ensure its non-appearance in after-life. Further, I have carefully followed many of Syme's cases of external division in his and in my own hands, where the diseased structures constituting stricture have been entirely divided, and in a way more certainly complete than any internal urethrotomy can offer; and am compelled to avow that, in very few instances indeed, has the thus divided stricture not reasserted itself after the lapse of time. Nevertheless, it is an important truth that, when any portion of the stricture escapes division, the narrowing speedily returns.

For that operation, I have myself substituted internal urethrotomy in the treatment of obstinate cases, during a period of now considerably more than twenty years, having ceased to perform Syme's operation, as a rule, in 1857. Since that date, I have performed the internal operation at University College Hospital and elsewhere some hundreds of times. My experience leads me to regard it as a far safer proceeding than Syme's in relation to life, and one which is quite as efficient in relation to the general results.

But, at the date named (1857), internal urethrotomy was rarely, if ever, employed in this country; the method best known here, viz., that advocated by Stafford, had lapsed through its inadequacy to render any important service, and dilatation and caustics constituted the treatment for the great majority of cases. Like many of my brethren, therefore, I tested other proposals which appeared soon afterwards, such as by splitting the stricture, which attained a considerable popularity for a time; overdistension, etc. Like others, too, I believe that there are good grounds for the conclusion that, for those examples of the disease which are so confirmed as to defy dilatation, those methods are inferior in permanency of effect to a well performed, that is, to a complete, division by internal urethrotomy.

Nevertheless, regarding the many methods of performing internal urethrotomy which have been proposed and practised, I doubt whether it is possible for anyone to pronounce which is absolutely the best. In every one, the object is, or ought to be, the same, viz., the complete division of the morbid tissue; but varied mechanical means of accomplishing this are originated by different minds, and different modes suit the hands of different surgeons. Each one probably prefers to accomplish the object with the instrument with which he is most familiar, and that method will generally be the most efficient in his hands. At the same time, many of the modes employed to accomplish internal urethrotomy will not ensure the complete division of the strictured portions of the urethra, and such methods must be regarded as defective.

The principles which govern a sound procedure are more essential points for the surgeon to discover and to teach, than a consideration of small details. These principles may be briefly stated, I think, as follows.

1. The necessity for a physical examination before operating, to detect and estimate the narrowed portions of the urethra. This is best accomplished, in my opinion, by means of a series of metal bulbs on slender stems, taking care not to regard as diseased changes those points at which the urethra itself is naturally only slightly dilatable. These bulbous exploring sounds I have invariably used, advocating them as essential to diagnosis in my first work, twenty-six years ago; and I still prefer them to any other, as safer, less irritating, and not less efficient, than more complex instruments which have been devised.

2. The necessity for accomplishing a complete division of all the morbid tissue constituting the stricture, by an incision carried through it; no matter what part of the urethra, or how much of it, is involved in the disease. As a general rule, this is, I think, most efficiently completed by a slender blade, carried beyond the stricture, and made to cut from within outwards; this latter proviso being, however, an open question. The important point, however, is, that any alleviation of the patient's condition attained by operation will be transitory if any part of the narrowing be left undivided.

3. I regard it as essential, after such division, to place at once a full-sized catheter for some hours in the bladder, to ensure a free outlet for the urine, and prevent all possibility of extravasation of urine into and through the incisions thus made.

4. The necessity for passing full-sized bougies subsequently, at occasional intervals, in order to effect free distension of the walls of the urethra, which lie in almost constant apposition, and so to prevent reunion of divided surfaces by the first intention.

The foregoing may, I believe, be held to embody those general principles which most experienced surgeons at the present day agree—with

a few dissentients, I am aware—ought to guide us in practice. That there are different modes of carrying them out, is, as I have before intimated, a matter no less of notoriety than of necessity, as inherent in the nature of things. Such a circumstance may be regarded as one fraught with some advantage for us here, in providing scope for discussion, and so eliciting a comparison of ideas and methods among the many experienced observers who honour the Section with their presence this day. I shall, therefore, very briefly offer my own views as to the best mode which a long familiarity with the operation in practice has led me to adopt.

In respect of the instrument to be employed, I unhesitatingly avow a preference for one which, in principle of construction, resembles a slender knife with a long handle, in order that it may act completely in obedience to the impetus given to it by the hand. Concealed within a bulb at the end of the instrument is the blade; so that, before this is unsheathed, the urethrotome itself is an efficient bulbous-ended explorer (like those already employed in the previous exploration), and is used as such to identify the stricture again at the very moment of operating. With such an instrument, the incision is directed solely by intelligence, and is limited or extended according to the sensations experienced by the operator's hand, of resistance or the reverse; just as happens in the analogous instance of division of tissues which are not visible, in the case of contracted tendon in club-foot.

To my mind, having had some little experience of the last-named proceeding many years ago, when surgeon to the Marylebone Infirmary, the two operations much resemble each other, and alike require a skilled and unrestricted hand to accomplish a satisfactory division of the constricting tissues; the right amount, neither too little nor too much.

All urethrotomes in which the blade can only move in a grooved director, and this is undoubtedly the most common mode of constructing them, produce a more or less uniform mechanical result, and are incapable of effecting any variation in depth and extent of incision, often necessary to accomplish adequate division in the varying conditions requiring operation. This is what I am compelled to regard as a serious defect, and explains my preference for the bulbous-ended instrument described. It is right to say, however, that the following objection to the latter is sometimes raised, viz., that very few strictures requiring operation are sufficiently narrow to permit the introduction through them of an urethrotome, the bulb of which is equal to No. 5 or 6 of the English scale. That may be quite true; but I have never seen a case of stricture, however obstinate or narrow, which could not be temporarily brought to the size required by tying in a slender gum-elastic catheter; and I think the advantage of operating in the manner described well worth the delay of a day or two devoted to such preparation of the urethra. Still, I am quite ready to concede that an instrument which cuts by means of a blade advancing from without inwards, on a guide previously passed, may be a safer one in some hands, especially if they be not thoroughly practised in traversing the urethra. My experience of internal urethrotomy, which has been thus conduoted throughout, that is, on the same principle and with the same instruments, has been from the first exceedingly satisfactory. The operation itself is fraught with very little risk; the durability of the relief afforded is the chief question to ascertain. The last twenty years have enabled me to watch the history and course of a good many cases; and, speaking in general terms, I may say that the first three or four years after the proceeding, often more, are very comfortable for the patient; after which, at earlier or later dates, say from four to seven years afterwards, he often finds himself reluctantly compelled to retreat a number or two in the size of the bougie, which he has been accustomed to pass once or twice a-month. Instead of 11 to 13, English scale, he must be content with 9 or 10, or less; but he has no symptoms to complain of. At an interval, varying in different cases from seven to twelve years, the condition in some cases becomes troublesome, and the patient finds No. 7, 6, or 5 perhaps, frequently necessary, and also that some of the old symptoms have returned. In such circumstances, I do not hesitate to advise another operation, and have occasionally performed it a second time. It so happens that I did this for one of my medical brethren only last week, having previously employed the same proceeding in 1867, thirteen years ago. I passed a No. 17 English, about 28 French, with ease, immediately after the incisions, and he is now doing admirably. In one case only, I have done the operation three times for the same patient. There is no reason why it should not be repeated, if necessary, just as we crush a second or a third calculus which may be formed after the first. In the case last referred to, the best result followed the third operation, and occasional dilatation has been quite sufficient to maintain a highly satisfactory state of the urethra ever since, although the date of that operation is at least eight years ago. I am very certain that the plan I have followed is one of great value for cases in which dilatation does not afford adequate relief; and I certainly think we are more prone to err in withholding the operation than by recommending it too generally. Inadequate relief to the stricture involves irretrievable mischief to the ureters and kidneys; and many a life has been sacrificed to persistence in painful and inefficient attempts to dilate, which might have been saved by free division of the stricture or strictures. The formation of a free passage for the urine is the necessary safeguard for the secreting organs, and there should be no loss of time in accomplishing it by internal urethrotomy, so soon as the stricture is no longer readily amenable to the action of dilatation. But when the operation is adopted, nothing less than a free and complete division of all the obstructing tissues should satisfy the operator. It cannot be too often repeated that on this depends the success of the operation.

The great desideratum of the present time unquestionably is the discovery of a mode of treatment which shall permanently restore to the strictured passage its original dilatability. I cannot say that a thoughtful consideration of the pathological condition which constitutes organic stricture, emboldens me to hope that such a result can be insured by the application of any principles of action at present known to us. If this be so, a large and important field for labour and for speculative inquiry is open in this direction. May it fall to the lot of some abler successor to this office of mine to-day, to record the accomplishment of this great achievement before another thirty years have expired.

It remains only now for me to thank you for thus patiently listening to a sketch, which, meagre as it is, will have attained its object, if it elicits practical communications from those present, who are so eminently qualified to make them with advantage to us all.

FORTY-EIGHTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in CAMBRIDGE, Aug. 10th, 11th, 12th, and 13th, 1880.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of the papers presented to the several Sections at the annual meeting, and of the discussions thereon.

SECTION A.—MEDICINE.

Wednesday, August 11th.

THE chair was taken at 2 P.M. by G. E. PAGET, M.D., F.R.S., Regius Professor of Physic in the University of Cambridge, President of the Section.

President's Address.—The President, in opening the business of the Section, said: The Local Executive Committee have expressed to me their opinion that, in the Sections of Medicine, Surgery, and Physiology (subjects on which there are special addresses), the addresses of the Presidents of Sections should be confined to a few opening remarks. It is to be regretted that the time allowed for the work of the sections is so short. But, such being the case, the recommendation of the Local Executive Committee seems to me judicious. I willingly adopt it, and I think I should improve upon it by abstaining altogether from any opening address. The communications promised to our section are so numerous, their subjects so interesting and so well fitted for discussion, the authors so deserving of all the time that we can give them, that I feel I ought not to encroach on their time. I will merely express my gratification at the great number and goodly promise of the papers offered, not in this section only, but in all of the eight or nine sections among which the work of the meeting is distributed. Nothing could show more strikingly the large development of the Association since it last met in Cambridge sixteen years ago. Then, as President of the Association, I presided at the reading of all the papers that were offered, whether on medicine, surgery, physiology, or sanitary science. They were all read before the general meetings of the Association, and there was time for them all. There were then no sections. There was no need of them. There had been no need of them at previous meetings, nor was there at the meetings that followed, at Leamington and Chester. The necessity for dividing the work among sections was not felt until the Association met in Dublin. Since then, the number and value of the scientific contributions has been continually increasing from year to year. This is a fact on which we may justly congratulate ourselves. It is the best evidence that our Association is really carrying out the chief purpose of its foundation—the advancement of medical science. And there is not the less satisfaction in perceiving that this marked increase in scientific activity is not confined to our Association, but is manifested in various ways throughout the whole medical profession of the United Kingdom. The number of medical practitioners is not

largely increased, but the number who contribute to the advancement of medical science is greater, far greater, than it was. And the movement is not in our own country alone. It is general throughout the whole medical world. Everywhere, throughout the world, the medical profession are actively at work, incessantly adding to their knowledge of diseases and their causes, striving more and more for means to prevent or relieve the sufferings of their fellow men.

Discussion on Hysterical Anæsthesia.

Dr. Bristowe (London) introduced the discussion on hysterical anæsthesia. It resembled, he said, other forms of hysteria in its actual characters. There was, for example, anæsthesia as regards touch, temperature, pain, and the condition of the muscles. These conditions were often associated; but cases now and then occurred in which analgesia was more marked than the other phenomena. In a still larger number of cases, the conditions were more or less modified. In regard to the sense of heat and cold and touch, anæsthesia depended a good deal upon the extent of surface touched. He had observed in some cases, where there was total anæsthesia to ordinary touch and to pain, as shown by pricking the skin, that the patient had felt when he had grasped the limb. In many cases, anæsthesia on one side was connected with hyperæsthesia on the other side, or in some other region; and even in the surface which was anæsthetic, certain portions sometimes remained hyperæsthetic. The muscular condition was often altered. There was some loss of power, some rigidity, some loss of the muscular sense, in virtue of which the patient was unable to use the hand or determine the position which it occupied. With regard to inco-ordination of movement, he had failed to recognise it. In a large number of cases, anæsthesia was hemiplegic, and in some few cases it was general; it perhaps affected the whole body, or one part at one time and another at another; and sometimes it was transferred from one side to the other. In one of his cases, three-fourths of the body were anæsthetic, the other portion being hyperæsthetic. In other cases, the anæsthesia was irregularly distributed. In many cases, the organs of special sense suffered in a remarkable way: hearing was impaired; the taste was modified; the sense of smell disappeared in a greater or less degree; and the sight became affected. In ordinary hysterical anæsthesia, the taste was not always impaired; sometimes it was totally annulled on the affected side, and some patients had no taste at all. The sense of smell was often absolutely abolished on the affected side. The patient was generally incapable of distinguishing colours. Red was most frequently recognised, or its recognition was the last to disappear; and sometimes everything was described as looking white. The first case to which he would call attention was that of a widow aged 31, who came under his care in hospital in July 1879. She had been shipwrecked on one or two occasions, and on the last occasion (three years ago) had lost her husband. She had suffered from hysterical fits, and had anæsthesia. On coming into the hospital, the fits had almost entirely disappeared; but there were anæsthesia on the left side of the body, pain in the region of the ovaries, loss of taste and smell on the left side; and sight and hearing were totally unimpaired. Another case was that of a girl aged 21, admitted in July last. She was first attacked with stiffness and pain in the neck, and sore-throat, in June. The muscles on both sides were affected; the thyroid body was enlarged and tender on both sides; there was tenderness of the left ovary, and total anæsthesia of the left side. She did not recognise heat and cold distinctly; she had a total abolition of the sense of pain, and almost of the sense of touch; she had lost taste on the left side, and smell in the left nostril; there was impairment of hearing in the left ear; the recognition of colours with the left eye was impaired; she called red red, blue green, green blue, and yellow white. Those peculiarities were constant, and the patient was still in the hospital. The third case (admitted in July, and still in the hospital) was that of a girl aged 18. The affection came on two years ago with fainting fits and pain in the spine and in the left hip and knee, and failure of sight for three months. She had anæsthesia to the middle line. There was tenderness of the left ovary. She could not distinguish between heat and cold; there was loss of taste and smell, and partial loss of hearing; recognition of colours, except red, bright green, and blue, was impaired. She had partial hemianæsthesia and an impaired muscular sense. The next case was one of hysterico-epilepsy that had been under his care more than twelve months. The patient, a girl aged 18, had epileptic attacks, followed by anæsthesia on the left side of the body, subsequently passing over to the right side, and involving the whole of the body. She was paraplegic, and had hysterical asthenia. She was now probably in one of the London workhouses or infirmaries. Another case was one recently published by Dr. Stone; that of a girl fifteen years of age, who had come into hospital attacked with hystero-epilepsy at the time of her first menstruation. It had been brought on remotely by an accident in which she had struck her head, but more immediately by reading some horrible story. Her attacks could be stopped by pressure upon both ovaries. She had hyperæsthesia of the lower extremities, and anæsthesia of the body above the navel. In the course of time, the anæsthesia extended so as to involve all parts of the body except the right lower extremity, which was hyperæsthetic. Not long ago, she had been sent from the hospital perfectly cured. Another case, also under the care of Dr. Stone, was that of a girl who had complained of pain, supposed to be rheumatic, in the muscles of the arm and leg and other parts of the body for two or three months. She had attacks of laughing and crying. On admission, it was found that she had lost the sight of the left eye; everything looked like a fog; she did not recognise colours or forms. After a short time, sensation returned, and she recognised everything; but, either immediately after or a little before she recovered her sight, she became temporarily anæsthetic on one side, lasting for a few hours —tending to show that the case was one of hysterico-anæsthesia; and that the impairment of sight, which, taken apart, might have been misunderstood, was also an anæsthetic phenomenon. He would next draw attention to the distinction between hysterico-anæsthesia and the other forms. With regard to hemiplegic anæsthesia, he confessed that he did not recognise any clear distinction between that and hysterical anæsthesia. It was attended with loss of sensibility to pain, impairment of the recognition of heat and cold, and all the various phenomena characterising hysterical anæsthesia. The patient not unfrequently lost the sense of taste on the same side as the anæsthesia, and not unfrequently lost the sight of the eye on the corresponding side. Within two or three years, he had had three well-marked examples of that. In one case, a man aged between thirty and forty was attacked with an apoplectic fit; and, when he came to himself, he was found to be not only completely paralysed on the left side, but completely anæsthetic on that side. There was deviation of the eyes, head, and neck, towards the affected side of the brain; and he was absolutely blind in the left eye for two or three days. The ophthalmoscope revealed nothing wrong in the posterior part of the eye. The patient recovered. In the cases he had mentioned, the sense of smell was impaired on the left side. It was difficult, however, to determine such points in cases of apoplexy, because the patient was often affected in his mind, and not able to explain his condition. Three cases showed blindness. In one, it was temporary, involving both eyes; but the patient recovered. A case of cross paralysis had recently come under the care of Dr. Barlow. It was that of a man thirty-nine years of age, who was attacked with giddiness, vomiting, drawing of the mouth to the right side, and inability to swallow. On admission, he was found to have paralysis of the left portio dura nerve, partial paralysis of the external rectus of the eye, complete anæsthesia of the upper part of the body down to the waist. The smell was imperfect; hearing on the left side was weak. The eyesight was not carefully investigated. The patient recovered in two or three days. The point of interest was, that anæsthesia affected one side of the body, without any loss of power. The patient could use his hand perfectly. He presumed the case was due to some effusion of blood, or to some affection of the medulla oblongata. Anæsthesia was very likely to occur after diphtheria, and he had recently had several of such cases. One was that of a clergyman aged 33 or 34, who came into the hospital after an attack of diphtheria which occurred two months previously. He presented most of the characteristic conditions of diphtheritic paralysis. There were defective accommodation, owing to paralysis of the muscles of the eye; difficulty of speaking and swallowing, owing to paralysis of the abductors of the larynx; loss of power in both hands, both forearms, both lower extremities; also anæsthesia, which was considerably distributed, in the hands, the forearms, the legs, the tip of the nose, the lips, the tip of the tongue, the chin, the penis, scrotum, and rectum; the evacuations passing without his knowledge. The distinctions between hysterical anæsthesia and the other forms were not so much in the anæsthesia itself as in the collateral circumstances associated with it. There were but few cases of hemiplegia with organic disease and anæsthesia which one would confound with hysteria; but they occasionally occurred. And there were very few cases of paraplegia of organic origin which would be confounded with hysterical anæsthesia; but he could produce examples; and so with regard to other forms. The members present were acquainted with the investigations of M. Charcot as to the application of various metals, magnets, and other agencies, producing a restoration of sensation on the affected side, and a transference of the anæsthesia to the other. In most of the cases he had narrated, experiments had been made as to the effect of the application of metals, but not with sufficient care. In the case of the woman whose husband was drowned, gold was applied to the cheek on the anæsthetic side, and in half an hour sensibility was restored, and the opposite side be-

came anæsthetic. He had tried the effect subsequently with other metals, but without success. In the second case, that of the girl aged 21, it was found that copper, zinc, and the magnet had a slight effect upon the skin, producing, after twelve or twenty-four hours, a temporary return of sensation, but no transference of the anæsthesia on the other side. In the next case, copper, iron, and the magnet had slightly the same effect. In case No. 2, no applications over the eye had any effect in restoring sight. Case No. 4 showed no particular effects. In Dr. Stone's case, the application of gold caused a transference of the hyperæsthesia to the anæsthetic side, and the magnet caused a return of sensation to one leg.

Dr. MATTHEWS DUNCAN (London) said that, in the inquiries under discussion, he recognised progress in the way of observation; much had been done in arranging the diseases and finding connected groups of symptoms and phenomena. But besides this, which was a great matter itself, he knew of no decided advance in this limited department of pathology. He thought there was a greatly prevalent omission of the study of the artificial forms of these diseases. In the days of mesmerism and electro-biology people saw, in any evening party, these diseases produced experimentally, or for amusement—anæsthesia, contracture, catalepsy—splendid examples, quite as perfect as the clinical cases now related. Indeed, one could not listen to or read such cases without seeing plain and admitted evidence of their being not altogether spontaneous, but to a great extent artificial. In saying they were artificial, he implied that the artifice was partly by the patient and partly by the practitioner, and he would carefully guard against being supposed he imply anything like collusion or bad faith. Of the good faith of all concerned, he had no doubt. But his remarks would be directed chiefly to the great part played by the ovary in these affections; for with the state of this subject he was intensely dissatisfied; he noticed a want of scientific precision or positive error in the best writings. He would refer to Charcot, for whose great works he had the highest respect. He (Dr. Duncan) had lately seen three characteristic examples of these hysterical diseases, one, a case of left hemianæsthesia with contracture, one of hystero-epilepsy, and another of the same with cataleptic attacks; and in none of these did he find any of the so-called ovarian symptoms or pressure-phenomena. Charcot gave directions for finding in the abdomen the seat of this ovary; and, speaking of palpation in the region of the ileo-pectineal line, he said that towards the middle of this rigid crest the hand would usually meet with an ovoid body, elongated transversely, which when pressed against the bony wall slipped under the finger. This was an error. The ovary was not to be felt in this way. But this was not all, for such so-called feeling was reduced to an absurdity when it was described as being done, or the ovary was described as being pressed to stop an epileptic fit, when there was tetanic rigidity, the belly being prominent, greatly distended, and very resisting. There was only one way of feeling the ovary; namely, by bimanual examination, the finger in the vagina or rectum touching or pressing on it. He had been feeling ovaries in this real and undoubted way for thirty years and more, and he had never seen any of the wonderful phenomena produced, which were said to be the result of the imaginary pressure which Charcot described. By this imaginary internal pressure it was said that, in certain cases, there were produced intense sibilant sounds in the left ear, which the patients compared to the strident noise produced by the whistle of a railway engine, a sensation as of blows from a hammer falling on the left temporal region, and a marked obnubilation of sight in the left eye. This marvellous set of productions he had no hesitation in characterising as artificial, or, rather, purely imaginary, as, indeed, a mass of bad observation. The same author taught his students that very commonly the use of the catheter in hysterical cases might need to be continued for months, nay years; and this was teaching a great and grave error. There was no such need. Were any confirmation required of the tenor of his remarks, he (Dr. Duncan) might find it in the suggestion in the same lectures that a hysterical woman might live long without passing urine, or only two or three grains of urea daily, and that she might get fat, or at least keep up her alimentation, by a quite inadequate supply of food.

Cases of Anæsthesia. By W. MOORE, M.D. (Dublin).—Dr. Moore related the following cases. CASE I. A young woman, aged about 26, whose menstruation was regular, suffered from tremor, simulating paralysis agitans; from inability to stand without support; from loss of vision for colours; from loss of taste, smell, and hearing; from complete loss of sensation of both sides of the face and upper extremities, except an hyperæsthetic zone round both mammæ, and a space about an inch in breadth along the spine from the lowest cervical vertebræ downwards. Sensation was also lost over the abdomen, but pressure over either ovary would induce hystero-epilepsy. There was loss of sensation over the lower extremities generally, except the soles of the feet. There was slight contraction of the right arm and left leg. Gold, silver, copper, steel, and zinc were applied over the anæsthetic parts; copper, steel, and zinc restored sensation, and punctures made before the application of the metals, and which did not bleed, now bled; and copper, steel, and zinc applied to the temples restored sight (up to a certain point), taste, smell, and hearing. Faradisation was tried with little result, but the solenoid, worked with a Leclanché's battery of thirty cells, restored sensation, smell, taste, sight, and hearing. The internal remedies employed were sulphate of copper, tincture of the sesquichloride of iron, and bromide of ammonium. The patient was quite restored to health; all tremor, paresis, and anæsthesia were gone, and the spinal and ovarian hyperæsthesia was appreciable. CASE II was one of jerking hemichorea of the left shoulder and arm in a girl aged about 20; she had well-marked anæsthesia of the extensor surface of the left fore-arm, with ischæmia. Gold, silver, and copper were applied to the anæsthetic parts. Copper restored sensation; and the punctures previously made now bled: there was no transference of the anæsthesia, nor any appreciable results from electricity. Under the continued use of bromide of camphor, the chorea and anæsthesia had disappeared, and the patient was enabled to resume her ordinary vocation, that of a milliner.

Hysterical Analgesia in Children. By THOMAS BARLOW, M.D. (London).—The object of the paper was to show that the sensory phenomena described by Charcot and others as occurring in hysteria were occasionally found in children who were the subjects of that neurosis. The test applied was the absence or deficiency in response in the way of movement and expression to what in a normal healthy child would be a painful application. For example, a boy aged 2 years and 9 months had the skin at the roots of the fingers firmly pinched with forceps. He neither winced nor withdrew his hand. It seemed in the highest degree improbable that such a child should have *pretended* not to feel the pinch of the forceps. When, subsequently, one cheek was pricked, there was the slightest possible play of features; when the other cheek was pricked, he cried. In one case, there appeared, from the history, to have been from an early period deficiency in the response to what are usually painful impressions, such as an extensive burn on the arm. "The child had never felt like other people." In other cases, the condition of analgesia was noted in children who were brought on account of fits which had occurred either after a fall or some emotional disturbance. The analgesia was tested by the prick of a pin, the pinch of a pair of forceps, or the application of strong faradism. Great differences were noted in the degree of the analgesia and in its distribution. In the most marked case, strong faradism was tolerated with complete indifference on one side, whilst a moderate current applied to the other side elicited an expression of pain, although not a loud one. The application of strong faradism for many minutes, on a subsequent occasion, at length elicited expression of discomfort. In the slight cases, some distress was manifested directly faradism was applied, although a needle had been pushed into the skin without the child withdrawing the limb. In a very slight case, the needle was tolerated for a short time, and then the limb was slowly withdrawn, but without any cry. As to distribution, although generally more marked on one side than the other, the belief was that in all the cases there was some general defect. Generally, the analgesia was more marked in the limbs than on the face. As to sex, six of the cases occurred in girls, two in boys. As to age, the youngest child was 2 years and 9 months, the eldest, 11½ years. In all the cases, there were symptoms, either related or observed, which strongly pointed to the existence of hysteria. In most of them, fits occurred, in which co-ordinated movements, opisthotonos, and to-and-fro movements of the trunk were marked features. It was held that these cases gave support to the hypothesis that in hysteria there is a more or less torpid condition of the sensory part of the brain.

A Case of Hemianæsthesia of Special and General Sensation, associated with Hemiopia. By W. ALLEN STURGE, M.D. (London).—The author said that, of the various forms of anæsthesia met with in hysteria, the most remarkable was hemianæsthesia of general sensation and of all the special senses. This condition was rarely met with in cases of organic disease of the brain. A few cases of it had, however, been put on record; and, in all such cases in which a *post mortem* examination had been made, the lesion had been found to occupy the extreme posterior portion of the internal capsule, in the neighbourhood of the back of the optic thalamus. In the case of a lesion of the optic tract anywhere between the chiasma and the corpora quadrigemina, hemiopia was produced, *i. e.*, there was, roughly speaking, blindness over half the field of vision in each eye, and not complete unilateral blindness. This was due to the fact that there was a semi-decussation only of the optic nerves in the chiasma. In hysterical hemianæsthesia, and in the hemianæsthesia due to lesion in the extreme posterior portion of the internal capsule, there was more or less complete unilateral blindness. Charcot accounted for this by supposing that those fibres of the

optic nerves which had not decussated in the chiasma, decussated after the tracts had entered the corpora quadrigemina. Theoretically, therefore, it would be possible that a lesion involving both the corpora quadrigemina and the posterior portion of the internal capsule would produce blindness of one eye and hemiopia in the opposite eye, in conjunction with the other phenomena of hemianæsthesia of special and general sensation. All the symptoms would be permanent, if the lesion destroyed both these neighbouring structures; but one of them might be destroyed, and the other affected only by the shock of the lesion, as was commonly the case in connection with suddenly produced lesions. In that case, certain symptoms would be permanent, and certain others temporary only. The following case was an example of the latter condition. L. A., a married woman aged 33, had had two children, the youngest nine years old; and had since twice miscarried. Six years ago, she had severe nocturnal headache, accompanied by severe aching in the shins, also worst at night. These pains lasted for three months. A year before the onset of the present illness, she had sore places on her tongue. Since that time she had been slowly deteriorating in health, and had become subject to attacks of giddiness, in one or two of which she fell down unconscious. On March 15th, 1879, she had an attack as she was getting out of bed, in which she became blind, had a noise like thunder in her right ear, was so giddy as to be unable to stand, and had difficulty in speaking. Her right arm and leg were very weak, and she was told her face was "drawn to one side". The following day, she began to recover sight in her left eye. Two days later, she was admitted into the Royal Free Hospital. At that time, the right arm was very weak, and she dragged the right leg in walking. There was loss of smell in the right nostril, almost complete deafness in the right ear, loss of taste on the right side of the tongue, complete anæsthesia of the right arm, and almost complete of the right leg and right side of the face. The right eye was quite blind, and the left eye was blind over the right half of the field of vision, the sight of the left half being good. Her memory was much affected. She was ordered ten grains of iodide of potassium three times a day. She rapidly improved in power and sensation. In the right eye, she recovered the sight of the left half of the field of vision, but the right half remained permanently blind, as did also the right half of the field of vision in the left eye.

Mr. DE BERDT HOVELL (London) said the first point of importance was to get rid of the objectionable term "hysterical". It implied some sort of reference to the female sexual organs; but, as many of the cases occurred in children, that idea seemed to be out of the question. He agreed with Dr. Matthews Duncan, that much of the connection existed only in the minds of medical men. The essential division was organic and inorganic, and those cases that were called hysterical might as well be called inorganic. The question was, how the condition which bore such a widespread name originated. He had given a great deal of attention to the investigation of such cases, and he had found that most of them arose from moral or physical shock, which might be sudden or gradual. That view was supported by some of the cases mentioned by Dr. Bristowe, the causes of which were shipwreck, an accident, the excitement of being saved from drowning, and being knocked down by a dog. What connection was there between those accidents and the term hysterical? The effects of physical shock and of mental shock seemed to be pretty nearly identical. The conclusion at which he arrived some years ago was, that the effect did not fall upon the brain, but upon the sympathetic nerve—that many of the emotional symptoms that followed were due to a loss of power in the sympathetic.

Dr. MCCALL ANDERSON (Glasgow) said that the cases which had come under his own observation corresponded very much with those that had been mentioned by Dr. Bristowe; and he thought that no one who had had an opportunity of watching such cases clearly could suppose that fraud had anything to do with the matter. With regard to the question of expectant attention, some years ago he had published, in the BRITISH MEDICAL JOURNAL, the report of a case of hystero-epilepsy in which no difficulty was experienced in causing a transference of all the phenomena with the aid of certain metals. The metal which effected the transference most readily was a zinc plate. When a piece of wood of the same shape and size was tried, the patient being blindfolded, no result whatever was produced. That did not favour the idea of expectant attention. He had recently reported another remarkable case of hysterical anæsthesia, in which there was not only complete loss of sensation in the left side of the body, complete colour-blindness on the left side, with a complete loss of sensation on the left side of the body, both general and special, on the left side of the tongue, but there was also well-marked hysterical paralysis of the left side, and a well-marked hysterical tremor of the abdomen. They tried the same metals as in the other case, and at first with a similar result, the zinc plate being the one which caused the most ready transference; but, to his surprise, a wooden plate also caused a transference of the phenomena from one side to the other. The experiment was repeated on several occasions, and always with the same result; that, therefore, strongly favoured the theory of expectant attention. He confessed, however, that he was not prepared to accept the theory. There were various circumstances which led him to doubt its accuracy. In one case, with the assistance of his colleague, Professor McKendrick, he tested a patient with galvanism. The galvanic battery was put under the patient's bed, and an assistant under the bed applied the two poles to the left side of the body, one of the poles being at at first unconnected with the battery; and, as long as the circuit was not completed, there was no result; but a few minutes after the circuit was completed, there was, as before, a complete transference. The cases referred to in Dr. Sturge's paper, occurring in connection with organic lesions of the brain, also tended to disprove the theory of expectant attention. He did not pretend to solve the mystery, and he thought that all that could be done now was to acknowledge complete ignorance. He hoped that the cases which had been so ably brought under the notice of the Section by Dr. Bristowe would tend to direct further attention to the subject, and that the time was not far distant when the members of the Association might be in a position to solve the problem.

Mr. SISSONS (Barton-on-Humber) said that in 1861 he had the misfortune to have diphtheria followed by paralysis and anæsthesia. A few weeks after the diphtheria, he had paralysis and loss of sensation, and when he walked he was unable to tell how his feet would come down. In taking hold of a pin, he felt as if he were grasping a poker. The anæsthesia was nearly universal. He should never forget the curious feeling of lying in bed and having no sensation in the skin. When sensation began to return, the pricking going-to-sleep feeling was even more intolerable. He took a sea-voyage for the benefit of his health; he was certain that drugs had not the slightest efficacy in his case, nor had they in one or two cases about which he had been consulted. He found nothing so beneficial as getting the sailors to give him a douche when they were washing the decks.

Dr. WADE (Birmingham) said that no criticism with regard to certain alleged facts of hystero-epilepsy would at all disprove any other facts or throw doubt upon the accuracy of other observations. It had been clearly shown that in many cases there was anæsthesia to a greater or less extent. He believed that M. Briquet, of La Charité, was the first to draw the attention of the profession to the fact that in hysterical persons there were often patches, more or less extensive, of anæsthesia. He had himself attended the *clinique* of M. Briquet in 1851, and had notes to that effect. He had no reference to non-perception of colours, but he had references to amaurosis, and notes of numerous cases of anæsthesia in various degrees. M. Briquet was in the habit of teaching that there were three methods of restoring sensibility—electricity, blisters all over the part, and croton-oil liniment—and of those three he preferred the last. Dr. Charcot was conversant with M. Briquet's observations, and had many conversations with him on the subject. He thought it was only just to the memory of M. Briquet that those facts should be known.

Dr. EADE (Norwich) said he should be sorry for the discussion to close without a word being said on the other side of the question. Dr. Matthews Duncan had expressed great doubts as to the accuracy of M. Charcot's observations; while another speaker had called attention to the fact that most, if not all, the cases brought before them were referable to some influence exerted upon the emotional faculties. When it was considered that the sexual organs, especially those of a female, had a very intimate relation with the emotional faculty, there was no difficulty in understanding that there might be two classes of cases in which the phenomena in question manifested themselves: one in which the emotional faculty might be influenced in the first instance, and the other in which it might be excited through the sexual organs. Having read Charcot's cases, he had no doubt that the facts he had described were all genuine; and that some of the cases, at all events, were due primarily to excitement in the sexual organs. Not long ago, he was asked to see a lady under some special circumstances of excitement: she was engaged to be married, and things had not passed smoothly. She was in a hysterico-anæsthetic condition, and exhibited the various phenomena to which reference had been made; and, for a day or two preceding his visit, she had been in a state of almost entire catalepsy. Bearing Charcot's cases in mind, he thought he would examine the woman carefully as to the ovaries. On examining the upper part of the abdomen and the right ovary, no influence was exerted upon her; but as soon as pressure was made upon the left ovary, she started, and began to snap her eyes and wink, and then awoke to consciousness. When he continued the pressure upon the left ovary, she distinctly made him understand that it gave her marked pain. It was clear that the ovary was in a state of hyperæsthesia. With all deference to Dr. Matthews Duncan, he could feel it distinctly under his finger. She remained

conscious during his visit, and was able to take liquid food; but she afterwards relapsed and became again cataleptic. In a few days, the attack passed off, and she recovered.

Dr. CARTER (Liverpool) thought that the statements made in Dr. Sturge's paper gave too much precision to the localities supposed to be affected in hemianæsthesia resulting from organic lesion. It was not pleasant to throw doubts upon a theory that looked so well; but he thought they should for the present be principally occupied in collecting cases, and should not theorise too rapidly. A short time since, he had the opportunity of making a *post mortem* examination in a case in which he had felt considerable interest. A lady about fifty years of age fell asleep, and awoke, as she thought, paralytic, and fell from the sofa. When he saw her, an hour afterwards, there was not any great loss of power, but complete loss of sensation on one side of the body. Within a month or two, she had epileptic convulsions on that side, without loss of consciousness. The right leg was first affected. The convulsive action went to the arm and the side of the face. A month afterwards, there was a similar epileptic condition of that part of the body. Later on, she had spectral illusions. Towards the end of the year, a genuine epileptic attack occurred, with biting of the tongue and loss of consciousness. The arm began slowly to waste, and became rigidly contracted. The spasmodic condition continued until death, nearly four years afterwards. The loss of sensation was also continuous. She did not know where her hand was unless she saw it. On examining the brain, a large cyst was found upon the right side, which appeared to have destroyed the gyrus angularis, the gyrus supramarginalis, and the gyrus below the second occipital; it had passed on and led to atrophy of the ascending parietal. Neither the gyrus hippocampi nor the internal capsule was affected. He thought they should hesitate before precisely and distinctly localising the centres of anæsthesia.

Dr. GOWERS (London) thought that, in the discussion of Charcot's cases, considerable caution should be exercised. Hysteria in this country was not altogether the same affection as it was in France, being very much influenced by national temperament. One of the characteristics of all the subjects of the disease was their emotional motility; and that was more marked in the French than in the English, and in children than in adults. It was not, therefore, surprising to meet with hysterical phenomena such as Dr. Barlow had described. From his own observation, he should say that hystero-epilepsy was as common in children as it was in young women. He had not seen cases as young as two years; but at five, six, seven, ten, and eleven, they became frequent. He could not help thinking that Dr. Matthews Duncan's opinion with regard to the relation between the sexual organs and a hysterical temperament was a little exaggerated; and that there was a distinct tenderness in the ovarian region, more marked on one side than on the other, in at least half the cases. The essential condition of hysterical anæsthesia seemed to be that somewhere in the sensory tract there was an arrest of the capacity for the conduction of the impression; and any change which was capable of going on under conditions which affected only the most sensitive part of the nerve-filaments was referred to some groups of cells, rather than of fibres. He thought it was true that, in a large number of cases, an emotional cause gave rise to the first phenomena; and an emotional cause might be conceived as giving a shock to the highest centres, and altering their action. One of the most valuable advances in the mode of regarding functional nervous phenomena was the doctrine of the internal resistance of nerve-cells; that there was a function in the nerve-cell by which the evolution of force was restrained, and that an increase of the resistance might altogether arrest the action of the nerve-cells. The resistance was apparently under the control, to a large extent, of nerve-cells situated elsewhere; and the phenomena of hysterical anæsthesia seemed to suggest that in some of the high, though not the highest, sensory centres there was a sudden increased resistance under the influence of some unnatural action of the highest centres. In other words, a sudden emotion might affect the sensory centres on one side so as to arrest the passage of stimuli through them from the periphery of the body. The phenomena of hysterical hemianæsthesia beautifully showed the intimate connection of the centres of the two sides, there being an alternation or oscillation of action by which a change in one was accompanied by a change in the other, as shown in the phenomena of transference, of which the observations of foreign and English physicians left no doubt as to the genuineness. With regard to the question of metallo-therapeutics, did the stimulation act on the spot at which there was an arrest of conduction? Did it act from below by virtue of any galvanic or other action exerted by metals upon the skin? or did it act from above by changing the condition of the highest cerebral centres? The phenomena of hysteria were extremely complicated and varied, and the difficulty of unravelling them was very great. Much might be said for either view; but a great deal might be learned by studying the simpler manifestations of the same class of phenomena. The motor phenomena of hysteria were more simple than the sensory. He remembered a case which illustrated the question at issue as to the mode of action of the stimuli with regard to the motor function. A girl was admitted to hospital with hysterical spasm of one arm, which was drawn up and rigid. The arm was strongly faradised, and the spasm instantly and permanently disappeared. The condition of the centres in that case should be regarded, not as an increase of resistance, but as a diminution of resistance. Did the faradisation affect that condition by acting upon the cells directly, or by altering the condition of the highest centres? The girl went out, and the question was unsettled. Subsequently she came in again with exactly the same spasm. She was again faradised, in the expectation that the spasm would instantly disappear; but no such result followed. It continued for some months with varied treatment, but without the slightest change. She then went to a man who was working "miracles", and who said he could instantly cure her. He made some movement, and the spasm instantly disappeared. In that case, there could have been no reflex or peripheral influence; but the result must have been due to some psychical impression or "expectant attention". The case to which he had alluded was strong evidence in favour of the view that the action of the metals was in some way upon the highest centres. The only fact which it seemed difficult to explain in that view, was the alleged cure by metals given internally, corresponding to those to which the patient was found to be sensitive. But he thought those experiments required to be repeated under rigid conditions, before they could be accepted as entirely satisfactory.

Dr. HUGHES BENNETT (London) said that, during the last few years, he had seen several cases of hemianæsthesia, and in two of them he had conducted an extensive series of experiments extending over twelve months. He had repeated successfully nearly all the experiments of M. Charcot, producing always all the phenomena that he had graphically described. After continuing the experiments with metals, magnets, etc., for some time, he repeated them with non-metallic substances; and, as in Dr. M'Call Anderson's case, the same results ensued. Subsequently, he found that tying a pocket-handkerchief round the limb of a patient produced the same effect. Indeed, after a time, although the experiments were conducted with the greatest care, it was found that the patient (who was blindfolded) had got into such a state that the mere approach of the medical men round the bedside sometimes produced very startling phenomena with regard to sensation. The conclusion at which he had arrived was, that the symptom of anæsthesia was a very fluctuating one, while paraplegia was usually permanent. On some occasions the patient would be completely anæsthetic, so that the most powerful batteries or any other methods adopted failed to produce any pain; while on other days, without apparent cause, the sensibility of the patient was normal. Emotional and other causes often had the effect of dissipating the anæsthesia and causing the phenomenon of transference. There were some points upon which he thought too much stress had been laid. With regard to bleeding, he had found that the result of puncturing the skin was precisely the same in the anæsthetic as in the normal side, depending upon the shape and character of the wound inflicted. If the needle were very slight and were put in gently, there would be bleeding on both sides, but if it were thrust firmly into the skin there would be no bleeding. There could be no doubt, however, that the sensibility affected to a certain extent the vascularity; because in many cases, in which there was complete hemianæsthesia with a certain temperature, it was found that the application of a pocket-handkerchief to the leg in ten minutes produced normal sensation on that side, and that there was a rise of from one to three degrees in temperature; showing that, whether the cause was local or due to the higher centres, there was some relation between the temperature and the circulation in the anæsthetic parts. He did not venture to enter into any explanation of the cause of those remarkable phenomena, which were no doubt perfectly genuine; but, so far as his experience went, he agreed with Dr. Gowers in thinking that they were due to some peculiar condition of the higher centres, some functional cause that could not yet be explained.

Dr. BATEMAN (Norwich) said he had a case which might to some extent illustrate the remarks of Dr. Gowers as to the efficacy of metallo-therapy. He was requested some months ago to see a young girl eleven years of age, who had never menstruated, and who had caused considerable anxiety to her friends by evincing certain somnambulistic and cataleptic symptoms. About two o'clock in the morning she would begin by repeating the word "hutch" twenty or thirty times; then she would sneeze three times, and all would be right. In half an hour she would begin repeating the same word again, sneeze three times, and then cease. Sometimes she would get out of bed, sing a song with her eyes closed, or make a speech, or mimic certain persons of her acquaint-

ance. He had himself witnessed those phenomena. Thinking that it was desirable to affect powerfully the nervous centres of the patient, he advised the application of a five-shilling piece to each arm, telling the girl beforehand that it was sure to cure her. A month afterwards the symptoms disappeared.

Dr. DYER (Ringwood) asked Dr. Bristowe whether, in any of his cases, there was any flexion of the uterus.

Dr. BRISTOWE stated that in one instance there was anteflexion, and a pessary was employed without any beneficial effect.

The PRESIDENT, in summing up the discussion, said he hoped that it would lead to a better understanding of one of the most obscure and difficult questions in medical practice. The name "hysteria" had been objected to as conveying an erroneous impression. It was now regarded as a disease of the nervous system, sometimes, but not necessarily, connected with the uterus, occurring as it did sometimes in boys and in grown-up men. The term, however, might be accepted just as we accepted the term lunacy, without any idea that the moon was influential in causing insanity. He had seen a well-marked case of hemianæsthesia, contracture, and what was called hystero-epilepsy, in a man between thirty and forty years of age, and he had seen other cases of hysterical anæsthesia which were certainly not connected with the uterus. Last winter he had seen a case in which it was brought on in a lady by fatigue, but it lasted only a few days. With regard to the term hystero-epilepsy, he should certainly be glad to see that changed, because in the cases to which it was applied there was no epilepsy at all, but merely an aggravated form of hysterical convulsions. With regard to Charcot's cases, they might, no doubt, appear somewhat exaggerated, but then it should be remembered that his patients were French women, and his observations were made in the Salpêtrière, where the cases would be of the most aggravated kind. It had been suggested that Charcot's observations were not new, and that he had been anticipated by Briquet; he thought, however, that the phenomenon of transference was a new fact, whatever explanation might be given of it. There was another fact that had not been remarked upon in the discussion, that when hemianæsthetic women had recovered sensibility by the application of metal, if the metal were again applied to the same spot it again became anæsthetic. That was certainly a very remarkable fact, and very difficult of explanation. The theory of expectant attention might explain the recovery of sensibility, but he was at a loss to understand how it could explain the production of insensibility, nor did he see how the phenomenon of transference could be explained in that way. As had been suggested, the cause was probably something in connection with the higher centres. There was an obvious connection between hysterical anæsthesia and hysterical paralysis, which often occurred in the same individual and sometimes in the same limb.

Unilateral Convulsions due to Brain-Disease. By C. E. BROWN-SÉQUARD, M.D., F.R.S. (Paris).—An analysis of more than 500 cases had led the author to the following conclusions as regards unilateral convulsions due to brain-disease. 1. These convulsions can be caused by a lesion in almost any part of the brain. 2. They can be produced by any kind of lesion. 3. They can be associated with any other symptom of brain-disease, or may be, for a time or till death, the only symptom existing. 4. They can appear at once in all parts of one side of the body, or begin in any muscle or group of muscles (eye, face, neck, trunk, or limbs). 5. They can pass into general convulsions or follow such convulsions. 6. They usually last longer than general convulsions due also to brain-disease, and still longer than genuine idiopathic epileptic convulsions. 7. They often appear without loss of consciousness, either at their beginning or at any time of an attack. 8. They can take place either on the side of the brain-lesion which causes them, or on the opposite side, the cross convulsions being more frequent than the direct ones. 9. The right limbs are attacked more frequently than the left, in cases of direct or of cross convulsions, and also when unilateral convulsions appear in cases of lesion in the two cerebral or cerebellar hemispheres. 10. In the same individual and from a single lesion, unilateral convulsions can appear at first on the side of the lesion and then on the opposite side, or *vice versâ*. 11. These convulsions can appear on the side of hemiplegia or on the opposite side, the paralysis, in either case, being a cross one; but they can also be direct when the paralysis is also direct and cross while the paralysis is direct. 12. Direct unilateral convulsions are more frequently produced than cross ones by lesion of the great cerebral ganglia, the crura cerebri, the cerebellum, the pons Varolii, the medulla oblongata; while, on the contrary, cross convulsions are much more frequently than direct ones caused by lesion of the centrum ovale or the convolutions. 13. In animals, as he had found, an irritation of the base of the brain and even of the motor part of the crura, the pons, and the medulla (the anterior pyramid) generally produces muscular contractions on the corresponding side; while irritation of the so-called motor centres, or of the fibres uniting these parts with the cerebral ganglia, usually produces movements on the opposite side, so that the same general effects are generated in animals as in man. 14. Jacksonian convulsions (either when exclusively and persistently unilateral or only temporarily so) can appear on the side of the lesion, or from lesion in parts of the brain considered as not belonging to the motor apparatus. 15. The study of unilateral convulsions brings forth a large number of facts altogether in opposition to the views now held about cerebral localisation. 16. The diagnostic significance of unilateral convulsions is often considerable, owing to the association of this symptom with other cerebral morbid manifestations.

The following papers were taken as read.

On Transfer-Phenomena in Epilepsy, produced by Encircling Blisters. By THOMAS BUZZARD, M.D., F.R.C.P. (London).—The author referred to some remarkable results, published by him in the *Practitioner* for October 1868, which followed in four cases the application of an encircling blister to a limb which was the seat of a marked epileptic aura. In one, a tickling in the left arm had always preceded the fit. After the application of a blister encircling this limb, the tickling was transferred to the left leg. In another, characterised by a similar aura, the fits, as well as the tickling, ceased after the application of an encircling blister. In a third, a sense of numbness in the left wrist was transferred to the right wrist. A fourth patient was a woman whose fits had always been preceded by cramp in the right hand, and who, after the blister, was affected with cramp in both hands before her fits. In one of these cases a subsequent necropsy showed cerebral tumour. Dr. Buzzard had recently applied encircling blisters to some other cases with the following results. In a patient, whose fits had always been preceded by cramp in the left foot and shaking, with numbness of the left leg, an encircling blister was applied to this limb, and it was the right leg which now shook and was numb. In another, tingling in the left arm was the symptom, and, after blistering, there was jerking of both arms and the left leg. In a third, the attacks were preceded by cramp of the left hand. The patient had had a severe fit two days before observation, and the left hand was quite powerless. An encircling blister was applied to the left forearm. Next day, the left hand had quite regained its power, but the patient complained that the right hand had *ipso facto* become weak. The dynamometer showed 40° as the grasp of the left hand, and only 18° with the right. The author's original observations had been recorded many years before those experiments had been performed in France, in which the removal of anæsthesia from one-half of the body was found to be accompanied by its transfer to the other side. He urged that the phenomena pointed to a power of influencing the nervous centres by impressions upon the skin; and referred to other trials of a therapeutic character which he was basing upon these observations. His aim was, in a case of aphasia, to rouse into activity the posterior portion of the third frontal convolution of the *right* hemisphere, by directing powerful impressions to contiguous grey matter, by means of painful electrical currents to the tongue and mouth, besides other sources of irritation to the left arm. He had nothing as yet important to record in this direction.

On Paralytic Chorea. By W. R. GOWERS, M.D., F.R.C.P. (London).—The object of the paper was to direct attention to a variety of chorea which sometimes presented a difficulty in diagnosis. Three symptoms might ordinarily be recognised in chorea: spontaneous movement, inco-ordination of voluntary movement, and muscular weakness. These were not always proportioned. Any one of them might so predominate as to give a special character to the case. In the form now considered, the last-named element (muscular weakness) predominated, and appeared, at first sight, to be the only symptom. A series of illustrative cases were narrated. The arm was always the part affected, and the muscular weakness, which alone was noticed by the friends, and sometimes by the medical attendant, might be very great and real. In some cases, however, the natural weakness might be less than the loss of use would suggest. There was no weakness of face, tongue, or leg. Close observation would, after a time, usually detect a slight occasional choreiform twitch, but this might be quite absent. There might be marked twitching in the other arm, which was not weak. The affection might pass off without more conspicuous spasm. Sometimes, choreiform movements became more marked as power increased. The course of this form was often tedious, but did not pass into severe general chorea. The variety was brought under the notice of the Section chiefly on account of the diagnosis; since, in several cases which had come under the author's notice, the nature of the affection had been misconceived. In his experience, whenever a child, between the ages of seven and fifteen, presented gradual loss of power in one arm, without affection of the face, tongue, or leg, the disease was always chorea. Even although choreiform movements might not be observed, the subsequent progress of the case would always justify the diagnosis. The paper

concluded with some remarks on the possible relation of the change in the nerve-elements in this form to that which underlay ordinary chorea.

The Classification and Nomenclature of Diseases. By A. RABAGLIATI, M.A., M.D. (Bradford).—Dr. Rabagliati said that the subject seemed to be in a rather confused state. Many objections might be taken to the official classification of diseases. 1. It did not proceed upon a thorough-going plan or principle. 2. It contained cross divisions. 3. It was not inclusive or comprehensive of all diseases. 4. It was not natural. By bringing together diseases of certain organs, it brought into existence rather an arbitrary classification than one distinguishing the essential nature of disease. 5. It was deficient in definitions, and actually gave no characters by which fever could be distinguished from inflammation. 6. It constantly named symptoms instead of diseases—*e. g.*, deafness, impaired vision, etc.—without attempting to discover the cause of the symptoms. Other classifications were equally faulty. The division of diseases into medical and surgical was convenient in practice, but impossible to maintain in a logical or scientific classification. Neither was the division of diseases into *acute* and *chronic* a logical one. There was no agreement among medical writers as to the meaning in which these terms were to be taken: Hippocrates letting the acute diseases extend, in one passage, as far even as the sixtieth day; while, in another, he seemed to fix the limit at fourteen days. Galen was in doubt whether they lasted longer than twenty days; but, if they lasted twenty-two, he called them *extended*. The views of Asclepiades, the reputed author of the division, were entirely theoretical. Sydenham said the acute diseases moved to their termination *quickly* and *impetuously*. The chronic diseases came *slowly* to their termination, or not at all. Celsus wrote much to the same purpose. There was a logical objection underlying all these references to the terms acute and chronic, which was that they were not logical apposites. Acute referred to intensity; chronic to duration. The author proposed to distinguish diseases of short duration as brachychronic or oligochronic, and to say they were those which did not last more than twenty-eight days. They would then be distinguished from chronic diseases, which lasted longer than twenty-eight days. As regarded intensity, several terms were already in use, and it only remained to define them. Thus, *mild* diseases (mitis, Latin; πρᾶος, Greek), it was proposed to define as those in which the temperature did not rise higher than 100° Fahr. In *subacute* diseases, the temperature ranged from 100° Fahr. to 102.5° Fahr.; and when the temperature rose above this point, the affection might be said to be *acute*. The temperature was fixed on as affording the character of these divisions, because heat-production seemed to be the link through which, more and more, vital phenomena were being brought under the law of the conservation of energy. Disease was defined as any and every departure from health. Health could not be defined, but must be described something after this fashion: temperature not above 99° Fahr., nor under 98° Fahr.; respirations from 14 to 20; pulsations from 60 to 90, and soft, rhythmic, regular; and so on. Disease, then, formed a subkingdom in the kingdom of conditions; the other subkingdom being health. The next step in classifying diseases must be etiological. To state the difference between typhus fever, *e. g.*, and pneumonia, it was necessary to refer to causes; for there occasionally occurred cases not distinguishable otherwise. Typhus was often complicated with pneumonia, and sometimes had no rash; while, in pneumonia, there might be mottling of the skin. But pneumonia was caused, like the inflammations proper, by exposure to cold or damp; while typhus was due to organic matter in a state of change. This was the next step in classification; and hence it was said that diseases were caused by inorganic matter, on the one hand (moving air, water, etc.); or by organic matter, on the other. When inorganic matter acted (*quâ* heat-abstracting), it caused simple inflammations; when it acted with momentum (*quâ* moving), it caused injuries or traumatic inflammations; and, when it acted simply as a foreign body, it caused irritative inflammations. For those conditions, the termination *itis* was proposed to be retained. The cause might act from within or from without, and this difference gave the class of the disease. The genus was determined by the part affected; *e.g.*, pleuritis, cerebritis, etc. Species would be acute, subacute, or mild, chronic or brachychronic, according to the definitions already given of these terms. The variety would be determined by facts in the history of the affection—such as the occurrence of suppuration, and its nature—according to the heredity, diathesis, or constitution of the patient. Definitions of these terms were given. Organic matter, as a cause of disease, might have higher or lower specialisation. In its highest form, it was an actual germ, capable of inducing a parasitic disease (νοσὸς παρασιτικὴ). If not so highly differentiated, the cause produced a fever proper—such as typhus or small-pox; and, when still lower in its differentiation, the cause induced a specific inflammation (νοσὸς καταζυμωτικὴ). Probably typhoid fever should be looked on as a specific inflammation rather than as a fever; and the time might come when the profession would consider the difference between the fevers and the specific inflammations as insufficient to determine a difference of order. Pregnancy would be the vanishing-point of disease on this line. Here the highest germ was introduced into the economy, and reproduced the highest form of life; but the whole process need not constitute disease. Most probably all these processes, due to the introduction of changing organic matter, would in time become amenable to treatment by some method analogous to that which had proved so useful in small-pox. According to the mode of action of the organic cause, classes of disease were determined. Those conditions named were due to organic matter finding its way into the economy from without. Such a condition as gout was due to organic matter acting from within. Acute rheumatism (for which term a definition was urgently needed) should probably be classed rather among the inflammations than the fevers, since it was generally due to cold; but the chalk-stone rheumatic affection seemed to belong to the affections due to organic matter acting from within. The diseases were very different from one another, though both called rheumatism. Diseases due to anxiety (very numerous at present) seemed to demand a place for themselves. It was doubtful if cancer did. The author suggested that cancer was, like injury, a depresso-congestive condition, in which the primary depression lasted for a very long time, and the subsequent hyperæmic tissue-forming stage lasted a very long time also. Cancer, in fact, was very often what might be called chronic injury, with mild symptoms at first, becoming later subacute, or even acute. Scrofulosis and tuberculosis seemed to be best classified here also. Tumour the author did not consider a true genus. Increased tissue-formation was the secondary stage of almost all diseases; and the conditions called tumour were, logically, accidental formations, and not the essence of the disease. The true place for the classification of cancer, the author suggested, was as a *variety* of the depresso-congestive process termed inflammation, injury, etc. The author objected to terms such as paralysis, neuralgia, neurosity, and the like, as names of diseases. They were names of symptoms whose cause was to be investigated. Such a name as hyperæmic neuralgia, or spanæmic neuralgia, of such and such a nerve, would be descriptive; but names like paresis were no more names of diseases than dropsy or rapid breathing was. Spasm, tetanus, chorea, and also very many of the names of nervous disorders, were in the same category. In conclusion, the author maintained that the suggested classification of diseases had a potential place for any new disease that may be discovered. The cause would determine the class and order; the part affected would determine the genus; while species and variety would be determined in accordance with the considerations already advanced. The classification proposed was on a thorough-going plan. It contained no cross divisions. It was natural; bringing together diseases of like nature. It was inclusive; finding place for all. Lastly: when we heard a functional or symptomatic name, we raised the question whether the condition was understood.

Friday, August 13th.[*]

The Chair was taken by G. E. PAGET, M.D., F.R.S., President; and afterwards by W. T. GAIRDNER, M.D.

Affections of Vision from Cerebral Disease. By DAVID FERRIER, M.D., F.R.S. (London).—Dr. Ferrier reviewed, in connection with recent investigations made by himself and his colleague Professor Gerald Yeo—a full report of which was laid before the Physiological Section—the various theories respecting the relations of the cerebral hemispheres to vision, and the clinical facts relating to crossed and hemiopic visual defects. The clinical evidence pointing to the localisation of a distinct visual centre was considered: but it was stated that at present this alone could not be regarded as by itself sufficient. The visual centre in the monkey included not only the angular gyrus but the occipital lobe; for, though the occipital lobes might be removed almost entirely without affection of vision, yet, in order to cause complete and permanent blindness, it was necessary that the angular gyri and occipital lobes should be destroyed on both sides. A portion only of one visual centre would in time suffice for vision with both eyes. Hence extensive lesions might be found in the visual centres without obvious visual defect, without thereby disproving the existence of a visual centre. From Dr. Yeo's and his recent investigations, it would appear that the hemispheres had a double relation with the eyes. The connection of the angular gyri was mainly crossed. Hence lesions here, and in the corresponding medullary fibres, caused crossed amaurosis in amblyopia. Here the facts of cerebral hemianæsthesia were passed in review, and Charcot's views and scheme of the optic tracts discussed. Perimeters of cases under the author's own care were shown, and the crossed amblyopia which

[*] The report of the proceedings on Thursday, August 12th, will be published next week.

they demonstrated was explained in connection with the experimental results. Where there was an unilateral lesion of the angular gyrus and occipital lobe together, but not of each singly, hemiopia occurred and lasted for some time in the monkey, but not permanently. In connection with this fact, the lesions causing hemiopia were described, and the clinical cases which had been recently placed on record were analysed. Taken by themselves, the clinical facts were not as yet sufficiently definite to establish any causal relationship between cortical lesions as such and hemiopia; but taken in relation with the experimental data, the fact of hemiopia from cortical, or rather subcortical, lesions in the occipital region could be satisfactorily accounted for by destruction of the medullary fibres radiating into the angular gyrus and occipital lobe, not the occipital lobe only. The occipital lobe in clinical records was a term too often vague and wanting in precision. Some considerations were advanced on the diagnosis between hemiopia from direct lesion of the optic tract and cerebral hemiopia; and the signs and duration of the affection in each case were discussed. A perimeter was shown of a case under the author's care, where there seemed to be a progressive restoration from a condition of hemiopia due to a cerebral lesion. The facts of experiment on monkeys showed that recovery took place, and, therefore, it might be expected in man, even though it were more slow and less perfect. This referred only to truly cerebral hemiopia, and not to hemiopia depending, as it did frequently, on lesions of the corpora geniculata or optic tract.

On the Plague in Russia, 1878-79. By J. F. PAYNE, M.D., F.R.C.P. (London).—The epidemic of plague in the province of Astrakhan, Russia, in the winter of 1878–79, was confined to a few villages on both banks of the Volga, inhabited chiefly by Cossacks. The history of this epidemic was, even now, very imperfectly known, as it did not attract attention till it had already attained its height. It was, however, believed to have begun in October 1878, and lasted till January, 1879. Its cessation appeared to be spontaneous or partly due to climatic changes; not to the sanitary measures of the Russian Government, since these, though very thorough, came too late. Perhaps the most important question connected with this outbreak of plague was that of its origin. On this point no perfectly satisfactory conclusion could be expected, since the early period of the epidemic did not come under the observation of skilled witnesses; and all the commissions sent out by the European Governments, including the special commission of the Russian Government itself, did not arrive upon the scene till the epidemic was virtually over. Two theories had been put forward which deserved special notice. One was that which supposed the disease to have been imported from Asiatic Turkey by the Cossacks returning to their homes after the war. Another theory was that it came across the Caspian sea from Resht in Persia. Besides these, it had been held by others that the disease might have originated independently in the district, as well as in those countries from which it had been supposed to be derived. The first theory was that put forward and defended by Professor Hirsch of Berlin, who was the head of the German Plague Commission, and whose authority was, in such a question, considerable. Dr. Payne could not accept this theory, and, believing it to be undesirable that such an explanation should be recorded in the history of epidemics as if it were an ascertained fact, he had stated the reasons which weighed most strongly against it. The theory of importation from Resht required to be stated with many modifications before it could be rendered probable. There did not seem to be sufficient reason for assuming an independent origin of the plague in the affected district, even though such an origin might not be precisely impossible. The key to the problem was, in the opinion of the writer, to be found in the previous occurrence of a disease, which was really a mild form of plague, in the same district in the year 1877. The actual origin of the plague of Astrakhan was then to be sought in this year rather than in 1878.

On the Curability of Attacks of Acute Phthisis (Cedipus Cruentus). By T. M. M'CALLAN ANDERSON, M.D. (Glasgow).—By the term acute phthisis, the author meant an acute pulmonary affection, accompanied by high and continuous fever, running a rapid course, and leading invariably to more or less destruction of lung-tissue if the patient survived long enough. He recognised three varieties of the disease: 1. Acute pulmonary tuberculosis; 2. Acute pneumonic phthisis; 3. Acute pneumonic phthisis complicated secondarily with the development of grey miliary tubercles. He thought it impossible to distinguish the second from the third variety during life, but that the first might be suspected when the disease set in suddenly with high fever, great prostration, profuse perspiration, lividity, and great acceleration of breathing, and when these symptoms were out of proportion to the physical signs. Having given extracts from the writings of Walshe, Trousseau, and others, showing that the profession was very hopeless as to such cases, he pointed out that, in a good many cases, he had obtained excellent results from treatment, of which the following was an outline: 1. Careful skilled nursing, with constant feeding, and stimulants in small quantities often (from 4 ozs. to 10 ozs. daily); 2. Each night a subcutaneous injection of $\frac{1}{100}$th to $\frac{1}{60}$th of a grain of atropin; 3. Remedies specially adapted to the removal of fever: (*a*) ice-cloths to the abdomen; (*b*) quinine, 10 to 30 grains, in a single dose, once daily; (*c*) a pill, composed of one grain of quinine, half a grain of digitalis, and from a quarter to three-quarters of a grain of opium, every four hours. In addition to this, special symptoms—diarrhœa, constipation, and the like—must be treated on ordinary principles, and, of course, the treatment indicated must not be used in a mere routine way, but adapted to the surroundings of each individual case. He concluded by referring to illustrative cases.

Mr. J. A. GOODCHILD (Bordighera) said that Dr. Anderson's paper had suggested to his mind the fact that occasional cases of acute tuberculosis would subside for a time without the reason being understood, and an apparent cure would be obtained in cases in which the whole history precluded the expectation of any very satisfactory result. He had a marked case of that kind last year: that of a young man twenty-three years of age, whose parents had died from phthisis, and all his brothers and sisters except one. He suddenly became excessively feverish, there was dulness over the lungs, he had night-sweatings, and was evidently the subject of acute tubercular phthisis. There was rapid emaciation, and the breathing was excessively difficult. The expectoration was not much in amount. When he (Mr. Goodchild) went abroad, he left the patient under the impression that he had only one or two weeks to live; but when he saw him again this summer, he was apparently fairly well. He had simply taken hypophosphites. He had a slight cough; but he was about, doing his ordinary business. He did not consider it to be a case of cure; and he had no doubt that, with such a strong tubercular tendency, the patient would at length succumb to the disease. If he could live abroad under better sanitary circumstances, he might perhaps escape for years to come.

Dr. TURNBULL (Liverpool) said he had listened with great satisfaction to Dr. Anderson's paper. Medical men had long thought that it was altogether impossible that phthisis could be cured; and the terms "arrest" and "suspension" were introduced in the first reports of the Brompton Hospital for Consumption. There was one difficulty in discussing the subject—that of separating cases of acute phthisis from cases of chronic phthisis. There was one form of the disease which, he thought, tended to show the possibility of curing acute phthisis. He referred to cases which ran a rapid acute course, and in which it was found on *post mortem* examination that the lung, with a great deal of congestion or pneumonia, showed a recent deposition of miliary tubercles, and on further examination it was found that there had been a previous attack, there being one or more dark portions of the lung, with some puckering and solidification; and they also frequently found a tubercle that had undergone cretaceous transformation, showing that the disease was one of long duration, though it had been acute in its last period. Were such cases to be called acute or chronic? Considering them from the last attack, they were undoubtedly acute; but regarding them from the first attack, they were certainly chronic. The fact of there having been a previous attack showed that the disease was capable of being suspended or arrested, and also indicated the possibility, in a certain number of cases, of the cure of a form of phthisis which had hitherto been regarded as the least likely to be suspended.

Dr. CARTER (Liverpool) said the members ought to feel much indebted to Dr. Anderson for raising the question of the possibility of the cure or amelioration of acute phthisis. In any future cases that might come under his care, he should certainly endeavour to follow the method described, which in a modified degree he had hitherto followed; but he should have little hope of success, for his experience had been uniformly unfortunate; no case in which there had been a general deposit of miliary tubercles in the lungs, attended by the rapid development of fever, wasting, etc., had been in any material degree favourably influenced by treatment. He had put patients into large open wards, and treated them very carefully by feeding and otherwise, cooling the body by iced water and the like; but the wasting had gone on, the fever was unchecked, and he had never seen such a patient recover. As soon as the iced water was removed, the fever went on with almost the same intensity, and at length the patient died.

Dr. BARR (Liverpool) said he had also tried antipyretic treatment, but without success, death having been the invariable result. Perhaps his cases had been unusually severe; but he had often thought that considerable relief was derived from the treatment, and he had continued it, notwithstanding his want of success. In another class of cases of tubercular disease—tubercular meningitis—he had in several instances effected a cure. It might be said that they were not cases of tubercular

meningitis at all; and, in the absence of any *post mortem* examination, he could not absolutely say that they were; but the symptoms were such as were invariably present in those cases that generally ended in death. In one case, after applying ice to the head for two or three weeks, and keeping the temperature as nearly normal as possible, there was a complete recovery, even after considerable wasting had taken place. In some of the cases under his care, the ice-cap had to be taken off, lest the temperature should become so low as to produce collapse. When the temperature went down below the normal point, the ice-cap should be removed for a few hours, and iced water or cloths should be applied to the head.

Dr. TOTHERICK (Wolverhampton) said that, like many others, he had tried Dr. Anderson's method as soon as it was published, having previously been accustomed to rely on large doses of the tincture of the perchloride of iron. In one remarkable case under his treatment, the febrile action was so marked that he had thought of transferring it to the fever-wards, but during the treatment there was a decided catarrhal sound at the back of the left lung, and eventually the base of the right lung broke up into a large cavity, with profuse expectoration. Although the case ran a very acute course, the disease was apparently arrested whilst under treatment by perchloride of iron. In another case, a young girl, fifteen years of age, was brought into hospital suffering from an intense fever, with a temperature sometimes of 105°, without a symptom of lung-disease or head-disease. The case was diagnosed as one that might turn out to be acute miliary tuberculosis. Dr. Anderson's treatment was adopted. Sometimes the temperature went down, and sometimes up. The lungs were anxiously auscultated twice a day; occasionally there were slight symptoms of catarrh and slight headache, and once there was slight strasbismus. The treatment went on for weeks, and then the patient left. She was now an out-patient; her temperature was often very high, as much as 103° in the morning, and yet she did not decrease in weight, although she was taking nothing but a little cod-liver oil. He could not say that the evidence was sufficient to show that the case was one of acute tuberculosis. Dr. Anderson's treatment was certainly not scientific; it must be considered as purely empirical—not that it ought to be objected to on that account if it were successful. In acute cases the atropin might be useful for night-sweats, but, as far as his experience went, there was no expectoration whatever, and not often any diarrhœa. He had noticed some cases of diarrhœa in which the opium was advantageous, but generally speaking there was not any expectoration. In fact, the patients often died before expectoration became developed. With regard to the temperature, he had always found that it could be controlled by the salicylate of soda more successfully than by quinine and digitalis, unless the quinine were given in such large doses as to derange the system and destroy the appetite.

Dr. MCCALL ANDERSON, in reply, said that Dr. Goodchild had referred to a case that he believed to be one of spontaneous recovery; he was far from saying that spontaneous recovery might not occasionally take place, if the case were properly nursed, but he hardly thought the case in question was one of recovery, seeing that some cough was left. He did not think that an attack was really cured until the cough had entirely gone, and the patient was greatly increased in weight. He did not think that the cases he had reported could be regarded as cases of spontaneous recovery, because most of the details of the treatment were carried out with a view of counteracting special conditions; and it was generally found that the special treatment controlled the special symptom, sometimes in a remarkably short space of time. Dr. Turnbull had said that it was difficult to separate cases of acute from cases of chronic phthisis. He had never before heard that there was any difficulty in distinguishing between the two. There might at first be symptoms, such as typhoid fever, rendering it difficult to make the distinction between the two; but, if an opportunity were afforded of watching the case from day to day, the diagnosis became clear enough. In chronic phthisis, there was not that high, or, at all events, that continuous fever, which was observed in acute phthisis, and the distress of the patient was much less. Reference had been made to patients having had previous attacks of phthisis, followed by an acute attack. It was impossible, however, to say what the previous attack was. In one of the cases to which he had referred—that of a young lady—he was informed that, when she was a child, she had a disease on the top of one lung. No doubt such patients were very vulnerable; and he did not contend that the treatment that he had suggested would prevent a subsequent attack. He had only spoken of the curability of an existing attack. To prevent other attacks, it would be desirable to resort to a sea-voyage, or some other means of improving the general health. With regard to the observations of Dr. Barr, he would remark that everything depended upon the way in which the treatment was carried out. Even the most intelligent nurses sometimes failed to apply it properly. He did not say that the temperature could be brought down by the use of iced cloths alone. It sometimes required a combination of remedies. He thought there was a great tendency on the part of many members of the profession to ignore too much the high temperature in cases of acute diseases, and that many patients were killed rather by the fever than by the disease which produced it. The case mentioned by Dr. Totherick might, perhaps, be one of those extraordinary cases of hysteria associated with high temperatures that sometimes occurred. With regard to diarrhœa, his experience was, that it was a common, though not an invariable, symptom. In carrying out the opium treatment, constipation sometimes became very obstinate, so that it was necessary to diminish or suspend the opium for a day or two. He agreed that, in the majority of cases in acute phthisis, there was not much expectoration; in fact, no expectoration whatever. He could not agree that salicylate of soda would control the temperature. In cases of rheumatic fever, such remedies might be of the greatest use. Generally, when the pain was removed, the fever subsided. A remarkable case had occurred in the wards of his colleague Dr. Gairdner, in which rheumatic fever was treated by salicin, and the pains almost immediately subsided; but the temperature, instead of going down, went up; iced cloths were then used in the way he had recommended, and almost immediately the temperature came down. The paper he had read was meant to be a protest against the very general opinion, that acute phthisis was incurable, and that tubercle must necessarily prove fatal. Though it was a very dangerous complication, he believed it was not necessarily incurable.

On the Treatment of Bright's Disease; with special reference to the use of Diuretic Remedies. By W. T. GAIRDNER, M.D., (Glasgow).—Dr. Gairdner said that the present communication was to be viewed simply as an abstract, the historical and other details on which it was founded being about to be published in the *Glasgow Medical Journal* for September. Dr. Gairdner had been long of opinion, as the result of more than twenty-five years of hospital experience, that the English practice in Bright's disease, and especially in acute and subacute cases, had been too much founded on the conception that the kidney, like an inflamed organ, must have, as nearly as might be, entire physiological rest; and hence that diuretics were to be avoided, even at the risk of their requiring to be replaced by more perturbatory practice. Dr. Gairdner did not hold that diuretic treatment was alone sufficient, or even in all cases expedient; but he held that the mere abstinence from diuretic treatment, or the doctrine that such practice was to be regarded with suspicion in the cases in which the simpler saline diuretics could be brought to act, was opposed to the teaching of experience. In the London schools, in particular, the teaching adopted for many years was that the occurrence of active diuresis, under remedies especially adapted to that end, was to be avoided, and that it was better practice, in most cases, and especially in acute and subacute cases, to aim at purging the bowels continuously by the strongest and most irritating cathartics, than to give scope to the kidneys to respond gradually and gently to such remedies as cream of tartar, potash salts, and digitalis. The position here referred to had been modified of late years by the admission: 1st. That spontaneous diuresis often, if not invariably, occurred in such cases as a kind of crisis, or as the first step in the cure; 2nd. That (as Dr. Dickinson, in particular, had emphatically taught) the copious imbibition of "clear spring water", in quantities such as to make it practically one of the most active of diuretics, tended to the relief, rather than to the obstruction, of the kidney in its physiological work; in other words, that flushing of the obstructed tubili uriniferi, and general furtherance of the true physiological activity of the kidney tended (as Dr. Christison long ago showed) to the diminution of its pathological disturbance of functions as indicated by albuminuria, deficient excretion of urea, and dropsy. Dr. Gairdner regarded it as in accordance with clinical experience, apart from the theory that, whenever the simpler diuretics would act at all in such cases as were usually treated by means of elimination, their action should be furthered and encouraged, in preference to other modes of elimination. While he did not at all discountenance the use of purgatives on the one hand, or of diaphoretics on the other, in cases in which they were specially indicated, or in which diuretics could not be brought to act, he was always disposed to make such simple diuretic practice as was indicated above the key-stone of the treatment, and to consider it as more in accordance with nature, and with the spontaneous tendency to crisis above-mentioned, than the use of the stronger drastic purgatives, or even of medicinal diaphoretics, or the too repeated and somewhat enervating use of warm baths, or of air and vapours at a very high temperature. Diuretics, indeed, not unfrequently failed; but so also, not unfrequently, did all the other remedies mentioned. It must also be admitted that the reasonable regulation of the skin and of the bowels was an essential part of good treatment in most cases of Bright's disease, whether attended or not with

dropsy: and that in certain cases—*e.g.*, of immediately threatening uræmia, drastic cathartics were sometimes the only method that could be trusted for immediate relief. In such cases, Dr. Gairdner acted on the presumptions derived from Bernard and Barreswil's well-known experiments, as well as on empirical data; showing that the elimination through the bowels of excretory matters which, if retained, were dangerous to life (and notably of urea and its congeners in the form of -bonate of ammonia) might be rationally and safely accomplished for ca[illegible], at least, so as to save life and conduce to present comfort. a-tim[illegible] regarded this perturbative course as only a temporary phase of But he [illegible] necessary in some cases, and to be supplanted as soon as treatment, [illegible] more natural and physiological determination of the possible by th[illegible] the kidney. Hence the preference accorded in his liquids towards [illegible] tartar, which in its various forms of powder, electuary practice to cream o[illegible] nd in certain cases in combination with jalap or gamboge, might be mad[illegible] active catharsis to the mildest diuresis, elimination, from the mos[illegible] tural diuretic crisis, so much insisted on coinciding or not with the na[illegible] he judicious use of formulæ by no by Dr. George Johnson. By t[illegible] ossible to graduate catharsis into means complex, it was usually p[illegible]s to gain whatever advantages diuresis, so to speak, in such a way [illegible] at the same time seizing the resulted from the former practice, while [illegible]al crisis, whereby the cure, earliest opportunities of inducing a true ren[illegible] The exclusively diaphoif possible at all, was usually best completed. [illegible]o have been tried and retic practice of Dr. Osborne of Dublin seemed t[illegible] ecently revived in found wanting, and in a measure laid aside, until [illegible] whose admirable another form in Germany, particularly by Bartels, w[illegible] rise to new articles in Ziemssen's *Cyclopædia* would probably give had often elaborate trials of Turkish and vapour baths. Dr. Gairdner employed these with benefit; but he thought that these benefits would be exaggerated, if they were so employed as to shut out diuretics, or to divert habitually all the available liquids of the body for long periods together to one emunctory, and so to starve the supply of liquids to the kidney. In a few cases of great obstinacy, however, a certain amount of temporary benefit appeared to result from the hypodermic employment of pilocarpin in doses of one-eighth to one-fourth of a grain every second day. The limits of expediency in the use of such perturbative and medicinal diaphoresis had, however, to be determined by careful further researches. The same remark applied, in Dr. Gairdner's opinion, to bloodletting, which, at one time a frequent and even a very favourite remedy in the acute and subacute cases, had in later years almost gone out of date, but which had been yet more recently revived by several observers and practitioners of good standing. Several points of modern theory and advanced experimental observation might be quoted as in favour of such practice; but it was not the object of the paper to enter into this question, and all that could be said in the meantime was that it would be a very extreme assumption to reject *in toto* the evidence as to the beneficial results of bloodletting in scarlatinal and other forms of acute renal dropsy. In conclusion, Dr. Gairdner said: "Finally—and to put into a single sentence the main object of this paper—I by no means claim to have discussed at all completely the treatment of Bright's disease; nor have I even alluded to several remedies—*e.g.*, gallic acid, benzoic acid, fuchsin—of which I have made personal trials with various results. But I hope to have shown, once for all, that in almost all stages of the disease there has been an undue tendency to depreciate or exclude diuretic remedies; and that these, judiciously employed, without pretending to an absolute supremacy, are at once the safest and in many cases the most effectual means of dealing with the dropsical symptoms; while, as Dr. Christison has pointed out, their legitimate function is not merely to get rid of a single symptom, but, by aiding the natural process of excretion by the kidneys, to ward off the dangerous accumulations in the blood which lead in time to what is called uræmia. To restore by remedies this natural function, we must needs employ, in any case, methods of elimination that are more or less closely allied in their action to the physiological processes which it is desired to arouse and quicken; and hence, as I venture still to be of opinion, the experience of ages, here quite in accordance with a sound theory, has practically demonstrated the advantage of the use in such cases of the cream of tartar, in its solid as well as liquid forms of administration, followed or accompanied by other mild diuretics or by digitalis—a mode of practice extending back, as we have seen, to the last century, if not to much earlier periods, and only apparently discredited by prejudices arising from the pathological researches of Bright. My argument in this paper is, that the principle of this practice, or the practice itself, ought to be carefully preserved, or restored again more generally and systematically, in the treatment of this disease. As to the employment of tonics, nutrients, chalybeates, and other hæmatics, in the later stages, there is practically an universal consensus of opinion."

Remarks on Bright's Disease, with particular reference to the Unequal Development of its several Factors.—By F. A. MAHOMED, M.D., F.R.C.P. (London). Bright's disease was described as a complex condition, made up of many factors. Of these, one was essential and constant, namely, the cardio-vascular change; it was so, because the disease was a general one, the result of a blood (or tissue) poison, or functional disorder. Hence, in both the chronic and acute condition, the primary cause of the disease produced high arterial pressure, and, secondary to this, fibro-hyaline thickening, with muscular hypertrophy of the arterioles, thickening of capillaries, with certain changes in the kidneys (notably thickening of the capsules of the glomeruli, and intertubular fibro-hyaline material), together with changes in other organs. Such a condition as this was not necessarily associated with nephritis, and, therefore, no renal symptoms need be present; in other words, there might be the clinical signs of the cardio-vascular changes of Bright's disease, without the occurrence of albuminuria, low specific gravity of urine, or casts, and without general dropsy. The results of chronic high arterial pressure were described, though not attributed to this cause, by Sir William Gull and Dr. Sutton, in their papers on Arterio-capillary Fibrosis; the acute changes of an exactly similar nature were described by Dr. Klein in his papers on the Morbid Anatomy of Scarlatina. In both cases, the absence of epithelial changes in the tubes of the kidney was insisted upon. The functional stage of the disorder was recognised by the occurrence of high arterial pressure, and was generally associated with other symptoms; while the pathognomonic signs of organic disease were displacement of the apex-beat and thickening of the vessels, though it might be suspected from other symptoms. The nephritic factor was the most common and most important; occasionally, it was the primary cause of the general disease, and always exaggerated it. It demanded separate attention and recognition; so also did the various other factors.

Dr. HAYDEN (Dublin) said that an important point in the discussion of the question was the inversion of the order of the symptoms in Bright's disease. As Dr. Mahomed had stated, attention was too exclusively directed to the condition of the urine as the chief, if not the only, evidence of renal disease. The condition of the cardio-vascular system was regarded only as a secondary change; but Dr. Mahomed now wished to direct attention to it as a primary change in the series of changes in the whole condition known as Bright's disease. He accepted that view with a little qualification. No doubt in many cases Bright's disease did commence from the kidney, and the cardio-vascular changes were also likely to occur in such changes. There was one point in regard to the means of diagnosis in Bright's disease, on which he entertained some doubt. Dr. Mahomed would direct attention mainly to the condition of the heart and arteries as evidence in the early stages. A somewhat similar change in the heart and arteries—at least the evidence of hypertrophy in the left ventricle, as deduced from the dislocation of the apex and a thickened condition of the arteries, as shown by the emptying of the passages—was also to be detected in the condition known as atheromatous change. In gout, for instance, the left ventricle of the heart was enlarged, and even from the exercise of the muscular system in an extreme degree a hypertrophic condition of the left ventricle might be produced; so that the simple fact of the existence of a hypertrophied left ventricle and a thick condition of the arterial tunics could not be taken as a proof of Bright's disease in its early stage, as those changes might be due to other causes. With regard to Dr. Gairdner's paper, whilst he had long recognised the benefit of the practice suggested of giving diuretics, he had never been satisfied with that practice in the case of congested kidney. The dread which practitioners had entertained of administering diuretics in renal diseases was based upon the wrong view of the physiology of the kidneys. Claude Bernard had proved that functional activity, so far from increasing congestion, tended to reduce vascular pressure and diminish the congestion. He had proved that by a conclusive experiment in regard to the salivary glands; and he (Dr. Hayden) saw no reason why the same conclusion should not be applied to the kidneys, which were also secreting organs. He showed that, while the gland was actively performing its function, the blood passing from it was increased in quantity; the venous pressure was increased, whilst the arterial was not. Thus they should aim at producing that physiological condition in an organ in a state of disease, if they regarded the disease only as an exaggerated function of the organ.

Dr. WILBERFORCE SMITH (London) thought the failure of diaphoresis to relieve the dropsy of renal disease was often due to its imperfect use. According to his experience, the best method was that of a hot-air bath in the patient's own room, which he had never known to fail where it had been thoroughly and daily adopted. The patient should be thoroughly instructed in the matter. The best apparatus, as far as he had observed, was that of a common jar about the size of a large tumbler, into which was placed a wine-glass of spirits of wine, which

was set on fire. As a protection against accident, or to relieve the mind of the patient, the jar might be put in an outer vessel, *e.g.*, a common *pot de chambre*. The patient sat on a chair with blankets round him, and a sheet outside, because the blankets, being porous, might let a good deal of the heat through. If the patients suffered from faintness or headaches, it might be obviated by giving a sufficient quantity of fluid before the use of the bath, and the application of wet cloths to the head. In advanced cases there was no doubt some danger of uræmia coming on, but in recent and mild cases there was no such danger.

Dr. HADDON (Manchester) said that, although recognising the great interest of Dr. Gairdner's communication with regard to the therapeutics of the disease, he thought attention should at present be more directed to its causation. Dr. Mahomed, he thought, had paid too much attention to arterial tension as being the cause of the thickening of the vessels. That arterial tension could be varied very quickly and in very diverse ways, and the thickening of the small vessels after scarlet fever was quite as likely to give rise to high arterial tension as a high arterial tension was to give rise to thickening of the arteries. Therefore, if after or during scarlet fever there was the proliferation described by Klein, there was a very clear case for high arterial tension. For himself, he should be inclined to ascribe high arterial tension to thickening of the vessels, instead of the reverse. But, in some of the forms of Bright's disease, he could not help thinking that the disease must first commence in some way through the nervous system, by increasing the arterial tension through the vaso-motor system. The general tendency of the profession was now to regard Bright's disease as being liable to be brought on by many causes, such as worry and other troubles purely affecting the nervous system. If the urine were examined, its normal character should be taken into consideration as well as its abnormal constituents. Whether urine contained albumen was of far less importance than whether it contained its normal constituents in proper proportions.

Dr. DICKINSON (London) regretted that his necessary presence in another Section had prevented his hearing the papers which had been read by Dr. Gairdner and Dr. Mahomed. If he had heard Dr. Gairdner's, he could not have failed to become much wiser thereby. Everything that Dr. Gairdner wrote, if he might venture to say so, was full of accurate observations and sound reasoning. He was quite convinced himself that, as touching the questions of the increased blood pressure, the hardness of the pulse, and so on, observed often with renal disease, the increased arterial tension preceded the vascular thickening. He had already urged this view, which was the result of practical observation. The hardness of pulse and sphygmographic evidences of overtension were to be observed long before there was time for any arterial change, and in cases where no evidence of this was observable after death. The increased resistance to the flow of blood in the capillaries probably caused the increased fulness of the arterial system, gave rise to the increased muscular hypertrophy in the heart and arteries by causing far increased exertion on their part, and set up the fibroid thickening, which also existed probably by means of the increased blood-pressure on the walls of the vessel, and the increased transudation of nutritive fluid into them, as a consequence of the same pressure. The treatment of renal dropsy had also been touched upon, and he would say a word with regard to that. It should not be lost sight of that renal dropsy was closely associated with anæmia. In old days, when renal dropsy was treated too exclusively by purging and sweating, it was too often treated unsucessfully. Vapour-baths had their use, and that a great one, particularly where there was much evidence of uræmia. But perchloride of iron was often used with much success in such cases, taking care, of course, to guard against constipation; and often a replacement of low diet by one less low was followed by marked mitigation of the dropsical symptoms. In some cases, the best remedy for dropsy was a mutton chop. One had to steer most heedfully between two different conditions which were often associated —anæmia on the one hand, uræmia on the other. It was a nice point to remedy the anæmia, which was often a leading factor in the dropsy, without encouraging the uræmia which might threaten.

Dr. GAIRDNER, in reply, said if Dr. Mahomed would read his (Dr. Gairdner's) paper at length, he would see that, from the time of Bright, and even before, there were distinct references to what, under other names, harmonised a good deal with Dr. Mahomed's own views of pathology. Those who followed Bright, divided the treatment into two parts. They said that diuretics might be good for the dropsy, but that the essential disease was something in the nature of inflammation, which should be treated by blood-letting. Dr. Mahomed had recognised a great many facts hitherto only obscurely known; but whether arterial tension was the primary fact of all, it would, at present, be premature to say.

Dr. MAHOMED said he agreed with Dr. Haddon that the cardio-vascular condition might originate from a primary renal condition. Dr. Haddon thought that arterial tension was a very variable thing, and that the thickening of the vessels was the cause of arterial tension. The thickening of the vessels, however, was not variable: vessels did not thicken or thin in half an hour, whereas arterial tension would vary in that time. It was impossible to say that in scarlatina arterial tension depended upon the thickening of the vessels, for it could be reduced in a very short time by a hot bath. He maintained that arterial tension was the primary condition, and the thickening of the vessels the secondary one. It was painful to read Bright's writings, and to think how little advance had been made since his days in the knowledge of the pathology of the disease. The great point that Bright did not recognise was that of the changes in the small vessels. Bright held that there was first a renal condition, then a blood-poisoning, and then a hardening of the pulse. Dr. Mahomed maintained that there was first the constitutional condition of a hard pulse, and subsequently a renal condition. With regard to treatment, he might mention that it was well known that a warm climate was the best thing for Bright's disease. He had lately tried in the London Fever Hospital to produce an artificial warm climate. He had erected a tent, and introduced into it a limited supply of steam, so as to keep the patients in a state of chronic vapour-bath for even days and weeks. Some very remarkable results had been produced by that treatment. In the first case, the albumen, which was present in large quantities, was steadily reduced from day to day till it came down to a trace. The patient was then unfortunately removed, and the next day the urine was greatly increased, and the following day it was full of blood and highly albuminous. The temperature of the tent was never allowed to rise above 80°. The object was to produce a moist atmosphere, and, at the same time, a slightly increased temperature.

The following papers were taken as read.

On the Influence of Altitude with Reference to the Treatment of Pulmonary Disease. By WILLIAM MARCET, M.D., F.R.S. (Cannes).—The author accepted the generally acknowledged theory, that cases of phthisis amongst the inhabitants of altitudes exceeding five or six thousand feet were so rare as to be exceptional. He also admitted that such winter-stations as Davos might prove beneficial to consumptive invalids, and had in some cases apparently effected a cure. After reviewing the influence of altitude in disease with especial reference to the various descriptions of pulmonary affections, the author proceeded to account for the beneficial effects of such winter-stations as Davos on consumptive invalids. He stated the results of his own experiments on respiration at various altitudes, which had a direct bearing on the present subject, and from which he arrived at the following results. 1. At stations at various altitudes above the sea, a smaller weight of air was taken into the lungs (or a smaller volume of air reduced to seaside-pressure and freezing-point), while more carbonic acid was emitted, especially in a cold climate; and it followed that the oxygen of the air passed through the substance of the lungs into the blood more rapidly or more readily on mountain-stations than near the sea-level. 2. Up to 7,000 or 8,000 feet, the increased volume of air breathed within a certain time (not reduced) was due to a greater expansion of the chest and lungs, and but little, if at all, to an increased rate of breathing, although at higher stations the frequency of the respiration was decidedly increased. The author concluded that the beneficial influence of high winter-stations on the progress of phthisis was due: 1. To the blood becoming more fully charged with oxygen from the air breathed, and to the phenomena of oxidation in the body being increased, thereby promoting considerably the healthy changes in progress in the living body; 2. To the capacity of the chest and lungs being increased—at all events, temporarily—after a winter sojourn in the mountains; and because, on that account, a greater volume of air was breathed after returning to a lower level. This last conclusion was arrived at independently of the observations and statements made by Dr. C. T. Williams, who offered a similar explanation to account for the beneficial influence of Davos in cases of phthisis.

The Nomenclature of Pneumonia and other Allied Lung-Inflammations. By OCTAVIUS STURGES, M.D., F.R.C.P. (London).—The object of the paper was to point out certain anomalies and ambiguities in the prevailing classification of lung-inflammations, and to suggest such modifications as might render the nomenclature of these affections more accurate, compendious, and expressive than at present. Some of the chief objections to the prevalent mode of classification of these diseases were pointed out—*e.g.*, the use of terms of uncertain or disputed meaning, such as "croupous"; the employment of the same word with more than one meaning, such as "chronic pneumonia"; the confusion under the common term "pneumonic" of a number of pathological processes

which were essentially different; the complexity and ambiguity of the qualifying adjectives of pneumonia, the term "acute sthenic exudative pneumonia" being inconveniently long; and the term "catarrhal" or "bronchopneumonia" being inconveniently vague. In the amended classification it was proposed to set up the term "pneumonia" to signify in one word that definite and orderly lung-inflammation, which ran a certain course, ending commonly in recovery, within a given period. Along with it two varieties or modifications of pneumonia were included—viz., bronchopneumonia, where there was antecedent bronchitis; pleuropneumonia, where there was a notable accumulation of fluid in the pleural cavity. For reasons that were given, the term "pneumonic" was proposed in place of the term "lobular" for that secondary lung-consolidation which succeeded to bronchitis (especially in young children) sometimes insidiously and sometimes openly, and with a near or a remote likeness to pneumonia proper. The use of the terms "pneumonia" and "pneumonic" would end here, and not be suffered to extend, as at present, to those chronic and permanent tissue-changes where the same histological elements became the agents in a deteriorative process radically different from the pneumonic, and to which the term "phthisis" was commonly applied. In place, therefore, of the word "pneumonic", as applied to acute and chronic phthisis, the word "catarrhal" was substituted—a term which coincided accurately with the views of Niemeyer as to the origin and constitution of phthisis. It was proposed, further, that the ambiguous term "chronic pneumonia" should be abolished altogether, save only as it might serve to describe the prolongation of ordinary pneumonia, the word "pulmonary (or alveolar) catarrh" taking its place in one of its uses, and the word "fibroid phthisis" in the other. The term "pulmonary catarrh" was recommended for clinical use as descriptive of that variety of crepitant rhonchus of which the precise signification varied with the locality, and for which, therefore, it was desirable to have a name which would carry no presumption along with it. Finally, it was suggested that in place of such expressions as "hypostatic consolidation", "passive pneumonia", and the like, the simple term "pulmonary consolidation" should be made use of, as expressing all that was known in regard to the origin and significance of those patches of solid lung, which in many chronic diseases was recognisable shortly before death in association with general lung-congestion. The advantages claimed for this amended classification were these. 1. It distinguished pneumonia by a cardinal name as a disease which it was important to identify and separate, in order the better to observe and record the many points of interest in its natural history, etc. 2. It grouped together along with pneumonia certain allied conditions which exhibited the same essential features under certain expressed modifications. 3. It drew a clear line of separation between the aforesaid group and other pulmonary inflammations which had no definite clinical course, but were seen in such various associations that no name could be applied to them, save one that described the anatomical condition. 4. It abolished, or at least restricted to a single and definite use, the ambiguous expression, "chronic pneumonia". 5. By excluding the word "pneumonic" from the description of phthisis (except of such phthisis, whether rare or common, that had its origin in true pneumonia), and substituting the word "catarrhal", it correctly indicated the actual relationship between lung-inflammation and the several forms of tissue-degeneration. 6. It introduced no new terms, and dispensed with some that were hypothetical, fanciful, metaphysical, or otherwise objectionable.

The Pathological Effects of Inspiration. By REGINALD E. THOMPSON, M.D., F.R.C.P. (London).—The object of the paper was to direct attention to various pathological conditions due to the action of the inspiratory force, transplanting organic matter from one part of the lungs to another. The most convincing evidence was that obtained in fatal cases of hæmoptysis, where the blood was seen spotting the lungs, inhaled from a distant source, which in most cases might be localised to a ruptured vessel or aneurism. The usual localities which were found stained in such cases were the upper lobe in the central and peripheral parts; the middle lobe close to the periphery, only in the region near the nipple, at the base, in the anterior inferior border, or above the arch of the diaphragm. The blood thus inhaled, in non-fatal cases, became a clot of colourless fibrin, which might remain unaltered for years, or under secondary alterations softened, liquefied, and was expectorated, giving rise to the phenomena usual to phthisis. The evidence of the inspiratory force thus established by fatal cases of bleeding, was confirmed as regarded other pathological products; as, for example, pus, the secretion from the bronchial tubes, as in chronic bronchitis and in bronchopneumonia, and also cancer. Considering the arguments which had been drawn from experiments on animals, and the evidence which might be derived from pathology regarding the peculiar distribution of certain forms of tubercle, the author was of opinion that the racemose form of tubercle was the result of matter inhaled from a phthisical cavity along the bronchial tubes, setting up irritation in the infected localities.

On Pulmonary Syphilis. By REGINALD E. THOMPSON, M.D., F.R.C.P. (London).—The details given in this paper were based upon the consideration of sixty well-marked cases, which were tabulated at the end. In all of these, which had occurred in the author's practice, the signs of pulmonary disease of a peculiar character were present; they were associated with symptoms of syphilitic cachexia, and were relieved by antisyphilitic remedies. The signs might be distinguished from those of other pulmonary diseases, and were sufficiently peculiar to establish the nature of the disease. Briefly, these physical signs were dulness of percussion and a peculiar alveolar rustle (resembling the crumpling of thin paper), with bronchial respiration and bronchophony of varying degree. These signs were not to be classed under the signs of phthisis, and the pulmonary condition indicated by them was notable for an absence of signs indicating destruction of lung-tissue. There was marked dyspnœa occurring after exertion, especially in raising the body upstairs or uphill. Hæmoptysis of small amount was frequently present, and the expectoration was sometimes abundant. These characteristics of the disease were accompanied with thoracic tenderness and other evidence of syphilitic complications. The pathology of the disease was very obscure, inasmuch as the disease was very chronic, and seldom, if ever, fatal; only one necropsy having been made by the author, and in this case death was due to other causes. The morbid condition of the lungs in this case was given in detail.

Treatment of Sleeplessness by Sitz-Baths and the Inverse Current. By J. FLETCHER LITTLE, L.R.C.P. (Ben-Rhydding).—The following were the points treated of in this paper: 1. The frequency with which cases of insomnia are met with in practice, and their intractable character; 2. The frequent abuse of sedatives by patients, and the evil effects that follow; 3. How to use the sitz-baths in the above cases; 4. How to use the inverse current in aid of the sitz-baths; 5. The successful results, with a few typical cases.

On the Mineral Waters and Climate of Spa. By LITTON FORBES, M.D. (Spa). The author said that the chalybeate springs of Spa had enjoyed a deservedly high reputation since the middle of the sixteenth century, when the Gernstein spring cured one of the feudal lords of the Ardennes. Their efficacy was mainly, if not entirely, due to the large quantity of iron held in solution, which was three times as much as in the springs of Schwalbach, and six times as much as the Paracelsus spring of St. Moritz; while the quantity of free carbonic acid present was almost identical in all three. The presence of so much iron frequently caused indigestion; and hence, as a rule, it was advisable to begin a course of treatment by some of the lighter springs. The chief indications for the use of the Spa waters were: anæmia in all its forms; nervous affections, accompanied with neuralgia and general want of tone; tuberculous affections and struma, where not otherwise contra-indicated; atonic gout; lesions of the secondary and tertiary stages of syphilis; certain vitiated states of the blood dependent on climatic or other causes; and generally all forms of uterine disease of an exhausting type. The use of the waters was, on the other hand, contra-indicated, as a general rule, in plethoric subjects, and in those cases in which there was a tendency to congestion, either of the brain or of the lungs. In phthisis, when much hæmoptysis was present, Dr. Forbes also thought that, as a rule, they were unsuitable. In cases of organic disease of either side of the heart, in inflammatory congestion of the liver, and in women during the period of the menopause, when indistinct signs of anæmia were present, their use required considerable caution. He had also met with a class of cases, occurring chiefly in girls or very young married women, and characterised by intense nervous irritability, in which the waters could not be assimilated during the earlier days of the patients' stay. Such cases, if clearly recognised from the first, were best treated by tepid mineral baths at a temperature of about 90° Fahr., all drinking of the waters being dispensed with. Under this treatment, combined with careful attention to diet and exercise, such cases generally improved rapidly, and were able, after a longer or shorter interval, to take the waters with great and permanent benefit. The climate of Spa was essentially a mountainous one, the springs being situated at a height of from 1,500 to 1,700 feet above the sea. The air was dry and singularly bracing, and, during the hottest days of summer, there was always a pleasant breeze. The season lasted from May until October, during which period the weather was such that the most delicate could be abroad from early morning till evening. In the spring and autumn, the early mornings and evenings were chilly, and a great-coat should be worn after sunset. The remarkably healthy condition of Spa was shown by the fact that typhoid fever and infectious diseases generally were almost unknown, while the great cholera epidemics of 1832, 1849, and 1866 passed by it without causing a single death.

Stertorous Breathing, in Apoplexy, and the Management of the

Apoplectic State. By R. L. BOWLES, M.D. (Folkestone).—After pointing out that stertor had been considered only as a symptom of the apoplectic state, Dr. Bowles proceeded to demonstrate that it really was as much a condition of slow suffocation in the pharynx, as croup was in the larynx, and that its results were equally disastrous; but happily the pharyngeal form of suffocation, or stertor, could be readily removed without any operation, by merely arranging the position of the patient so as to do away with the gravitation of the tongue, or mucus, or fluid into the back of the pharynx. It was then pointed out how the removal of this condition of suffocation in a case of apoplexy changed its aspect and affected its treatment, pathology, and final result; and typical cases were related illustrating these assertions as well as many important practical points in the management of a severe case of apoplexy. Various kinds of stertor were defined and explained by Dr. Bowles, and for convenience named as follows: nasal, buccal, palatine, pharyngeal, laryngeal, and mucous; all of these caused more or less obstruction to respiration, which obstruction could and must in every case be removed. The paper concluded by specifying many diseases as well as apoplexy, in which these principles had been applied, and showing that in many of them recovery had ensued, which otherwise appeared impossible.

Syphilitic Insanity. By C. R. DRYSDALE, M.D. (London).—Dr. Drysdale contended that syphilis was a cause occasionally, although very rarely, of mania, melancholia, and dementia; but not, as far as he could judge, of the well-marked form of paralysis of the insane. Some writers on syphilis, among others, Dr. Lewin of Berlin, seemed to allege that syphilis never caused insanity, while some German authors gave syphilis too large a part in the causation of mental disease. With regard to the idea that it never gave rise to insanity, the same allegation had been made by eminent writers, not thirty years ago, concerning cerebral syphilis. Disease of the brain and spinal cord was now universally admitted to be sometimes due to the virus, and therefore there seemed no great difficulty in believing that one of the functions of the brain, intelligence, should be sometimes perverted by syphilitic disease of the organ. In the great majority, indeed, of cases where syphilis attacked the brain, it also injured the intellect more or less. Sometimes loss of intelligence was one of the first symptoms. There were three divisions into which the syphilitic intellectual lesions fell, depression, mania, and dementia. Many persons doubtless would admit that cerebral syphilis caused depression of spirits going on to dementia. Dr. Drysdale said he had seen several well-marked cases of that form. One gentleman contracted syphilis in 1869, then had iritis, eruptions, ataxia, epilepsy, and finally became demented, and died in an epileptic fit. In another case, a man, who had been temperate, contracted syphilis, had ptosis, then fell into melancholia, and died in a lunatic asylum. Suicidal cases were sometimes clearly syphilitic in causation. In the delirium caused by the brain-affection, they would throw themselves out of a window, etc. Acute mania occasionally occurred in the eruptive stage of syphilis. Dr. Drysdale narrated a case, where the patient had roseola, and became so violent that he was taken into a lunatic asylum and fed with a stomach-pump. Specific treatment soon made him recover. In another case, there were diplopia and ptosis; the patient became furious; iodide of potassium in large doses cured him. The diagnosis of syphilitic insanity was often most obscure. If squinting, ptosis, or paralysis of the motores oculorum were present, of course it was not so difficult to pronounce; but not unfrequently no such symptoms were present. In such cases, it would be well to find out, if possible, the most intimate friends of the patient, and try to make out whether syphilis had existed. The possibility of a given case of mania or imbecility being syphilitic should be borne in mind, and treatment cautiously essayed. General paralysis of the insane had very marked characters. In the male sex it rarely occurred before the age of 35, and was almost confined to the middle classes, whilst, when it was occasionally met with in women, it only attacked poor women. Syphilis had no such selection of age or sex. On opening the cranium of a patient with cerebral syphilis, one never found that generalised meningitis seen invariably in general paralysis of the insane. Cerebral syphilis presented partial lesions. Again, in general paralysis, the brain-affection was confined to the meninges. In syphilis all parts were affected: brain, skull, and vessels. Lastly, when general paralysis existed, all treatment was out of the question. Syphilis was sometimes very amenable to specific treatment.

Case of Softening of the Pons Varolii, with Thermometric Observations. By H. F. A. GOODRIDGE, M.D. (Bath).—A man, aged 60, ten days before admission, was seized with giddiness (without loss of consciousness), and left hemiplegic paralysis. On admission, he was motionless in the left upper and lower limbs, with slight impairment of sensation in the latter. He had ptosis of the right eye with mydriasis (these ocular symptoms were of two years' standing), but without divergent squints. There was slight left facial paralysis. In the course of sixteen days, he improved so much as to be able to move about with a stick. He was now seized again with giddiness without loss of consciousness, and became hemiplegic in the right side, with partial right facial paralysis and right external strabismus. He had anæsthesia of the right side of the face, and impairment of sensation of the right foot and leg, with dysphagia, difficulty of articulation, and great emotionality. His condition grew worse. After thirty-seven hours of this attack, the temperature, previously about-normal, rose to 130°, with accleration of the pulse and breathing (the latter became stertorous). The temperature was almost hourly observed after this until death, at seventy-seven hours from the onset of the attack. Gradually increasing, it reached ultimately 106.8°, but there was very profuse perspiration during a portion of this period. Consciousness was retained nearly to the last. The symptoms of paralysis of the eighth and ninth nerves became more and more pronounced. Glycosuria was present. At the necropsy, there were found marked atheroma of the basilar artery, great disparity in the size of the vertebrals, extensive necrotic softening of the left half of the pons Varolii, no adventitious products. The brain was elsewhere pretty healthy.

The Incubation Period of Typhoid Fever. By A. COLLIE, M.D. (Homerton).—Dr. Collie related cases of enteric fever, pointing to the conclusion that the incubation period of that disease might be six to eight weeks.

On a Case of Gouty Aphasia, Hemiplegia, and Convulsions, ending in Recovery. By J. MOORHEAD, M.A., M.D. (Weymouth).—This was a case primarily of aphasia *pur et simple*, suddenly occurring without any premonitory symptoms. The seizure took place on April 7th, 1879. The subject of it was a gentleman, aged 37, who had previously had several attacks of gout in the lower extremities. He recovered the power of speech, after suitable treatment, at the end of forty-eight hours. On July 14th, the aphasia recurred, but again passed off rapidly. On September 27th, another similar attack took place, accompanied with inability to raise the right arm. The power of bending the arm and fingers was intact. This seizure also lasted only two or three days. On December 16th, aphasia and paralysis of the right deltoid suddenly returned, but speedily yielded to treatment. Lastly, on March 16th, 1880, the patient, without the slightest warning, suddenly became aphasic and paralysed in the entire right side. Sensation was intact. On March 18th, the right arm and leg were affected with tonic convulsions, without loss of consciousness. On March 20th, the patient had two seizures of bilateral convulsions, during which consciousness was lost. On March 21st, the aphasia and hemiplegia had entirely disappeared, and neither they nor the convulsions had since returned, the patient having made a satisfactory recovery. In the intervals of all the seizures, the patient was in fair health. The argument of the paper was, that all these seizures were due to a localised development of gout in the brain. In the first two attacks, when there was aphasia only, the gouty thrombus would seem to have been confined to Broca's region; in the next two, when there was also paralysis of the right shoulder, it probably involved both that region and the portion of the cortical motor area immediately adjoining. But in the last seizure of complete hemiplegia, the trunk of the left middle cerebral artery or all its branches were apparently suddenly blocked by the development of gouty thrombus. The ordinary causes of aphasia and hemiplegia were discussed, and set aside as inexplicable or unable to reconcile all the clinical phenomena of the case. The convulsions were probably due to irritation of the cortical motor area of the left cerebral hemisphere, as pointed out by Dr. Hughlings Jackson; while the whole case appeared to receive elucidation from the able researches of Dr. Ferrier on cerebral localisation.

SECTION B.—SURGERY.

Wednesday, August 11th.

THE Chair was taken by the President of the Section, W. S. SAVORY, F.R.C.S., F.R.S., Surgeon to St. Bartholomew's Hospital, who delivered an address, which was published at page 259 of the JOURNAL for August 14th.

DISCUSSION ON THE TREATMENT OF WOUNDS.

Note on the Application of the Antiseptic Method of Dressing to Cranio-Cerebral Surgery. By GERALD F. YEO, M.D. (London).—The object of the note was to give the results of experiments on the applicability of the antiseptic method of dressing to the brain and meninges, which were undertaken under the auspices of the Scientific Grants Committee of the Association. In the experiments, Dr. Yeo had had the great advantage of the advice and assistance of Dr. Ferrier.

The experiments were performed on monkeys. Before the operation, the scalp was purified with a strong (1 in 5) solution of absolute phenol in oil or glycerine. The spray was used in all but four cases. The edges of the wound were accurately brought together with sutures; horsehair being found the best. The discharge was so slight that drainage was unnecessary, and in the later cases it was omitted. Several layers of loose gauze, damped in a solution of carbolic acid (1 in 40), were placed over the wound, and were held in position by about twenty turns of a narrow gauze roller, and the whole enclosed in three or four caps of gauze painted with collodion. The trephine was used for opening the skull, and a small bone-forceps was applied to shape the aperture to the required size. Of twenty-six animals operated on, only seven died; but in three of these, the death might be attributed to the intense cold of last winter—one of these three survived the operation thirteen days without inflammation. One death might be assigned to chloroform. Of the remaining three deaths, one was caused by hæmorrhage six days after the operation, there being no trace of inflammation; one by the shock of the operation; and one only by inflammation. Of the twenty-one animals which survived, twenty were treated successfully with antiseptic dressings, and one was treated with modified antiseptics. Among the cases treated antiseptically, there was not one case of inflammation; and where this method could not be used, there was intense encephalitis.

Ten Years' Surgery in the Kilmarnock Infirmary. By JOHN C. MCVAIL, M.D. (Kilmarnock).—The paper contained statistics of surgical practice in the above institution for the past ten years and eight months. The hospital is situated in the central town of a mining and manufacturing district, and from such trades the patients are chiefly drawn. The town is less healthy than Edinburgh or Glasgow. The hospital contains one hundred and twenty beds. Dr. McVail said that the smaller an infirmary, the less liable was it to hospital disease; but Mr. Lister contended that a large infirmary with antiseptic treatment was less liable than a small one without such treatment. The treatment practised in Kilmarnock was dry dressing. In amputations, bleeding was very carefully quenched, and no liquids applied to the raw surface. Lint spread with lard was the usual dressing. In compound fractures, "blood-dressing" was the favourite method. Where there was little or no discharge, dressing was very unfrequent. Where the discharge was considerable, dry dressing meant frequent dressing; as, to keep the wound dry, discharges had to be frequently removed. In all, 1,488 patients were admitted, of whom 19 died under forty-eight hours in the wards, and 33 over forty-eight hours—a total death-rate of 3.5 per cent. Dr. Cameron's death-rate in the Glasgow Royal Infirmary, with antiseptic treatment, was 5.1 per cent. The omission of the deaths under forty-eight hours reduced Dr. Borland's death-rate to 2.3, and Dr. Cameron's to 2.9. But in the past four years and nine months—a period similar to Dr. Cameron's—Dr. Borland's rate was only 1.08; and, in the past two years and five weeks, no deaths had occurred in 426 cases, including 90 operations, 45 injuries, 52 abscesses, and 7 compound fractures. Of the 1,429 cases, 529, with 8 deaths, had no surface-lesion; and 900, with 25 deaths, had surface-lesion. These 900 were divided into eleven classes: 1, major compound fractures; 2, injuries; 3, primary major amputations (double); 4, primary major amputations (single); 5, secondary major amputations; 6, other operations; 7, burns; 8, abscesses; 9, ulcers; 10, diseases of bones and joints; 11, other cases. Mr. Lister's statistics in Edinburgh were compared with those in classes 1, 2, 4, 5, and 6, and were stated to be inferior in every class. In the other classes, Mr. Lister's statistics had not been published. Dr. Borland had no deaths from compound fracture in the ten years. In abscesses, the successes of Listerism were obtained in a manner which hardly agreed with the germ-theory. In ulcers, Dr. Borland had no deaths: a common result under any treatment, though not in accordance with the germ-theory. In hospital diseases, Dr. Borland had 3 deaths in 900 liable cases, or .3 per cent. of the operations. The mortality from blood-poisoning under Dr. Borland and Mr. Lister was very similar. In 845 operations by Mr. Lister, antiseptic treatment was not adopted in 292 cases, which seemed to show that it was very often inapplicable: a grave fault in any system of wound-dressing. Of Dr. Borland's 25 deaths, 7 occurred within four days, and other 6 within eight days of admission; 4 chronic cases were sent in only for proper attention on their deathbed; 3 died from hospital diseases; and 1 each from tetanus, hemiplegia, periostitis, severe general injuries, intercurrent disease, and erysipelas which arose previously to admission. Dr. Borland's position as to antiseptics was, that he had never needed them. Until better results had been shown to follow other methods, he was justified in continuing a practice which was the matured result of fifty years' experience.

Professor LISTER (London) wished to say, with reference to Dr. McVail's interesting paper, that no doubt the results which he had mentioned were exceedingly grand and excellent; and if such could be got everywhere, there would be scarcely any need for antiseptic surgery. He was afraid, however, that such would not be found to be the case. Dr. McVail had referred to a certain statement which he (Mr. Lister) had made with regard to abscesses, as something apparently incredible, because inconsistent with possibility. That showed that Dr. McVail, at any rate, had had no such cases. His statement was that, in cases of abscess from vertebral caries, from the moment the abscess had been evacuated no more pus formed, but a mere serous discharge. Now, Dr. McVail did not believe that statement, and why? On this theoretical reason, that the skin was the best of all possible excluders of organisms. But surely nobody ever said—at least he (Mr. Lister) had never stated or thought—that atmospheric organisms were the only cause of suppuration. Suppose an abscess occurred as the result of a deep-seated inflammation, that inflammation might be entirely caused independent of any atmospheric or external influences. The abscess having been once formed, the expanding pus produced tension upon the surrounding textures, and that tension maintained inflammatory disturbance in proportion to its degree; and so long as the abscess remained unopened, it had a tension leading to inflammatory disturbance and suppuration. And if there were one point that the antiseptic operation had somewhat remarkably put out it was, that tension pure and simple was a very grave cause of inflammatory disturbance. If they let out pus, they got rid of tension; but if they got rid of tension, they let in putrefaction, that was to say, another cause of chemical irritation of putrid products. But if tension were removed by the drainage-tube, and at the same time the organisms were excluded which he thought were pretty well proved to be the cause of septic disorders, there was no more suppuration. There was, he thought, great truth in a remark made at Cork, that every good surgeon was, whether consciously or unconsciously, an antiseptic surgeon. In this respect, the improvements of surgery had been improvements in antiseptics. Scrupulous cleanliness, frequent changes of water-dressings or poultices, as distinguished from leaving water-dressings on for a long time together, were antiseptic means—that was to say, means tending to guard against the evil effects of septicæmia. Drainage, so as to prevent accumulations in the wound, dependent openings, the opening treatment of wounds, all operated as antiseptic agencies. Free ventilation, so as to ensure as pure air as possible, was also an antiseptic measure. Even judicious selection of cases for operation might be said to be antiseptic, because, if they operated upon persons of unsound constitution, the most probable cause of death was, in his opinion, simply septic agency—the patient's system being less able to get rid of the septic materials or poisonous agencies introduced as the result of wounds. And therefore he said that a judicious selection of cases, and determining to operate only (if they had the choice) upon patients whose alimentary organs were in a sound state, was antiseptic, because it tended to guard patients from the septic injuries from which they would otherwise probably die. But, although it was quite true that surgeons had thus been unconsciously antiseptic surgeons, and, he need hardly say, the antiseptic lotions used externally were antiseptic, yet it was only of late years that surgeons had aimed at being aseptic instead of antiseptic, to the total exclusion of septic agencies, which differed *toto cælo* from antiseptic treatment. He would take the case of a subcutaneous wound. Bone had been broken, and muscles torn, and blood diffused into the part, and yet, bad as this wound was as a wound, the protecting skin made all the difference, as Dr. McVail truly said. And, as the result of this, the surgeon as a rule felt little apprehension, and the injury could be reckoned upon, almost with certainty, to follow a course free from inflammation and local disturbance. That surely led them to see that, provided they could obtain that treatment of wounds which would lead them to that which the skin did, theoretically, at any rate, they would obtain results of a totally superior kind to those of other surgery. It seemed to him, in answer to the objection that, because there should be a septic abscess, or subcutaneous injury with septic bacteria in it, therefore there could be no truth in the antiseptic treatment, that the truth was rather that it was marvellous that the system should have such a power as it had to exclude or get rid of a septic agency at all quarters, as by the orifice of every sudoriferous gland-duct and of the other gland-ducts of the skin, by the mucous ducts and the gland-ducts at the entrance of the intestinal canal and respiratory passages, not to mention the larger gland-ducts, where the bacteria were present in teeming multitudes. And it was only necessary that one bacterium should be present in order that, as soon as life left the inflamed or injured part, it should develop itself, and produce a septic abscess. He did not propose to enter into the consideration of the various means by which antiseptic treatment might be carried out, and it would be superfluous so to do. He proposed to call attention to an experiment which he had lately performed, and which might

throw some light on the great essential principles of antiseptic treatment, and serve to explain the results which Dr. McVail had reported. On the 4th of the present month he had, following experiments already described in the *Pathological Transactions*, and which were performed antiseptically, taken a quantity of blood from an ox. The jugular vein of the ox, immediately after being felled, was divided, and the divided vein was drawn over the mouth of a heat-purified flask, which was thus charged with the blood. Then a number of stoppered bottles, which had also been purified at a temperature over 300°, continued for some hours, were charged from the flask, and covered over with cotton caps, which had been themselves purified in the same way. Six of these bottles had received blood, and nothing else. He had not since opened one which he now produced, and opened. It was then, he said, seven days since the blood was drawn, and the bottles, so soon as charged, had been introduced into a portable box kept at 100°; and, when he had come home from the slaughter-house, he had transferred them into another box, kept at a constant temperature of 99½°. They would find that there was in that bottle the smell of the cow-house, which, curiously, was given off by a bullock's blood when perfectly fresh and kept for a little while under a glass shade. He had opened four of those six bottles before with the same result, showing that, when the blood was taken in a state of purity and preserved from contamination, provided the animal be healthy, at all events it had not a power of putrefying *per se*. There was plenty of air in these bottles, but it had been shown that the less the air in bottles the more rapid the putrefaction took place when it did occur. Then, after three days, as he happened to have at hand an exceedingly putrid specimen of lipoma, which he had got from an old gentleman's nose, and which had been accidentally left lying in a piece of mackintosh, he opened one of the bottles—his fingers being moistened with carbolic lotion, and touched the serum with the offensive matter by means of a silver wire heated in the flame of the spirit lamp; and the bottle was then closed again. The next day there was the appearance of great alteration, and in two days he removed the stopper. He would not do that there, as it would be exceedingly offensive to do so. Suffice it to say, it was in the highest degree offensive, and he found, on examination with the microscope, that it contained a variety of bacteria. This illustrated another important point—namely, that putrefaction was a fermentation. The introduction of that exceedingly minute particle of an already putrefying liquid had the same effect as the introduction of a few cells of the yeast-plant into a saccharine solution in inducing the alcoholic fermentation, and the introduction into a glass of pure milk of a rod dipped in sour milk in inducing the lactic fermentation. So in the same way had a putrid fermentation been here induced. But now he wished to direct attention to a more important part of the experiment, because this was, after all, nothing new. Into two bottles, he introduced one minim of tap water, taking special care that nothing else was done to contaminate it; into two others, two minims; into two others, 4 minims; into two others, 8; into two others, 16; and into two others, 32 minims. But into one set of these bottles the water was introduced before the blood, so that as the blood passed into the bottles it mingled with the water before the blood coagulated. In the other set, he introduced the water after the blood had coagulated. With regard to the set of bottles where the water was introduced after coagulation, in the course of two days the bottle S, which had received 32 minims, or an eighth part of the whole mass of the water, showed a crimson colour in the serum. He might mention that in those bottles in which the blood had undergone no change, the serum was quite clear and yellow, and in the others it was dark, crimson, brown, or otherwise altered in colour. Proceeding to examine a drop of the liquid under the microscope, he found that the liquid was full of minute exquisitely delicate bacteria, somewhat long; but there was no smell in the blood except the cow-house odour. In the course of two days more, he examined all of those bottles which were unchanged in aspect, and he could find no organism in the liquid. In another bottle, there was a pale crimson colour of the serum. The smell was not a putrid smell at all, but like that of roast-beef, altogether altered from the cow-house odour of the original blood. And here again, he found bacteria, apparently of a different sort. In bottle I, although it had had 4 minims of water added to it, there was no alteration of the appearance or odour, and he could discover no organism. In bottle F, which had received no less than 8 minims of water, there was a pale brownish tint of the serum, nothing abnormal in the odour, and what he could discover in the way of an organism was not a bacterium, but an exquisitely branching and delicate fibrilla. Then, as regarded bottle S, the serum was somewhat brown, the odour was exactly like that of bruised hemlock, and there were exceedingly delicate bacilli with brilliant granules. And in that which had received 32 minims there was no alteration of odour. Now, it was surely very remarkable—it was quite unexpected to himself—that there should be, as the result of adding 4 minims of water to blood-serum, no development of organisms or perceptible change of odour, or smell, or aspect. He had made experiments with pure milk, and found that, with the average tap water, the difficulty was to get a hundredth of a minim that had not an organism in it; and if they put a minim of water at this period of the year in uncontaminated urine, they would find bacteria in it, and even in pure Pasteur's fluid they could hardly subdivide water so much as not to get them. And that showed that blood-serum was not at all particularly disposed to septic alteration, and was not by any means a favourable field for the growth of these minute organisms. To have had a bottle with one minim and no change, was strange enough; but to have a bottle with 4 minims with no organic putrefaction, he confessed, surprised him exceedingly, and the possibility tended to explain such results as those that Dr. McVail had described, particularly in a more healthy locality, more healthy country hospital, and a more healthy country practice generally. In these experiments, there was, in the first place, the remarkable fact that in those bottles in which organisms did develop, there was no putrefaction. No doubt, that was nothing new. It was now well established that there might be organisms devoloped in organic liquids without producing smell. He had himself some time ago, in noticing pus in abscesses free from odour, inferred by analogy that there must be organisms which developed in organic or liquids without producing putrefaction and odour, but not yet without producing mischief. But here there were alterations in the blood-serum, and chemical changes as shown by the altered colour of the serum, and yet no putrefaction. It did not at all follow, however, that the results of these organisms might not be really deadly, because it had been shown not only that organisms might develop without producing putrefaction, but that some of these that did so were exceedingly deadly, and, on the contrary, that putrefaction destroyed them. And here there might be some exceedingly deadly form of poison, and for his part he should be exceedingly sorry to prick his finger with the contents of any one of his bottles. And this led him to think that if they were still to use the words septicity and antiseptics, they must enlarge the scope of these words, and that the word septic change was not necessarily one which produced a putrefactive stink; and so antiseptic treatment must include all treatment tending to guard against all these organisms, whether or not they tended to produce a putrefactive odour. And now, with regard to the other set of bottles, here was what he thought was a remarkable truth. Two bottles marked *q* and *r*, both contained organisms, though neither of them had any putrefactive odour; and in ten of them which he showed, he could discover no alteration in external appearance, and no organisms whatever. If they compared the results of the bottles which had the water mixed with the blood before coagulation with the results of introducing water after coagulation, they could not but be struck with the very great difference. It was with the hope of bringing out this difference that he made the experiment. They had seen that, when the water was mingled with the blood before coagulation, it prevented the organisms in the water from developing. That served to illustrate what he believed to be very important truths with regard to practical surgery. It showed that organisms introduced into and mingling with the blood that coagulated in the patient were much less likely to do mischief than if introduced in the form of septic dressing acting from the outside; and that an undisturbed blood-clot had the power of protecting itself against the development of organisms. He had long seen accounts of operations, the good results of which could not be otherwise explained. He could not but think these facts of fundamental importance. In the second series of bottles, the septic material was introduced into the blood-serum after coagulation, and the result had been that it had penetrated through the blood-clot, and they thus saw the enormous difference between the septic material acting through the clot through a septic dressing, and the septic material added to the blood before its coagulation. Facts of that kind served to explain the sort of results that Dr. McVail had brought forward. But he should remark that the dry dressing which Dr. McVail advocated was an antiseptic means, because it had been shown that bacteria could not develop in a concentrated solution of albumen; and so a dry dressing, when it answered its purposes, was a kind of antiseptic dressing. As soon as the blood was sufficiently dry in it, it was no longer a water-dressing or a poultice or anything but a dressing which did not contain developing bacteria in it; and then, with the clot beneath, they could understand how, from this sort of facts, all might go well. The question came to be, was the dry dressing the best mode of attaining the object, or might it not be got more securely by chemically antiseptic means? He believed it would be found that the latter was the truth; and, then if that were so, these facts tended to explain the advantage of an external antiseptic dressing as practised by the late Mr. Callender, who did not use the spray. And he himself did

the same before he introduced the spray, and he must confess those cases all did uncommonly well, when the limb was kept perfectly at rest. And, therefore, that led him to urge on his professional brethren, whatever they might do, at all events to use an external antiseptic dressing of some kind or other. Whether they might feel themselves justified in confining themselves to the use of the dry dressing of Dr. McVail, or whether they might think it more effectual to use some form of chemical antiseptic dressing, be it spirit and lead lotion, iodine, or any one of the great variety of things that were now known as antiseptics, an antiseptic dressing of some kind should be used rather than a septic dressing. If it were truth that this power depended upon vitality of the clot, which he suspected it did, it should not be crunched up and broken into fragments by movements, but the parts should be kept at rest. What first led him to think of this matter long ago was that he noticed the undisturbed clot behaved itself, with reference to the question of coagulation, like a piece of healthy tissue, whereas a disturbed or torn clot induced coagulation in its neighbourhood. The undisturbed clot in a vein made in venesection did not extend itself. If it did, the whole arterial venous system would soon be blocked up. And if it were true, that this remarkable effect of a blood-clot upon the organisms imprisoned in it depended upon the vital power of the clot, so to speak, they should avoid injury to the clot as much as they could, or, in other words, keep the wound as much at rest as was possible. But then, after all, he could not help believing himself that a still better thing was, not merely to put the part, including the blood-clot, in the best possible position for resisting the organisms when they got in, but to try to keep them altogether out. That was his own opinion as the result of experience, because he had found that, the more carefully he tried to keep out these septic matters, the more successful did his practice become. With regard to the spray, he wished with all his heart they could get rid of it. If it were not for it, his antiseptic treatment would be as simple as that of which Dr. McVail spoke. But there was evidence that the spray was effectual —the evidence, for instance, of empyema in a child, where they could not avoid the respiratory movements, and at every time of changing the dressing a large quantity of air went in; and they could hardly suppose that if the air went in, not in the form of spray, something else would not enter in. And then there were the experiments of Mr. Chiene, who found that, if he poured some of the ordinary air of a hospital from the larger of a number of vessels into the smaller, he could not do it without having organisms developed, but that if he did it under the spray he had none. All this seemed very like evidence of the usefulness of the spray; and, so long as that was so, his conscience did not allow him to omit it. And another thing he must mention. He had a case of ordinary loose cartilage of the knee in a man aged 30. He removed it under the spray, and the next day he found that the patient was suffering from great pain in the knee, and his temperature was elevated, and he had already had one rigor. In the course of a couple more days, there was suppuration of the knee-joint. Such a state of things he had never met before under the antiseptic treatment of any joint. A kind of abscess also occurred in the cellular tissue in the vicinity. There was no smell about the pus, and there did not seem to be a particularly injurious organism in it; and the man had been saved. But the abscesses were not yet got rid of, although he had left the man almost convalescent from them. He found that the pus contained, not the ordinary septic bacteria, but very little organisms, looking very like the *Bacteria lactis* that caused the curdling of milk; but they would grow neither in milk nor in cucumber infusion. The question was, Was this some other rare organism peculiarly capable of resisting antiseptic means, or had it entered through some flaw in their proceedings? And so they had set to work to think what flaw they could discover. It occurred to Mr. Chiene that, when they lifted out the drainage-tube, they did not do so in the line of the spray; and, as there was a considerable volume of air which had not yet time to be acted upon by the antiseptic fluid, it might be that that was the cause of the mischief in this instance. He could not deny that that had been a matter he had overlooked. Mischief from this cause might be much more frequent than it had been, were it not that the holes in the drainage-tube permitted the spray to get inside, and that the fluid matter at one end acted as a sort of piston in pushing out part of the enclosed air. He confessed that, since he had used the drainage-tube, he had not got the same results that he had got with the old practice; and he suspected it was due to the use of the drainage-tube in an imperfect way, and it might be, for, since he had used it in a more careful way, he had certainly got more perfect results. He commended it, at all events, to consideration.

Dr. BASTIAN (London) said that he had made some experiments during the past fortnight, bearing upon the conditions on which the germ-theory was based. Antiseptic treatment was a broad term, which might mean the mere stopping of putrefaction in the wound itself, and that might be brought about perfectly well by the chemical agencies, such as the carbolic acid lotion, introduced in the dressings, checking fermentative processes. But then Professor Lister did not rest content with that, but went farther, and based his antiseptic treatment upon the germ-theory, and he had just brought forward facts which had a bearing upon that theory. There was one thing as to which it appeared to him they should come to an absolute opinion with regard to this theory; and that was the question whether there were or were not, in the healthy fluids of the human body, germs of any kind, or organisms, pre-existing. The theory of Professor Lister said, No. Now, he should like Mr. Lister to give him an opportunity of examining a portion of an organ removed from an animal by him under strict antiseptic precautions; and, if he found no organisms in it, that would go a great way to convince him of the truth of the theory. Of course, some would say that such an experiment, if organisms should be found, proved that the organisms were in the tissues before, and others, that such organisms might originate independently; but he thought the experiment should be tried. As to the antiseptic treatment itself, he thought there might be something to be said for it; but he firmly disbelieved the germ-theory on which it was founded.

Mr. DARBY (Bray) entirely disbelieved the germ-theory. The bacteria could not live in healthy blood, and the experiments were all made on dead matter. He had charge for many years of a hospital with four hundred beds, and he never saw a case of septicæmia. He did not think there was such a thing as septicæmia. As he understood it, it meant putrid blood, which, he said, did not circulate in the living body; and, therefore, there was no such thing, properly speaking, as antiseptic treatment, seeing there was no such thing as septicæmia.

Mr. ERICHSEN (London) thought the discussion was going out of what he conceived to be its legitimate channel. The discussion was as to the antiseptic treatment of wounds, and it had drifted away into the general and hazy atmosphere of the germ-theory. He had heard with great interest the paper of Dr. McVail, which was one of those practical papers that went directly to the heart and the sympathies of the practical surgeon. He was especially interested in it, because the treatment advocated was that to which he had been accustomed in the early part of his professional life, and from which he had seen the very best results, and which had been adopted by the late Mr. Liston; and he knew of no treatment that was preferable to it, where one was removed from the great centres where all medical and surgical appliances could be procured. There was another point that interested him in that paper; and that was, that union by the first intention was not exactly a modern invention. He had spoken to men who had been educated during the last ten or eleven years, and who seemed to be utterly amazed to find that it was common in other days. And really all they knew on this subject came from the work of John Hunter, except so far as modern science had applied different terms to very much the same phenomena. But when the anæsthetics came into use, the surgeons, from a feeling of humanity, erred in another direction, and gave up the wholesome practice of leaving the wound open until it was glazed; and wounds came to be put up in the operating theatre, and often overtightly, with the consequence that serous ichor accumulated in the wound and did not escape sufficiently freely; and the worst possible results undoubtedly ensued from that practice. Unquestionably, they owed very much to Mr. Lister for the introduction of antiseptic surgery, although he confessed he was somewhat staggered when he heard that under the word antiseptic were to be now included every possible hygienic and other precautions taken in the hospital, even to the exclusion of unfit cases for operation. Used in that sense, the word simply lost all significance. But, if it were to be taken in the sense in which he and others understood it, he knew that they owed much to Mr. Lister for his work, as did all surgeons throughout the world. Antiseptic treatment consisted principally in three principles. The first was the use of the spray, to prevent the intrusion of germs during the operation itself. Was that really necessary? Why, the long series of cases that Dr. McVail had brought forward showed it was not, and his own experience and that of every surgeon of equal standing with him showed it was not; and that union occurred with no discharges of pus; and that, to all intents and purposes, they got union by the first intention without it. Let them look to what occurred in operations for hare-lip, cleft-palate, and in section of the cornea for cataract, where the wound united perfectly, notwithstanding the presence of bacteria. The use of the spray, therefore, was not a matter of necessity; and, in many cases, he believed it was a matter of very great inconvenience, especially in dissecting operations. He could not, indeed, but smile to see the routine manner in which the details of the system were carried out in cases where the spray could not possibly be of any avail—as in colotomy, for

instance, after the colon had been reached and cut, and the wound covered with the feculent matter of the bowel. That, of course, was no argument against its use. The next great principle was the covering in of the wound, not for the exclusion of the air, but, he believed, for the filtration of the air; and he had seen the very best results for years past, in his own practice, from the employment of the dry dressing. But, were germs really likely to be productive in many cases of much evil? There were two operations in surgery, during which wounds were full of germs, he did think, of the very worst character—those, for instance, for fistula *in ano* and lithotomy—and which were performed without evil result, notwithstanding the constant presence of such germs. He could not, therefore, understand the great dread which some surgeons seemed to have of germs entering a wound; and he brought these matters forward rather with the view of inquiry and seeking explanation than to attempt, which he was perfectly incompetent to do, to give any. But there was one most essential point—whether antiseptic treatment was used or not—and that was thorough drainage of the wound. Here was a great evil that resulted after the introduction of anæsthetics. The introduction by Chassaignac, about twenty-five years ago, of the perforated India-rubber tube, constituted the greatest advance in the treatment of wounds and abscesses that had been made during the present century. With it, wounds would heal under almost any kind of treatment, provided there was a good deal of attention bestowed upon them. In the cases of Dr. McVail, ligatures acted as drains, just as those pieces of twisted horse-hair that were now put into wounds for that purpose. Notwithstanding the great services which the germ-theory and antiseptic treatment had rendered to science and humanity, there were yet two serious evils to be guarded against in connection with both. There was too great a tendency to make everything local and nothing constitutional, and to forget those constitutional tendencies and conditions which could not with safety be ignored in the treatment of wounds more than in any other conditions; and this had tended to retard the hygienic improvement of hospitals. The antiseptic method went rather to the effect than to the cause, rather to evils that were generated in badly constructed, ill-ventilated, and ill-managed hospitals; and the worse these were, the more satisfactory would the results of the antiseptic treatment be. But, truly, the better plan would be to improve the hospital, and not simply to save surgeons from the consequences of neglected hygienic measures.

Professor MACLEOD (Glasgow) said that he would venture to bring the discussion back to what he conceived to be its true course, viz., the general subject of the treatment of wounds. The consideration of the question almost resolved itself into a discussion on the Listerian method, though of course it included those closely allied measures, without which that method could not give those brilliant results which it was so well able to afford. In declaring himself an entire convert to the antiseptic system of treatment, he, like many others, reserved his opinion regarding the germ-theory. No one could bear more unreserved and hearty testimony than he could to the extraordinary results which could be secured by those who practised the system with care and intelligence. As one of those who practised in hospitals before antiseptics were efficiently used, he could regard with infinite satisfaction the position to which surgery, by means of them, had attained. In the modern treatment of wounds, he included far more than the use of this or that germicide (as they were often termed). The better arrest of bleeding during operations; the incalculable benefit of anæsthetics; the husbanding, before and after operation, of the patient's strength; the infinite care taken to secure divided blood-vessels, and that by improved methods; the attention to drainage, rest, and fixture; to position and abeyance of function; the better hygienic condition of hospitals; and the extraordinary improvement in all the appliances; and, above all, in nursing, had all their share in that remarkable success in the treatment of wounds with which all were familiar, and in which all so much rejoiced—all of these agencies must be given their due weight and place in the treatment of wounds. If any of them failed or were discarded, the result would be in some measure weakened or rendered hazardous. Antiseptics could not do everything, but that their use had wielded all these together, given them harmony and completeness, could not, he thought, be denied. He was far from believing that practitioners had, as a rule, grasped the practice which had in so large a measure been the outcome of the Listerian system; and he was prepared to admit that, even in high places, that punctilious attention to details which was requisite to success was not always maintained. It required more practice than a private *clientèle* usually afforded, to secure that constant alertness and accuracy which was requisite; and in hospital practice, unless the surgeon himself superintended the details of dressing, he would now and again fail to secure the entire good of the system. The treatment of wounds was, indeed, a very large subject. He would confine his remarks to a few points. First, as to the arrest of bleeding in wounds. After having fairly tried torsion and acupressure, he had ended in almost exclusively employing the ligature. With well prepared catgut or carbolised silk ligatures cut short, he had no fault to find. He well knew how difficult it was to get good catgut. When it failed to disappear, and ended by making its way out after much trouble, one was apt to condemn it altogether; but good catgut did not behave so. He doubted whether it caused more trouble than the twisted ends of arteries, though the latter were not always recognised as sources of annoyance. When one had buried numberless loops of catgut and silk in wounds, and had never seen anything more of them, the success of such appliances became evident to him. Secondly, as to drainage, which, in the treatment of wounds, stood in the very front line; he suspected, notwithstanding all that had been said on the subject, that sufficient attention was not paid. In planning an operation, or in dressing a recent wound, did surgeons always bear in mind the position the part was to retain during healing, and place the drains so that they would act most efficiently then, rather than as the patient was on the operation-table? Were the drains always free enough, dependent enough, short enough from origin to surface; and was scrupulous care taken not to press upon or close them by the dressings? All discharges should be made to run off at once by gravitation, and without any squeezing, probing, or handling of the wound, which was always most hurtful to the processes of repair. However true it was—and he believed it to be true—that blood-clot kept free from septic influences would become organised, yet he greatly preferred having none of it in a wound; and so he took care, in all recent wounds, to deluge them with antiseptic solution, so as to wash out, if possible, all such foreign agencies, to secure the rapid running off of all subsequent oozings, and to bring together and steadily retain, by most gentle pressure, fixture, and rest, the lips of the wound throughout their whole extent and depth. At present, he knew of no drains better than those Chassaignac's tubes. Catgut, horsehair, protective tissue, Neuber's decalcified bones, etc., were all very good under certain circumstances; but, for the general run of surgical work, he was perfectly content with the vulcanite tubes. They must, however, be fitted as to length and calibre to the wound. They should not penetrate too far, or press upon bone or nerve, and they should not project beyond the surface so as to be exposed to pressure from the dressings. Several short ones were better than one long one. They should be diminished in length and calibre, and, in fact, wholly withdrawn as soon as possible. They should never be allowed to cause irritation, or act as setons. If the wound were antiseptic from the beginning (as in operations), then in forty-eight hours they had generally done their work; but, if pus were formed within the wound, then they must be retained till they had given it all exit. Thirdly, as to sutures, he was (always with antiseptics) a strong advocate for their free use. He adhered to wire as a rule, certainly for most wounds. Of course, horsehair, catgut, silk, etc., had also their uses. The careful adjustment of the depth of the wound was not always, he thought, secured as it should be. No cavity for the rest of secretions should be left, and yet undue traction, or tension, or pressure, was most reprehensible. By posture, splints, and fixture, the strain on the sutures should be diminished, and any stitch removed which showed the least signs of causing irritation. Of the various buttons used to diffuse pressure, that employed in Glasgow, with a nipple-like projection attached to the shield through which the wire ran, and which could be compressed upon it, was, to his mind, the best. Fourthly, as to dressings, he could say little. He always employed the gauze dressings of Lister. A common cause of failure in their use, however, was, making them too small in extent. The requisite thickness was secured, but they did not sufficiently overlap all sides of the wound; they were not enough protected at their edges (especially on the dependent side) by loose gauze or marine lint, or salicylic wool or carbolic jute, all of which were admirably fitted, not only to filter the air and arrest its septic dust, but to support and secure the wound. Carelessness in this respect, and want of attention to fixing the dressings securely by bandage above and below, and especially at flexures and hollows, accounted for many failures. He strongly believed in the importance of the first dressing, and had long taken the utmost pains to apply it with the minutest precision. If the wound were then made completely antiseptic, the battle was as good as gained. Repair might then set in at once, and the formative changes which would secure it against assault would not be long in becoming established; but if, on the other hand, any putrefactive agency, however minute, were allowed to gain admission, then those tissues whose vital condition had been enfeebled by the traumatic violence would certainly suffer. Days, sometimes weeks, had passed, and the dressings had not been disturbed in his practice. The temperature (if the wound were a large one), the patient's sensations, the absence of staining and smell, and the continued tight fitting of the dressings, were the guides to readjustment. If there were

no raw surface, he did not apply protective tissue to recent wounds at all, but placed the wet gauze in direct contact with it. It was very rarely, with properly made carbolic gauze, that any erythema or eczema arose. It was coarse paraffin, rather than the carbolic acid, which occasioned it. If they appeared thin, the protective must be used. After the first dressing, he never syringed a wound, always supposing there was no pus escaping from its interior; and the formation of pus with antiseptic dressings was the rare exception. Forcing fluid into a dry wound only arrested and destroyed repair. Very careful fixing of the part, without undue constriction, was necessary, so as to keep the muscles at rest; the use of splints for this purpose, in great and little wounds (from thigh-stumps to wounds of the distal phalanx of a finger) was often most serviceable. The lips of the wound should, while supported, be kept entirely free of what might be called pressure, especially vertically. He enclosed stumps in a cavity of gauze, and used no pressure, properly so-called, till the time came for moulding them into shape. Too firm bandaging often did infinite harm in recent wounds. In granulating wounds, all had, he thought, found the injurious effects of carbolic acid. Fortunately, when wounds had reached that stage, there was less need of antiseptics. He had taken it for granted that most men had, like himself, found, on the whole and for general purposes, carbolic acid the best antiseptic. Of the poisonous effects ascribed to it, he had seen little or nothing; and the olive-coloured urine was now almost never meet with, and when it does appear, it rarely was attended with any harm. When bone was involved, or wounds septic when first dealt with, there was no agent like chloride of zinc; and it was well that it and carbolic acid worked well together. The use of irrigation, continuous baths, ice, etc., in the treatment of wounds, must also be passed over from want of time. In conclusion, he said that the advantages of the antiseptic treatment of wounds was triumphantly shown by the almost entire disappearance from hospitals of those terrible blood-poisons with which surgeons were, in Glasgow as elsewhere, familiar before this plan of management was introduced; by the absence of local complications and constitutional disturbance; by the securing the patient against pain, sleeplessness, and danger, and the surgeon against anxiety and endless trouble; that it had enlarged the domain of surgery, and diminished in a remarkable degree "the stripes with which humanity is stricken". He rejoiced that it had fallen to his former colleague and distinguished predecessor, Professor Lister, to have so largely contributed to this great result. Since the meeting had begun, he had obtained from Glasgow the statistics of the operations performed by him during the last six years in the Western Infirmary. These tables contained 729 important, and for the most part serious, operations; and if the numbers were rightly recorded—and of that he had every confidence, though he had not had time personally to verify them—they showed a mortality of 3.3 per cent., a result which, as the cases had been collected from the public records of a large hospital open to inspection, and include all the cases which had come under his care for operation, spoke volumes, he thought, for what could be done by antiseptic precautions in practical surgery.

Mr. LUND (Manchester) observed that it had been said that, as there were bacteria in the living body doing no harm, therefore why should one be frightened at them in diseased conditions? Now, there could be bacteria without putrefaction, but there could not be putrefaction without bacteria. The remarks which Mr. Lister had just made had immense value, and threw light on many difficult points. First of all, they just touched upon the question of the dry and wet treatment of wounds, and how far those bacteria were germinated more freely in one condition than in another. Now, it seemed to him that the dry treatment of wounds would partially explain the result—the bacteria entering into the wound before coagulation had taken place could not do so much harm as afterwards. It would seem that the bacteria were fixed in some way in the clot, and could not provoke an amount of putrefaction that was of serious consequence. It was very well known that those wounds treated antiseptically, in which there was a large secretion of an ichorous discharge, went on most favourably. It had been said to be a very acrid fluid. It seemed to him merely this: that it was a fluid that very quickly underwent a septic change; and, therefore, that this serosity was likely to become affected and produce constitutional effects. He thought it was very desirable to keep in view this theory that, where putrid matter was laid upon a wound, as for experiment, or formed on the surface of a wound, it did not seem to be the drop of foreign matter in the wound that did harm, but that it set up a putrefactive change in the wound; and that, being absorbed from the surface into the system, it produced the pyæmic condition, or septicæmia. If that were the right idea, then attention ought to be directed to local treatment, and in that way the patient might be carried safely through without having constitutional effects.

Mr. JOHN WOOD (London) thought the power to resist putrefaction depended on what in the old language was called vital power of the blood. But all this bore upon the great and more practical question of statistics. For it seemed to him that the unfortunate class of persons who furnished the differences between the statistics was a class of persons who especially needed all the tenderness and care that surgery could afford them. There was no doubt that, under any surgery, a large proportion of healthy persons would recover. Now, it seemed to him that the only reasonable ground upon which they could place the extreme use of antiseptics, and the great justification Professor Lister had for his unintermitting pursuit of this subject, even to its minutest development, was this: that it saved a considerable percentage of weakly constitutions, upon whom it was necessary absolutely to operate, and who would die unless for its precautions. And another point from which he had been in the habit of considering it was this: that it extended the aim, and scope, and value to the community of surgical skill in cases on which would be too risky to operate without the extreme precautions which antiseptic surgery afforded. There were a great many operations which they were doing at the present time which would have been considered wild, and which were now by many considered unjustifiable, otherwise than with their improved means. It was their bounden duty to use every precaution that science afforded them, in order to extend the benefit of these operations to the community. It had been his lot to perform operations which he would not presume to do without these precautions, but which, with them, he undertook with confidence, and which were followed with no bad symptoms.

Professor LISTER, in reply, said of course he knew that union by the first intention was nothing new. With regard to Mr. Erichsen's observations on the operation for hare-lip, he thought that the explanation was to be found in the action of the living tissues. Suppose a layer of lymph between two plates of glass at the same temperature, putrefaction took place; while it did not between the healthy living tissues. Experiments, further, had shown that bacteria did not exist in normal urine, or in the urethra up to the very meatus, which seemed to show that the healthy urethral mucous membrane had the power of resisting the access of these organisms. It was the same with the healthy cut surfaces, with lymph between them. With regard to the blood-clot, he suspected that it was the white blood-corpuscles that had this power of resistance; but he was not certain of this. Also, he did not neglect the constitutional treatment; and, as to antiseptic treatment checking improvements in hospital hygiene, he should be very sorry to think that that was the case. One hygienic improvement they might have, and that was not to have the whole of the windows of the surgical wards open during the depth of the winter. He used to think it better that some of his patients should die of pneumonia and bronchitis, than that the whole of them should die from hospital disease. But, now that they had the means of preventing the latter, they should save the first. But some of the worthy sisterhood, of whom they had heard lately, were fully impressed with the old notions, and kept windows open to a degree that was positively hurtful to the patients. He believed he might add that he had now succeeded in getting a catgut which would answer the surgical requirements. He had with him a piece of catgut which had been eleven days among the human tissues, and was yet not organised.

Application of the Plaster-of-Paris Jacket in the Recumbent Posture.—Dr. T. J. WALKER (Peterborough) gave a demonstration of his method of applying the plaster-of-Paris bandage. The patient having been dressed in an ordinary knitted vest, a measurement was taken round the chest (to which five inches were added, to allow the ends to overlap). This measurement was marked across the table, and indicated the length of the many-tailed bandage required. A second measurement was taken from the apex of the axilla to about two inches below the crest of the ilium; and this was marked on the table at right angles to the former, and showed the length of the jacket. Lawn bandages, about three inches in width, were now charged with a mixture of plaster-of-Paris, water, and mucilage; the usual quantities required for a child being five pounds of plaster, forty ounces of water, and five ounces of mucilage. The last was added to retard the setting of the plaster, and must be of full *P. B.* strength. To charge the bandages, a simple machine was used, consisting of a tin vessel, fan-roller, and two spindles. The dry bandages were placed on one spindle, and, passing below the fanner, were rolled on to the second spindle; the revolution of the fanner, by the passage of the bandage beneath it, satisfactorily charging the latter. Dr. Walker said that this machine, although a great convenience, was not absolutely necessary; the bandages might be charged, as in Dr. Sayre's method, by dipping them into water containing mucilage in the proportion of one to eight. One end of the charged bandage was now taken by an assistant and rapidly unrolled by the surgeon across the table, and divided according to the

length of the first measurement. A second was unrolled, two-thirds overlapping the first; and this process was repeated until a many-tailed bandage of sufficient breadth had been laid out on the table, the breadth required being indicated by the measurement formerly mentioned. One layer of the many-tailed bandage was now complete, and the operation was continued similarly with the second and third layers, strips of paper being placed between, to prevent the ends from becoming confused during the application of the jacket. The patient was now laid on the bandages with the arms placed above the head, care being taken that he was perfectly straight. The ends of the strip of bandage last laid down were now crossed over the front of the chest and smoothed down. This was repeated until the whole of the layer had been applied. The strips of paper between the layers were next removed, and the second and third layers similarly treated; the whole was then smoothed over with any wet plaster which might remain over, and the patient was kept quiet until the jacket hardened. Dr. Walker said that it was generally necessary to snick and turn down the jacket under the arms, to allow full movement of the latter; and the lower edge might require similar treatment at the hip-joints. In about twenty minutes, the plaster became perfectly hard.

Thursday, August 12th.

On Lithotrity at a Single Sitting: with a Record of its Results in Forty-six Consecutive Cases. By Sir H. THOMPSON, F.R.C.S. (The calculi in these cases were exhibited.)—The paper consisted of a consideration of Bigelow's proposal, with reasons for believing it would issue in an advance for the operation of lithotrity. About eighteen months ago, Sir H. Thompson commenced employing it as the rule, and since that time he had operated in fifty-four cases of stone in the bladder of the male adult, mostly aged; on forty-six of these by the method of one sitting; on two others, by multiple sitting; and on six by lateral lithotomy. Among these fifty-four cases were three deaths, two in cases of lithotrity by one sitting, and one after lithotomy. The reasons were given for adopting multiple lithotrity and lithotomy in the eight cases; and the following practical deductions were appended to the paper, as the sum of the lessons to be learned by this contribution towards an attempt to estimate the value of the method in question. 1. In view of a general adoption of lithotrity at a single sitting, it becomes more than ever important to diagnose carefully before operating, the size—and if practicable, as it mostly is—the nature of the stone, so that the means employed to remove it may correspond thereto. For, when the stone is small, or of medium size, as it is in the majority of cases, it is not only unwise but dangerous to employ large and unwieldy instruments to remove it. Small instruments are much safer than large ones, and do less mischief in the bladder and urethra. The latter should never be used, unless the work to be done renders them necessary; and this can only happen in a few exceptional cases. 2. There is no doubt that a practised hand, thoroughly familiar with the details of lithotrity, is more necessary to the success of an operation which is to be completed at a single sitting, when the stone is not small, than to that of an operation which consists of several sittings. In other words, the removal of a large stone at a single sitting is a more difficult proceeding than that which disposes of it at several trials. 3. Speaking with caution, it appeared to him that at present we are not justified in attempting to remove all stones by crushing, and certainly not by any one system of crushing. The new method rendered lithotrity safer than before for the stones already assigned to that process, and extended it to some which were larger than before so operated on. But he still regarded lateral lithotomy (the high operation being sometimes perhaps advantageous) as an admirable procedure not only for hard stones, say of about two ounces in weight and upwards, as a rough general estimate, but also for smaller ones in some cases where the urethra was not large, or other circumstances seemed to indicate it. Further, he could not doubt that many men, whose experience was necessarily small, would cut for a hard stone, weighing an ounce, more safely than they would crush it at a single sitting. Great and irretrievable damage might be easily inflicted by large lithotrites and evacuators in unpractised hands. For two among the forty-eight cases of lithotrity recently operated on, multiple sittings were preferred for the reasons given; and he strongly advised the exercise of an independent judgment in every case, and not the pursuit of any routine method, without reference to the very varied circumstances which calculous disease largely presented.

Case in which a Stone in the Bladder had for its Nucleus a Portion of Necrosed Bone. By T. SYMPSON, F.R.C.S. (Lincoln).—An agricultural labourer, aged 19, of fair complexion and scrofulous temperament, was admitted into the Lincoln County Hospital on May 26th, 1879, under the care of Mr. Sympson, with symptoms of stone in the bladder; lateral lithotomy was performed on June 12th; the stone broke when grasped by the forceps, and a nucleus of bone was disclosed. On investigation, it appeared that five years before the patient had caught cold by sitting on some turnip-tops among the sheep, abscesses formed about the right hip and on the left leg, and sinuses were left through which portions of bone made their exit. The patient made a good recovery, but this was somewhat retarded by the occurrence of inflammation and suppuration of the right testicle. He was discharged from the hospital on August 15th. Cases in which a foreign body introduced into the bladder had formed the nucleus for a calculus were not of very uncommon occurrence, but this observation did not apply to instances of portions of bone thus acting, the only examples on record seeming to be two mentioned by Sir H. Thompson in the *Lancet* for 1872, vol. i., page 851, and republished in his *Lectures on Diseases of the Urinary Organs* (the case to which he referred was that from which the calculus H.a 11 of Section VIII, in the Museum of the Royal College of Surgeons was taken), three cases recorded in the *Surgical History of the Rebellion*, Washington, 1876; a case operated upon by Mr. Reginald Harrison in 1866; and one by Mr. Lund, that of a girl, in 1867.

Mr. CADGE (Norwich) observed that there was a contrast, rather than a comparison, between Mr. Sympson's rare case of lithotomy and Sir Henry Thompson's series of cases. Mr. Sympson's case seemed to him to be one of singular importance and interest. It showed what Nature showed in most abundant and wonderful examples—the power she possessed of extruding foreign bodies in some way to the surface of the body; and in the same way she had endeavoured to extrude stones otherwise than by the natural outlet of the urethra. He had known many examples of her attempts to get rid of such things—as, for instance, of renal stone by a lumbar abscess; and of vesical stone, so that it was picked out of the scrotum. The one important question before the Section—namely, that of lithotrity—had been introduced by Sir Henry Thompson in an admirable manner. He was struck by Sir Henry's remark as to an anomaly of this new treatment, and quite joined in his objection to another name being given to this operation. Sir Henry had substituted another name for that employed by Bigelow, to which, perhaps, it would not be difficult to take exception, because in many of his cases the stone was not removed at a single sitting. It had been proposed to substitute the term rapid lithotrity; but that also was objectionable, because, if anything were objectionable about this operation, it was rapid manipulation, which might be understood by the term. However, whatever the name were mattered but little, in comparison with the questions which had been put by Sir Henry Thompson. Was this an improvement on the old practice? and was it one that was likely to commend itself to English surgeons and surgery as a step in advance? and how far was the improvement likely to go? He had looked over the specimens which Sir Henry had placed before them; and the first fact that struck him was that, in the majority of the cases, the stones were small. He thought the average weight of them would turn out to be, even including the one of something over an ounce, very little more than two drachms; and therefore the majority of the stones were small—probably sixty grains, or something like that. Now, to deal with all those cases by the former practice would unquestionably have been very easy, and have landed almost all the patients in pretty complete recovery. So far as results went, therefore, he doubted very much whether they were better by the younger than by the older method; but the real point of interest into which he would venture to inquire was, whether by the operation of Bigelow they were likely to extend the boundary of years within which this operation to remove stone might be performed. It struck him that the tendency hitherto had been, on the part of most surgeons, to narrow the number of cases to which lithotrity was applicable, and to extend and enlarge that to which the old operation of lithotomy had been applied. He thought Sir Henry Thompson said that he performed slightly more of lithotrity and slightly less of lithotomy. The question was, whether the new operation would enable him to deal with stones of larger dimensions. He had put before them some cases that he had submitted to lithotomy; and he (Mr. Cadge) thought that probably the stones weighed from an ounce to an ounce and a half. Professor Bigelow would probably have tried to get those stones out by crushing; and the question was, whether that would have answered in the long run and in a large number of cases; and to that even now, with all his great and vast experience, Sir Henry could not probably give an answer. He thought Sir Henry said they had better not extend the new method much, and had better deal in the old way with stones of two or one and a half ounces, except in cases where the bladder was sound and the health good. He supposed they should be bound to continue in uncertainty on this matter, until case after case had occurred in which it had been really attempted. After all, so far as his operations went, the great difficulty of the whole business consisted in selecting which operation to perform. That had been the experience also of

Sir William Fergusson. He adopted entirely the view of Sir Henry Thompson; but he held himself fully in reserve to hold that that view might yet have to be reconsidered. He had seen cystitis following the crushing of a stone according to Bigelow's plan, which he thought would have been avoided with the old method. Still the patients had recovered, and some of them in a shorter time, and with more freedom from trouble, than under the old operation. So far as he could see, however, he thought Sir Henry had pretty well gauged the good, and probably the bad, in this new method of operating. On the question of the instruments to be used, Sir Henry was resolutely opposed to using larger instruments than before, except perhaps that of the large extracting catheter. From having seen an instrument in the Annual Museum which he was told was made under the authority of Sir Henry, he had come rather expecting to hear him say he was prepared to go farther than he had hitherto done. At the junction of the shaft with the blade, that instrument measured an inch and a quarter round; and that must be a very considerable diameter.

Mr. WHEELHOUSE (Leeds) said that, in the Leeds Hospital, for some years past, the principle had been forcing itself on their notice that the less loose fragments of stone could be left in the bladder, generally speaking, the better were the results; and they had been working in this direction previously, and until he had seen Bigelow's operation. This opened up a new field of effort altogether, and it was entered upon in the hope of doing away with the evils of the old system. It appeared to him that the result of the debate should be this: Was lithotrity or lithotomy, in a given case, the better operation of the two? and, having settled that lithotrity was the operation to be chosen, then came the further question, Was it to be lithotrity at a single sitting, or several? Now, he, like Mr. Cadge, would say that he could not feel that he had formed an absolute opinion as yet, but he was growing in faith that larger stones than they had hitherto attempted by lithotrity might be so treated; and they might very frequently, at all events, be broken up at a single sitting. The sooner the bladder was placed at rest, the sooner recovery would take place, and the less likely they would be to have cystitis and more serious changes in the kidneys and more distant parts of the tract. They had come to the conclusion, therefore, at Leeds, that, where lithotrity was admissible at all, it was better at a single sitting than at several. But they had hardly come to the conclusion that, in all cases, it was possible. In respect to Mr. Sympson's case, he might tell of a singular case of that kind brought under his notice by a surgeon in a country practice, and never published. It was, at least, a curiosity in surgery. A woman suffered from extra-uterine fœtation. All the bones of the fœtus were apparently discharged, and were carefully collected as they came from the rectum. But one femur was found to be missing, until, a few years afterwards, she was operated on for stone in the bladder. The stone was extracted and cut, and the missing femur was found inside.

Mr. REGINALD HARRISON (Liverpool) thought they must have heard with very great satisfaction the manner in which Sir Henry Thompson acknowledged the good work of Bigelow. It was two years and a half since he (Mr. Harrison) had the advantage, during his stay in Boston, of seeing Dr. Bigelow operate, and he was very much struck by the operation. With regard to the nomenclature, he did not see why they should hamper themselves with any designations which would in any way place a restriction upon them. Was not the word lithotrity good enough for all? He could wish that Sir Henry Thompson would say why he spoke of the stones by weight, and not by size. He hardly saw how they could estimate the size by weight; and they went by size in selecting cases for lithotomy or lithotrity. Surely it was by size only that they could obtain any very accurate or precise knowledge in reference to this selection.

Mr. JORDAN (Birmingham) said he, also, had had the advantage of seeing Professor Bigelow giving a demonstration of his method at a meeting of the Clinical Society in London. He had asked Dr. Bigelow if he thought this operation would entirely take the place of lithotomy; and he answered with so much hesitation as to lead one to suppose that was quite a possible occurrence. To-day, they heard that Sir Henry Thompson, Mr. Cadge, and Mr. Harrison were much less advanced than that. Thus they were very much in the same position with regard to it as they were to Mr. Lister's treatment of wounds—they were not yet prepared to take it in its entirety. With regard to the formation of urinary calculi around nuclei, he operated some years ago on a man who admitted that he had been in the habit of passing a pea down his urethra, and he found a pea in the centre of the stone.

Sir HENRY THOMPSON expressed his satisfaction at the almost unanimous expression of opinion on the part of so many of his brethren present, that the term lithotrity should be retained as the title of the crushing operation, whatever the number of the sittings or the method of removing the *débris* that might be adopted. In relation to the remark that some of the calculi were small, he pointed out that the weight had been carefully appended in each case, and that only one or two were as small as seventy grains, that several were two hundred grains and upwards, while some were more than an ounce. In relation to the fact that some were small, he claimed this as a creditable sign. No one could overrate the importance of detecting the stone early, and not allowing it to become large. He was certain that year by year it would be sooner found; for it was absolutely true that in nineteen cases out of twenty the stone gave unmistakable signs of its presence before it was as large as a nut; and at that period it ought to be crushed, and would be crushed almost with invariable ease and safety. The time must come when the knife would scarcely ever be required. Still, at present, he must prefer to employ the lateral operation for a large and hard calculus, unless the circumstances were unusually favourable to lithotrity. What he desired most to insist on was, that there could be no occasion, under any circumstances, for large unwieldy instruments; and, in reply to Mr. Cadge, he especially pointed out that he had never found occasion to use a lithotrite or evacuating catheter larger than No. 17 at the thickest part, and that he rarely used any larger than No. 16. He concluded by thanking the meeting for their indulgent attention to his papers.

The Use of the Hot Bath in Strangulated Hernia. By EDMUND OWEN, F.R.C.S., (London).—Mr. Owen argued that, since the days of Pott, Hunter, and Cooper, there had not been that marked improvement in the treatment of strangulated hernia which the introduction of chloroform ought to have insured; that those "surgical warriors" employed the hot bath, venesections, and the nauseating doses of antimony for the simple reason that they knew of no better way of obtaining muscular and nervous exhaustion; that they were doubtless well aware that such depressing treatment would not improve the chances of recovery of the patient who should eventually be submitted to operation. He confessed that he did not understand the precise physiological action of the hot bath in aiding in the return of a strangulated bowel: Mr. Birkett spoke of it as exerting a powerful but uncertain influence over the vascular, nervous, and muscular systems. Mr. Owen maintained that an anæsthetic would supply all the advantages which the hot bath could pretend to afford; that it was a direct means of economising time; and that, last but not least in order of importance, it saved the patient and the tender bowel that desperate employment of the taxis which the steaming bath often seemed to suggest to the medical attendant, who, with his coat off and his shirt-sleeves rolled up to the shoulders, intended having a final try at reduction. Mr. Owen agreed with Mr. Bryant, who urged that the taxis should never be employed without an anæsthetic, and that, the reduction of the hernia failing to be accomplished, the operation should at once be performed. Although strongly inclined to do so, he would not argue that the hot bath should never be employed in the treatment of a large strangulated hernia; all that he could say was, that in such cases the manipulation might effect less serious harm, on account of the constricting force being distributed around a more considerable mass of tissues; but that, in the case of a small inguinal hernia, or of a femoral hernia, large or small, its use was unadvisable, whilst for a recent small strangulation it was positively harmful. In conclusion, he asked for an expression of opinion as to whether the routine employment of the hot bath in the treatment of strangulated hernia was not a superstitious and dangerous remnant of antiquated surgery.

Mr. JOHN WOOD (London) expressed his hearty concurrence in the views just expressed. He had long been of opinion that the use of the hot bath for strangulated hernia, instead of being beneficial, was positively injurious; and that on these grounds—that the application of heat caused the dilation of the gases in the bowel, enlarged the hernia, and increased the difficulties under which the operators laboured. He had been accustomed in these cases to the application of a bladder of ice for an hour.

Mr. C. B. KEETLEY (London) said that he thought Mr. Owen and Mr. Wood too sweeping in their condemnation of the hot bath. It did not necessarily delay operation, for in hospital practice it could often be given while the visiting surgeon was being sent for; and in private practice, while assistance, ether, and instruments were being fetched. It was possible for a hot bath to relieve the congestion of the part strangled, whether it relaxed the strangulating bands or not. For some amount of circulation often took place in spite of the constriction, otherwise strangulation could not, as it sometimes did, remain unrelieved for days without destroying the bowel. The hot bath could not expand much the intestinal gas, because it was generally below the temperature of the bowel itself, and, even when it was a few degrees warmer, the co-efficient of expansion of gases was small. On the whole, therefore, he did not think the time-honoured practice in these cases was so very unreasonable.

Removal of the Clavicle, Scapula, and Upper Limb for Sarcoma. By E. LUND, F.R.C.S. (Manchester).—Mr. Lund read the history of a case of removal of one-third of the clavicle, the whole of the scapula, and the upper extremity from a man, aged 20, the subject of a large central sarcoma, commencing in the upper half of the left humerus, and extending backwards, so as to cover more than half the breadth of the scapula. The patient had made a good recovery, and was shown. The operation was performed on September 26th, 1879, and, as yet, there was no recurrence of the disease, and the patient seemed to be in excellent health. Mr. Lund described minutely the details of the operation, which was conducted antiseptically; and he found great advantage by tying each vessel separately, both vein and artery as brought into view, by two catgut ligatures passed beneath, and then cutting between the ligatures. In this way, hæmorrhage from rapid recurrent circulation was prevented, and the man did not lose three ounces of blood during the operation. The large nerves were divided with very sharp scissors, and it was found, from the conical form which the chest presented after the scapula had been taken away, that the edges of the large wound so produced could be easily approximated, without any tension.

On the Immediate Suture of Divided Nerves. By HERBERT W. PAGE, M.C. Cantab., F.R.C.S.Eng. (London).—The author referred to the readiness with which divided nerves united if circumstances were favourable for the correct apposition of the ends, as in clean-cut wounds, or where section had been made for the relief of neuralgia, too often frustrated by the reunion of the nerve. In jagged and lacerated wounds, where the conditions were altogether different, and where the soft parts were separated from one another, it was unusual to meet with reunion of divided nerves, whose ends had probably been wide apart. Such cases gave a history rather of neuralgia and trophic disturbances than of regained functions and restored usefulness of limb. Success had frequently attended the operation of secondary section of nerves, as in cases of Mr. Hulke, von Langenbeck, and others referred to in the paper, which showed the desirability of primary section in all cases of divided nerve-trunks in lacerated wounds. The recorded cases of primary nerve-section were few in number; and the author, after alluding to those mentioned by Mr. Favell, in his address before the Association at Sheffield, and to those by Létiévant, in his *Traité des Sections Nerveuses*, gave the history of two successful cases of primary section of the median nerve, severed in lacerated wounds of the upper arm. The cases, one under the care of Mr. Walter Pye, and one more recently in St. Mary's Hospital, under the care of the author, were recorded in detail. Although for all practical purposes the function of the nerves had been regained, and the usefulness of the limbs thereby preserved, there had not been perfect restoration of sensation; and the author doubted whether, in face of the improbability of each and all of the divided fibres becoming once again accurately continuous in the nerve-trunk, there could ever be so perfect a restoration as would bring back sensation to the state in which it was before injury. The material used for suture, whether silk, silver, or catgut (with a preference in favour of the last), or whether it was desirable to pass the suture through the nerve-trunk as well as through the neurilemma, were matters of less importance than the avoidance of suppuration. Suppuration evidently prevented reunion in some of the cases mentioned in the paper; and the author concluded that in nerve-section the absence of suppuration, and the method of repair accompanying it, were of the greatest moment. These could only disturb early efforts towards union, involve the nerve-ends in an irregular cicatrix, and lead thereby to the neuralgia and trophic derangements which together made an useless limb. To the absence of suppuration in the healing of the very severe wound in his own case, the author attributed in great measure the successful issue of the immediate suture of the widely separated ends of the nerve.

Friday, August 13th.

THE chair was taken at 11 A.M. by JOHN WOOD, Esq., F.R.S., Vice-President of the Section.

DISCUSSION ON THE TREATMENT OF STRICTURE OF THE URETHRA.

The discussion on this subject was opened by Sir HENRY THOMPSON. His remarks are published on page 325.

Professsor MACLEOD (Glasgow) said that he would confine his remarks strictly to the treatment of stricture, without diverging to discuss the many collateral points connected therewith. A careful clinical study would, he thought, lead to such a classification of strictures as to remove in a great measure the difficulty arising from the variety of methods recommended for treating them. It was a consideration of the kind, extent, and position of the contraction, and a careful estimate of what each of the various "methods" of treatment was capable of doing, that was the best guide in treatment. Traumatic strictures were as a rule tighter, less yielding, and less amenable to treatment than those which resulted from inflammatory action. They implied generally a lesion (and that in a direction across the canal) of the mucous membrane, a rent or laceration which frequently allowed extravasation of urine at the time of its production, and which afterwards occasioned an essential contraction of the canal. In stricture from inflammatory action again, as was well-known, the mucous membrane was usually not directly involved, though it was pressed inwards, corrugated, and possibly (though not necessarily or always) bound down by the deposit of lymph external to it. In this pathological difference an important fact existed as bearing on treatment; as, if a traumatic structure were burst up by rapid dilatation, the lesion in the mucous membrane would be renewed, while the same method would break up the external deposit in an inflammatory stricture, without necessarily injuring the lining membrane of the canal. In bad cases of stricture, it was most important to attend to the general health, as preliminary to all local treatment. Rest, a careful regulation of the diet, entire abstinence from stimulants, and possibly from smoking, the regulation of the bowels, and securing as normal a condition of the urine as possible, were essential. Dr. Macleod always administered quinine for some days, and gave an opiate at night, if it agreed with the patient. The state of the kidneys and bladder was very important, and care must be taken to ascertain their condition. The utmost gentleness in manipulation—the observance of the temperature in some cases, and the use, when instruments had to be passed, of chloroform, which here had one of its greatest triumphs, were further points to be noticed. He would not refer to the treatment by caustic, galvanism, subcutaneous incision, excision, forced rupture with a large instrument (known as "Mayor's method"), or to dilatation by air, water, or oil; as these plans were not clinically serviceable or in common use. He would confine his observations to—1. Dilatation with rigid or inflexible instruments, slow or rapid, up to but not beyond the normal calibre of the canal; 2. Rupture or divulsion; 3. Urethrotomy by internal or external incision; all of which he was in the habit of practising, and which, he thought, had their appropriate place in the treatment of stricture. Cure was not to be attained by any of these plans, or by any plan known; but if the cases submitted to treatment were carefully studied, the canal could in all instances be restored to its legitimate size, and it would depend on the patient whether it was afterwards maintained so. In these days of impatience for rapid results, those plans of treatment which quickly removed the annoyance of stricture would always command the chief support; and, so far as permanence of effect went, he had been unable to discover much to choose between them. Strictures might for practical purposes be divided into—1. Recent strictures of limited extent; 2. Old strictures of circumscribed dimensions; 3. Old and extensive strictures, which were hard and firm, with or without fistulæ and false passages; 4. Resilient recurrent strictures; and, lastly, 5. Traumatic strictures, which, for reasons before alluded to, ought to be judged of from a different point of view. He held that, in order to treat a stricture safely and effectively, we must take into account their characters in respect to the points just referred to, and also the part of the canal in which they were situated. 1. Recent strictures of limited extent in any part of the canal were best treated by rupture. He was in the habit of using Holt's well-known modification of Perrève's instrument, but he supposed any of the other many inventions, for which their authors claimed special advantages, would do as well. He had never seen any complication, and no possible danger, follow the use of Holt's dilator, when used in cases fitted for it. He believed it was best not to pass a catheter after its use, but to delay for four days any further interference with the canal. By that time any little irritation produced by the passage of the dilator would have subsided, and the further management of the case was simplified. 2. Old strictures of limited extent, he treated by internal incision, followed by dilatation with Holt's instrument, or "interrupted dilatation" by bougies. "Continuous" dilatation was of course applicable to these cases if the patient had sufficient resignation, and there was no kidney-affection. Short instruments, which did not quite reach the bladder, should, however, be used, and the patient's condition constantly observed. Of the very numerous instruments now before the profession, intended for the internal division of stricture, he thought none so simple and efficient as that known as Trélat's. It had always accomplished what was required of it; and in no case had he had any after-trouble from infiltration, hæmorrhage, etc. If employed in cases fitted for it, no fear need be entertained of internal urethrotomy. The incision, being in the axis of the canal, healed well and without contraction. 3. Old, hard, extensive strictures were best managed, as a rule, by external division. It was the quickest and most satisfactory mode of dealing with them, especially if there were fistulæ or false passages. When the kidneys were sound, continuous dilatation might certainly be employed;

but, as a rule, this implied loss of time. It would, of course, depend on whether a guide could be passed through the contracted part whether Syme's mode of proceeding or Wheelhouse's improved application of the "boutonnière" was followed. It was undoubtedly very rare for an experienced surgeon, who could prepare his patient, and who had patience and chloroform at his command, to fail in passing a grooved guide along the canal; but occasionally such cases did occur, and, from what he had seen of Wheelhouse's operation, he believed it best met the requirements of such cases, while Syme's perfectly fulfilled the object to be attained in those which were permeable. The danger of external urethrotomy had been greatly exaggerated, and its results were, in Dr. Macleod's experience, perfectly satisfactory, if the subsequent surveillance of the case were attended to. It was no more a cure than any other plan of treatment, but it secured a possible restoration to health, which cannot in many instances otherwise be obtained. 4. Recurrent strictures required internal incision, and, if that failed, external division. 5. Traumatic strictures, if limited, should be cut by the urethrotome, and afterwards dilated. A longitudinal incision was a very different thing from the tear which followed sudden divulsion. If the stricture were severe and extensive, external urethrotomy answered best. Continuous dilatation was inefficient. 6. "Irritability" in a stricture implied the need of constitutional treatment, and especial regard to the state of the urine. If, after such treatment had been fairly tried, with rest and the administration of quinine, and the employment of chloroform when instruments were introduced, this annoying condition still continued, then whatever form of contraction might be present should be dealt with by internal or external urethrotomy according to circumstances. The presence of fistulæ and sinuses pointed to external urethrotomy as a rule. If extravasation of urine had occurred in connection with stricture, then, of course, the division of the contraction would necessarily be accomplished when the drainage was provided for. If there were several strictures, he had generally found it best to deal with them in succession and at different times. If the kidneys were diseased, the case was, of course, very unfavourable for any treatment; but, on the whole, perhaps external division was the best plan to adopt if the stricture were a bad one. Finally, the part of the canal in which the contraction existed should regulate the surgeon's proceedings to a certain extent. Strictures near the meatus were, other things conforming, best managed by internal incision; those in the spongy part by rupture or incision; while those behind the bulb could be dealt with on their merits, but were best situated for external division. In twenty-five years of surgical practice, he had never had occasion to tap the bladder from the rectum for retention of urine; and in the cases in which the usual applications of baths, purgatives, opiates, ice, etc., had failed to bring spontaneous relief, and a catheter, aided by the use of chloroform, could not, without undue violence or too prolonged employment, be passed, he had recourse, with perfect confidence and no hesitation as regarded ulterior evil consequences, to the needle of the aspirator passed above the pubes.

Mr. FURNEAUX JORDAN (Birmingham) did not think Sir Henry Thompson had spoken too strongly of the great value of elastic instruments. But it appeared to him that the power there was of introducing simple flexible threads, where other instruments could not be passed, put a great number of strictures under control which otherwise could not be managed. In some persons, the use of such a thread was quite sufficient to keep a stricture in order. Persons who moved about a good deal during the week, but who could rest on the Sunday, could, by putting in such a thread on the Saturday night, pass a full stream on the Monday morning. The urine passing out by the side of the thread and not through it, seemed to exercise a considerable amount of hydrostatic pressure. The same principle might be extended to stricture at other points. Thus, by passing a No. (English) 12 thread, a woman with stricture of the rectum might at once pass solid motions. Also, it might be introduced into the pharynx, and, by now and then introducing a little milk by its side, they might distend the strictured part more simply than by other means. With respect to internal urethrotomy, his experience was with Sir Henry Thompson so far, and, in performing the operation, he had preferred Mr. Durham's urethrotome. He knew it was open to the objection of not cutting through all the solid tissue, which Sir Henry said they must cut through. But here he was not sure that he agreed with Sir Henry. Was it not sufficient to incise the urethra in such a way that they could immediately afterwards pass a large bougie, and keep the patient for a very long time in a very comfortable condition? He thought it was. He had introduced the principle of treating stricture, in certain cases of extreme difficulty, from behind forward, and he had had a curious illustration of the value of this operation. Impermeable stricture was very rare, but now and then it occurred; and on one of these cases he had lately performed this operation with success.

Mr. R. HARRISON (Liverpool) said that he was a believer in the many modes of carrying out the practice of this department of surgery—in rupture, in dilatation, and in incision, either external or internal, and in other modes; and he did so because stricture had a great many variations, some of which might be treated in one way, and some in another. And one of the things surgeons had to learn in the present day was to apply the various modes of treatment to the precise conditions determining them. He did not like to anticipate; but, if he might do so, he would say that he did not think they would see future improvement in the treatment of stricture come out of any mechanical mode of treatment—for surgeons now possessed abundant means of that kind—but rather out of physiological or pathological principles, or some chemical or other discovery, which should prevent the return of the disease by preventing the growth of the stricture-tissue.

Mr. TEEVAN (London) remarked that most surgeons who had had much experience in the treatment of stricture would, he thought, agree in the main with the principles so admirably enunciated by Sir H. Thompson. He considered that most strictures were best treated by gradual dilatation with soft instruments, but that, if an operation were required, internal urethrotomy was the best one to select. There were, however, surgeons who still practised immediate dilatation, or rupture, and that they did so showed they were but imperfectly acquainted with the *rationale* of the operation, and were not aware of the great mortality attached to it. The advocates of immediate dilatation stated that only the submucous strictured tissue was split, and that this was effected in the median line of the urethra. The *post mortem* examinations which had been made in Paris and New York proved that the mucous membrane was torn open, and that the rent was often not in the axis of the urethra, but stretched obliquely across it, so that very often the effect of the operation was to convert an organic stricture into a traumatic one. Then, again, it was shown, in cases of linear stricture, that the healthy urethra had been torn open, and the indurated strictured portion had been left untouched. Lastly, had the deaths which had occurred after forcible dilatation been published, the operation would long ago have received its *congé*, and he thought the advocates of that method had not acted straightforwardly in omitting to publish them. The operative treatment of stricture might now be well formulated as "internal urethrotomy *versus* forcible dilatation"; and the latter method was directly challenged by the former, as being more dangerous in application and inferior in results. He could not agree with Mr. Furneaux Jordan in his advocacy of scarification; the results obtained by that operation were of the most transitory nature, as experience in Paris had proved.

Mr. JOHN WOOD (London) said that, many years ago, he had come to the same conclusion which Sir Henry Thompson and Mr. Teevan had stated, and he had gone to the length of inventing an instrument for the purpose. He claimed for that instrument the advantage of enabling the operator to feel for the stricture, and then to nick it wherever he thought proper, either in the median line, or on one side or the other. He found, however, that the cases which required it really were exceedingly few, and he had never had a fatal case. He entirely agreed with the remarks that rupture was a dangerous proceeding. He never did it himself, but he had seen a good number of cases that went to the bad from it, and believed that such a rupture must lead to a traumatic stricture of the worst kind. He was quite sure that urethrotomy in safe hands was the operation of the future.

Mr. CLEMENT LUCAS (London) said he was quite in accord that the majority of cases could be treated by gradual dilatation, and he should limit the cases treated by internal urethrotomy to those which could not be so treated, which he believed would be found to be very few. There were, however, some strictures which were curable by gradual dilatation, so as not again to require the attention of the surgeon.

Mr. W. MAC CORMAC (London) spoke of the great advantage the patient obtained, in cases of old stricture and other strictures, by the method of continuous dilatation. In hospital practice, it had been found of great advantage in the hands of many surgeons. With regard to internal incision, he thought it was as effectual as, if not more so than, any other method yet devised for the treatment of stricture—they could not say the cure of stricture.

Sir H. THOMPSON desired to reply very briefly, in order to economise the time for other papers which were to follow. In his short opening paper, it was impossible to touch on all the numerous points which might be raised in a discussion on stricture; and he had chiefly dwelt on the treatment by urethrotomy as the best means of dealing with strictures already proved not to be amenable to dilatation, because he thought that this was a matter which wanted to be emphasised in connection with the subject. Of the value of dilatation, both simple and continuous, he had always had a full conviction, and had always taught this, and had thought it unnecessary, therefore, to insist specially

on it now. He would remark, in relation to internal urethrotomy, that there was not the slightest fear of cutting freely, and that it would be affectation to suppose that any one could cut the stricture alone, without dividing some healthy tissue before and behind it. In fact, this ought to be done in order to ensure the division of all the resisting fibres. Not the slightest contraction took place from a simple incised wound in the long axis of the urethra. A clean cut through tissue anywhere was not followed by any contraction, and could not be; there must be loss of substance, as in a burn for example, in order to be followed by contraction; there was none after the incision in lithotomy. He had never seen the least ill-result follow a free incision through the stricture; but merely making small incisions into the hard tissue without dividing it, produced only transient benefit; such treatment, under the name of "scarification", had long been exploded in France. He was gratified to hear, from those who had practical experience of this matter, a coincidence in view in relation to it, and also in the estimate of the splitting operation, which he held to be useless as far as permanence of result was concerned. He had long ago shown that when violence was thus applied to a stricture, the weakest side, that is the healthiest side, of the urethra must give way; no one could suppose, for an instant that the hard tissue would split; and thus a rent occurring in the softest portion, the way was prepared for fresh stricture formation at the spot. He concluded by thanking the members for the valuable hints they had contributed towards the subject, and only regretted that time had not permitted him to refer to the interesting cases of Mr. F. Jordan and others which had been mentioned.

Etiology of Pott's Disease. By E. NOBLE SMITH, L.R.C.P.(London).—The author said that, in consequence of the rarity of opportunities for examining the morbid anatomy of caries of the spine, his inquiries must extend to caries in other bones. We met with, firstly, chronic ostitis, commencing in the periphery of the bone; and, secondly, ostitis, commencing in the centre of the bone, and independent of periostitis. A further grade was that of suppurative periostitis. We also met with ostitis interna fungosa (caries sicca). Scrofula and syphilis were common causes of caries. The caries which followed superficial ostitis was often independent of scrofula. Scrofulous caries were usually from ostitis centralis. The bones were infiltrated with oily matter, and became light and soft. Constant irritation of an inflamed bone might give rise to caries in an otherwise healthy subject. Caries sicca was considered by Sir B. Brodie to be of rheumatic origin, and by Shaffer and others as non-scrofulous. Of the authors who had written upon the subject, some considered the disease entirely dependent upon scrofula; others that an injury might be the exciting cause in a scrofulous patient; and some Americans considered the disease as wholly due to traumatic causes. Mr. Smith, from the study of caries in other bones, and from practical observation of the cases which had come before him, divided the cases into four classes: 1. In patients affected with so-called scrofula; 2. In delicate patients, non-scrofulous, and without any family history of disease; 3. In patients temporarily debilitated by fever, etc.; 4. In patients who presented no apparent signs of other illness of any kind, except the pain following an injury. Class 4 he explained as possibly the result of the nature of injuries to the bones of the spinal column. As there was nearly always the same kind of injury in fractures, the upper part of the spinal column being bent violently forward, so that the anterior part of a vertebra was crushed or broken off by the vertebra above it, and the posterior part of the bodies of the vertebræ are uninjured. He supposed that an injury not severe enough to cause absolute fracture might yet so damage the bone that caries resulted, because the parts were not allowed to rest. This theory was in accordance with the laws of pathology laid down by Billroth and others, that continual irritation of an inflamed bone so interfered with the natural process of healing that ulceration might ensue.

Dupuytren's Contraction of the Fingers. By A. S. MYRTLE, M.D. (Harrogate).—Dr. Myrtle based his remarks on a long personal experience with this defect, from which he had suffered for many years. He described two forms of contracted fingers, traumatic and idiopathic, and discussed their etiology and pathology. In the treatment, the only safe and successful course was subcutaneous division of constricted bands with subsequent mechanical extension.

The Treatment of Gonorrhœa and Gleet. By C. B. KEETLEY, F.R.C.S. (London).—Mr. Keetley laid down the following indications. 1. The urine should be rendered non-irritating by internal medicines, such as acetate of potash, and avoidance of alcohol or excess in animal food. 2. It should never be allowed to linger in the urethra. 3. Local disinfectant remedies should be used. 4. Drainage should be provided for the gonorrhœal discharge. 5. The principles of antiseptic surgery should not be lost sight of. 6. Complications, especially epididymitis, should be guarded against.

Stricture of the Œsophagus. By PROSSER JAMES, M.D. (London).—Dr. James drew attention to (1) the analogies of stricture of the œsophagus with strictures of other organs, and especially of the urethra; (2) the differences between the same; and (3) the methods of treatment. He described the instrument he had devised for carrying down to the contracted tissues medicaments which might be likely to influence them, and the other therapeutical measures to which he resorted.

The following papers were taken as read.

On Fracture of the Neck of the Humerus, as a Complication of Dislocation of the Shoulder. By EDWARD H. BENNETT, M.D. (Dublin).—The author exhibited five examples of dislocation of the shoulder, complicated by fracture of the upper extremity of the humerus. In one of these, the dislocation was recent and the fracture incomplete; in the remaining, the fractures were completely united. Having reviewed the opinions of Delpech, Cooper, Malgaigne, Smith, and, lastly, of Mr. Eve, on the mechanism of the double lesion, the author advanced his views, founded on the examination of the series of recorded cases and on the specimens exhibited, and expressed them in the following conclusions. 1. Fracture of the upper extremity of the humerus, occurring as a complication of dislocation, commences at that part of the anatomical neck which rests, after dislocation has taken place, against the border of the glenoid cavity. 2. It is caused by pressure of the humerus against the sharp edge of the glenoid cavity, probably the result of a constrained position, preventing the separation of the elbow from the side as in ordinary dislocations. 3. While the fracture starts at the anatomical neck, and may follow it strictly, it commonly passes obliquely into the shaft, detaching the lesser tuberosity with the head. 4. The fracture is neither comminuted nor impacted.

Intravenous Injection of Milk. By AUSTIN MELDON, M.K.Q.C.P.I. (Dublin).—Dr. Meldon read a paper on the intravenous injection of milk, which was a continuation of that read by him at the meeting of the Association in Cork in 1879. The author stated that the object of again bringing the subject forward was to reply, through the Association, to numerous letters he had received in reference to the operation since his former paper had appeared; as also, to give the results of a more extended experience of the operation, as well as to endeavour to induce other medical men to try it in suitable cases. Dr. Meldon had performed the operation twenty times, twelve of these being in cases of phthisis, in which the patient had reached an almost moribund condition. The author stated he was somewhat disappointed as to the very temporary nature of the improvement which followed the operation in these cases, four of them having since died. He was, however, satisfied that life could be prolonged in phthisis by the operation; but when delayed, as in these cases, until the last stage, little further benefit could be expected. Four of the operations were in cases of pernicious anæmia, all of which, the author believed, were cured by the operation. Two were cases of exhaustion from hæmorrhage, both of which recovered. The remaining two were cases of exhaustion after typhoid fever, in both of which much benefit followed the operation. The patient in one of them, however, died after the second operation. In conclusion, Dr. Meldon stated that he believed intravenous injection of milk to be a far better operation than the transfusion of blood. It was much more satisfactory in its results, and quite devoid of the dangers of the latter operation. He invariably used goat's milk, as the animal was easily procured in Dublin, and could be brought into the chamber of the patient—thus avoiding any delay in the transfusion after milking. He never used more than six ounces at a time, and always took care that the milk was alkaline by adding a little carbonate of ammonia to each injection.

Suprapubic Luxation of Femur. By WILLIAM STOKES, F.R.C.S.I. (Dublin).—The author commenced by alluding to the great variety in the various pathological museums of this and other countries, of specimens illustrating the condition of the parts chiefly concerned in pubic or ilio-pubic luxations of the femur. Mention was then made of a form of pubic luxation, an account of which, as far as the author was aware, was not observed in the text-books. In this form, the head of the bone did not lie on the pelvis, or either above or below the inferior spine of the ilium, but above the pubes and within the pelvis. A twofold interest was attached to this apparently exceptional position of the head of the bone, which consisted in the absence of one of the most characteristic signs of the injury—viz., the globular inguinal tumour formed by the head of the femur, and obliterating the natural fold of the groin. The other noteworthy circumstance connected with this suprapubic position of the bone was essentially a practical one, and consisted in the fact of the physical impossibility of reducing the luxation by any of the usual methods of extension or manipulation. The particulars of the case were then given, and the method by which reduction was effected explained. Shortly after reduction was effected, the patient succumbed. This unhappy result was, in the author's opinion, due either to shock or to the anæsthetic. It had also been suggested that the cause of

death was embolism. Allusion was then made to another case, which had recently occurred in Dublin, in the practice of Professor Bennett, which was also an example of this unusual form of luxation. Reduction was in this case effected in a manner somewhat similar to that adopted in the author's case. The specimen which illustrated this rare luxation was exhibited by Mr. Stokes.

Hæmostatic Scissors.—Dr. WARLOMONT (Brussels) showed a pair of scissors for the prevention of the hæmorrhage liable to follow the section of blood-vessels in surgical operations. Their purpose was to replace the ordinary scissors in the truss, where they would not occupy more space than these. The instrument is composed of two separate parts, which can be placed in juxtaposition—viz., scissors and pincers. A. *Scissors.*—These are ordinary ones, of different sizes—straight, curved, or bent. A circular hole is bored through the screw which fastens the two blades, and a kind of sliding bolt is fixed to the front side of one of the blades, of which the extremity facing the hole is cut out in the form of a half-circle, in a radius somewhat smaller than the aperture. On the back of each of the blades, not far from the rings, are two little rods one *millimètre* (0.03937 of an inch) in height. B. *Pincers.*—These are something like a pair of curling-irons as regards the disposition of their jaws, destined to approach each other in a parallel direction. These jaws are flat and elongated, from one to two or three *centimètres* (0.3937, 0.78742, or 1.18113 inches) long, and provided with little teeth corresponding to the mortices of the opposite branch. The teeth and the mortices are placed in a contrary sense, and are two *millimètres* (0.07874 of an inch) distant one from the other. The jaws of the pincers are flat, and their ends, facing the rings of the scissors, are excavated in the form of a half-circle, in a radius corresponding to the size of the little rods of the scissors, which they are intended to embrace at the moment of juxtaposition of the two instruments. These flat jaws are furnished on their lateral face with a Péan's catch. The screw which fixes the two jaws has a perpendicular rod corresponding in size with the opening bored in the screw of the scissors into which it is to enter, passing a little beyond it. This prominent extremity or head is indented laterally with two notches, through which the bows of the flat bolt are to slide. In order to mount the instrument, the two pieces must be placed in juxtaposition; the ends of the jaws of the pincers then embrace the little rods of the scissors, and the rod traverses the hole bored through the screw of the scissors, extending a little beyond it. The sliding-bolt must be then moved forward towards the head of the rod whose extremity, terminating in the form of a bow, seizes the neck of the rod, and prevents it from escaping, thus joining the two pieces together, so that they now form but one instrument—the pincers serving, as it were, as a lining to the scissors. The instrument being thus adjusted, and the usual method of section by the scissors being employed, the jaws and ends of the pincers follow the scissors in the action of their blades and rings. The jaws of the pincers are the first to meet and press closely the parts with which they come into contact; if they are driven deeper, the blades of the scissors, passing before the jaws of the pincers, divide the parts on which they have seized. At the same time, the ends of the pincers approaching each other, they are imprisoned by the catch, and thus made fast, so as to prevent the jaws from separating. The bolt is then withdrawn, which, giving freedom to the rod, which had been the means of keeping the two parts together, renders them independent in their action. The scissors are removed, while the pincers remain attached to the divided parts. If the vessels that have been divided are of small calibre, the pressure alone is sufficient to close them; otherwise the surgeon may apply ligatures, or cauterise a wound or pedicle, which will remain dry as long as the pincers are maintained. The use of the hæmostatic scissors is not a limited one. They may be employed in a number of cases, such as the removal of tumours, bloody or others, especially of pedicles; in the section of the optic nerve; in the enucleation or enervation of the eye; in important operations, such as ovariotomy, hysterectomy, and the Cæsarean operation, where it may be of great service to place here and there movable clamps; also in amputation of the tongue, and resection of tumours in the lips, eyelids, or cheeks; in operations for phimosis, hare-lip, and other similar operations. The instrument has been constructed, according to the inventor's instructions, by M. Colin, manufacturer of surgical instruments (Maison Charrière, à Paris).

Spiral Spring Rotator.—Dr. A. C. MERCER, of New York, exhibited for Dr. Gregory Doyle a spiral spring rotator for removing the inversion of the limb, which often remains after operations on club-foot, especially talipes equino-varus.

A NEW hospital is to be built in Philadelphia. It will be called St. Agnes' Hospital, and will accommodate three hundred patients.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 28TH, 1880.

SANITY AND INSANITY.

THOSE members of the British Medical Association who expected to hear something interesting in the Section of Psychology from Dr. Crichton Browne were not disappointed; the address was one of the most brilliant ever delivered before the Association. The tendency of specialism, or of one of them—for there are many—is generally to magnify the speciality. Dr. Browne certainly does not depreciate the importance of his; his conversance with its vast interests, many-sidedness, and interesting relations could not allow him to do so. But it will have been noted that his opening sentences claimed no undue place for it. Thus he coincides entirely with the opinion of the General Council of Medical Education and Registration, who declined to recommend the licensing bodies of the country to make mental diseases a subject of separate examination for all degrees and licences to practise medicine. If some limitation of the arduous and varied curriculum compulsory on medical students is not to be looked for in the immediate future, or some extension of the term of study; if, for example, anatomy, physiology, and pathology may not be taught and looked upon as different aspects of the same questions, certainly no extension of that curriculum could be tolerated by men who are already groaning under a weight of detail that is well-nigh insupportable in a course of study extending only over five years at most. Dr. Browne suggests that some test of proficiency in medical psychology might fairly be exacted from men who propose to devote themselves specially to lunacy; but it would be unfair to make such a demand on the candidates for the ordinary licence to practise medicine. Yet, if any subject may be said to be particularly urgent in its claims upon us, it is this one of lunacy. To begin with, the figures issued by the Commissioners show the startling fact that pauper lunacy has practically doubled in the twenty years from 1859 to 1879. The number of pauper lunatics in England and Wales in the former year was 31,782, and in the latter 62,107. At the same dates, the numbers of lunatics paid for, either by themselves or their friends, were 4,980 and 7,778 respectively. In these, the increase amounts to 56 per cent. As there is no reason to believe that the public are less unwilling now than they were twenty years ago to permit their relatives to be classed among the insane, the figures relating to those lunatics who could pay for themselves may be taken as illustrative of the real increase in lunacy. Better registration may account for some of the increase among the pauper class; but it is credited highly, we think, if 44 per cent. of that increase be attributed to it. Even then, lunatics would be half as numerous again in 1879 as they were in 1859, which is a much higher ratio than the increase of the population in the same period. But, as Dr. Browne points out, this increase, large as it is is by no means the whole. The insane in asylums probably form only a comparatively small proportion of the aggregate of those persons suffering from mental alienation in some form or other. The "crazy circle", as Dr. Browne terms it, he estimates roughly to possibly number twice as many as the 93,634 persons who form the total of those confined in asylums, public and private, in the United Kingdom. If, in addition to these large numbers, we take into account the numbers of those who suffer from epilepsy and paralysis, locomotor ataxia, and

every sort of spinal mischief, neuralgia, hysteria, chorea, and the whole order of nervous diseases, which contributed among them 70,000 deaths to the returns of the Registrar-General last year, we shall have a grand total which may well fill us with dismay. That, in view of these facts, Dr. Browne should still refrain from demanding that a knowledge of his speciality should be exacted from every candidate for a licence to practise medicine, argues great forbearance on his part, and great consideration for the overtaxed brains of the medical youth of the country.

Is the increase in nervous disorders accompanied by any corresponding change in the constitution of the people of this country? An American physician, upon somewhat vague data, has come to the conclusion that nervous diseases are on the increase there, that many bodily diseases are assuming a nervous or asthenic type, and that nervous exhaustion is so common that it must be regarded as a distinct disease. His declaration has attracted much popular attention. He draws these conclusions from the increased sensitiveness of Americans to heat and cold, from their greatly augmented susceptibility to the action of stimulants and narcotics, from their inability to digest pork, and from the premature decay of their teeth. The last feature can surely be no more marked in America than it is in strumous subjects in this country. Dr. Browne is not prepared to go so far as Dr. Beard, however; but even he is disposed to think that the nervous constitution is becoming more marked in this country than it used to be; that it is shown, among other things, by a greater slimness of figure among young women than obtained in the last generation or two, and by a delicacy of nervous organisation which renders the present generation less able to bear the glare of the primary colours than their predecessors. If the substitution of more delicate and neutral tints for red, yellow, and purple, be a mark of increased nervous susceptibility, few persons, we imagine, will be disposed to regret the fact; and we suppose Dr. Browne does not wish to construe it into a mark of disease. But there are other and less equivocal signs of this tendency, which, though not affecting tables of mortality under the heading of nervous disorders, appear in other ways. Thus the increase of diabetes, of kidney-disease, of heart-disease, of rheumatism, and it might, perhaps, have been added, of asthma, are all indicative of the nervous tendency of the times. If further proof be wanted, it can be found in the study of the quantities of neurotic remedies consumed, such as morphia, hyoscyamus, conium, chloral, the bromides, arsenic, etc.

As to the interesting question of the causes of the disturbances of nervous equilibrium, called insanity, craziness, or neurosis, the address sums them up under the masterly headings of (1) the increasing complexity of the nervous system, and (2) the increasing complexity of life. The Commissioners in Lunacy give different causes; as, for instance, "mental worry", "pecuniary embarrassment", "alcoholism", "heredity", and so on; but these specific causes may easily be referred to one or both of the divisions first named. There can be no doubt that the rate at which life to-day is lived makes it impossible to maintain the calm and quiet of our ancestors. The increase of town life, with its infinite variety of change and whirl; the competition which there waxes keener and keener; the invention and use of machinery in an ever increasing number of the occupations of life; the use of railways and telegraphs in place of quiet easy-going stage-coaches and franked epistles; with, let it be added, the anxiety that comes of not knowing intimately our business clients, and the consequent uncertainty whether they will meet the liabilities they have undertaken—these are some of the disturbing causes which go to interfere with mental and nervous equilibrium. All the excitement incident to such a mode of life induces a greater complexity of the nervous system. The cerebral tissue becomes more and more highly organised, convolutions obtain secondary gyri, and, with each differentiation in structure, new possibilities of disturbance are introduced; while the very differentiation in question produces in turn new mechanical devices, which again introduce a more complicated mode of life with which the nervous system must keep pace. It is somewhat discouraging to be told that education itself may be one of the causes of the increase of nervous disorder; but it is well to know the truth even when it is not agreeable to us. Even if Dr. Freichler's diatribe be not made out completely, there can be no doubt that stupidity may be artificially induced by unintelligent and injudicious teaching in schools; and we take it that Dr. Browne's suggestions on this head are at once the ablest and most instructive part of his address. Having shown, by examples, that the cerebral centres, if never properly exercised, are not developed, but that, if once developed, they do not waste, he goes on to use these facts as hints to training the young. Muscular exercise, he says, has been hitherto thought to expand the lungs, quicken the circulation, and brace the nerves; but to this must now be added the pregnant idea that it also contributes to brain-growth and mental evolution. As a large part of the brain is composed of motor centres, we may, in the nascent state of the organ, powerfully act on the brain, by putting into methodical exercise the muscles which we know to be directed by its various parts; and especially the centres governing the movements of the hand ought to be brought into training by careful drill of manual movements, so that, in due time, a cunning right hand may be the servant of every man to some mechanical art, and of every woman to some technical work. If art be introduced into the nursery, so that the earliest recollections of after-life be those of beautiful objects, and if moral and religious feeling be duly cultivated, we shall be the better able to resist the inroads of nervous and mental disease; and thus, by a painstaking yet easy use of the powers with which we have been endowed, be of some use in our day and generation.

THE GOVERNMENT AND VACCINATION.

THE Government, in their ill-advised and now abandoned attempt to amend the Compulsory Vaccination Act, could not hope to satisfy the opponents of vaccination, while they naturally excited the opposition of those who believe in the necessity for compulsory vaccination, and know how to estimate at its true value the agitation of the small but noisy minority that clamours for the repeal of compulsory vaccination. Between the opposition of those who object to the illogical proposition of the Government, and the awakened efforts of antivaccinators to obtain further concessions, it was easy to foresee that the Vaccination Amendment Act was destined to be a thorn in the side of the Ministry, who were wise to abandon it. Mr. J. T. Hibbert, M.P., the permanent secretary to the Local Government Board, appears to have been recently called upon to express an opinion as to the accuracy of certain statistics lately submitted to a meeting of antivaccinators at Oldham. It is much to be regretted that Mr. Hibbert has yielded to the political temptation of apparently adopting some of these statistics of antivaccinators, as affording one of the reasons "which led him to support the proposed modification of the Vaccination Acts". The return in question deals with the old and favourite assertion of the opponents of vaccination that compulsory vaccination has caused a large increase of fatal cases of hereditary venereal disease. Mr. Hibbert does not appear to have troubled himself to study the available statistics on the subject published in the reports of the Registrar-General; nor does he seem to be aware that, if he believed the statement of antivaccinators as to the recorded increase of fatal congenital syphilis being due to vaccination, his clear duty would have been to propose the repeal, instead of supporting the amendment, of the Compulsory Vaccination Acts. If Mr. Hibbert be in doubt as to the trustworthiness of these statistics, he should have used the means at his disposal in the Local Government Board to test their value and true bearing, and, at any rate, should have hesitated before he committed himself and his colleagues to a letter which doubtlessly encouraged false hopes in the camp of antivaccinators.

Let us consider briefly the figures which Mr. Hibbert is inclined to use as a justification of his support of the recently proposed amendment of the Vaccination Acts. The reports of the Registrar-General undoubtedly show a steadily increasing fatality of venereal disease in recent years; and the point in dispute is whether any connection can be established between this increase and the more general adoption of vaccination. No one who understands the system of certification of

causes of death, which affords to the Registrar-General the basis of his mortality statistics, would be likely to accept the recorded number of deaths referred to venereal disease as even approximately representing the true mortality from that cause. If, however, the actual number of cases bore a constant proportion to the recorded cases, the figures might be accepted as trustworthy evidence of increased fatality. There is good ground, however, for believing that, in recent years, there has been a steady improvement in the knowledge as to the indications of hereditary and visceral syphilis (of which the signs were until lately unknown), in the accuracy of diagnosis, and in the general quality of medical certificates. If this be true, the marked increase of the recorded fatality of venereal disease cannot be truthfully attributed to its increased prevalence. Even if we felt justified in accepting the Registrar-General's figures as trustworthy proof of the increased prevalence and fatality of the disease, there is an important fact connected with the figures which appears to forbid the construction put upon them by antivaccinators. The proportional increase in the fatality of syphilis in recent years has been almost as great among adults as among infants; and it may be presumed that the blindest of those who agitate for the repeal of the Compulsory Vaccination Act would scarcely attribute the general marked increase of death-rate from venereal disease among adults to the effect of compulsory vaccination. We believe that the increase of recorded fatal cases of syphilis, etc., is mainly due to more careful diagnosis and correct certification; but, at any rate, it is absolutely necessary to discover some other explanation of the increase of adult mortality from this cause than the Compulsory Vaccination Acts. In face, moreover, of this increase of adult fatality and prevalence of this disease, it appears scarcely possible for anyone seriously to attribute the recorded increase of infant fatality from this cause to vaccination. It is impossible not to regret that Mr. Hibbert should have allowed himself to be deceived as to the true bearing of these statistics of venereal disease of which the antivaccinators so sedulously endeavour to make capital.

THE deaths of two distinguished pharmacologists, Professor Phöbus in Giessen, and Professor Talck in Marburg, have been reported.

PROFESSOR KLEBS has tendered his resignation as Professor in the University of Prague, on account of misunderstanding with his colleagues.

THE Worshipful Company of Drapers have intimated their intention of continuing, for the present, their annual subscription of one hundred guineas to the Research Fund of the Chemical Society.

THE death of Professor Buhl is announced. His studies of the pathological anatomy of tubercle, and in other departments of pathology and medicine, have been highly appreciated at home as well as abroad.

THE sentence of death passed upon a herbalist named Colmer and his wife, for the murder of Mrs. Budge, at Yeovil, by performing upon her an unlawful operation, with a view to procuring abortion, has been commuted to penal servitude for life.

SOOTHING-POWDERS.

AT an inquest held on August 3rd, by Mr. Brian, Coroner for Plymouth, an infant, aged 10 weeks, was proved to have died of narcotic poisoning after the administration of part of a powder purchased from a local druggist, and described as a "Steedman's Soothing-powder".

FINES AND IMPRISONMENT UNDER THE VACCINATION ACT.

A RETURN, printed by order of the House of Commons, on the motion of Mr. Otway, as to fines and imprisonment under the Vaccination Act, shows that the total number of persons who have been fined in England and Wales for refusing to have children vaccinated is 3,929, and 87 have been imprisoned for the same offence. In Wales, only forty-one persons were fined, and there was no sentence of imprisonment. One person in Berkshire was fined twenty-five times, the penalties amounting to £17 9s. 6d. Another person in Lancashire had twenty-one fines imposed upon him, amounting in all to £25 17s. Two persons—one in Shropshire, the other in the West Riding of Yorkshire—were fined sixteen times each; the fines amounting, in the latter case, to £12 5s., and, in the former, to only £5 4s. One person in Finsbury was fined fifteen times; and, after having paid £5 10s., appears to have died. A person in the North Riding of Yorkshire was also fined fifteen times, and paid £14 9s. 6d. Numerous persons were fined as many as seven, eight, nine, and ten times.

CHARGE AGAINST A NURSE.

BEFORE the Margate magistrates, a nurse named Winter was charged with assaulting and beating Miss Beatrice Keating, a niece of Mr. Justice Keating, at the Queen's Arms Hotel, Margate. A good deal of painful interest attached to the case, Miss Keating being of unsound mind. The case fell through on this account, but will come before the Lunacy Commissioners.

NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

ARRANGEMENTS are in progress for holding the approaching congress of this association in Edinburgh. As has already been announced, Lord Reay, D.C.L., is to be the president. The names of the presidents of the departments of Jurisprudence and Art have not yet been intimated. The Right Hon. Sir Walter Crofton, C.B., is to be the chairman of the "Repression of Crime" section; while the "Education" department is to be presided over by Lord Balfour of Burleigh; the "Health" department by John Beddoe, M.D., F.R.S.; and the "Economy and Trade" department by Sir U. Kay-Shuttleworth.

TWO DEATHS FROM CHLOROFORM.

MRS. LEVENTON, aged 35, wife of a Liverpool commission merchant, died suddenly on Tuesday at the dental surgery of Mr. Stuck, Liverpool, whilst chloroform was being administered. The deceased lady was accompanied by her family physician, Dr. Packer of Huyton, and by a lady friend. We hear also accidentally of a death from chloroform at the London Hospital, of which no official details have reached us, nor have we seen any published. We cannot but feel that a very serious responsibility rests upon those who continue to employ chloroform as an anæsthetic, in the face of evidence so strong as that which exists in favour of the greater immunity from accident which belongs to ether, and, in the case of dental operations, to nitrous oxide; and we must once more express the opinion that it is an urgent public duty to furnish full official details to the medical profession of every death or serious accident from the use of any anæsthetic. We regret that this duty has not been promptly and fully performed by the persons responsible for this case at the London Hospital.

POISONING IN LEAD-FACTORIES.

MUCH remains to be done to lessen the danger to life from industrial poisoning. Among the most melancholy of the deleterious occupations, is that of workers in a lead-factory. This week, Mr. Payne, the City coroner, held an inquest on the body of Mary Ann Donovan, 30 years of age. Evidence was adduced showing that the deceased was a single woman, and earned her living by working at a white lead factory in the New North Road. On Friday, she was seized with what appeared to be a fit, and was removed to St. Luke's Infirmary. The next day being Saturday, she left the infirmary to go and take her wages. The following day, she complained of being ill and of having severe pains in the head, which continued until Tuesday morning, when her landlady went for a medical order for the parish doctor. That was at ten o'clock in the morning; and, owing to Dr. Reed and his assistant being out on professional business, no medical man attended until about one o'clock, when Donovan had been dead an hour or so. Dr. Reed now said there were distinct marks of lead-poisoning to be seen between the teeth and gums of the deceased's mouth, the effect of the employment she had followed. The cause of death was an apoplectic or epileptic fit pro-

duced by the lead-poisoning. A verdict in accordance with the medical evidence was returned by the jury. We have collected a good deal of evidence of the widespread misery due to poisoning in lead-works. It seems cruel and unjust that such horrible results of labour should pass unnoticed and unremedied; and we propose shortly to direct attention to this subject more forcibly than has yet been done. Meantime, we shall be glad to receive communications tending to elucidate either the extent, nature, causes, or means of preventing lead-poisoning of the persons employed in white lead works.

AMERICAN HAMS.

FROM time to time, considerable doubts have been expressed as to the perfect wholesomeness of American bacon and ham. There would seem to be some ground for the distrust of these imports which has sprung up; since, in a report by Mr. Law, one of the first authorities on the diseases of domestic animals in America, to the American National Board of Health, we find such a statement as the following. "Our pork hams have, rightly or wrongly, acquired a most undesirable reputation. Dr. Belfield and Mr. Atwood of Chicago pronounce eight per cent. of the hogs killed in that city to be trichinous, and several European countries have forbidden the importation of American hams. In Germany, on the other hand, where all pork is subjected to microscopic examination, the statistics show that trichinæ have been found in but one of two thousand hogs examined."

A FEVER EXTINGUISHED.

THE *Indian Medical Gazette* states that the "Burdwan Fever" is now a matter of history. So we gather from a very interesting report by Dr. Coates, published in the *Calcutta Gazette*. The year 1879 has been the most healthy in the district of Burdwan since 1869. Health, happiness, and industry have taken the place of disease, misery, and apathy. "In places situated on low lands, having little drainage, and bearing a marshy character, the fever still lingers; in others, bad water contributes largely to their unhealthiness." The scouring of stagnant and silted-up water-channels, by admission of the comparatively pure water of the Damuda, appears to have had an excellent effect. The redigging and cleaning out of old tanks is also said to have been beneficial. In the district of Hooghly, efforts to improve the supply of drinking-water seem to have been equally successful and beneficial—more particularly the scouring out of the Kana Nuddee (blind or silted-up river) by the Damuda flood. Dr. Coates found that, in the villages situated along dried-up water-courses, scarcely one-tenth of the people were left alive. He considers that the cause of the fever consisted rather in the amount of organic filth which the water gained from the soil, than in the soaking of the soil *per se*.

THE HISTORY OF OVARIOTOMY.

ONE of the most pleasant recollections of the Cambridge meeting will be the friendly recognition by many of our foreign guests, not only of the hospitality of the Cambridge men, but their acknowledgment of the influence of our work abroad. These feelings were admirably expressed at one of the meetings of the Obstetrical Section by Dr. Worms, Physician to the Prefecture of the Seine and to the Northern Railway of France, who took advantage of the opportunity afforded in a discussion on Hysterotomy, opened by Mr. Spencer Wells, to express the gratitude of our foreign visitors for the kindness they had experienced, and their feeling as to the influence abroad of English surgical gynæcology, so gracefully and so amply, that we are unwilling to run any risk of lessening the value of his remarks by translation, and we are sure that very many of our readers will be interested in reading the *ipsissima verba* of an able and accomplished Frenchman. They were these:

"Je ne voudrais pas quitter ce *meeting* de la 'British Medical Association', d'où nous emportons, mes collègues français et moi, de si précieux souvenirs de science et d'hospitalité, sans vous dire les sentiments qu'a fait naître en moi la communication que vous venez d'entendre de Mr. Spencer Wells.

"Comme je me suis aperçu, pendant les quelques jours très-agréables que j'ai passés avec nos confrères anglais que vous parlez tous très-bien le français, je me servirai de ma langue maternelle en ce moment; je ne serais pas sûr d'être compris aussi bien par vous si j'essayais de vous adresser la parole en langue anglaise. Je voudrais vous dire quelques mots de l'influence qu'ont exercée sur la chirurgie gynécologique française les travaux et les méthodes opératoires des chirurgiens anglais, et en particulier, ceux de mon honorable et illustre ami Mr. Spencer Wells. Lorsqu'il publia, il y a près de 20 ans, ses premières ovariotomies, on lui sentait le souffle de la plus grande sincérité: je me mis en rapport avec lui et je me fis un devoir d'user de toutes mes forces pour faire accepter en France une opération nouvelle qui amenait la guérison d'une affection considérée comme incurable jusqu'alors. Je recontrai la plus grande résistance, et je dois même dire une grande incrédulité de la part des chirurgiens les plus célèbres de cette époque. Mais la scrupuleuse exactitude des relations d'opérations publiées par Mr. Spencer Wells, où les insuccès étaient enregistrés avec le même respect de la vérité que les succès, finirent par vaincre cette obstination.

"M. Nélaton donna le signal: sur mes instances, il vint en Angleterre, et rapporta cette opinion que l'ovariotomie était une opération praticable, ce qu'il n'avait pas cru jusqu'alors; il l'encouragea en France, la patronisa de sa haute autorité. Depuis cette époque, tous les jeunes chirurgiens français sont venus à vous, ils ont tous successivement assisté aux opérations pratiquées par Mr. Spencer Wells, dont le nom et l'hospitalité aimable sont aussi populaires en France que son habileté et sa dignité professionnelle. J'ai un vrai plaisir à proclamer que les chirurgiens français qui ont apporté en France la chirurgie des tumeurs abdominales sont ses élèves et sont tous venus s'inspirer de sa pratique ou de ses travaux. Les élèves sont devenus des maîtres à leur tour et si nous ne comptons pas en France les ovariotomies par mille, les centaines ne sont pas rares.

"L'hystérotomie suivra dans son développement en France la marche que cette opération aura en Angleterre; mais, je le dis encore une fois, pour faire accepter en France et faire répandre des opérations qui étaient considérées chez nous comme *criminelles*, il y a 20 ans, il fallait de grands exemples d'habileté et de conscience professionnelle. Cette habileté, et cette autorité qui découle de la conscience nous les avons trouvées chez vous, et en particulier dans la personne de Mr. Spencer Wells; c'était pour moi un devoir de vous offrir cet hommage auquel, j'en suis convaincu, tous mes confrères français s'associeront."

THE BOYLSTON PRIZE ESSAY.

THE following are the questions proposed for 1881: 1. The Effects of Drugs, during Lactation, on either Nurse or Nurseling; 2. Injuries to the Back, without apparent mechanical lesion, in their surgical and medico-legal aspects. The author of a dissertation considered worthy of a prize on either of the subjects proposed for 1881 will be entitled to a premium of three hundred dollars. The questions proposed for 1882 are: 1. Sewer-Gas (the gas found in sewers): What are its Physiological Effects on Animals and Plants? an Experimental Inquiry. The author of a dissertation on the above subject considered worthy of a prize will be entitled to a premium of three hundred dollars. 2. The Therapeutic Value of Food administered against or beyond the Patient's Appetite and Inclination. The author of a dissertation on the above subject considered worthy of a prize will be entitled to a premium of two hundred dollars. The prize for this year was, as we have mentioned, awarded to Mr. Watson Cheyne.

LONDON STREETS AND LONDON SMELLS.

THE National Health Society, Berners Street, is calling the attention of the vestries of the Metropolis to the unwholesome condition of the streets of London in hot weather. In a document signed on behalf of the council by Mr. Ernest Hart, chairman, and others, it is represented that the intolerable smells that have lately pervaded the streets of the West End have been the subject of frequent complaints in the daily papers. Streets, smelling like very badly kept stable-yards, have been throughout the past and other seasons, injurious to health and prejudicial to trade. It is estimated that more than one thousand loads of dung are daily deposited in the streets of the metropolis, one hundred loads in the streets of the city. Even the surface-cleaning is so imperfect in the greater part of London that much of this filth remains upon the streets in a noxious state of decomposition, while it is blown about by the wind and washed into the drains, where it too often lies stagnant in the ill-constructed and ill-cleansed sewers, which are under the charge of the vestries. In some of the streets under the care of the Corporation of

the City, a more perfect daily sweeping keeps the surface clean; but we must go to Paris, Vienna, or Madrid, to see streets thoroughly well washed and clean. In the City of London, the hydrants which are now in use for protection from fire might well be made serviceable for washing the streets and flushing the sewers. Heavy thunder-showers and storms of rain occasionally act as scavengers, and actually diminish the death-rate by their refreshing effects. Much might be done by amending the form of the sewers, and making them self-cleansing. It is said that where this has been done, in a part of Holborn, the expense has been less than that involved in cleansing them by flushing. No doubt the early attainment of a water-supply, under competent scientific and public control, will be the most effective means of remedying these evils. It cannot, meanwhile, be too often repeated to intelligent ratepayers that all foul depressing smells mean the continuance of sickness and of a high death-rate.

THE SECOND INTERNATIONAL OTOLOGICAL CONGRESS.

THE meetings of this Congress will take place in Milan from the 6th to the 9th September 1880. On the 5th September, there will be a *réunion* at 7.30 P.M., at Biffi's Galleria Vittorio Emmanuele. On Monday, September 6th, the first meeting will be held, commencing at 9 A.M., by Signor Voltolini, the interim President, and a member of the local committee. The actual president and two secretaries will be elected, who, with two members also to be elected, will form the publication committee. This committee will be entrusted with the editing and publishing of the reports of the meetings, which will be sent to every member of the Congress. Every member, when entering his name on the list of those present, will pay twenty *francs* to form a fund for defraying the printing and other expenses. In order to obtain a prompt and correct publication of the reports of the meeting, every speaker is requested, after having terminated his communication, to deposit a copy with the publication committee. After the election, the reading of the papers will commence. There will be a dinner at Biffi's at 6.30 P.M. Tuesday, Sept. 7th, meeting at 9 P.M. Announcement of the time and place where the next Otological Congress will be held. Election of the provisional committee. Communications. In the afternoon, there will be an excursion to Pavia. Wednesday, Sept. 8th, Meeting at 9 A.M. Communications. Banquet at Biffi's, 6.30 P.M. Thursday, Sept. 9th, closing meeting at 9 A.M. In the afternoon, there will be an excursion to some locality not yet fixed upon. Papers may be read in any language the writer prefers. Discussions may take place in French, German, or English. If the speaker do not know either of these languages, he can speak in his own, and his speech will be translated by another member. Notices of the following communications have been received: 1. Professor Voltolini of Breslau: On the Anatomo-Pathological Examination of the Organ of Hearing, of the Labyrinth in particular, with Demonstrations. 2. Professor Politzer of Vienna: *(a)* Results of the Anatomo-Pathological Examination of the Labyrinth; *(b)* Experiments on Paracusis Willisii. 3. Herr Lowenberg, Paris: Why do Certain Deaf Persons keep the Mouth partly open? 4. Professor Moos, Heidelberg: *(a)* The Aural Diseases of Mechanics and Railway Stokers entailing Dangers on Society; *(b)* Rare Case of Wound of the left Side of the Cranium by a sharp instrument; Temporary Irritation of the left Oculo-motor and Pneumogastric Nerves; Permanent Paralysis of the Left Facial and Acoustic Nerves. 5. Professors Moos and Steinbrügge, Heidelberg: Demonstration of a Preparation of Nervous Atrophy of the first Orbital Convolution; its Physiological and Pathological Value. 6. M. Menière, Paris: *(a)* On the Treatment of Chronic Otorrhœa; *(b)* On the Means employed for the Dilatation of the Eustachian Tube; *(c)* Some Reflections on Menière's Disease. 7. Professor Hartmann, Berlin: *(a)* On Deaf-Mutism; *(b)* On the Function of the Velum Palati. 8. Signor Grazzi, Florence: Demonstration of a New Tympanotome. 9. M. E. Fourniei, Paris: Study on the Propagation of Sonorous Waves towards the Auditory Nerve; Function of the Eustachian Tube. Notices of Papers to be read will be received up to the opening of the Congress by Dr. Sapolini, Palazzo Reale, Milan.

IMITATORS OF TANNER.

THE Naples correspondent of the *Times* writes that Naples will not be behind the rest of the world. It is resolved on having its "Tanner" celebrity, and a day has been appointed for drawing up the conditions on which the feat of abstinence is to be performed. The gentleman who will contend for such honours as are to be gained (for no scientific purpose appears to be alleged as the object of the fast) is a Signor Goldschmidt, known in Naples as a singing master, as a marvellous swimmer, and as a vegetarian of some years' standing. He bets that he will fast not forty, but fifty days, thus far surpassing the "great Tanner", but he insists on being permitted to drink any quantity of water he likes. If the affair comes off, the eyes of the world will be directed on Naples. The journals report another feat of an opposite character, in which a man undertook to consume an enormous quantity of food in twenty-four hours. In three hours he had eaten one hundred and fifty sardines by way of whetting his appetite, but death stepped in and deprived him of his anticipated honours.

ANTISEPTIC SURGERY.

MM. GOSSELIN and Bergeron are still prosecuting their researches on the mode of action of the antiseptic substances employed in dressing wounds. The question has occurred to them whether the antiseptic action of carbolised alcohol, now largely employed, may not be as well attributed to the alcohol as to the carbolic acid. Having placed each of these substances separately in contact with blood, they have found that the alcoholised blood putrefied less quickly when it was in contact with carbolic acid than when it was mixed with alcohol, and still less quickly in the latter case than when it was pure. The experimenters, therefore, are of opinion that the concurrence of the two substances is useful, the carbolic acid destroying the germs, whilst the alcohol induces coagulation of the blood, and consequently its relative imputrescibility.

MR. JUSTICE STEPHEN AND THE LEADERS OF THE MEDICAL PROFESSION IN LEEDS.

DR. CLIFFORD ALLBUTT (Leeds) and Mr. W. A. Statter (Wakefield) gave evidence, at Leeds Assizes, before Mr. Justice Stephen, relative to the injuries which a young lady had received in a railway accident on the Lancashire and Yorkshire Railway. At the close of the case, says the *Yorkshire Post*, his lordship paid a very high compliment to those gentlemen, and to the leaders of the medical profession in Leeds generally. He said the medical evidence by Mr. Statter and Dr. Clifford Allbutt was a pattern of what such evidence should be. He was in the habit of hearing medical evidence in all parts of the country, and Leeds was the only town where he never heard those unseemly disputes between the legal and medical professions which occurred at other places. Here there was a certain number of gentlemen, the leaders of the medical profession in the great School of Medicine in Leeds, who had set an admirable example for many years past of truth and candour and straightforwardness in the witness-box, and he was happy to see that their example was being followed by the younger members of the profession. When a man really tried to tell the truth, the whole truth, and nothing but the truth, in plain and simple language, notwithstanding what consequences might be drawn from it, and whether he was called on the one side or the other, bullying in court and things of that kind ceased at once. Alluding to Mr. C. G. Wheelhouse, surgeon, of Leeds, who had seen the plaintiff on behalf of the company, his lordship said that although there was another eminent gentlemen present to give evidence, the defendants had not found it necessary to call him. He hoped that such a state of things might long continue in Leeds, and be imitated in other towns.

INSTRUCTIVE!

IN *Pay Hospitals and Paying Wards of the World*, an account is given of a wealthy tradesman, who advised his friend to save his pounds when he desired to consult an eminent member of the profession, by giving a shilling to the porter in the hospital out-patient room. By a similar

argument, the editor of the *Hackney Gazette* informs his readers that the Home Hospital movement is a delusion and a snare. He condemned it stock and barrel, not because skilled nursing, hygienic surroundings, and home comforts are not good things in themselves, and cheap at three guineas a week, but because "the middle-class man or woman who is able to spend £300 a year, in addition to another £100 or £200, perhaps, for professional advice, to be nursed through an injury or disorder, can obtain all these comforts and equal skill, quietly and efficiently, at a *real* (voluntary) *hospital for nothing*". Who shall say, after this, that the free hospitals are not greatly abused by the well-to-do, or that improvidence has not, at any rate, one able representative in the weekly press? *Magna est veritas et prevalebit!*

SCOTLAND.

NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

THE annual Social Science Congress will be held in Edinburgh this year. The medical profession is well represented in the Health Section. The president of the Health Section will be John Beddoe, M.D., F.R.S. The vice-presidents will be the Right Hon. Sir John McNeill; Mr. G. Blanshard, President of the Royal Scottish Society of Arts; Professor Crum-Brown, M.D.; George Buchanan, M.D., President of the Faculty of Physicians and Surgeons, Glasgow; Charles Cameron, M.P., M.D., LL.D.; Robert Farquharson, M.P., M.D.; Andrew Fergus, M.D., Glasgow; Captain Douglas Galton, C.B., F.R.S.; D. R. Haldane, M.D., President of the Royal College of Physicians, Edinburgh; Mr. F. B. Imlach, President of the Royal College of Surgeons, Edinburgh; Professor Douglas Maclagan, M.D.; Mr. W. H. Michael, Q.C., F.C.S.; Arthur Mitchell, M.D., Commissioner in Lunacy; Professor Francis Ogston, M.D., Aberdeen; Professor W. Turner, M.B.Lond., F.R.S.; and Mr. W. S. Walker, C.B., of Bowland. The Committee includes G. W. Balfour, M.D., Edinburgh; Neil Carmichael, M.D., Glasgow; Mr. J. R. Findlay; Mr. Gowans, Convener of Edinburgh Public Health Committee; Mr. J. Campbell Jones, S.S.C.; Ex-Provost William Lindsay of Leith; Angus Macdonald, M.D., Edinburgh; Professor McKendrick, Glasgow; Alexander Peddie, M.D., Edinburgh; J. B. Russell, M.D., Medical Officer of Health, Glasgow; Bailie Ure, Convener of Glasgow Health Committee; James Wallace, M.D., Greenock; Patrick Herne Watson, M.D., Edinburgh; David Wilson, M.D., Edinburgh; and Andrew Wood, M.D., D.C.L., Edinburgh. The composition of the Section being so powerfully medical this year, cannot but render the proceedings of the Health Section of the Congress of much value to the public, and of great interest to the profession.

LOCH KATRINE WATER.

THE following is the monthly report of the Loch Katrine water just issued by Professor Mills of Anderson's College. The results are returned in parts per 100,000. Total solid impurity, 2.9; organic carbon, 0.139; organic nitrogen, 0.015; ammonia, 0.000; nitric nitrogen, 0.006; total combined nitrogen, 0.021; chlorine, 0.63; hardness, 0.95. The water, when sampled, was light-brown in colour, and contained much suspended matter.

PUBLIC HEALTH IN EDINBURGH.

IN carrying out the provisions of the Public Health Act (Scotland), 1867, in relation to the prevention and mitigation of contagious diseases, the Town Council of Edinburgh has expended £1,714 during the last year, which is £361 in excess of the revenue collected for that purpose. The fee payable to practitioners in Edinburgh for notifying cases of infectious disease to the medical officer of health, and which is at the rate of 2s. 6d. per case, was paid by order some time ago. Cases reported from the dispensaries are paid at the same rate, and are credited to the dispensary. This is an excellent part of the general arrangement, as so many cases of infectious disorder occur in dispensary practice that could be benefited by the cognisance of the authorities; while the fee will not be unacceptable to medical charities, which have considerable difficulty in making both ends meet. Last week, the mortality in Edinburgh was 17 per 1,000. There were thirteen deaths due to zymotic diseases, of which four occurred in the New Town and nine in the Old Town; of these nine, there were four due to whooping-cough. In Glasgow, the mortality was 20 per 1,000—an increase of 3 on the corresponding period last year.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending August 14th, it appears that the death-rate in the eight principal towns was 20.1 per 1,000 of estimated population. This rate is 4.8 above that for the corresponding week of last year, and 0.3 above that for the previous week of the present year. The lowest mortality was recorded in Paisley, viz., 15.9 per 1,000; and the highest in Leith, viz., 24.0 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.9 per 1,000—nearly the same as the rate for last week. An increase occurred in the number of deaths from scarlet fever in Leith. Acute diseases of the chest caused seventy deaths, being three more than the number for the previous week. The mean temperature was 63.0°, being 4.7° above that of the previous week, and of the corresponding week of last year.

IRELAND.

NURSES' HOME AND TRAINING SCHOOL, BELFAST.

THE Committee are endeavouring to obtain a sum of money to cancel the debt incurred in painting and making certain improvements in the Home. A concert, to obtain the necessary funds, will be held on the 9th of September; and we trust so laudable an undertaking will receive the support it merits; and that the interests of an institution so deserving of success as the Nurses' Home, Belfast, will be promoted.

ZYMOTIC DISEASES IN PROVINCIAL TOWN DISTRICTS.

DURING the June quarter, six deaths from scarlatina were registered in Belfast, 13 in Waterford, 25 in Drogheda, and 54 in Cork, where the disease has been prevalent for the past twelve months. Measles caused 29 deaths in Belfast, 9 in Drogheda, and 4 in Queenstown. Whooping-cough prevailed in Belfast, and caused 66 deaths in that district, 23 in Londonderry, 13 in Cork, and 11 in Queenstown. In Cork 37 deaths took place from fever, in Belfast 28, Limerick 11, and Galway 7; while the only fatal case of small-pox occurred in Belfast.

CONVALESCENT HOSPITAL FOR DUBLIN.

AT a meeting of the Corporation of Dublin, held this week, a report was submitted from the Public Health Committee, containing recommendations to the effect that a convalescent home, for the reception of patients recovering from infectious diseases, should be attached to Cork Street Fever Hospital, and constitute a department of that institution; further, that the amount already contributed towards the erection of a convalescent home should be handed over to the governors of that institution; and that, when the home was provided, the Council should contribute towards its maintenance, by a capitation grant, for the support of such patients as might be admitted to the fever hospital from the city. Dr. Long, however, strongly objected to a convalescent home being attached to Cork Stree, or any other hospital, more especially as a proper site could be obtained outside the city; and, after some discussion, the report was adopted, omitting the recommendation pledging the Council to support the home in connection with Cork Street Fever Hospital.

LUNATICS IN WORKHOUSES.

AT the end of 1879 there were 154 inmates in Irish workhouses more than in the preceding year, which, under ordinary circumstances, might be considered as a large increase, were it not that the destitute condition of many parts of the country, in the autumn and winter months, compelled many lunatics to enter these institutions, in consequence of

their relatives not having the means to support them. In the 163 unions throughout the country there were 3,491 insane, and these included 1,618 lunatics proper, that is, persons at one period of their existence possessed of intellect, though in some instances not of clear mind, and more or less affected with epilepsy. Patients of this class are incapable for the most part of participating in the enjoyments of life, and almost indifferent to its comforts, aged and utterly demented, not unfrequently also infirm and bed-ridden. Hopeless, however, as such cases are, they require personal attention in regard to food, clothing, and cleanliness; and in these particulars an improvement is being gradually carried out, especially in workhouses largely tenanted by the insane, and where facilities exist for out-door recreation. The exact cost of the insane located in workhouses cannot be ascertained, but from certain data the inspectors of lunatic asylums believe that about £12 10s. would cover all the union expenses of each lunatic; while the cost of a patient in a district asylum is about £12 2s. 10d. in excess beyond that of an insane poor-house inmate; but, subtracting from the latter the annual Treasury rate in aid per head of £10 8s., it follows that the difference chargeable on the rates for a lunatic in an asylum would be £1 14s. 10d., as compared with the capitation cost of idiots, the utterly demented, and aged in workhouses. Hence, if these calculations are accurate, not only do the insane resident in district asylums benefit largely in a curative point of view, but to a far greater extent are lunatics, while offering slender hopes of recovery, and who, under a less organised protection, would be dangerous to society, humanely looked after.

HEALTH OF DUBLIN: QUARTERLY REPORT.

In the Dublin Registration District, the number of births registered during the quarter ending 3rd July last amounted to 2,708, being equal to an annual ratio of 1 in 29.0, or 34.4 in every 1,000 of the population; and the deaths to 2,868, affording an annual ratio of 1 in 27.4, or 36.5 per 1,000; omitting the deaths (90) of persons admitted into public institutions from localities outside the district, the rate was 35.3 per 1,000. The death-rate for the second quarter was excessive, as compared with the average of the previous ten years, the total deaths being 2,868, against an average of 2,173—showing an excess of 695. Deaths from zymotic diseases numbered 726, equivalent to an annual rate of 9.2 per 1,000 inhabitants, against an average of 432 for the corresponding quarters of the past ten years, equivalent to a rate of 5.5 per 1,000. Small-pox caused 135 deaths, against 61 for the preceding quarter; measles, 81; scarlatina, 159, or 100 in excess of the average; whooping-cough, 99; fever, 120; diphtheria, 15; and diarrhœa, 26. To convulsions 285 deaths were ascribed; phthisis, 295; hydrocephalus, 69; mesenteric disease, 50; and scrofula, 36. Diseases of the respiratory organs produced 455 deaths, which include 310 from bronchitis, 101 from pneumonia, and 8 from pleuritis. Apoplexy caused 24 deaths; paralysis, 64; diseases of the heart and circulatory organs, 135; cephalitis, 34; and liver-disease, 36. The mean of the mean weekly temperature for the quarter was 50.5°; and the rainfall for the thirteen weeks measured 5.499 inches.

OBSERVATION WARDS.

The Public Health Committee of the Corporation of Dublin have recommended that the several hospitals in that city be requested to provide an observation ward in each, and the suggestion has been adopted by the Town Council at a meeting held on the 23rd instant. We understand that the governors of Cork Street Fever Hospital have had this subject under their consideration already, and, in a short time, a ward of this nature will be opened there.

It transpired at the recent meeting of Middlesex magistrates, that, since the last meeting, inquests had been held by the metropolitan coroners as follows: By Mr. Humphreys, 118 inquests, at a cost of £206 3s.; Dr. Hardwicke, 107, at a cost of £207 13s. 11d.; Dr. Diplock, 48, at a cost of £94 4s.; and Mr. Bedford, 23, at a cost of £42 3s.

BARON VON HEBRA.

For a generation the celebrity of the Vienna medical school was to a large extent sustained by Rokitansky, Skoda, and Hebra, and within a comparatively short period it has had to mourn the loss of all of them. The three men were equally distinguished by rare and singular independence of character, by originality of genius, and by inexhaustible power of work—qualities which have enabled them to stamp their individuality indelibly on the records of medical science. With a selected field, which in some respects is insignificant as compared with those explored so successfully by Rokitansky and Skoda, it is all the more a testimony to the power of the man, that Hebra was able to raise the study of a speciality like skin-diseases to a position of such importance that his teaching became for many years one of the great attractions of the school. It must be ascribed more to the man than to the subject that a course of dermatology in Vienna became, in the estimation of most German and American students, almost an indispensable part of a thorough medical education.

This power to raise any one branch of medical study into a conspicuous position in a centre of medical education, is one of the attributes of genius. It is different from the power of successful research, and still more is it different from the respect commanded by industrious and careful teaching. Its possessor must be endowed by nature with the fire that kindles enthusiasm, and inspires the love of work and knowledge in all susceptible minds which are brought under his influence. Those who are conversant with the Edinburgh medical school in the days of Sir James Simpson, and with the kind of influence which he exercised on his pupils, have an example of the power of a strong mind in communicating the first impulses that give direction to many future careers. Simpson's power is, we believe, more shown in the number of able men whom he diverted into the study and practice of obstetrics, than by anything he contributed to the science of gynæcology.

No teacher of our time has exercised this power to an extent comparable to Hebra. To pass over the energetic school of dermatology which he has left behind him in Vienna, we may point to the distinguished men in Russia, Italy, and America, whose contributions to the literature of skin-diseases occupy so large a part of the contemporary medical journals. Many of these men went to Vienna with no fixed idea of taking up skin-diseases as a speciality, but, falling under the spell of Hebra, left it with the resolve to devote their lives exclusively to this one branch, and—with permission we may say it—by no means one of the most important branches of medical practice.

In analysing those qualities which constituted Hebra's power, we are struck by the combination in the same man of two faculties, which by no means necessarily go together, but whose combination in one man inevitably lead to distinction in a medical teacher and practitioner. Hebra possessed, in an eminent degree, that power of rapid perception and comparison which make a man what we call a good observer. His power of diagnosis was unrivalled; after much experience of dermatological teachers, we do not hesitate to say unapproached. So rapid was the exercise of this power, that to less expert observers its exercise sometimes seemed that of an instinct. We were present when (we think) the fifth case of that peculiar skin-disease, which he has described as *impetigo herpetiformis*, presented itself at his *clinique*. This disease, of which only very few examples have been described, has hitherto been seen only in pregnant or parturient women, and with one exception all the cases have proved fatal. The essential feature of the disease is the appearance on tender parts of the skin of vesicles, which rapidly run into pustules. These come in groups, which coalesce; crusts are formed, which leave an excoriated surface, and fatal exhaustion sets in. Amongst a number of patients who were admitted, together with the out-patient room, one pale-faced woman showed, on the uncovered part of the neck, two or three scattered pustules—even to the ordinary instructed eye, we make bold to say, presenting no very unusual characters. Hebra's attention was immediately arrested, and he at once remarked that the woman was going to have, or had just had, a child, and diagnosed the case. Further examination showed that the patient had been very recently confined, and that on the groins the characteristic eruption had already coalesced.

The diagnosis of skin-diseases is confessedly often attended with extreme difficulty (Hebra was of opinion that some students could never acquire the art), and it was undoubtedly by the skill in diagnosis which first arrested attention, and the singular clearness with which he expounded the laws on which it is based, that so many foreign visitors to Vienna were charmed. Each case which came before his class was a problem in the solution of which all were interested; and as the student became conscious of an increasing power of diagnosis, the pleasure given by the conscious possession of a new power was

accompanied by an increased capacity to understand the quick eye and unerring judgment of the master.

It is to this faculty of accurate observation that Hebra's contributions to practical medicine are due. Within the limits of this article it is not possible to do more than mention some of these. Amongst the most important of them are his demonstrations of the unity of eczema in its various papular (lichen), pustular (impetigo), and squamous (pityriasis) forms, the definite and independent nature of the comparatively rare diseases lichen ruber, pityriasis rubra, and prurigo, the sharply defined diagnostic features which distinguish lupus erythematosus, and the parasitic skin-disease which he described as eczema marginatum, the importance and possibility of distinguishing lupus vulgaris from the advanced stages of syphilis to which the term is frequently applied. The art of therapeutics owes to him a succession of experiments with drugs, by which the powerlessness of a long array of vaunted specifics for skin-diseases was demonstrated, and the sphere and mode of employment of arsenic was laid down on a firm basis.

In looking back on the achievements of Professor Hebra as a practitioner and as a teacher, we cannot help feeling that, whilst medicine owes him much for having established dermatology on a scientific basis, it has lost something by the confinement of his activity to one department of our art. His penetrating intellect, acute critical faculty, boldness in conception, and in experiment and tenacity of character, would have won for him a position as a physician or a surgeon as conspicuous and honourable as that which he acquired as a dermatologist. He was a strong man, whose influence will be perpetuated in the influence he has exercised on methods of observation and on therapeutics.

BRITISH MEDICAL ASSOCIATION: PROPOSED INVITATION TO GLASGOW.

THE *Glasgow Medical Journal* reports, in its recent number, as follows, on this subject. The question of asking the British Medical Association to hold an early meeting in Glasgow was brought up informally at a recent meeting of the Faculty of Physicians and Surgeons. The desirableness of such a meeting was generally agreed on, and the venerable President of the Faculty was especially enthusiastic in desiring that it should be at the earliest possible opportunity. In view of the meeting of the International Medical Congress in London, in 1881, it was thought that the meeting of the British Medical Association would probably be unsuccessful if held in that year; but a general opinion was expressed that, in any following year, the Association would be made very welcome.

NEW SYDENHAM SOCIETY.

THE following is the report presented to the twenty-second annual meeting of the New Sydenham Society, held this year at Cambridge. It was unanimously adopted.

The series for the year 1879 consisted of the following works:—The second and concluding volume of Waring's *Bibliotheca Therapeutica*, a second part of the Society's *Lexicon of Medical Terms*, Guttmann's *Manual of Physical Diagnosis*, and a second Fasciculus of the Society's *Atlas of Pathology*. With the latter were included essays on the present state of knowledge as to the Pathology of the Kidney by Dr. Greenfield, and as to that of the Spleen and Suprarenals by Dr. Goodhart. These papers were compiled at the request of the Council, and were freely illustrated by drawings from the microscope.

The series for the current year will probably comprise the following:—1. A third Fasciculus of the Society's *Lexicon* (already out); 2. The fifth and concluding volume of Hebra's *Treatise on Skin-Diseases*, with index to the whole (already out); 3. Koch's *Researches on the Etiology of Diseases consequent on Wound-Infection*; 4. A third Fasciculus of the Society's *Atlas of Pathology*, comprising Diseases of the Liver; 5. A fourth Fasciculus of the *Lexicon*.

The Council has adopted, for reprinting, the classical treatise of Dr. Stokes on *Diseases of the Chest*. This work, which has been always held in very high estimation by all authorities, has been for some time out of print. It will be edited for the Society, with short annotations, etc., by Dr. Hudson of Dublin. It has also been decided to edit for the Society a selection from the works of Duchenne; and Dr. Vivian Poore has, at the Council's request, undertaken the preparation of the work.

The translation of Professor Charcot's *Lectures on the Diseases of Old Age, and on certain Chronic Maladies*, has been decided on. The work has been placed in the hands of Mr. William S. Tuke.

The preparation of the Society's *Lexicon* is, in the hands of its editors, Mr. Power and Dr. Sedgwick, progressing satisfactorily, and as rapidly as the difficulties of the task permit. Three Fasciculi have been issued, and another is just ready. It is to be distinctly understood that the Fasciculi of this work are always issued as soon as ready. The Council is prepared to devote to it any portion of the year's income that may be requisite; and nothing but the onerous nature of the editors' task will be allowed to delay its publication.

The Balance Sheet for 1879 has been audited, and is, as usual, appended. [It showed receipts (including a balance of £1,082 13s. 1½d, in hand on December 31st, 1878), amounting to £3,005 8s. 9d.; and expenditure amounting to £2,720 19s. 6d., leaving a balance of £1,367 1s. 9½d.]

ASSOCIATION INTELLIGENCE.

NORTH WALES BRANCH.

THE thirtieth annual meeting will be held at the Bulkeley Arms Hotel, Beaumaris, on Tuesday, August 31st.

The "Clio" boats will be in waiting, at 11.30 A.M., on the Bangor side of the Garth Ferry, to take members to view the North Wales training-ship.

On arriving at Beaumaris, members will be driven to Baron Hill, the seat of Sir Richard William Bulkeley, Bart, who has kindly especially opened the grounds to the Association.

On the return to Beaumaris, the ruins of the castle will be visited.

The meeting will commence at 1.15 P.M. A debate upon Dyspepsia will be opened in the President's address. It is requested that the titles of other papers may be communicated to the Honorary Secretary.

Dinner at 3.30 P.M. Tickets, 10s. 6d. each, inclusive of wine.

The return steamer leaves Beaumaris at 5.45 P.M., to meet the 7 P.M. up train. J. LLOYD ROBERTS, *Honorary Secretary*.

Denbigh, August 10th, 1880.

CORRESPONDENCE.

EXCISION OF THE KNEE AND OF THE HIP.

SIR,—In the able and useful "Address in Surgery", recently delivered before the British Medical Association, by Mr. Holmes, at Cambridge, it is stated that the tendency of surgeons of late years has been to bring the operation of excision of the knee into use as one of expediency, or for the purpose of superseding the expectant treatment; and also, that there are some who use excision far more freely than Fergusson ever did.

How true this is will be forcibly seen by comparing the tables in Mr. Holmes's address with some statistics, extending over a longer period than five years, published by me in the *Lancet* on October 25th, 1879.* For instance, to take Guy's Hospital, it will be observed that nearly all the excisions of the knee have been done since the year 1874; for whilst in the five years ending 1878, according to Mr. Holmes, there have been 89 cases at that hospital, in the nine years ending 1878 (in my list the dates refer to the volume of the reports from which the numbers are taken, etc., to the preceding year's practice), there were only 88 cases. In the three years 1870, 1871, and 1873, there were but two cases altogether of excision of the knee at Guy's.

At St. Bartholomew's Hospital, there has not been the same marked increase in later years; the figures in Mr. Holmes's table show that 24 cases have undergone excision of the knee in five years, whereas mine show 42 cases in eight years.

With respect to the operation of excision of the hip, the change in practice is more uniform at these two large hospitals. Mr. Holmes shows that at St. Bartholomew's Hospital six cases, and at Guy's sixty-four cases, occurred in the five years ending 1878; whereas, my statistics showed that at St. Bartholomew's, in eight years, from 1870-78, there were only seven cases of excision of the hip; and at Guy's, in the nine years 1870-78, seventy-five cases.

The same very marked difference in the surgical treatment of morbus coxarius during the last few years has not, however, taken place in all the London hospitals; at the Middlesex Hospital, for instance, there were twenty-six excisions of the hip in the eleven years from 1867 to 1877, and these were pretty evenly distributed over the several years.

In 1874, I saw the hip excised four times by four different surgeons in twice as many days, and, in consequence, was led at that time to

* Clinical Lecture on "Disease of the Shoulder-joint, with reports of two cases in which the head of the humerus was excised", p. 606.

collect a few statistics which showed how exceptional such frequency was.* It is from this same year (1874) that the great increase in the annual number of excision operations dates.

This being so, it cannot be a matter of surprise that their exact place in surgery has not as yet been definitely ascertained, but I cannot doubt that Mr. Holmes's admirable address will assist materially in ascertaining it.—I am, sir, yours obediently, HENRY MORRIS.

2, Mansfield Street, August 24th, 1880.

THE FINANCIAL RESULTS OF THE PROVIDENT SYSTEM.

SIR,—There is one point connected with the provident movement upon which, as far as I am aware, we have no precise information, and yet it is a point which must inevitably influence the profession at large in the reception they give to the Provident Dispensary system.

It is this: Would the profession gain money or lose money by adopting the change? Medical men are so hard worked and so indifferently paid, there are, moreover, so many cases for which, for one reason or another, they never receive any payment at all, that they cannot afford to overlook the pecuniary aspect of the question. Now it is upon this point that we want definite and statistical information. The question may be put thus: Give 100 families (or 500 individuals) of the working class enrolled in a Provident Dispensary, and 100 families (or 500 individuals) of the same class not in a Provident Dispensary, which pays most to the medical profession in the course of a year, or in the course of a term of years?

In my paper upon *The Limits of Unpaid Service*, to which Sir Charles Trevelyan referred in his letter published in the JOURNAL of July 31st, I endeavoured to show that the present out-patient system had a depressing effect upon the whole scale of our professional remuneration, and I have argued that the adoption of the provident system would have the opposite effect. But I have no statistics to adduce in favour of my argument. I myself believe that, in addition to other advantages, such as getting rid of small bills and bad debts, the actual money receipts would be greater. But this is precisely the point upon which we need exact information.

To obtain this information would certainly not be easy; but, perhaps, some of our friends who reside in large towns where the Provident Dispensary system has long been at work—such as Northampton, Coventry, or Derby—could suggest some plan which would put us in possession of trustworthy statistics.—Yours faithfully,

WILLIAM FAIRLIE CLARKE.

Southborough, August 23rd, 1880.

THE UNDERGROUND RAILWAY.

SIR,—Having often been compelled to endure the miseries of the underground railway, it occurred to me that the following plan might be of service. By the aid of a centrifugal fan in the smoke-box, the gases due to combustion might easily be forced through a tank holding caustic lime or soda, thus fixing carbonic acid and the sulphur gases, leaving merely the carbonic oxide, which gas could readily be burnt into carbonic acid on its exit if desirable. By another method, a separate carriage or chamber open at each end, and so constructed as to embrace as large a sectional area of the tunnel as possible, could be attached to each train; this chamber, or "chemical lung", fitted with trays of caustic lime, kept moist, or charcoal bars saturated with solution of caustic soda, running from an upper to a lower tank, and thence pumped back again, would answer the same purpose as far as carbonic acid and sulphur gases, as well from the engines as the passengers, are concerned, but it leaves untouched the carbonic oxide. For sick rooms and small areas, I propose saturating a properly constructed punkah, with solution of caustic soda; while, for large buildings, such as theatres, one or more intakes at the roof, connected with a centrifugal fan in the basement, which shall drive the hot foul air through the chemical lung, and then allow the purified air to escape at the lower part of the building, will flood the whole area with air freed from carbonic acid and sulphur gases, and enable the air so purified to be cooled, if need be, it being also easy to add any amount of oxygen necessary to compensate for the destruction of this agent. I claim economy, facility of application, and efficiency as the main recommendations of my scheme.—Yours truly, RICHARD NEALE, M.D.

Vide Medical Times and Gazette, June 6th, 1874, page 614.

THE will of Dr. Stephen Henry Ward, of 28, Finsbury Circus, has been proved, and duty paid on £5,000.

BEQUESTS.—The North-Eastern Hospital for Children has received £1,600 under the will of Mr. Thomas Hall, and £100 from Lady Bentinck.

MILITARY AND NAVAL MEDICAL SERVICES.

SURGEON-MAJOR HESSIAN, Army Medical Department, has been appointed a member of the Aldershot Local Board of Health.

ARMY MEDICAL SERVICE.—The following thirty-three candidates, surgeons on probation at the Medical School at Netley, recently passed the final examination in London.

	Marks.
1. G. H. Sylvester	1925
2. W. J. Macnamara	1900
3. D. O'Sullivan	1725
4. F. O. Milward	1710
5. P. B. Conolly	1660
6. C. R. Woods	1600
7. H. F. Ballington	1585
8. W. C. Milward	1575
9. W. H. Bracken	1565
10. M. F. Macnamara	1490
11. J. O. Sondiford	1480
12. R. L. Love	1455
13. H. W. Murray	1455
14. M. W. Kerin	1420
15. A. Peterkin	1420
16. J. Harran	1405
17. W. S. Lukey	1395
18. E. L. Maunsell	1375
19. J. S. Langdon	1350
20. W. F. Heffernan	1345
21. R. W. E. Nicholson	1345
22. J. G. W. Crofts	1330
23. W. Dugdale	1325
24. D. L. Irvine	1325
25. J. Ronayne	1320
26. C. H. Clabburn	1290
27. E. R. Cree	1275
28. M. O'C. Drury	1260
29. W. Deane-Freeman	1245
30. J. H. Nicholas	1200
31. D. F. Franklin	1175
32. J. L. Curtin	1160
33. H. Saunders	1155

ARMY MEDICAL SERVICE.—The following is a list of candidates who were successful for appointment as Surgeons in Her Majesty's British Medical Service, at the Competitive Examination in London on August 9th, 1880.

	Marks.
1. S. A. Crick	2510
2. J. R. Dodd	2240
3. A. J. Struthers	2230
4. G. E. Twiss	2230
5. R. F. Adams	2225
6. C. G. D. Masse	2135
7. A. B. Cottell	2075
8. T. Archer	2035
9. S. G. Hamilton	2035
10. H. J. R. Moberly	1990
11. A. P. Hart	1955
12. H. J. Barnes	1930
13. R. W. S. Sawyer	1930
14. W. G. A. Bedford	1920
15. R. Jenning	1910
16. S. C. B. Robinson	1880
17. H. S. Parker	1840
18. T. F. W. Fogarty	1825
19. R. W. Ford	1825
20. G. J. Coutts	1820
21. A. Sharpe	1800
22. C. L. Young	1800
23. C. Reid	1790
24. W. J. Baker	1770
25. A. T. Sheggett	1760
26. R. R. K. Elmes	1715
27. H. K. Allport	1700
28. E. Batt	1680
29. S. Townsend	1660
30. T. R. P. Woodhouse	1675
31. J. Gibson	1650
32. J. H. A. Rhodes	1625
33. A. Hickman	1620
34. T. C. Nugent	1620
35. G. S. Lewis	1610
36. L. W. Swabey	1610
37. R. Haselden	1605
38. R. E. Ricketts-Morse	1580
39. W. J. B. Lyons	1580
40. W. Rowney	1530
41. T. J. R. Lucas	1565
42. C. J. Addison	1560
43. A. G. Kay	1560
44. W. W. Pope	1560
45. R. Porter	1560
46. R. C. K. Laffar	1555
47. C. A. P. Mitchell	1555
48. G. J. Coates	1550
49. G. W. H. Cook	1545
50. T. B. A. Tuckey	1535
51. F. A. Harris	1515
52. C. B. Lewis	1500
53. T. H. Parke	1450
54. F. A. B. Daly	1445
55. A. S. Rose	1445
56. D. L. Porter	1430
57. J. Battersby	1425
58. J. Maconachie	1415
59. A. H. Morgan	1405
60. C. H. Dixon	1400
61. T. Moynihan	1375
62. M. W. O'Keeffe	1370
63. T. J. O'Donnell	1360
64. J. Osburne	1355
65. H. E. R. Wolrige	1355
66. R. P. Hetherington	1315
67. R. C. Johnstone	1305
68. T. A. Dixon	1270
69. W. C. T. Poole	1250

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the Competitive Examination held at Burlington House on August 9th, 1880. Thirty-six candidates competed for twenty-six appointments; thirty-three were reported qualified.

	Marks.
1. G. M. J. Giles	2385
2. J. T. Vangeyzel	2250
3. A. R. W. Sedgefield	2240
4. A. F. Ferguson	2070
5. S. Hassan	1970
6. H. C. Banerji	1945
7. E. L. H. Dobson	1930
8. H. N. V. Harington	1885
9. W. Deane	1845
10. R. J. Polden	1840
11. F. S. Peck	1830
12. S. C. Nandi	1820
13. K. H. Mistri	1815
14. J. Shearer	1795
15. A. H. Pierson	1790
16. G. M. E. McKee	1780
17. H. M. Hakim	1765
18. K. C. Sanjana	1725
19. M. J. Kekawala	1715
20. G. E. Fooks	1700
21. P. De Conceiçao	1685
22. F. J. Doyle	1675
23. J. A. Burton	1715
24. M. P. Kharegat	1690
25. P. H. W. Boon	1680
26. J. W. T. Anderson	1460

THE King of Italy has conferred on Dr. Julius Althaus the brevet and insignia of a Knight of the order of the Crown of Italy.

THE East London Hospital for Children has received £1,600 under a Chancery suit of Walton *v.* Paine.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—First M.B. Examination: 1880. Examination for Honours.—Anatomy.

First Class.

Cooper, George Frederick (Gold Medal), St. Thomas's Hospital.

Third Class.

Evans, Charles Silvester, St. Thomas's Hospital.
Moline, Paul Frank, University College.
Martin, Sidney Harris Cox, B.Sc., University College.
Horrocks, William Heaton, Owens College.
Norvill, Frederic Harvey, King's College.

Physiology and Histology.

First Class.

Price, John Alfred Parry (Exhibition and Gold Medal), Guy's Hospital.
Tunzelmann, E. W. von (Gold Medal), University College.
Halliburton, William Dobinson, B.Sc., University College.

Second Class.

Horrocks, William Heaton, Owens College.
Booth, Edward Hargrave, Guy's Hospital.
Martin, Sidney Harris Cox, B.Sc., University College.

Third Class.

Collier, Joseph, Owens College.
Evans, Charles Silvester, St. Thomas's Hospital.

Chemistry.

First Class.

Price, John Alfred Parry (Exhibition and Gold Medal), Guy's Hospital.
Overend, Walker, B.Sc., St. Bartholomew's Hospital.

Second Class.

Stephens, Lockhart Edward Walker, Guy's Hospital.

Third Class.

Spicer, Robert Henry Scanes, B.Sc., St. Mary's and Guy's Hospitals.

Materia Medica and Pharmaceutical Chemistry.

First Class.

Halliburton, William D., B.Sc. (Exhibition and Gold Medal), University Coll.

Second Class.

Brooks, Walter Tyrrell, King's College.
Overend, Walker, B.Sc., St. Bartholomew's Hospital.
Wilkinson, William Camac, B.A.Sydney, University College.

Third Class.

Beverley, John Metcalfe, Owens College.
Price, John Alfred Parry, Guy's Hospital.
Faulkner, Joseph, St. Bartholomew's Hospital.
Adams, William Goode, University College.
Berry, James, St. Bartholomew's Hospital.

Obtained the number of marks qualifying for a medal.
N.B.—The bracket denotes equality of merit.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 19th, 1880.

Cooper, Walter, George Street, Croydon.
Davis, William Henry, Newcastle-on-Tyne.
Divecha, Kirkhasroo R., Bombay.
Lunn, Ernest Craven, Hull.
Reynolds, John Swatman, Upper Norwood.
Symons, George Francis, Stockwell Hospital.
Watkins, Christopher James, Mornington Road.

The following gentlemen also on the same day passed their primary professional examination.

Douty, Joel Harrington, Middlesex Hospital.
Gale, Arthur Knight, London Hospital.
Little, Henry, St. Bartholomew's Hospital.
Lynch, John William, London Hospital.
McLaughlin, Edward H., St. Thomas's Hospital.
Pickthorn, Thomas Russell, St. George's Hospital.
Pigott, Peter, Guy's Hospital.
Wigan, Charles Arthur, Charing Cross Hospital.

UNIVERSITY OF GLASGOW.—The following degrees in medicine were conferred by the University on July 29th, 1880.

Doctors of Medicine (M.D.), with the titles of their Theses.—James Bryce, M.B., Scotland: That Mankind originated as a common family—most probably on a continent in the Indian Ocean; certainly within the Tropics. James Denniston, M.B., Scotland: The Medical and Surgical History of the latter part of the late campaign in Armenia. William G. Dun, M.B., Scotland: Malignant Pustule or Anthrax; its Symptoms, Pathology, and Treatment. George Elder, M.B., Ireland: Gynæcological Notes. Samson Gemmell, M.B., Scotland: Arterial Tension in Bright's Disease, from a clinical point of view. Thomas Hunt, M.B., Scotland: Is not Prevention better than Cure? James Hutchinson, M.B., Scotland: A Sporadic Case of Enteric Fever occurring in a remote district in the Western Highlands. James Arthur Jones, M.B., Wales: Treatment of Corneal Affections. Thomas Young, M.B., Scotland: Cancer of Liver, with doubtful Symptoms during Life. (* Commended for thesis.)

Bachelors of Medicine and Masters in Surgery (M.B. and C.M.)—Alexander Adam, Australia. Matt. S. Anderson, M.A., Scotland. David Blyth, Scotland. John Bond, Scotland. James D. Boyd, Australia. John T. Brown, Scotland. Walter Scott Campbell, Scotland. William A. Campbell, Scotland. Thomas Davidson, Scotland. Geo. H. J. Dinsmore, England. William Fraser, Scotland. Thomas P. Gemmell, Scotland. Robert Gilbert, Scotland. Robert M. Gilchrist, Scotland. David Grant, Scotland. Thomas W. Gregson, England. Pyari Mohan Gupta, India. Andrew A. Hogarth, M.A., Scotland. David W. Inglis, M.A., Scotland. Alexander Johnston, Scotland. William Rees Jones, Wales. James Kaye, Scotland. John G. Douglas Kerr, Australia. Alexander Kilpatrick, Scotland. Robert Kirkland, Scotland. David H. Kyle, Australia. William A. G. Laing, England. Alex. N. Ledingham, Scotland. William T. Liddle, Scotland. James K. Love, Scotland. John T. Macaulay, Scotland. Archibald M'Crorie, Scotland. Hugh M'Dougall, Scotland. Alexander Macindoe, Scotland. Malcolm Mackintosh, Scotland. Alexander D. Mackay, Scotland. Hugh Mackay, Scotland. John M'Kenzie, Scotland. Quintin M'Lennan, Scotland. Donald M'Leod, Scotland. Alexander Martin, Scotland. Robert Miller, Scotland. Donald Morison, Scotland. Alex. Morton, M.A., Scotland. James F. Muir, Scotland. E. G. Ochiltree, Australia. James Picken, Scotland. John Reid, Scotland. John Ritchie, Scotland. George Scott, England. John L. Speirs, Scotland. John Stevenson, Scotland. Alexander Stewart, Scotland. Thomas Stewart, Scotland. Thomas F. Tannahill, Scotland. Robert G. Taylor, Cape of Good Hope. John P. Topping, Scotland. James A. Wilson, Scotland. Allen M'Culloch, Scotland. J. M'Gregor-Robertson, M.A., Scotland. John D. M'Vean, Scotland. William F. Parmer, India. John Lindsay Steven, Scotland. John M. Walker, Scotland.

Bachelors of Medicine (M.B.)—William Babtie, Scotland. Wm. H. J. Brown, Scotland. Niven Gordon Cluckie, Scotland. Alexander Macintyre, Scotland. Benjamin A. Palmer, Ireland. Charles F. Pollock, Scotland. Guthrie Rankin, Scotland. Ridley Turnbull, England.

The following gentlemen were named as entitled to honours, to high commendation, and to commendation, on account of distinguished merit at the various examinations for the degrees of M.B. and C.M.

I.—*Honours.*—A. A. Hogarth, M.A.; J. M'G. Robertson, M.A.; J. L. Steven. II. *High Commendation.* D. W. Inglis, M.A.; C. F. Pollock. III. *Commendation.*—M. S. Anderson, M.A.; D. Blyth; W. Fraser; R. Gilbert; D. Grant; J. K. Love; H. M'Dougall; M. Mackintosh; H. Mackay; A. Martin; A. Morton, M.A.; B. A. Palmer; G. Rankin.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ABINGDON UNION—Medical Officer and Public Vaccinator to No. 3 District. Salary, £130 per annum. Applications, with testimonials, on or before September 11th.

BRIDGWATER INFIRMARY—Dispenser. Salary, £50 per annum, with board, lodging, and washing. Applications, etc., to the Honorary Secretary.

BRIGHTON AND HOVE LYING-IN INSTITUTION—House-Surgeon. Salary, £120 per annum, with furnished apartments, coals, gas, etc. Applications, with testimonials, to the Secretary on or before August 31st.

CAMBRIDGESHIRE COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and attendance. Applications, etc., on or before September 27th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, before October 10th.

CHILDREN'S HOSPITAL, Birmingham—Assistant Resident Medical Officer. Salary, £40 per annum, with board, washing, etc. Applications not later than September 1st.

DEVON COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £150 per annum, with board and lodging. Applications, with testimonials, on or before September 9th.

DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich—Dispenser. Salary, £40 per annum. Applications, etc., on or before September 4th.

FLINTSHIRE DISPENSARY—House-Surgeon. Salary, £100 per annum. Applications, with testimonials, to the Secretary on or before September 7th.

FULHAM UNION—Two Medical Officers for Third and Fifth Districts. Salary, £60 per annum each; also, Vaccination Officer to Second District. Applications, etc., before September 1st.

HARTLEPOOL HOSPITAL AND DISPENSARY—House-Surgeon. Salary, £80 per annum, increasing £10 yearly to £100, with board, lodging, and washing. Applications, etc., on or before August 31st.

HUDDERSFIELD INFIRMARY—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, with testimonials, not later than September 1st.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Demonstratorship on Anatomy. Applications on or before August 28th.

MANCHESTER ROYAL INFIRMARY—Resident Surgical Officer. Salary, £150 per annum, with board and residence. Applications not later than September 1st.

NEW ROSS UNION—Medical Officer for Fethard Dispensary District. Salary, £100 per annum, exclusive of sanitary, registration, and vaccination fees. Election on September 7th.

NEWRY UNION—Medical Officer for Mountnorris Dispensary District. Salary, £120 per annum, with £15 per annum as Medical Officer of Health, registration and vaccination fees. Election on September 6th.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with apartments, attendance, coals, gas, etc. Applications, with testimonials, to the Secretary on or before September 1st.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN—Registrar. Applications, with testimonials, not later than September 1st.

PARISH OF ISLINGTON—Resident Medical Officer to the Workhouse and Infirmary. Salary, £200 per annum, with furnished residence, coals, and gas; also, Resident Assistant Medical Officer and Dispenser of Medicine to Workhouse and Infirmary. Salary, £100 per annum, with board, apartments, and washing. Applications, etc., on or before September 1st.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—House-Surgeon. Salary, £120 per annum, with board, washing, and lodging. Applications, with testimonials, on or before September 1st.

RIPON DISPENSARY—Resident House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, etc. Applications, with testimonials, to the Honorary Secretaries.

ROYAL INFIRMARY, MANCHESTER—Resident Surgical Officer. Salary, £150 per annum, with board, and residence. Applications, with testimonials, on or before September 1st.

UNIVERSITY COLLEGE, London—Surgical Registrar. Applications, with testimonials, to the Secretary, on or before August 30th.

WELLINGTON UNION—Medical Officer to the 1st and 2nd Districts and Workhouse.

WOLVERHAMPTON UNION—Medical Officer for the Wednesfield District. Salary, £80 per annum. Applications, etc., on or before September 2nd.

YORK FRIENDLY MEDICAL ASSOCIATION—Assistant Medical Officer. Salary, £120 per annum. Applications, with testimonials, to the Secretary, before September 14th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BARNES, Henry, M.D., appointed Consulting Physician to the Cumberland and Westmorland Convalescent Institution at Silloth.

BROWN, W. Perrin, L.R.C.P.Ed., appointed House-Physician to the Bradford Infirmary, *vice* Thomas Wilmot, L.R.C.P., resigned.

LEONARDS, Walter, M.A., M.D., appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children, *vice* A. A. Bowlby, M.R.C.S.Eng., resigned.

FOSTER, William, M.R.C.S.Eng., appointed Dispensary Surgeon to the Bradford Infirmary, *vice* W. P. Brown, L.R.C.P.Ed., resigned.

PARKER, Wm. Rushton, B.A., M.B. Cantab., appointed Resident Medical Officer to the Fever Hospital, Netherfield Road, Liverpool.

WILMOT, Thomas, L.R.C.P., appointed House-Surgeon to the Bradford Infirmary, *vice* W. L. Roberts, M.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

JULER.—On August 22nd, at 77, Wimpole Street, Cavendish Square, W., the wife of Henry Juler, Esq., F.R.C.S., of a son.

PEACOCK.—On August 24th, at Forston House, near Dorchester, the wife of Henry George Peacock, L.R.C.P., M.R.C.S., Assistant Medical Officer Dorset County Asylum, of a son.

MARRIAGE.

ROBERTSON—MACKIE.—At Fyvie, Aberdeenshire, on the 18th instant, by the Rev. A. J. Milne, LL.D., Minister of the Parish, assisted by the Rev. Jas. Brebner, M.A., Forgue, George J. Robertson, M.B., Oldham, to Lizzie, elder daughter of William Mackie, Esq., Fyvie.

DEATH.

HILL.—At Tunbridge Wells, on the 19th instant, George Hill, M.D., formerly of the Elms, Hooton, Cheshire, youngest son of the late Robert Hill, Esq., solicitor, Stirling.

AN inquest was held this week on the body of Mr. H. J. Heywood, a surgeon in Pendleton, near Manchester, where he had an extensive practice. Mr. Heywood had for years suffered from indigestion, and had been in the habit of taking laudanum to relieve the pain and induce sleep. At about four on Wednesday morning, he raised an alarm in his bedroom, and it was found that he had inadvertently taken prussic acid for laudanum. He died shortly afterwards. The jury returned a verdict of death by misadventure.

DR. ROBERT KOCH, hitherto practising as a district medical officer in Woolstain, whose remarkable studies and researches in connection with infectious diseases and their relation to bacteria organisms have won for him European reputation, has been summoned to Berlin as a member of the Imperial Sanitary Council, with the title of Royal Councillor of State. This well deserved honour will, no doubt, afford to Dr. Koch the opportunity of continuing his valuable labours with greater facility and continuity.

PUBLIC HEALTH.—During last week, being the thirty-third week of this year, 4,014 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 24 deaths annually in every 1,000 persons living. The annual death-rate was 17 in Edinburgh, 20 in Glasgow, and 38 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Brighton, 16; Bristol, 16; Wolverhampton, 20; London, 21; Portsmouth, 22; Oldham, 22; Norwich, 23; Bradford, 24; Birmingham, 24; Newcastle-upon-Tyne, 24; Leeds, 26; Nottingham, 29; Sheffield, 29; Liverpool, 30; Sunderland, 30; Manchester, 31; Salford, 33; Leicester, 35; Plymouth, 35; and the highest rate 40 in Hull. The annual death-rate from the seven principal zymotic diseases averaged 7.9 per 1,000 in the twenty towns, and ranged from 2.9 and 3.9 in Bristol and Brighton, to 15.0 and 24.1 in Hull and Leicester. In London, 1,492 deaths were registered, which were 72 below the average, and gave an annual death-rate of 21.3. The 1,492 deaths included 4 from small-pox, 23 from measles, 49 from scarlet fever, 7 from diphtheria, 24 from whooping-cough, 20 from different forms of fever, and 265 from diarrhœa—being altogether 392 zymotic deaths, which were 46 below the average, and were equal to an annual rate of 5.6 per 1,000. The deaths referred to lung diseases, which had been 200, 175, and 152 in the three previous weeks, were 167 last week, and exceeded the corrected weekly average by 26; 93 were attributed to bronchitis, and 48 to pneumonia. Different forms of violence caused 63 deaths; 51 were the result of negligence or accident, including 17 from fractures and contusions, 5 from burns and scalds, 16 from drowning, and 10 of infants under one year of age from suffocation. —At Greenwich, the mean temperature of the air was 63.8°, and 2.0° above the average. The general direction of the wind was north-easterly, and the horizontal movement of the air averaged 11.5 miles per hour, which was 2.0 above the average. No rain was measured during the week. The duration of registered bright sunshine in the week was equal to 18 per cent. of its possible duration. No ozone was recorded on any day of the week except Saturday, when the amount was small.

THE VALUE OF TIMELY PRECAUTIONS.—The circumstances relating to the questions recently asked in Parliament by Mr. Alderman MacArthur are of an interesting and remarkable character. It appears that on May 14th, 1879, the *Leonidas*, with a cargo of four hundred and eighty coolies, arrived off the port of Nasova. Mr. Thurston, the Colonial Secretary, at once reported to the Administrator, Mr. Des Vœux, that there had been an outbreak both of cholera and of small-pox on board the ship; and that, although the former malady had disappeared, three cases of small-pox had occurred only a few days previously. The authorities were painfully reminded of the fact that the introduction of measles into the islands, under similar circumstances, had involved the destruction of many thousands of lives. Mr. Des Vœux adopted the most stringent measures to prevent contact between the vessel and the shore. He ordered the *Leonidas* to be brought inside the barrier reef, and anchored to leeward of the town. He then stationed a schooner and several boats in such positions as to prevent all unauthorised communication with the ship; and guards were also provided with rifles for the purpose of firing on any person who attempted to break the quarantine. Ultimately, the coolies and the crew were landed on a small island, where accommodation was provided for them in a large number of native houses, many of which were hurriedly built for the purpose. Here they remained till August 9th, when they were released from quarantine. The natives were greatly alarmed at the prospect of being decimated by small-pox, and advantage therefore was wisely taken of the opportunity to induce many thousands of them to be vaccinated. The result of these prudent and well-considered measures—carried out with so much tenacity of purpose—was that infection was wholly confined to the ship, and that small-pox is still practically unknown in Fiji. Mr. Des Vœux, who acted as Administrator during the anxious period to which we have referred, has been appointed Governor of Fiji.

DEATHS FROM DIARRHŒA.—The deaths referred to diarrhœa in the twenty largest English towns, which had steadily increased in the nine preceding weeks from 51 to 807, further rose last week to 864, and were equal to an annual rate of 6.0 per 1,000. The diarrhœa death-rate was equal to 3.8 in London, and to 8.2 in the nineteen provincial towns, among which it ranged from 1.7 and 3.4 in Bristol and Brighton, to 12.9 and 20.1 in Hull and Leicester. The deaths referred to diarrhœa in London, which had been 367 and 348 in the two preceding weeks, further declined to 265 last week, and were 4 below the corrected average in the corresponding week of the last ten years. The 265 fatal cases included 194 of infants under one year of age, 55 of children aged between one and five years, and 12 of persons aged upwards of sixty years. The fatality of diarrhœa again showed the largest proportional excess in the South group of registration districts, especially in Southwark, Battersea, and Camberwell. The deaths of 10 infants and young children, and of 3 adults, were referred to simple cholera or to choleraic diarrhœa.

SUBCUTANEOUS INJECTION OF ETHER IN SCIATICA.—Dr. Comegys recommends hypodermic injection of sulphuric ether for the treatment of sciatica (*L'Union Médicale*, August 5th). He cites two cases, one in detail, which he has cured by this plan. Three drops of ether are injected at intervals of twelve hours. The injection need not be a deep one; and, though it causes a momentary sharp pain, it does not bring on any consecutive unpleasant effects. Dr. Comegys is inclined to think that the same injection might be successful in the case of tic douloureux, for which Dr. Marino recommends hypodermic injection of ergotine.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M. Westminster, 2 P.M. Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M. West London, 3 P.M.—St. Mark's, 3 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M. Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30, Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

W. H. C. (Spalding).—The object is one with which we sympathise; but the pages of this JOURNAL do not appear to us to be a fitting place for such an appeal, which has no exclusively medical ground. Already we have to make more than enough of appeals for exclusively medical objects. As citizens, medical men need other papers in which such appeals may properly be circulated. There would be no end to like applications if we did not draw a line at subjects relating especially to medical duties and interests.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE EPSOM COLLEGE PROSECUTION.

SIR,—I beg to forward you a list of contributions I have received up to this time for the "O'Brien Jones Fund," and am writing to £185 4s. This sum is for short of the amount of Mr. Jones's expenses in the late trial (viz., £300); but the warm sympathy expressed in almost all the letters which accompanied the remittances justify a confident belief that further publicity alone is necessary to ensure Mr. Jones being entirely indemnified for the pecuniary loss he has sustained.—I am, sir, yours obediently,

ED. HART VINEN, M.D., Treasurer.

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DEPRAVED TASTE IN ANIMALS.

THE subject of a depraved taste in animals is an interesting one, which has not been studied as much perhaps as it might. In human beings, it would seem to depend on ill-health of either body or mind; but in animals it would seem as if it might be present, and the animals enjoy good health. One remarkable instance in an herbivorous animal is vouched for by a writer in *Nature*. It occurred in a sheep that had been shipped on board one of the P. and O. steamers to help to supply the kitchen on board, but while fattening it developed an inordinate taste for tobacco, which it would eat in any quantity that was given to it. It did not much care for cigars, and altogether objected to burnt ends; but it would greedily devour the half-chewed quid of a sailor or a handful of roll tobacco. While chewing, there was apparently no undue flow of saliva, and its taste was so peculiar that most of the passengers on board amused themselves by feeding it, to see for themselves if it were really so. As a consequence, though in fair condition, the cook was afraid to kill the sheep, believing that the mutton would have a flavour of tobacco. Another very remarkable case has just been communicated to us by Mr. Francis Goodlake: this time a flesh-eating animal in the shape of a kitten, about five months old, who shows a passionate fondness for salads. It eats of sliced cucumber dressed with vinegar, even when hot with cayenne pepper. After a little fencing, it has eaten a piece of boiled beef with mustard. Its mother was at least once seen to eat a slice of cucumber, which had salt, pepper, and vinegar on it. The kitten is apparently in good health, and its extraordinary taste is not easily accounted for. Even supposing it once got a feed of salmon *mayonnaise*, why should it now select to prefer the dressing to the fish? [Why indeed.—ED.]

THE TREATMENT OF SEA-SICKNESS: ITS RELATION TO MEDICAL ETIQUETTE ON SHIPBOARD.

SIR,—A recent issue of your JOURNAL contains a letter from the surgeon of the steamer *Germanic*, that raises questions of a scientific, ethical, and personal character, to which I cheerfully reply. Two points are raised in your correspondent's letter: the treatment of sea-sickness as described in my recently published work on that subject; and the method in which I conducted my experiment on the steamer *Germanic*.

The treatment of sea-sickness, as pointed out in my work, is largely of a preventive nature, and must be begun and, to a certain degree, carried out before sailing. This treatment consists of large doses of bromide of sodium, thirty to sixty grains three or more times daily, until mild bromisation is produced; that is, symptoms of drowsiness and some weakness in the lower limbs. Those who judiciously carry out and maintain the preventive treatment are rarely much sea-sick, even in rough weather, and usually not sea-sick at all.

I am endeavouring, as best I can, to bring about the day when all who go to sea shall take this treatment from their family physicians, who know their temperament and know how they bear remedies. A number of passengers on board the *Germanic* had received this treatment from their physicians, and none of them were sea-sick. The voyage was, it is true, a very smooth one; but at least twenty persons, many of them strangers to me, were sufficiently sick to come to me to ask me to help them; and two or three who took no treatment were sick the entire voyage.

My treatment during sea-sickness, where the preventive treatment has not been used, consists in mild atropisation with belladonna or atropia, pushed to a considerable dryness of the throat, in combination with ipecacuanha, in doses of one-five-hundredth of a grain, and a very small quantity of bromide of sodium and capsicum. After the stomach is settled by this combination, which is usually in half an hour or so, I use the bromide of sodium in large doses, until all symptoms of sea-sickness disappear. I also use the citrate of caffeine, in three grain doses, for the headache symptoms of sea-sickness. Whether the treatment needs to be kept up during the voyage, in whole or part, depends on the weather and the individual.

During the present season, scores of persons, to my personal knowledge, and probably hundreds, have had their sea-sickness greatly relieved or prevented by this plan of treatment, which is now being carried out all over the world. Since landing in England, I have received a number of reports of success.

From the above, it would be clear that physicians on shore must have much to do in carrying out the preventive treatment; the battle with sea-sickness must be fought before we go to sea. Thus far, only the minority have taken the preventive treatment on shore, and on all the steamers there are more or less passengers sick, even in mild weather. These experiments have been made by myself, both on English and American steamers, whether provided with surgeons or not.

In some cases, I have had the cheerful co-operation of surgeons; in no other case, so far as I know, has there been any opposition to these experiments, whether made by myself or others. This experiment, by the way, has always been made without any fee or reward, except the satisfaction of preventing or relieving a disease which the world has always regarded outside of science. On the land or on the sea, the laws of medical etiquette are based on the golden rule. By this rule, I have been guided in all my experiments in the treatment of sea-sickness. I have myself been a surgeon on a steamer in the late war; and if at any time any physician, however obscure, had wished to experiment with my cases of sea-sickness, I would have gratefully placed the whole ship and store of drugs at his disposal, even though he had failed in every case. I had supposed—and I cannot be entirely wrong in this supposition—that surgeons dislike to deal in cases of sea-sickness; and it is said that the majority of sufferers have so little faith in medicine they do not think of asking the surgeon's aid. On the *Germanic*, I was experimenting, not practising, seeking to answer some minor questions relating to dosage and combination, but I would not knowingly have made one of those experiments on any individual who was, or wished to be, under the surgeon's care.

The subject is not a contest between Americans and Europeans, but is one that concerns all nations alike; a gentleman is a gentleman in all languages; and the golden rule out of which all our ethics are evolutions encompasses the globe. My relations with the surgeon of the *Germanic* were, in all other respects, of so agreeable a character that I am sure that free conference on the subject would have enabled us to work together in harmony. I sent the request for a supply of medicine before sailing to the clerk of whom I purchased my tickets, the only person whom I knew, and I assumed that he would attend to the matter through the regular channels, when the *Germanic* came into port; there was no thought or intention of any disrespect to the medical officers. If the surgeon had informed me of his feelings in regard to that matter when I came on board, there would, I am sure, have been no subsequent difficulty. To have experimented as extensively as I did outside of the circle of my own friends was, I think, under the circumstances, unwise. The annoyance at last became so great from the requests for advice, medicines, and even for copies of my book, that I was forced to decline.

The subject is one of commanding interest, for the twofold reason that successful treatment in sea-sickness is destined to increase manyfold international intercourse, and that a just observance of the golden rule is essential to the very existence of our profession; and I therefore desire to express my thanks to Dr. Fourness-Brice for the frankness, promptness, and courtesy with which he has called attention to this matter.—I am, etc.,

GEORGE M. BEARD.

Cambridge, August 16th, 1880.

S. N. P.—The husband, being the nearest relative, is the person responsible. No one can interfere unless money questions be involved, when the Lord Chancellor can be applied to.

LODGE OF ODDFELLOWS.

SIR,—Would you kindly give me your advice in your next week's issue upon the following subject? I have been requested by the members of the lodge of Oddfellows here to say upon what terms I would undertake the duties of surgeon, etc., to the members of the order, together with their wives (not including confinements). I should feel very much obliged by being informed what is the average remuneration per head throughout the United Kingdom. The members now pay me 4s. 4d. *per annum* each member; and as I have no idea what sum their wives ought to pay, I seek your advice. Mine is a country practice, and I am expected to visit patients and supply medicines three miles from my residence.—I am, sir, yours sincerely,

Williton, near Taunton, Aug. 17th, 1880. W. H. MIDDLETON, M.R.C.S.E.

P.S.—The society numbers about one hundred and thirty members, scarcely half being married.

A CHEQUE for £1 1s. has been received by the Editor as a contribution towards the expenses of Mr. Buncombe, who was recently unjustly exposed to a charge of manslaughter. Though the committal has been quashed, Mr. Buncombe has been put to expenses.

A QUESTION OF DIAGNOSIS: TRAUMATIC NEURALGIA (?).

SIR,—Would some of your numerous readers kindly give me their advice under the following circumstances? In the year 1857, whilst residing in India as a civil medical practitioner, I was temporarily attached to the 13th Native Infantry, and served with them during the siege of Lucknow. On one occasion, whilst engaged attending an officer who had been mortally wounded in a sortie, I was struck on the right clavicle by the fragment of a shell. The shock was pretty severe, but passed off in a short time; and Dr. Boyd, of Her Majesty's 32nd Regiment, examined the part at once, and was unable to detect either fracture or dislocation of the bone, or the slightest abrasion or discoloration of the integuments. I resumed duty next day, perfectly well. In 1877 (that is twenty years after the occurrence), I was suddenly seized with a pain in the humeral end of the right clavicle, extending in front as far as the nipple of the breast, and in the back along the scapula to its inferior angle; and since that time to the present I have never been entirely free from it. Having consulted some of the most eminent men of the profession, and tried every means to obtain permanent relief without success, I now, as a *dernier ressort*, with your kind permission, place my case in the columns of the BRITISH MEDICAL JOURNAL.—I am, sir, your obedient servant,

PATRICK BRERETON, Retired Medical Practitioner, Indian Civil Service.

P.S.—My own opinion is that the affection is neuralgic; but I wish to observe that my brother, the late Major Brereton of the Royal Bengal Lancers, was a great sufferer from gout for many years previous to his death. P. B.

10, Charlott's Quay, Limerick, August 11th, 1880.

COMMUNICATIONS, LETTERS, etc., have been received from:—

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REMARKS
ON
MICRO-ORGANISMS: THEIR RELATION TO DISEASE.*

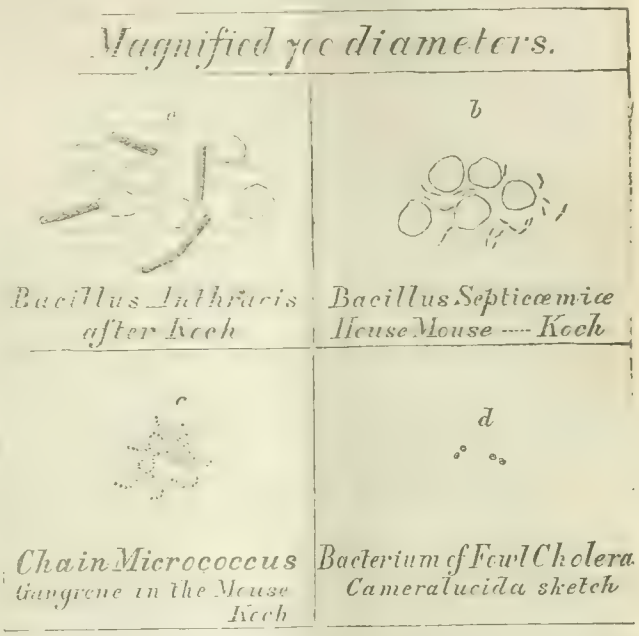
BY JOSEPH LISTER, F.R.S.,
Professor of Clinical Surgery in King's College, London.

THE relation of micro-organisms to disease is a subject of vast extent and importance. If we compare the present state of knowledge regarding it with that of twenty years ago, we are astonished at the progress which has been made in the interval. At that time, bacteria were little more than scientific curiosities: whether they were animal or vegetable, few people knew or cared; but most regarded them as animals on account of the active movements which they often exhibited. That they were causes of putrefaction, or other fermentative changes, was a thing not thought of; and the notion that they had special relations to disease would have been regarded as the wildest of speculations. Now, however, a mass of information has been accumulated regarding all these points, of which it would be hopeless for me to attempt to give even a brief sketch in the time at my disposal; and all that I can do is to present to the Pathological Section a few examples illustrating the progress which is being made in this department of research.

First, I will mention some examples of the labours of Dr. Koch, of Wollstein, in Germany. Though a hard-worked general practitioner, Koch has continued to devote an immense amount of time and energy to his investigations: and by a combination of well-planned experiments, ingenious methods of staining bacteria out of proportion to the tissues among which they lie, a beautiful adaptation of optical principles to render the coloured object discernible by the human eye, and, further, by a most successful application of micro-photography, he has succeeded in demonstrating the presence of these minute organisms in a manner never before attained.

The *Bacillus anthracis* is now universally recognised among pathologists as the cause of splenic fever, so fatal among cattle in this and other countries, and capable of being communicated to various other animals, and, among the rest, to the human species, as has been lately illustrated by the so-called woolsorters' disease, in the North of England. The *Bacillus anthracis* is a large form of bacterium, as is shown at *a* in the accompanying woodcut. It is there shown along with red blood-corpuscles of a mouse, and the rods of which it is composed are seen to be in diameter nearly one-fourth of that of the red corpuscles. Koch's method of staining the sections shows in the most beautiful manner that these bacilli are not only present in the spleen and some other organs, but that they people the blood in the minute vessels of all parts. Koch has thus added to our conviction that the bacillus is the cause of the symptoms, seeing that, as he remarks, it is impossible to suppose that an organism can develope in such enormous numbers at the expense of the vital fluid, without exerting a serious influence upon the system.

But the most striking and important results of Koch's method of investigation are those which relate to organisms of much smaller dimensions. He found that, if putrid liquid is injected under the skin of a mouse, the animal may die in the course of a short time, as the result of the chemically toxic effects of the products of putrefaction absorbed into the circulation; but, if it survive this primary disorder, it may succumb in the course of about two days to blood-disease. If the point of a lancet be dipped into the blood of the heart of a mouse which has died in this way, and a scratch be made in the skin of a healthy mouse with the envenomed instrument, the second mouse dies with similar symptoms to those of the first, the poison being absolutely certain in its virulent operation; and the same thing may be continued indefinitely through any series of animals. If now sections be made, and stained, and examined by Koch's procedures, it is found that the entire blood of the diseased animal is peopled with bacteria, resembling those of the *Bacillus anthracis* in the enormous multitudes in which they are produced, and also in their rod-like form, but differing from them in being exquisitely minute and delicate, as is shown at *b*, drawn on the same scale as *a*, where it is seen that the diameter can only be represented by a slender streak not one-eighth of the diameter of the *Bacillus anthracis*, and such as, before the introduction of Koch's method, would have escaped notice altogether. Now, this disease is totally distinct from pyæmia, being not accompanied with multiple abscesses or embolism; and thus it has been shown by Koch that septicæmia may exist as a deadly blood-disease, caused by the development of micro-organisms, being equally distinct from pyæmia and from the chemically toxic effects of septic products.



On some occasions, as the result of the introduction of putrid fluid under the mouse's skin, Koch found, besides septicæmia, a local affection of the seat of inoculation, in the form of spreading gangrene; and, on investigating the part, he discovered in it, exactly corresponding with the extent of the local affection, another organism very differently formed from that of the septicæmia—viz., a micrococcus, consisting of minute spherical granules arranged in linear series, like strings of exquisitely minute beads, as represented at *c* in the woodcut. Believing that this locally developing organism must be the cause of the gangrene, he tried to separate it from the bacillus of the septicæmia, and succeeded through an accidental observation of great interest. Having till that time employed the house-mouse in his experiments, he happened to try the inoculation of a field-mouse. This animal, though so closely allied, proved not susceptible of the septicæmia. The bacillus of that disease was unable to grow in the blood of the field-mouse, but the micrococcus of the gangrene could develope among its tissues. The new organism was thus obtained in an isolated form, and, when now inoculated into the house-mouse, produced in that animal gangrene pure and simple, extending for an indefinite period among its tissues.

Thus the animal body, which had previously been an obscure field of labour in this department, in which the pathologists did little more than grope in the dark, was converted by Koch into a pure cultivating apparatus, in which the growth and effects of the micro-organisms of various infective diseases could be studied with the utmost simplicity and precision.

One more example I must take from Koch's work. On one occasion, as the result of inoculating putrid liquid into a rabbit, he observed a spreading inflammation having all the clinical character of erysipelas; and, on examining stained sections of the part, he discovered another exquisitely delicate bacillus resembling the micrococcus of the gangrene, in being local in its development, while its exact correspondence in extent with that of the disease led fairly to the conclusion that it constituted the *materies morbi*.†

I will next refer to a disease occasioned by a micro-organism discovered by the eminent pathologist Professor Toussaint of Toulouse,

* Address delivered before the Pathological Section in opening a discussion on the subject at the Annual Meeting of the British Medical Association in Cambridge, August 12th, 1880.

† See *Untersuchungen über die Aetiologie der Wundinfectionskrankheiten*. von Dr. Robert Koch. Leipzig: 1878. A translation is about to be issued by the Sydenham Society.

whom I am proud to see present in this Section to-day. This disease has been somewhat inappropriately termed *Cholera des poules*, or fowl-cholera, for it is not attended with diarrhœa or any other of the symptoms of cholera; but, as it happened to be extremely destructive among the poultry-yards of Paris at the same time that an epidemic of cholera was raging in the city, the disorder that prevailed among the fowls was also given the name of cholera. The lesions by which it is chiefly characterised are great swelling of the chains of lymphatic glands in the vicinity of the trachea, pericarditis accompanied with great effusion, and congestion, and it may be ulceration, of the mucous membrane of the duodenum. It is a blood-disease, and highly infectious. If some of the blood of a chicken that has died of it be mixed with the oats with which healthy chickens are fed, a considerable proportion, perhaps four out of six, are affected and die; and similar results are produced by mixing the intestinal excreta of diseased fowls with the food. It is an interesting question how the virus thus administered enters the circulation. The invariable affection of the lymphatic glands of the throat suggests to M. Toussaint the idea that some accidental abrasion of the epithelium in the mouth or pharynx is probably the channel; and this view is confirmed by the fact that a similar affection of the lymphatic glands, together with other symptoms of the disease, is produced by inoculating the chicken in the mouth; and further, by the circumstance that such chickens as fail to take the disease when fed with the infected food are liable to it when inoculated, implying that it was merely some accidental circumstance which secured their previous immunity. This disease has been made the subject of special investigation by M. Pasteur. He found that the micro-organism could be readily cultivated outside the body of the fowl. It was, indeed, somewhat particular as regards the fluid in which it would grow; thus yeast-water, in which the *Bacillus anthracis* grows readily, proved an unsuitable medium for this organism, but it grew luxuriantly in chicken-broth, and, indeed, in infusion of other kinds of meat; but chicken-broth proved peculiarly convenient for the purpose. M. Pasteur has been so kind as to send me some tubes in which the organism has been cultivated, and a drop of the liquid has been placed under a microscope on the table. It will be seen that the organism is a minute form of bacterium, oval-shaped, tending to multiplication by transverse constriction, and very frequently seen in pairs, and occasionally in chains. Its transverse diameter is from 1-50,000th to 1-25,000th of an inch; so that it resembles very closely the bacterium lactis (see *d* in the woodcut taken from a *camera lucida* sketch of the organism sent by M. Pasteur). So far as I am aware, this is the first time this bacterium has been shown in this country. Now, it was found by Pasteur that the organism could be produced in chicken-broth in any number of successive cultivations, and to the last retain its full virulence; so that, if a healthy chicken were inoculated with it, the fatal disease was produced as surely as by inoculation with the blood of a fowl that had died of the complaint. This was pretty conclusive evidence that the organism was the cause of the disease, and that it constituted the true infective element; because any other material that might be supposed to accompany it in the blood of the diseased animal must have been got rid of by the successive cultivations in chicken-broth.

The growth of the organism occasions no putrefaction in the liquid, so that this is a good example of a bacterium which is most destructive as a disease, but which is at the same time entirely destitute of septic property, in the primitive sense of that term as equivalent to putrefactive. After the bacterium has grown for a certain time in a given portion of chicken-broth, it ceases to develop further; and when this is the case, although the broth has lost only a very small proportion of its substance by weight, and although, as aforesaid, it has not undergone putrefaction, and still constitutes an excellent pabulum for ordinary forms of bacteria, the bacterium of the fowl-cholera, though introduced from some new source, is incapable of growing in it. This fact certainly seems highly suggestive of an analogy with the effects of vaccination, or those of an attack of measles or scarlatina in securing immunity from the disease for the future. Here we have a certain medium invaded by a virus capable of self-multiplication, as is the case with those diseases in the animal body; the medium itself little affected chemically by the growth of the virus within it, nevertheless rendered unfit for the development of that virus for the future. But something more than the suggestion of analogy with vaccination has been effected by M. Pasteur. By cultivating this bacterium in a particular manner, which he has not yet published, he enfeebles the organism, as he believes, and produces such an alteration in it that, when inoculated into a healthy fowl, it produces only a modified and no longer fatal form of complaint, but the bird is thereby rendered secure against taking the ordinary form of the disease. It has been really vaccinated, if we adopt M. Pasteur's extension of the term vaccination to other similar cases; for just as we speak of an iron milestone, we may, if we please, apply the term vaccination to the use of a virus other than the vaccine obtained from a heifer. But though the vaccination with the modified bacteria and the fowl-cholera does not occasion the fatal disease, it produces pretty severe local effects. If inoculated on the breast of the fowl, it causes a limited gangrene of the pectoral muscle, the affected part falling off in due time as a dry slough. Through the great kindness of M. Pasteur, I have now the opportunity of showing to the Section a hen which has been treated in this way. You observe a slough on the breast of the bird, about as large as a penny piece; it is dry, and obviously old. The fowl has been some days in my possession subsequently to its journey from Paris; but though more than enough time has elapsed since the inoculation to have caused its death, had the disease been in the ordinary form, it is, you see, in good health, bright and active, and it both eats and sleeps well.*

I will now return to the *Bacillus anthracis*, with regard to which I shall have again to refer to the labours of M. Toussaint. First, however, I must allude to the work of some of my own countrymen. In March 1878, an experiment was made at the Brown Institution, at the suggestion of Dr. Burdon Sanderson, of inoculating a calf with the blood of a guinea-pig which had died of splenic fever, which is exceedingly fatal to rodentia. The result was that the calf took the disease, but in a mild form, and recovered from it; and a similar fact was observed in two heifers treated in the same way.†

This line of inquiry has since been followed up by Dr. Sanderson's successor at the Brown Institution, Dr. Greenfield, with the view of ascertaining whether the milder form of the disease in cattle, resulting from inoculation with the blood of rodentia affected with it, confers upon the cattle immunity from the complaint in its fatal form; or, to use again M. Pasteur's expression, whether the cattle have been vaccinated with reference to anthrax. And I have great pleasure in being able to inform the Section, by Dr. Greenfield's permission, that the question has been answered in the affirmative; and that one bovine animal, inoculated seven months ago with virus from a rodent, has proved itself, on repeated inoculations, entirely incapable of contracting splenic fever, remaining free from either constitutional or local manifestations of it.

And now to return to M. Toussaint, who has made observations with regard to this same subject of vaccination against anthrax fraught with the very deepest interest. The question arises, with regard to effective vaccination, using the term in Pasteur's general sense: Is it essential that micro-organisms should develop in the blood of the animal in which immunity from further attacks of the disease is to be secured? or is it possible that the necessary influence upon the system may be exerted by merely chemical products of the growth of that organism in some other medium? With the view of approaching the solution of this question, M. Toussaint has performed experiments of injecting into the blood of healthy sheep blood taken from an animal affected with splenic fever, but deprived of the *Bacillus anthracis*. Taking blood from a sheep just on the point of death, when the bacillus has presumably produced all its possible effect upon the vital fluid, M. Toussaint proceeds to deprive it of the living bacillus in either of two ways—by filtration, or by destroying the vitality of the organism. The former he effects by mixing the blood with three or four parts of water, and then passing it through about twelve layers of ordinary filter-paper. The bacillus, in consequence of its large dimensions, is entirely retained by this form of filter, as is proved by the fact that the filtrate no longer gives rise to the organism in a cultivating liquid or in a living animal. Nevertheless, if injected in considerable quantity into the circulation of a healthy sheep, it produces a true vaccinating influence; that is to say, secures immunity from splenic fever. But, what is further extremely interesting, in order that this change in the constitution of the sheep may be brought about, the lapse of a certain time is essential. If a vaccinated sheep be inoculated with anthrax within a few days of the operation, it will die of splenic fever; but if from twelve to fifteen days be allowed to elapse, complete immunity is found to have been produced. Similar results followed from the injection of anthrax blood treated by M. Toussaint's other method, which consists of maintaining it for a considerable time at a temperature of 55° Cent. (131° Fahr.), which has the effect of killing the bacillus; after which half per cent. of carbolic acid is added, to prevent putrefaction of the liquid. The blood treated in this way having been proved to be free from living bacilli by negative results of an experiment upon a rodent, about four cubic *centimètres* are injected into the venous system of a sheep, with the effect of producing the same protective influence against splenic fever as is ensured by the filtered blood. These experiments are still in pro-

* M. Pasteur's researches on this subject are related in the *Comptes Rendus de l'Académie de Science*, February, April, and May, 1880.

† See Report on Experiments on Anthrax by Dr. Sanderson. (*Journal of the Royal Agricultural Society of England*, vol. xvi, 2nd ser., part 1.

gress; but M. Toussaint informs me that he has already ascertained the existence of immunity against anthrax for three months and a half in both sheep and dogs treated in this way.

I need hardly remark on the surpassing importance of researches such as these. No one can say but that, if the British Medical Association should meet at Cambridge again ten years hence, some one may be able to record the discovery of the appropriate vaccine for measles, scarlet fever, and other acute specific diseases in the human subject. But even should nothing more be effected than what seems to be already on the point of attainment, the means of securing poultry from death by fowl-cholera, and cattle from the terribly destructive splenic fever, it must be admitted that we have an instance of a most valuable result from the much-reviled vivisection.

I have yet one more example to give of researches in this domain of pathology; and this also has reference to the *Bacillus anthracis*. The investigator in this instance is Dr. Buchner, assistant physician in Munich. It is well known that the bacillus anthracis is morphologically identical with an organism frequently met with in infusion of hay, which may be termed hay-bacillus. Such being the case, it occurred to Dr. Buchner that they might be merely one and the same organism modified by circumstances. For my own part, I am quite prepared to hear of such modifying influence being exerted upon bacteria, having made the observation several years ago that, when the *bacterium lactis* had been cultivated for some time in unboiled urine, it proved but a feeble lactic ferment when introduced again into milk. Its power of producing the lactic fermentation had been impaired by residence in the new medium. In the case before us, indeed, the physiological difference between the two organisms seems, at first sight, so great, as to forbid the idea of anything other than a specific difference. The bacillus anthracis refuses to grow in hay-infusion in which the hay-bacillus thrives with the utmost luxuriance; and conversely, the hay-bacillus is utterly incapable of growing in the blood of a living animal, whether introduced in small or in large quantities. The hay-bacillus is remarkable for its power of resistance to high temperatures, which is not the case with the bacillus anthracis. The latter is destroyed by a very slight acidity of the liquid of cultivation, or by any considerable degree of alkalinity, whereas the former survives under such conditions. Both will grow in diluted extract of meat, but their mode of growth differs greatly. The hay-bacillus multiplies rapidly, and forms a dry and wrinkled skin upon the surface, while the bacillus anthracis produces a delicate cloud at the bottom of the vessel, increasing slowly. Nothing daunted by these apparent essential differences, Dr. Buchner has laboured with indomitable perseverance by means of experiments carried on in Professor Nägeli's laboratory, to solve the double problem of changing the bacillus anthracis into hay-bacillus, and the converse. Having devised an ingenious apparatus by which a large reservoir of pure cultivating liquid was placed in communication with a cultivating vessel, so that any cultivation could be drawn off by simply turning a stop-cock, and further cultivating liquid supplied to the organisms remaining in the vessel by a mere inclination of the apparatus, Buchner proceeded to cultivate the isolated bacillus anthracis in extract of meat for several hundred successive generations. As an early result of these experiments, he found that the bacillus lost its power of producing disease in an animal inoculated with it. Up to this point he is confirmed by Dr. Greenfield, who has found that, when the bacillus anthracis is cultivated in aqueous humour, after about six generations it loses its infective property. Then as Buchner's experiments proceeded, the appearance of the growing organism was found to undergo gradual modification. Instead of the cloud at the bottom of the vessel, a scum began to make its appearance—at first greasy-looking and easily broken up—constituting, so far as appearances went, an intermediate form between the two organisms; and in course of time the scum became dryer and firmer, and at length the modified bacillus anthracis was found to be capable of growing in an acid hay infusion, and to present in every respect the characters of the hay-bacillus. The converse feat of changing the hay-bacillus into the bacillus anthracis proved very much more difficult. A great number of ingenious devices were adopted by Buchner, who was, nevertheless, continually baffled, till at last he attained success in the following manner. Having obtained the blood of a healthy animal under antiseptic precautions, and defibrinated it also antiseptically, and having arranged his apparatus so that the pure defibrinated blood, which was to be the cultivating medium, should be kept in constant movement, so as to continually break up the scum, and also keep the red corpuscles in perpetual motion so as to convey oxygen to all parts of the liquid—in this way imitating, to a certain extent, the conditions of growth of the bacillus anthracis outside the animal body, within which the hay-bacillus could not be got by any means to develope—he proceeded to cultivate through numerous successive generations. A transitional form soon made its appearance; but the change advanced only to a limited degree, so that further progress by this method became hopeless. The modified form hitherto obtained failed entirely to grow when injected into the blood of an animal. On the contrary, it was in a short time completely eliminated from the system, just like the ordinary hay-bacillus. It had, however, been observed by Buchner that spores had never been formed by the bacillus growing in the defibrinated blood; and it occurred to him that, perhaps, if it were transferred to extract of meat, and induced to form spores there, the modified organism might yet grow in the blood of a living animal. The carrying out of this idea was crowned with success; and, both in the mouse and in the rabbit, Buchner succeeded by injecting various different quantities containing the organism in different animals. When large quantities were introduced, the animals died rapidly from the merely chemical toxic effects of the injected liquid; but, in some instances, after the period for these primary effects had passed, a fatal disease supervened—attended, as in anthrax, with great swelling of the spleen, the blood of which was found peopled as in that affection with newly formed bacilli; and the spleens affected in this way were found to communicate anthrax to healthy animals, just like those of animals which had died of ordinary splenic fever.*

Supposing these results to be trustworthy, and the record of them bears all the stamp of authenticity, I need scarcely point out to a meeting like the present their transcendent importance as bearing upon the origin of infective diseases, and their modifications as exhibited in epidemics.

I trust that these examples may suffice to convey some idea of the work now going on with reference to the relations of micro-organisms to disease.

ON THE REMOVAL OF UTERINE TUMOURS BY ABDOMINAL SECTION.†

By T. SPENCER WELLS,

Vice-President of the Royal College of Surgeons of England, Surgeon to the Queen's Household, etc.

I WISH particularly to limit this discussion precisely to the consideration of the subject of removal of uterine tumours—myoma, fibro-myoma, or fibroma—by abdominal section. Such a tumour as that on the table, which was removed by Mr. Sherburn of Hull from the uterine cavity and vagina, and the removal of fibroid polypi, or the enucleation of ingrowths which project towards the uterine cavity, are beyond the scope of discussion to-day. And so is excision of the entire uterus for cancer, by Freund's method or any other; and the operation of Porro, so interesting to the obstetrician, where, in addition to the Cæsarean section, the uterus itself is excised after withdrawing the child. All these subjects are well worthy of separate discussion; and I hope they will be carefully criticised as soon as a sufficient number of facts, carefully observed and faithfully recorded, have been collected to form a groundwork for the formation of sound opinion. My object to-day is to obtain from members present any such additions to our knowledge as may assist in the formation of professional opinion upon the removal of fibroid outgrowths from the uterus towards the peritoneal cavity, subperitoneal outgrowths with a more or less perfect pedicle, or fibroid enlargements of the fundus, which may be removed with some part of the uterus itself, and with or without one or both ovaries at the same time, by such a division of the abdominal wall as is made in ovariotomy, but necessarily longer when the tumours are both large and solid. And, as I understand opening a discussion to differ from reading a paper, in so far that in the former case one hopes to elicit information from others, while in the latter we endeavour to relate what we have ourselves observed or thought, I shall now only sketch so much of my own doings and reflections as may induce others to narrate theirs, and thus assist in the removal of the doubts and difficulties which necessarily obscure any comparatively new subject at its rise and during its early progress.

In the Hunterian Lectures at the College of Surgeons which I delivered in June 1878, and which were fully reported in your JOURNAL, I reported all my cases of removal, or attempted removal, of uterine tumours through the abdominal wall; and arranged them in two tables, one containing all the necessary details of twenty-four cases where uterine tumours were removed, with or without one or both ovaries; and twenty-one cases where only an exploratory incision was made, or where, in addition, the tumour was either simply punctured or partially

* See *Ueber die experimentelle Erzeugung des Milzbrandcontagiums aus den Heupilzen*, von Haus Buchner. München, 1880.

† Address delivered in the Section of Obstetric Medicine, in introducing a discussion on the subject, at the Annual Meeting of the British Medical Association in Cambridge, August 13th, 1880. See page 373.

removed. I must refer anyone who wishes to examine this subject more carefully hereafter to the published tables. I can only say now that, of the twenty-four cases where the tumours were removed, only nine of the patients recovered, and fifteen died; while of the twenty-one cases of incision, puncture, or partial removal, only one died, and twenty recovered from the operation, some of them more or less relieved by it. I ask your attention to this mortality of sixteen deaths in forty-five operations, because this represents the results of my practice before adopting, in these operations, the Listerian details of antiseptic surgery. Since the delivery of the lectures, I have operated antiseptically, and I have had ten cases of removal, with three deaths and seven recoveries; and five cases of incision and puncture, all recoveries; or three deaths in fifteen operations. My whole experience, then, amounts to sixty cases: thirty-four of removal, with eighteen deaths and sixteen recoveries; twenty-six of incomplete operation, with only one death. The smaller mortality since adopting antiseptic precautions is certainly remarkable; but I do not wish to enter on this wide question now. I rather desire to discuss the indications which should guide us in deciding whether to leave a patient to her fate, or to medical treatment by ergotin or anything else; or to advise her to submit to the risk of abdominal section. It must be remembered that the risk—very small indeed if the attempt end in incision and puncture only—is now considerably smaller than it was a few years ago, and may be expected to become much smaller as experience increases, and the details of the different steps of the operation are more carefully studied and more frequently practised.

I have very little to add to the remarks on the operation which may be found in the report of my lecture (BRITISH MEDICAL JOURNAL, vol. ii, 1878, page 130), beyond attempting to enforce as strongly as I can adoption of the principle of uniting divided edges of peritoneum to each other. Whatever doubt some may entertain as to the value of my experiments on animals, and practice on women, in leading most operators in the present day to bring divided edges of peritoneum together whenever they have been separated by wound or by operation, I myself have no doubt whatever about it. And just as strongly as I assert that it is and must be better, when the abdominal wall is divided, to bring the peritoneal edges and surfaces of the opening together, restoring the complete closure of the peritoneal cavity, than to leave the cavity free to the admission of fluids oozing from wounded muscle, fat, and cellular tissue, and to allow contact of intestine and omentum with anything more than peritoneum, so strongly—more strongly, if I could—would I insist that the peritoneal edges of the divided uterine wall, or of the connecting part of the outgrowth with the uterine wall, should also be carefully brought together. In the only case of Cæsarean section I ever did, I sewed up the wound in the uterine wall by uninterrupted suture; and I still believe that the recovery of the patient was in a great measure due to this protection of the peritoneal cavity from the uterine discharges. Opinions will differ, of course, on this as on every other question; but my own opinion is quite clear. And so, after cutting away an uterine tumour—whether an outgrowth with a pedicle, or a growth which can be enucleated after incision of the fundus, or which leads to removal of so much of the fundus and body of the organ as to open the uterine cavity—I would strongly advise the operator to bring the peritoneal edges of the divided uterine wall together by many sutures, or by uninterrupted suture along the whole extent of the gap. In one of my published cases, where a solid tumour weighing seventy pounds was successfully removed, I put in at least twenty-four points of uninterrupted suture, the gap in the uterine wall and broad ligament having been more than a foot in length.

Schroeder, of Berlin, writes to me that, when he has opened the uterine cavity, he uses two rows of sutures: first, one row which close the mucous surfaces of the uterine cavity, and are left to pass away downwards by the vagina; and another row which brings the peritoneal edges of the fundus and broad ligament together.

Hegar, of Freiburg, writes to me saying that he has returned to the extraperitoneal treatment in these cases, and has had a series of ten successes. But he is especially careful to close the peritoneal edges of the lower part of the opening in the abdominal wall very accurately around the peritoneal edges of the uterine stump. He sews the two surfaces together by passing sutures all round the stump, fixing it securely to the abdominal wall by many points of suture, tying it up like the mouth of a purse. He carefully dries and disinfects the stump which is left between the edges of the lower angle of the united incisions, just as in extraperitoneal ovariotomy; but he believes that if disinfection were imperfect, and putrefaction occurred, the peritoneal union would serve to protect the patient from infection. Before I resorted to antiseptics, I was in favour of the extraperitoneal treatment of the stump after removal of uterine tumours, or of portions of the uterus; but, since antiseptics, I certainly prefer the intraperitoneal treatment, provided the divided edges of peritoneum are accurately brought together. Unless additional facts alter my opinion, I am not inclined to follow the example of my friend Schroeder, and sew up the divided edges of mucous membrane when the cavity has been opened. Last month, I removed a large fibro-cystic tumour which involved the fundus and part of the body of the uterus. It was not necessary to interfere with either of the ovaries. The patient was over sixty years of age, and had long ceased to menstruate. But I cut away nearly all the supravaginal portion of the uterus, and of course opened the cavity. I carefully stitched together the peritoneal edges of the divided uterine wall, and I believe that the opening left for a little oozing of blood through the vagina, which went on for the first two or three days, was useful. If I had prevented this by suture, something like a hæmatocele might have formed, or blood might have found its way, in spite of the sutures which I had used, into the peritoneal cavity. This patient recovered without any febrile elevation of temperature. My present feeling, then, is in favour of intraperitoneal treatment of the stump or uterine wound; and, if the cautery should not become, as it doubtless may become, the favourite resource, then I would strongly advise complete union by suture of the divided peritoneal edges of the uterine wall.

There were several other operative details which I thought I might bring before you; but the time allotted to me has expired, and I may, at the close of the discussion perhaps, in replying to some question which may be asked, give such further information as may be desired and as I may be able to offer.

EXAMINATION OF COLOUR-PERCEPTION AT THE CAMBRIDGE MEETING.

By HERBERT W. PAGE, M.A.Cantab., F.R.C.S.Eng.,
Assistant-Surgeon to St. Mary's Hospital; Clinical Assistant to the Royal London Ophthalmic Hospital; etc.

THE proposed examination by Holmgren's method of the colour-perception of members of the British Medical Association, attending the meeting at Cambridge, was carried out on August 11th, 12th, and 13th, by Mr. Berry, Mr. Frost, Mr. Nettleship, Mr. Pye, Mr. Swanzy of Dublin, and myself. I thank these gentlemen for the invaluable aid so freely given by them—given not without much self-denial, inasmuch as the examinations took them away from the sectional meetings which all had been wishful to attend. Nor can I omit to thank Dr. Brailey for great help given to us in obtaining the sanction of the Executive and the use of the room in the new museums, and for the trouble he took in having had printed and posted the numerous directions and appeals which met the eye at every bend and corner of the buildings where the meetings were held.

The object of the examination, as suggested by me in the BRITISH MEDICAL JOURNAL (1879, vol. ii, page 651), was to discover the proportion of congenitally colour-blind amongst a large number of educated and intelligent men. Want of time rendered it impossible to make more minute inquiries, either into the family history of those who were colour-blind, or as to their ability to distinguish the colours of different signal-lamps placed at a distance from them. At the hour when the examination closed, 920 had entered their names in the reception-room at the Guildhall. There voluntarily presented themselves for examination 745—of whom at least 700 were members of the profession, the remainder being undergraduates (some of them medical students) and other members of the University.

Of the 700 members of the profession, 12 were completely colour-blind, 6 red-blind, and 6 green-blind; and 2 were incompletely colour-blind, one red, and one green—in all 14. Of 4 others, who were *not* colour-blind, it may be said that their chromatic sense was feeble. In the whole 745 examined, there were 15 colour-blind*—one of the undergraduates (a green-blind) making the additional number.

All the colour-blind knew of their defect; but it should not be forgotten that they were educated men; and it is not unlikely that amongst ignorant persons, whose faculty of observation is extremely limited, the defect may never be discovered, unless they have undergone colour-education at school. A large number who presented themselves expressed a belief that they were colour-blind, whose colour-sense was yet found on examination to be normal. In nearly all these cases, the belief arose from a difficulty experienced in correctly naming the shades of blue and green, which merge imperceptibly into each other. The readiness with which the colours were chosen was exceedingly variable; but only in one or two instances was there any sign of what is called colour-stupidity, which makes the examination of uneducated persons so much more difficult.

* Any of the colour-blind who are willing to assist in the scientific investigation of the subject, by submitting to further examination, are requested to communicate privately with Mr. W. A. Frost, 77, Wimpole Street.

It has been objected that the statistical results of the Cambridge examination would be valueless unless *all* members attending the meeting were examined. That may, of course, be so; but it may be remarked that, if 4 is the true percentage of congenital colour-blindness amongst males—and Dr. Joy Jeffries has found 4 per cent. to be rather below it—there should have been amongst the 920 who attended the meeting 37 or 38 colour-blind. Fifteen were found, and it seems extremely improbable that so many as 22 or 23 should have absented themselves. The result of the examination at Cambridge must be taken for what it is worth; and it is only right to call attention to the fact that the percentage at Cambridge is much below that which has been found by Professor Holmgren, Dr. Joy Jeffries, and others, by the same method of examination, in many thousands of males.

Whatever may be the true percentage of congenital colour-blindness amongst males, one great result must arise from the examination at Cambridge. Several hundred members of the profession, taken from all parts of the land, have had this congenital defect and its examination brought more prominently under their notice than could, perhaps, have been otherwise possible.* Many of them may be called upon, some time or other, to make the medical examination of men who seek employment by land or sea, when a right perception of colours (as used in signals) is of essential importance for the safety of the travelling public; and it is hoped that, both directly and indirectly, this examination at Cambridge may become the means of drawing greater attention to the existence of colour-blindness amongst males than in this country it has yet received, and to the vast importance of the compulsory examination of all railway servants and sailors, so as to prevent the possibility of future accidents by excluding from positions of responsibility all whose colour-sense is in any way defective.

It should be especially observed that this examination has dealt only with congenital colour-blindness, and has taken no account of the colour-blindness which is a symptom of various pathological states, notably of the amblyopia due to chronic tobacco-poisoning, which may affect those whose colour-perception has been perfectly acute. The existence of such a condition, and it is by no means uncommon, shows how great is the necessity that the examination of railway-men and sailors should be made, not only before they enter their respective services, but should be also periodical, and conducted by competent observers, amongst all who are so employed.

* Those who wish for further information will find it clearly and fully set forth in Dr. Joy Jeffries' *Colour-Blindness: its Dangers and its Detection* (London: Trübner and Co.). Worsteds, matching as nearly as possible those of Professor Holmgren, may be had of Messrs. Pickard and Curry, 195, Great Portland Street, W.

THE Canada Medical Association has held its thirteenth annual meeting, in Ottawa, during the present week.

BOLTON.—A striking feature in this report is the graphic representation (in the shape of three plates, drawn in the way that Mr. Pridgin Teale's little book has made famous) of the dangers which arise to inhabitants of houses from imperfections in branch drains, together with the manner in which these dangers may be avoided. Probably, a pictorial warning of this sort does a hundred times more good than lengthy written descriptions, which few people read, and fewer still understand. Mr. Sergeant has made his report to include the twelve months ended the 30th September: a fashion that he would do well to avoid in the future, for all opportunity of useful comparison with other towns is thus lost. During the twelve months ended the 30th September, 1879, 3,897 persons were born, and 2,233 died at Bolton. These figures are equal to rates of 37.0 and 21.2 per 1,000 of the population. The mortality amongst children can hardly be considered as "eminently satisfactory" when it constitutes 42.85 per cent. of the total mortality, though it is doubtless an improvement on the high rates of former years. As compared with 1878, there is a diminution of 55 uncertified deaths; but a proportion of such deaths equal to 8.5 per cent. of the total deaths is far too high, and suggestive of a great amount of criminal neglect. Amongst the deaths was one of a female at 92, one at 96, and one male at the age of 101 years. Zymotic diseases were less fatal than in any year yet recorded, a result stated to be largely due to the early information which is given to the health-officials under the terms of the local Act requiring compulsory notification of infectious cases. We are sorry, however, to see that the town is still without a hospital for infectious diseases. Whooping-cough was the most fatal of the zymotic diseases. It caused in all 97 deaths, or 36 more than in the preceding year. Fever caused 42 deaths, the disease being most prevalent in the autumn. In connection with this subject, Mr. Sergeant draws the attention of his authority to the imperfect state of the sewerage in certain parts of the district. The Sale of Food and Drugs Act seems to be working in the borough with satisfactory results.

FORTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CAMBRIDGE, Aug. 10th, 11th, 12th, and 13th, 1880.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of the papers presented to the several Sections at the annual meeting, and of the discussions thereon.

SECTION C.—OBSTETRIC MEDICINE.

Wednesday, August 11th.

THE Chair was taken by the President, W. S. PLAYFAIR, M.D., F.R.S., Professor of Midwifery in King's College, who delivered an address, which was published at page 261 of the JOURNAL for August 14th.

DISCUSSION ON UTERINE HÆMOSTATICS.

The discussion on this subject was opened with a paper by Dr. LOMBE ATTHILL (Dublin), which, in his absence, was read by Dr. Ingle, one of the secretaries of the Section.

Dr. ATTHILL said that he would confine his remarks to the means of arresting hæmorrhages from the unimpregnated uterus. He said that the most common causes giving origin to uterine hæmorrhage unconnected with the actual existence of pregnancy were:—1. The various forms of cancer; 2. Tumours of the uterus; 3. Imperfect involution of the uterus after labour or abortion; 4. Granular erosion of the cervix uteri; 5. A granular condition of the intra-uterine surface; 6. Retention of a portion of the ovum after abortion. 1. Cancer was placed first on the list of causes, because its treatment by the administration of Chian turpentine, as advocated by Mr. John Clay of Birmingham, had attracted general attention. Dr. Atthill's opinion of the drug as a hæmostatic in some cases of cancer was very favourable; but he could not confirm to the full extent Mr. Clay's views as to its curative powers in malignant disease of the uterus. It seemed to exercise its greatest power in cases of epithelioma of the cervix, and to have comparatively little influence in the medullary form of the disease. The value of turpentine in cancer of the uterus seemed to be mainly due to its action in diminishing the blood-supply. Dr. Atthill related the case of a lady who came under his care in September, 1879, suffering from a severe attack of uterine hæmorrhage, which proceeded from an epithelioma of the cervix uteri. The hæmorrhage was checked by the application of the strong solution of perchloride of iron; but, as the disease steadily progressed, the diseased structures were removed with the scoop and knife on December 1st. The patient rapidly recovered; but in February the hæmorrhage recurred, and the disease was found to have extended into the cavity of the uterus. The diseased mass was removed; but the hæmorrhage continued in spite of the use of perchloride of iron. In March, Dr. Atthill began to administer pills of three grains of Chian turpentine with two of sulphur, eight to be taken daily. For some time, the hæmorrhage was much lessened, and almost disappeared; but lately there had been a return of the bleeding to an alarming extent. The patient had taken the Chian turpentine daily from the time of its first prescription. The small supply of Chian turpentine, and the difficulty of obtaining it pure, were serious objections to its use. Dr. Atthill believed that a pure oil of turpentine, administered in from ten- to twenty-drop doses three or four times a day, was as a hæmostatic quite as good; and that, if carefully rubbed up with powdered gum arabic or tragacanth, it was likely to agree with most patients. He had also administered the confection of turpentine with advantage. 2. To restrain the hæmorrhage from fibrous tumours, the injection into the uterus of the liquor ferri perchloridi, and of the tincture of iodine, had been advocated. This method was sometimes followed by satisfactory results; but it was not absolutely safe, and, unless care were taken to provide a free exit for the fluid injected, either by previously dilating the cervix uteri or by using a double cannula, serious results might follow. The injection of hot water in such cases was a far safer method of restraining the hæmorrhage. Incising the cervix was often useful in being followed by a diminution in the hæmorrhage and by relief from pain; and at the same time it permitted the introduction into the uterus of a tube of moderate size, and the free return of the hot water, which should be injected at a temperature of about 110° Fahr. Another simple and often effectual method of applying heat, was the use of Chapman's spinal hot-water bags. Of drugs, none could equal ergot in its power of restraining the hæmorrhage depending on fibrous tumours. It was most effective when administered hypodermically. 3. Imperfect involution of the

uterus implied primarily a relaxed state of the muscular tissue of the organ, and an unduly distended condition of the uterine vessels; and, also, in most cases, an unhealthy condition of the intra-uterine mucous membrane. When the latter existed, it must be cured by treatment directed to the intra-uterine surface. To check the hæmorrhage at the time of its occurrence, hot water was a safe plan of treatment, and generally easily carried out. Ergot, quinine, and strychnine were, in cases of imperfect involution of the uterus, indirect hæmostatics. In the chronic form of the affection, Dr. Atthill had administered Chian turpentine with benefit. 4. Hæmorrhage due to a granular condition of the vaginal aspect of the cervix might be arrested by the direct application to the bleeding surface of almost any astringent; but, to prevent its recurrence, a healthy condition of the cervix must be brought about by the free application of some strong caustic. 5. The retention of a portion of the ovum after abortion sometimes gave rise to very troublesome hæmorrhage. In such cases, dilatation of the uterus and removal of the retained portion by a curette might be performed unless contraindicated, but it was liable to give rise to cellulitis and even peritonitis; and Dr. Atthill therefore strongly recommended in such cases, at least as a preliminary measure, the syringing out the uterus with hot water. He had no faith in the administration of astringents by the mouth in cases of uterine hæmorrhage, depending on the causes which he had enumerated. In conclusion, he suggested that the most important questions for discussion in connection with the subject of uterine hæmostatics were these:—1. What is the value of Chian turpentine in arresting hæmorrhage in cases of cancer of the uterus? 2. Is Chian turpentine the only variety of the drug of use in such cases? 3. In what other forms of uterine hæmorrhage is the administration of turpentine indicated? 4. What is the value of the intra-uterine injection of hot water: (*a*) in cases of hæmorrhage depending on the existence of fibrous tumours of the uterus; (*b*) in cases of imperfect involution of the uterus; (*c*) where portions of the ovum have been retained after abortion?

Mr. OAKLEY (Halifax) advocated the use of injection of ergotine. It should always be injected into the connective tissue. He had only found this to fail where there were peritoneal adhesions.

Dr. ROUTH (London) said that, as to the use of Chian turpentine, his success at first had been good. It checked hæmorrhage, it relieved pain beyond all expectation, and produced the copious glutinous secretion described by Mr. Clay; but at present it failed altogether. The reason, he believed, was that the drug as now supplied was adulterated. What he had seen of old was a resinous-looking substance. That now supplied was like Canada balsam. Indeed, a wholesale druggist, to whom Dr. Routh's hospital authority had applied for it, refused to supply it because they could not now procure it pure. As regarded ergot, he had used ergotine (five grains to a drachm of water), and the extractum liquidum ergotæ (half a drachm to a drachm) injected perpendicularly into the gluteus muscle. It was not, however, always certain in its effects, and he had seen abscess result from it, and in one case death, with symptoms not unlike septicæmia, followed its employment. He could only hope that the septicæmia in this case might have been induced by some other cause, but the case proved that injection of ergot was not always so innocent as stated. As to injection of iron, if the uterus were previously dilated by a tent, to allow its free passage out after injection, he thought it could be safely done. He believed it was next to impossible in an ordinary case to inject up the Fallopian tubes, except in rare cases of dilatation from retention of menses. Chiari of Vienna, had proved that in women just dead, and before the irritability of the muscular tissue was lost, it was impossible with any amount of force to inject fluids up the Fallopian tubes. Hot water he had found very efficacious; but it must be very hot water, as hot, in fact, as the patient could bear it; not only 105° Fahr. as had been suggested. Possibly it acted by coagulating the albumen of the blood in the small vessels, and so arrested the hæmorrhage.

Dr. RODEN (Droitwich) called attention to the use of simple mechanical pressure for the prevention and arrest of *post partum* hæmorrhage. The apparatus consisted of an oval air-pad of sufficient size to fill accurately the two pelvic fossæ, with a strong webbing belt passing through bands on the pad, and then round the body, fastening with a single strong steel buckle, thus forming a most efficient binder. This apparatus was almost invariably successful in preventing hæmorrhage. Where it was not effectually so, the use of an India-rubber pessary within the vagina, inflated to the size of the fœtal head, efficiently supplemented the external pad in arresting the hæmorrhage.

Dr. AUST LAWRENCE (Clifton) said that Chian turpentine had arrested hæmorrhage in two cases of cancer of the uterus observed by him. He used the solution of ergotine recommended by Professor Simpson, and injected it under the skin with no bad result. The quantity used was not more than 10 minims. In one case of *post partum* hæmorrhage, hot water was injected with no result: the hæmorrhage was afterwards stopped by pressure. In one case, hæmorrhage was stopped by perchloride of iron. He said that it was important to ascertain the exact source of the hæmorrhage before using any local remedy. Cases of ruptured artery in the vulva were mentioned.

Dr. MURPHY (Sunderland) said that, in *post partum* hæmorrhage, what best fulfilled the requirements was the hand of the obstetrician, by means of which he might grasp the uterus through the abdominal wall, having first moved the intestines up. Any clots that might have formed would then be squeezed out, and steady and firm pressure should be kept up until the uterus felt hard and well contracted, when the ordinary bandage might be applied and the hand removed. He had injected ergotine with advantage.

Dr. BENNET (Mentone) always found that plugging the cervical canal was the most efficacious means of treating passive hæmorrhage of all kinds. He introduced a large speculum, cleared out the vagina, and passed into the cervix a number of small plugs of cotton until it was completely packed. They were removed by strings attached to them at the end of twenty-four hours. He removed any ovum or remains of placenta with a polypus-forceps through the speculum.

Dr. GRAILY HEWITT (London) stated that he had used quite hot water as a vaginal injection in order to check undue loss of blood in cases of menstruation, particularly in that due to fibroid tumours. He had found it exceedingly efficacious in restraining the loss. He mentioned a case of very profuse menstruation, in which the discharge ceased at once on application of the remedy.

Dr. GERVIS (London) said, with reference to the use of Chian turpentine, that he had tried it in a series of cases, with decided benefit as a styptic, but it had no effect on the pain, and it most generally produced nausea. As regarded the cervical plug, in some cases of uterine hæmorrhage it was of undoubted value. Dr. Gervis gave particulars of a case of purpuric hæmorrhage in which it checked hæmorrhage, where even the injection of the perchloride failed. On the use of the iron perchloride in cases of *post partum* hæmorrhage, Dr. Gervis gave reasons for believing that it acted as a surface-styptic, and not by inducing uterine contraction. The mechanical appliance shown Dr. Gervis thought useful possibly as a preventive of hæmorrhage, but that it was not equal to the intelligent use of the hand, especially the combined use of the two hands—the one grasping the fundus, and the other in the uterine interior.

Mr. F. J. BAILEY (Liverpool) agreed with Dr. Bennet in the use of cotton-wool for plugging the os uteri in hæmorrhage during the earlier months of pregnancy, having used it for twenty years and found it very successful, frequently carrying on the patient to the full time. He also attended to constitutional treatment, and gave tincture of perchloride of iron. There was no risk of causing abortion by its use; he gave it for some time in full doses. He always injected ergotine into the buttock, and used Tanner's preparation. He never had abscess nor inflammation after it when so used, but had when it was put under the skin. He used an ordinary injecting-syringe with steel cannula. The patient must not be too much exhausted, or it would not act. If so, intra-uterine injections of perchloride of iron must be used; or hot water, or ice-cold water. The hand, if used, must only be kept in a very short time. External pressure with the hand was better than any pad. The best stimulant to give internally was turpentine, which acted as an uterine hæmostatic and also as a stimulant. It was superior to brandy, which often produced vomiting.

Dr. GRIGG (London) had used Chian turpentine in cases of cancer, without success in any case. He had found pressure on the aorta of great value in arresting *post partum* hæmorrhage. It might be done by Davy's instrument, as he had seen in one case of operation on the uterus. He had seen cases such as those mentioned by Dr. Lawrence, where the hæmorrhage was due to vessels in the vagina and vulva. He had found great benefit from the use of ice in his out-patient practice; in severe cases it should be passed into the uterus. He had had excellent results from the use of gallic acid and bromide of potassium. He had found chromic acid more useful than perchloride of iron.

Dr. MACNAUGHTON JONES (Cork) regretted that stress had not been laid on the prevention of hæmorrhage rather than on the arrest of it. The value of expression of the placenta was not sufficiently insisted on, combined with sustained pressure on the uterus. If these plans were followed, less would be heard of *post partum* hæmorrhage. As regarded the use of ergotine, he had used Bonjean's preparation most successfully; he combined it with glycerine. He met with abscess when he injected it subcutaneously, but not since he injected it into the muscles of the gluteal region. As to Chian turpentine, he had at present two marked cases of epithelioma of the cervix, in which pain was relieved and hæmorrhage arrested by this remedy; but then other means were

employed. It did not appear to influence the progress of the disease. As regarded the treatment of hæmorrhage attending abortion, he had again to draw attention to the neglect of a well laid down (Barnes) rule to secure and maintain free patency of the cervical canal, so as thoroughly to clear the uterus of the common cause of the bleeding, viz., retained portions of membranes and placenta. He could recall to mind two cases of very severe hæmorrhage, lasting for some days, after the brim was expelled, in which, when called in, he had used the curette after dilatation with tents. Ergot was given internally.

Mr. BUNTING (Tottenham) had found the galvanic battery succeed where other means had failed.

Dr. HERMAN (London) had not seen yet any effect upon uterine cancer follow the use of Chian turpentine. He did not think the use of a double channelled catheter for injection of perchloride of iron into the unimpregnated uterus was safe; a case had been published which showed that the fluid might pass along the Fallopian tube. He thought it was better to inject through a hollow probe a small quantity only.

Dr. FITZPATRICK (Liverpool) believed that the majority of the cases of *post partum* hæmorrhages were produced by hasty and unskilful practice, and by the indiscriminate use of the forceps, which was now carried by junior practitioners as a pocket-companion. The hand, and the hand only, if properly and regularly applied, and for a sufficiently long time, is the only one required.

Dr. HENRY BENNET said that he had listened attentively to the paper and to the remarks of the speakers thereon, and had failed to perceive any mention of a mechanical mode of treating intractable uterine hæmorrhage, which he believed he was the first to introduce more than thirty years ago; viz., the plugging of the cervix uteri itself. In morbidly prolonged menstruation or menorrhagia, in the continuous hæmorrhage which sometimes occurred at the cessation of menstruation, in hæmorrhage from small polypi, in hæmorrhage in the early months of menstruation, threatening abortion, or from the presence of blightened ova or moles, or from retained fœtal placenta after abortion, he had found this method of practice invaluable and most efficacious. Hæmorrhage was at once arrested, as would be the flow of wine from an uncorked bottle when a cork was inserted. He got the uterine neck fairly in view with a full speculum in a good light; and, by means of the speculum-forceps, filled up the cervical canal with pledgets of cotton-wool, each tied to a thread. These threads were united and brought out of the vulva, lying on the perinæum when the speculum was removed. At the end of twenty-four hours, they were pulled away, and the cervix was exposed with the speculum. If blood still oozed out of the os, they were renewed. If an ovum, or mole, or membranes, or a piece of placenta, presented, after one, two, or three days' treatment, it was pulled out with the speculum-forceps. He never had had any accident.

The PRESIDENT, in summing up the views and arguments advanced by the various speakers, said that all must regret the unavoidable absence of Dr. Lombe Atthill, who had so clearly laid certain issues before the section in the admirable paper with which he had intended to open the discussion. The subject was one which it was extremely difficult to discuss briefly, concerning as it did a wide and important field in obstetric practice. Nor would it be possible for him to do more than glance at the important questions which had been raised, and upon which those who had engaged in this discussion had made many valuable and practical remarks, and which had elicited from them the various opinions and suggestions just given, bearing on the arrest of hæmorrhage. This proved that a wise selection had been made in the choice of this subject as one of general interest, and valuable for introduction into this section. He quite agreed with Dr. Macnaughton Jones in regard to the necessities which existed for the exercise of greater care in the prevention of *post partum* hæmorrhage. He attributed many of the cases of uncontrollable and excessive hæmorrhage to the neglect of the practice of expression of the placenta, carefully following it out of the uterus and vagina, avoiding the too early and forcible attempts to remove it by means of the cord or the hand in the vagina. If the method on which he had always insisted to his students were adopted, viz., patient waiting, giving the uterus a sufficient time for the natural hæmostatic action of uterine contraction, and the coagula in the vessels to have their due result, avoiding, has had been rigidly taught by the Dublin School, too early attempts at removal, but remaining at least a quarter of an hour before any interference was attempted, while efficient pressure was maintained on the uterus, then he firmly believed that we should have less of those formidable cases of hæmorrhage which necessitated the use of means such as those which had been alluded to. What he had before said elsewhere he might repeat, that the practitioner who had a large number of cases of *post partum* hæmorrhage occurring in his practice, might rely on it that the fault lay frequently with himself rather than with his patient. In the use of the various means suggested, it appeared to him that the manner in which many agents acted in controlling the bleeding, namely, by exciting reflex action, had not been sufficiently borne in mind; the value of ice, which he had frequently used, as also of hot water, was due to this exciting action. There was no doubt that the proper manner of injecting ergotine was that which had been referred to—deeply into the gluteal muscles; and he had no troublesome consequences with this method. Hot water he regarded as one of the most valuable means of controlling hæmorrhage, and certainly preferable to the use of perchloride of iron, which he quite agreed should only be employed as a *dernier ressort*. There was no questioning the importance of the plan largely adopted on the Continent, of compression of the aorta. He thought that this step, as a means within the reach of all, in cases of great emergency, and while waiting the application of other remedies, was not so frequently resorted to as it might be. He thought that such appliances as the one shown for keeping up pressure might be useful in certain cases, but they were not always available; and even if they were, there was not, he conceived, the same degree of certainty as with the hand. He did not agree with the remarks which had been made about the forceps as a cause of hæmorrhage. No one deprecated more strongly than he the use of the forceps where the indications for that instrument were not clear, or condemned its being used rashly, as had been remarked, as a "pocket-companion", in every case; but he had quite a different opinion as to its value in those cases where, with lingering labour where the energy of the uterus was exhausted, and its power of contraction diminished, the forceps came in as the best preventative of future bleeding, when the contents of the uterus were expelled, and the organ was empty. It was evident that there were not yet reliable data to go on in deciding on the value of the Chian turpentine, which had been introduced by Mr. Clay. The results were too uncertain. With other cancer remedies, he believed it would have but a short-lived reputation, and would be found to be of little benefit in this disease. Not enough was yet known to enable one to speak positively of the results of treatment in those cases in which a granular state with excrescences on the mucous lining of the uterus existed, and where the curette had been used to remove them.

Hæmorrhage and Sickness during Pregnancy. By HENRY BENNET, M.D. (Weybridge).—Dr. Henry Bennet read a paper on hæmorrhage and sickness during pregnancy, and on abortion in connection with chronic inflammation of the uterus (Hancock). In the earliest edition of his work on uterine inflammation, published in 1845, and in the subsequent editions published in 1848, 1852, and 1861, he drew attention to an important pathological fact; viz., that chronic inflammation of the cervix or body of the uterus had a powerful and frequent influence in the production of various morbid conditions of the pregnant, parturient, and puerperal periods. During pregnancy, it often gave rise to laborious gestation, to obstinate sickness, to hæmorrhage, simulating menstruation or otherwise, to abortion, and to the formation of placental tumours or moles. At the time of parturition, it often gave rise to rigidity of the cervix, erroneously interpreted by most writers, to lingering painful labour, to hæmorrhage during labour and after it, and to adherent placenta; during the puerperal period, it often gave rise to metritis, to ovaritis, and abscess of the lateral ligaments, to prolonged sanguineous and purulent lochial discharge, to arrested involution, to subsequent displacement in various directions, to retarded menstruation, to a host of morbid local symptoms of various forms, affecting the bladder, the rectum, and anus, and the pelvic viscera in general, and to numerous constitutional sympathetic symptoms more or less marked and severe. These clinical facts had been ascertained—1. by the surgical examination of pregnant women up to the sixth or seventh month of pregnancy, whenever they presented the uterine symptoms referred to; 2. by the surgical examination of women six weeks or two months after delivery, as a rule, whenever they had presented any of these morbid conditions during pregnancy, during parturition, or during the puerperal condition. Such an examination was a necessity, leading, in such cases, to the constant discovery of morbid inflammatory states of the cervix, to lacerations and bruises of that organ, and to chronic localised inflammation of the body of the uterus. These lesions were generally cured with ease, if advantage were taken of the natural process of involution subsequent to parturition; whereas, if neglected and ignored, and only discovered a year or more after parturition, they were most intractable. The treatment in these cases was necessarily surgical, and pregnancy was in reality no impediment whatever to its being carried out. On the contrary, it constantly enabled the practitioner to cure disease which, if left alone, would destroy the fœtus, and lead to abortion or premature delivery. Thus, surgical interference was not only a justifiable, but a most valuable, means of saving life. In the course of his career, Dr. Bennet had saved scores of pregnancies and lives by adopting and following out these doctrines. On consult-

ing the more recent works on uterine diseases, he did not find that they had been taken up and followed in practice as they ought to have been; and, after many years' silence, he was anxious to give this final testimony to their clinical truth and to their therapeutical value, founded on the experience of a long professional career.

Dr. BYRNE (Dublin) regretted that he was compelled to differ from Dr. Bennet. He did not believe that, even in the unimpregnated state, ulceration of the cervix and os uteri was so common as seemed to appear from the writings of those who made this subject a speciality; whilst, during pregnancy, he thought that the condition was very rare indeed, if it ever occurred. After the introduction of the speculum into practice, a great many diseases had been discovered, which had no real existence. This was much to be regretted, as the speculum was an instrument of precision. There was a great difference in the results following the discovery and improvement of the telescope and that of the speculum. In the case of the former, the stars and nebulæ and planets which were seen by the early observers were seen also by subsequent astronomers; and their positions in space, etc., were carefully marked out. Such was not the case with regard to the speculum; and the enthusiasts who made it a special study frequently described nebulæ in the cervix which never existed except in the mind's eye of the discoverer. He (Dr. Byrne) had had much experience of uterine affections; and he did not exaggerate when he stated, that he had made more than two thousand examinations during his practice; and the result of his experience was, that ulceration of the uterus was less frequent in the unimpregnated condition than had been described. It was, in his opinion, very bad practice to be examining with the speculum the uterus in the early months of pregnancy, and applying powerful caustics and other applications to ulcerations of an imaginary kind.

Mr. DONOVAN (Whitwick) had found inflammations of the cervix uteri a fruitful source of trouble during pregnancy. In a case under his care, the woman had aborted six times. When he first saw her, she was in labour; and he recognised a subacute inflammation of the cervix. He applied nitric acid, with the result of completely removing her distressing symptoms. This was, he thought, clear proof that disease of the cervix did not prevent pregnancy from taking place.

Dr. FITZPATRICK (Liverpool) traversed Dr. Byrne's argument, and agreed with the statements contained in Dr. Bennet's paper, which, from his own experience, he could fully endorse.

Dr. GRAILY HEWITT (London) called attention to the subject of the sickness of pregnancy. He could not help remarking, in the first place, that he considered the paper just read would perhaps have been considered as representing the state of medical knowledge on the subject fifteen or twenty years ago; but he was surprised to find in it no mention or allusion to work done of late years—no mention of distortions of the uterus—everything put down as due to "inflammation" or "ulceration". It was well known that high authorities had stated that inflammation was a word which would be usefully removed from uterine pathology; and as to ulceration, that had been annihilated by searching criticism. Briefly, the view he (Dr. Hewitt) had been led to take in the course of the extreme cases of sickness in pregnancy was, that it was due to the compression, constriction, and condensation of the tissues of the cervix uteri, particularly those surrounding the internal os, this being coupled with pressure of a distorted shape of the uterus. The late Dr. Copeman of Norwich, some time ago, discovered by accident that dilatation of the cervical canal arrested the sickness immediately; and he subsequently practised this procedure with great success in other cases. Dr. Graily Hewitt considered, as he had pointed out to Dr. Copeman at the time, that the effect was due to the straightening and rectification of the uterine distortion, which resulted from this operation. For his own part, he had treated several severe cases of vomiting in pregnancy most successfully by simple positional treatment —*i. e.*, by placing the fundus of the uterus in its proper position, and relieving the flexion. In only one case, where there was very great hypertrophy and hardness of the cervix, this had failed, and in that case he performed dilatation.

Dr. GERVIS (London) thought the paper of great value. Endocervicitis during pregnancy required local treatment, and was frequently benefited thereby.

Dr. HENRY BENNET, in reply, said that most of the speakers had failed to see that he had limited himself to the consideration of sickness, hæmorrhage, and abortion, in connection with inflammation. Had he not done so, it would have required at least a dozen papers to treat of the numerous morbid phenomena. One speaker had said that, in some recent works on uterine diseases, inflammation and ulceration had been abolished. He knew that such was the case, and by so much the works in question were incomplete, and those who bought them would have to buy other works to complete them. The laws of general pathology governed local manifestations of disease. There was a general pathology of the skin, of the osseous tissue, of serous membranes, of mucous membranes. He who studied these laws in general had only to apply them in particular. On the vulva, vagina, cervix, cervical canal, and uterine cavity, there was a vascular well-organised mucous membrane, the pathology of which could no more be ignored than that of the throat, larynx, bronchial tubes, or intestinal canal.

Practical Observations on the Best Methods of Treatment to be adopted in Cases of Accidental and Unavoidable Hæmorrhage. By KEITH NORMAN MACDONALD, M.D. (St. Andrew's).—Dr. Macdonald remarked that, in treating such cases, no reliance could be placed on astringents, opiates, the application of cold and plugging, especially where the pregnancy had advanced beyond the seventh month. Plugging was useful in some cases; but it was seldom efficiently carried out, and there was no security against blood accumulating within the uterus. It should only be used as a very temporary measure. The following was an outline of the treatment to be adopted. All cases of hæmorrhage occurring before the fifth month should be treated as ordinary cases of abortion, laying particular stress on prolonged rest in bed if the hæmorrhage had been arrested. If it continued, the expulsion of the ovum should be hastened by ergot and rupture of membranes. After the sixth month, in cases of accidental hæmorrhage, if rest and astringents failed, labour should be brought on either by rupturing the membranes or by an elastic catheter introduced into the arteries. This might be followed by the use of Barnes's bags. In cases of placenta prævia, the treatment should be more prompt and decisive. At whatever period the bleeding occurred, if the placenta could be felt presenting, complete delivery should at once be brought about by rupture of membranes, dilatation by Barnes's bags, and turning.

Post Partum Hæmorrhage. By JOHN BASSETT, M.D. (Birmingham).—Dr. Bassett read a paper on the causes of *post partum* hæmorrhage, and upon the methods which he had found it advisable to adopt to prevent its occurrence. He alluded to various circumstances which occurred during the progress of the labour, which had a direct tendency to bring about a spasmodic or a powerless state of the womb; and he then dwelt upon the importance of paying strict attention to the health of pregnant women; for anæmia had been found, according to his experience, to be a condition very frequently induced during pregnancy, and one upon which the inefficient nervous and muscular power of the uterus depended, and as being the direct cause of the majority of the severe floodings which took place after delivery.

On the Influence of Uterine Disorders in the Production of Sick Headaches and other allied Affections. By ARTHUR W. EDIS, M.D., F.R.C.P. (London).—Attention was drawn to the occurrence of uterine disorder being a frequent factor in the production of sick headaches. Cases were given in illustration of this, where a radical cure had been effected by improving the condition of the uterus, when other more general remedies had entirely failed to afford relief. The morning sickness of early pregnancy was in many cases traceable to some flexion, inflammatory condition of the body or cervix of the uterus, or some well recognised uterine disorder, and was only relieved when treatment was directed to this latter condition. Other neurosal affections, such as hysteria, epilepsy, and even insanity, were not unfrequently due to some morbid influence commencing in the uterus, and might be alleviated by attention to local treatment. Asthma, neuralgia, and chorea were also, in some cases, dependent upon some uterine disturbance.

Thursday, August 12.

The Chair was taken at 2 P.M. by W. S. PLAYFAIR, M.D., President of the Section.

On Open Fallopian Tubes. By J. MATTHEWS DUNCAN, M.D. (London).—Dr. Matthews Duncan described the ordinary and the patent or canalised state of the tubes, contrasting their condition with that of the cervix uteri. Although the cervix uteri differed greatly in this respect from the tubes, yet under various circumstances it became spontaneously canalised in health and disease. Lastly, Dr. Duncan dwelt on the pathological importance of patency in intra-uterine injections, in hæmatocele, and on the importance of persistent closure in sterility.

Dr. HALL (Leeds) referred to cases of retained menses, and asked how it happened that, in making openings into the hymen, in such cases, there was sometimes uterine contraction set up, with discharge of the fluid into the peritoneum.

Dr. MARION SIMS (New York) had seen several cases of patent Fallopian tube. In each of them there was retroversion and hypertrophy of the uterus. Dr. Emmet had settled the proper treatment of retained menses. He made a free opening, and injected a disinfecting fluid.

Dr. J. A. BYRNE (Dublin) said that he was not able to point out any case in his practice, either in private or in hospital, where he could be

certain that the condition of the Fallopian tube was such as had been described by Dr. Duncan; but he had occasionally suspected this from the direction which the uterine sound took, and the somewhat increased distance which it traversed *in utero*. As regarded the proper mode of opening into the vagina in cases of imperforate hymen and menstrual retention, the safest mode, according to the most recent writers, was to empty the uterus gradually, and to make a small incision in the hymen. This was done in a case which he had seen some time since in Dublin. It was the case of a young girl, a patient of Dr. Cruise, who very kindly asked him to see her. She was only fifteen years of age, and her abdomen was as large as that of a woman at the full period of pregnancy, the hymen being imperforate, and the collection must have been going on for a long time. A small opening was made, and exit given to a quantity of fluid resembling treacle. The next day a catheter was passed, and more fluid drawn off, and thus gradually the uterus was emptied. The patient recovered, and menstruation was afterwards regular. Dr. Byrne recommended that, in all cases where the introduction of the sound became necessary, caution should be used; and this very condition, which Dr. Duncan so well described, rendered, in his opinion, caution more necessary, as, in case of perforation of the tube, fatal consequences most probably ensued.

Dr. DUNCAN, in replying, said that the subject alluded to by Dr. Hall was a very difficult one in pathology. He had endeavoured to explain it in print, as others had done, but none of the explanations were satisfactory. With regard to the treatment of retained menses, he always made a free opening, and then left them alone. He had so treated a large number of cases—a dozen at least—and had never lost one.

On the Treatment of Uterine Flexions. By HENRY GERVIS, M.D., F.R.C.P. (London).—After expressing his agreement with the proposition enunciated by Dr. Graily Hewitt, that an unhealthy condition of the uterine tissue was the primary factor in cases of acquired flexion, the author advocated the view that the importance of flexions depended very much upon the amount of obstruction in the utero-cervical canal produced by the bend, and that the pathological results associated with flexions were in direct proportion to the amount of the obstruction. He then laid considerable stress upon the importance of classifying cases of flexion with respect to their special suitability for various methods of treatment. Cases of retroflexion he divided into three classes: 1. Those in which the uterus is capable of reposition, and, when replaced, of retaining, with suitable external support, more or less of its normal position; 2. Those capable of reposition, but resuming the faulty position on the withdrawal of the replacing force; 3. Those incapable of reposition, either from the presence of adhesions, or from the permanently damaged condition of the uterine tissue at the site of the bend. The special treatment suitable to the three classes was then discussed. For cases of anteflexion, a similar classification was not equally serviceable: it being rarer, on the one hand, for cases of anteflexion, when straightened by the sound, to retain, even temporarily, the normal position; and, on the other, it being also rare to meet with cases of anteflexion in which reposition was opposed by adhesions. The difficulty of applying adequate external support by pessaries, and the objections to intra-uterine stems, were next discussed. And, finally, acting on the principle that the patency of the cervical canal was the chiefly important matter, the plan of securing dilatation of the cervix in cases of anteflexion was recommended as the most generally useful, and the method of treatment by the graduated uterine bougie detailed.

Dr. HERMAN (London) stated that he had treated 56 cases of dysmenorrhœa by dilatation. The cases so treated comprised at first all those in which he could not find any definite structural cause for the menstrual pain; latterly, he had been able more carefully to select the cases in which this treatment would do good. Out of the 56 cases, in 27 there was no benefit; in five, the result was uncertain: three cases were complicated owing to other treatment having at the same time been employed; in five, the result could not be ascertained; in one the pain was quite changed in character; and in 15, complete relief to the pain followed, and lasted in some cases, to his knowledge, for many months; in two, as long as a year and eight months; this being the time during which he had watched the patient, and knew that the relief lasted. He had in his cases carried out the dilatation at one operation, not gradually, as Dr. Gervis had done.

Dr. BANTOCK (London) was in general accord with Dr. Gervis, but he thought there was a want of precision in nomenclature. In his opinion, a vaginal pessary was of no use in the treatment of any kind of flexion. In retroflexion the os was behind the axis of the vagina, and the body was low down in Douglas's pouch. These relations did not hold good in retroversion. In a true case of flexion, all intra-uterine stems must be used, whether it were anteflexion or retroflexion. He was quite satisfied that there was such a thing as contraction of the internal os, and that it required mechanical treatment.

Dr. HALL (Leeds) believed that cases of retroflexion and retroversion were very greatly benefited by the use of Hodge's pessaries. But, in anteflexion and anteversion cases, he wished to get some information as to any means of treatment which promised success. He would also be glad to hear what was the best material for pessaries. He thought intra-uterine stems were dangerous instruments, but required details of the risks in connection with their use.

Dr. PALLEN (New York) thought we should only advance when the pathology of flexion—the cause of the condition—was made out. He always tried to find out this in the cases that came under his care. Some cases recovered without any treatment; and others could not be treated satisfactorily, without finding out and removing the cause. The symptoms might be modified in many cases, and sometimes Hodge's pessaries were the best to use, but they required the longitudinal axis to be elongated, and the posterior limb to be made larger than usual. Many flexions could not become cured, and never did, unless the woman by some chance became pregnant. He had given up intra-uterine stem-pessaries for many years, but he found postural treatment of great use in the treatment of flexions. The postural genupectoral gymnastics allowed the elasticity of the tissues to recover its natural condition, and the position of the organ to be restored to its natural state.

Dr. MARION SIMS (New York) had not for years used a sound in the restoration of anteflexion. He did it with the finger. In treating anteflexion, he had long given up the intra-uterine stem, and now employed a globe pessary of just sufficient size to fill up the anterior cul-de-sac, and very carefully fitted. He related some cases in illustration of his treatment. As regarded retroflexion, he objected to the use of the Simpson's sound. Some kind of elevator must be used, and the fundus thrown up. The cervix was then to be pushed back as far as possible, while the external hand pulled the fundus forward directly behind the symphysis pubis. The uterus must be not only replaced, but it must be anteverted, and then only should be put in a pessary. He always now used block tin or some other malleable material, which must be bent to suit the peculiarities of each case.

Dr. GERVIS, in reply, said Dr. Herman's observations were of great value, and illustrated the different results obtained by different practitioners in carrying out similar plans of treatment. As regarded Dr. Bantock's view of the inutility of vaginal pessaries in cases of retroflexion, he could not agree with it. In conjunction with the other treatment referred to, he had certainly known many cases of distinct retroflexion of the first class ultimately cured by the use of appropriate pessaries. The importance of accurate knowledge of the condition of the tissue antecedent to the bend was doubtless very great, and Dr. Pallen's suggestion was very interesting, as also his proposals as to uterine gymnastics. Dr. Sims's observations were all of the highest interest, and he was glad to find that Dr. Sims laid stress upon the importance of that to which he (Dr. Gervis) had referred: namely, the replacement of the uterus by the sound in conjunction with the use of whatever pessary was selected.

The Etiology and Treatment of Lacerations of the Cervix Uteri. By MONTROSE A. PALLEN, M.D., LL.D., (New York).—In this paper, Dr. Pallen first discussed the reason why so many women suffered from lacerations of the genital organs during parturition. He ascribed the laceration of the neck of the womb, which occured in many cases, either to causes existing in the pelvis, or to neglect, or the use of instruments. Of about nine hundred patients treated in the gynæcological class of the University Medical College of New York during the last six years, more than two hundred had laceration of the cervix, which either interfered with the generative functions or produced more or less disease. As causes of laceration, Dr. Pallen referred especially to tedious labour, and the scleremic condition often following congestion or inflammation—the so-called hyperplasia cervicis; also to disproportion or deformity in the osseous structures, rendering the use of the forceps necessary. The injury could not be positively recognised until delivery was completed; but, if the pelvis were very roomy, it was to be suspected when the child's head and the mother's vulva became suddenly bathed with blood. Hæmorrhage was the chief symptom, and was sometimes fatal. If it persisted, its source should be ascertained. If, after the uterus had well contracted, the absence of laceration of the external parts had been ascertained by ocular inspection, and the parts had been well cleansed with carbolised water, blood continued to escape from the vagina, the deduction necessarily would be that it came from the cervix; and examination with the finger would detect the laceration. In such a case, Dr. Pallen would introduce a Sims's speculum, cleanse the vagina of clots, and see the point whence the blood issued. The use of the tampon was sometimes necessary to save the patient; and on several occasions he had employed silver wire sutures. In speaking of this, he took occasion to recommend that the obstetrician should always go to a labour provided for any emergency of the kind that might

occur. If plugging were required, the accoucheur should first introduce a tampon of styptic cotton saturated with alum or with persulphate of iron, and then pack the cervix with as many layers of cotton as could be introduced into the vagina. The plugging must always be done by means of a Sims's speculum, with the woman in the semi-prone position; and each layer of cotton must be smoothly and accurately placed in position. After the removal of the tampon, frequent irrigations of carbolised or thymolised water must be made for two or three days, until all possibility of sepsis had been removed by the development of the granulation process. In describing the operation for closure of the lacerations, Dr. Pallen said that he had performed it at least fifty times during the last six years on hospital patients; and it had been done in many other cases since 1866. The proper time for performing the operation—which should be done in all cases, however slight the laceration—was four or five days after the cessation of the menstrual flow. In operating, the patient should be placed on the table in the left lateral semi-prone position, with the perinæum retracted by a Sims's speculum, or one of its modifications. Dr. Pallen had hitherto frequently operated without anæsthetics; otherwise he had used ether, but would in future employ nitrous oxide. The instruments used for paring the edges of the laceration were scissors, about seven inches in length, of a variety of curves. During the direction, the cervix was steadied by a tenaculum as long as or longer than the scissors; the point being very hard and bent at an acute angle. An assistant sponged the bleeding surfaces rapidly and thoroughly with very small sponges. To control bleeding, Dr. Emmet had described a tourniquet; but Dr. Pallen found a very hot douche just prior to the operation generally sufficient. In general, the loss of blood did not exceed an ounce. Sometimes, however, very large vessels were cut, and, when these ramified in the dense cicatricial tissue, bleeding might continue until the edges were firmly approximated by the silver wires. If the cicatricial tissue were not all cut away, it might altogether interfere with healing, or its retraction during healing might give rise to secondary hæmorrhage. The sutures were applied by means of short, straight, well tempered needles, with very sharp and hard points; sometimes, to pass the sutures through the upper angle, a needle shaped like a fish-hook was necessary. Before twisting the wires, all clots should be sponged away, and the edges of the wound accurately approximated; the sutures must be bent on the flat and curved on the cervical tissue, and cut off about two lines from the wound.

The PRESIDENT referred to the value of the paper, and expressed a fear that, on this side of the Atlantic, there were few who were competent to discuss the matter from personal knowledge. He thought it possible that it might not be necessary in every case of lacerated cervix to sew it up.

Dr. MACAN (Dublin) had not performed the operation himself, but he thought the consideration of the subject, as it came before surgeons immediately after the accident occurred, was of much importance, and that the treatment at the moment most convenient was plugging. The diagnosis of the accident, and sewing up the laceration immediately, must be very difficult.

Mr. JARDINE MURRAY (Brighton) hoped the practice advocated in the paper would not be introduced to the same extent on this side of the Atlantic. He thought it could not be necessary to operate in cases of lacerated cervix so frequently as Dr. Pallen recommended. In cases where the cervix was divided by the knife intentionally, ought the operation to be performed? And if not, why not?

Dr. J. A. BYRNE (Dublin) said that he was surprised at the very large number of cases in which this parturient accident had occurred, and in which operative procedure became necessary in Dr. Pallen's practice. He (Dr. Byrne) had seen five thousand or more cases of labour during the time that he was resident in the Rotunda Lying-in Hospital in Dublin, and he had never witnessed any case in which hæmorrhage of an alarming nature occurred from this accident. Dr. Pallen had, in his opinion, most correctly described the source from which the hæmorrhage came; but was such an operation either necessary or desirable in most cases? In these cases, he had always found that the injection of simple cold water, or perchloride of iron and cold water, arrested this form of hæmorrhage; and he had never seen a fatal case. He had had opportunities of making examinations after death in many cases of women dying from other causes, and he had never seen the fearful lacerations of the cervix described by Dr. Pallen. However, he did not deny that they might exist, and that, in in such cases, the operative proceeding recommended might be necessary, or at all events useful. He highly approved of Dr. Pallen's removal of foul lochia by syringing the vagina; and he remembered one case, in which the removal of clots after a miscarriage, in which urgent symptoms came on, was followed by a lowering of temperature, and recovery. He hesitated not to approve of this practice, as also that recommended by Dr. Pallen, of receiving lochial discharges in carbolised tow, instead of the ordinary napkins. He forbad the use of sponges, as he always entertained the opinion that they were a means of conveying infection.

Dr. GRAILY HEWITT (London) observed, in reference to the question that had been raised as to the frequency of laceration of the uterine cervix, that he had formerly not observed it particularly; but, since his attention had been drawn to the subject by Dr. Emmet's recent paper, he had met with the condition in several cases. It sometimes might have been noticed that, after passing through a particular street perhaps almost daily for months or years, on a particular occasion, after the lapse of a long time, the presence of a shop that never attracted notice before was remarked; but it had been there, though unnoticed, all the time. This would explain how it was, perhaps, that this condition of lacerated cervix uteri had been overlooked.

Dr. AUST LAWRENCE (Clifton) mentioned a case in which there was a very severe laceration of the cervix, following a prolonged and tedious labour.

Dr. MARION SIMS (New York) looked upon this operation as one of the most important additions to gynæcology in modern times. He had overlooked the condition until his attention was drawn to it by Dr. Emmet. As regarded the primary operation, he thought the laceration would not be diagnosed or operated on frequently, but the chronic condition everyone could recognise, and it must now be treated. The operation was done with great frequency in New York, and did produce good results in cases which had resisted all other means of treatment. He thought it was now done sometimes where it was not necessary. It was only necessary when the mucous membrane was hypertrophied and ectropic.

Dr. WALTER (Manchester) had listened to Dr. Pallen's paper with much interest; but there was one point in the operation for lacerated cervix to which he wished to draw attention, namely, the use of the vaginal tampon, as recommended by Dr. Pallen for the checking of hæmorrhage. Dr. Pallen said that he advised the plug to remain *in situ* for four or five days. This procedure Dr. Walter thought to be fraught with great danger; and, while admitting that tamponing the vagina for hæmorrhage after delivery was a matter in which he had no personal experience, it not being, as far as he knew, ever practised in this country, yet he could not help thinking that the patient must necessarily undergo great risks of septicæmia, through the retention of blood and clots in the uterus, and the hindrance offered to the discharge of the lochia by the pressure of the plug in the vagina.

Dr. PALLEN was satisfied, if he had convinced his audience that the operation was sometimes necessary. He believed it was absolutely necessary to sew up every case of lacerated cervix. It was a good rule in surgery always to remove any cause which might produce ultimate evil results. He wished to place the study of obstetrics on a higher plane, and to point out that a great deal of gynæcological disease was due to miserable obstetrics. He recognised the difficulty of tamponing a woman after labour; but we must save her life, and sometimes this was the only way to do it.

On Congestive Hypertrophy of the Mucous Lining of the Body of the Uterus. By GRAILY HEWITT, M.D., F.R.C.P. (London).—The author related a case in which a lady, single, aged 42, was suffering from great enlargement, congestion, and anteversion and flexion of the uterus, the result of an attack of severe sea-sickness four years ago. The symptoms were constant pain and hæmorrhage on exertion. Operation for removal of a growth from the interior of the uterus had been performed by Dr. Milner Moore of Coventry a year before, with temporary relief. There was now found to be a prominent, projecting, soft, tumour-like growth within the uterus. A second operation was contemplated, and a preparatory treatment of rest and daily reposition of uterus was carried out carefully by Dr. Brockwell of Gipsy Hill, at the author's request. On proceeding to the operation, about ten days afterwards, it was found that the intra-uterine swelling had become enormously reduced; thereby showing that the swelling in question, which it had been feared was sarcomatous, was nothing more than the greatly hypertrophied and congested mucous membrane of the uterus. The uterus had been kept entirely in place, had become much reduced in size, and the hypertrophic mucous membrane to be removed was slight in amount. Nitric acid was applied to the surface. The patient did well. The case related demonstrated the extent to which mere congestion, produced by anteversion, might give rise to a tumour-like hypertrophy of the lining of the uterus. It also showed the effect of comparatively simple measures in reducing such hypertrophy.

Friday, August 13th.

The Chair was taken by the President, W. S. PLAYFAIR, M.D.

Pelvic Stand for Use in Demonstrating the Mechanism of Labour. By

H. MACNAUGHTON JONES, M.D. (Cork).—Dr. Macnaughton Jones exhibited a stand with articulated pelvis, so constructed that the pelvis could be placed at any plane with the horizon and turned readily in any direction. The pelvis was placed in the obstetric position, on the left side, and by means of the two universal joints and a sliding rod could be raised to any height, turned dorsally, moved on the right side, the inlet or outlet shown, thus enabling any lecturer to demonstrate to a large class in the most favourable manner the transit of the head and the mechanism of parturition. He had used it also in demonstrating other presentations than those of the head. The stand was made for him by Messrs. Mayer and Meltzer of Great Portland Street.

DISCUSSION ON THE REMOVAL OF UTERINE TUMOURS.

This discussion was opened by Mr. SPENCER WELLS (London). His remarks are published at page 365.

Mr. KNOWSLEY THORNTON (London) said that the first point to be dealt with in the discussion of this subject, was the question as to how far the removal of uterine fibroids by abdominal section was justifiable. He would simply say, under this head, that he did not think surgeons were ever justified in operating until all medical measures of treatment had been exhausted without such relief as enabled the patient to live in tolerable comfort. In those cases in which operation was necessary, what was to be arrived at was the perfecting of differential diagnosis. This was often extremely difficult, but was of the utmost importance, because on a correct diagnosis of the kind of fibroid operative procedure must depend. There were three classes of tumours: 1. Subperitoneal fibroids which were more or less pediculate; 2. Subperitoneal fibroids which were sessile, and intramural fibroids; 3. Tumours which so involved the uterus that it was necessary for cure to remove the whole supravaginal portion of the organ. The operations in these three classes differed very much in gravity; hence the importance of correct diagnosis. Now, thanks to Mr. Lister, exploratory operations could be made with perfect safety, and these would teach much; so that diagnosis would improve apart from the information gained in the individual case. In class 1, with Listerism, tumours might be removed with little or no danger. In class 2, though apparently the operation was not so favourable as that required in class 3, the cases were really more fatal as far as his experience went. In class 3, both ovaries were usually removed along with the uterus, and these cases appeared to do best when Mr. Spencer Wells's clamp was used. To this class, he would restrict the use of the term "hysterectomy". In the other classes, the ligature or the cautery, and intraperitoneal treatment, answered best. He thought that the method of sewing up only the peritoneal surfaces, as suggested and practised by Mr. Wells, was preferable to Schroeder's plan in cases in which it was necessary to open the uterine cavity.

Mr. LAWSON TAIT (Birmingham) had performed seventy-three ovariotomies, with two deaths; since then, he had done thirty-three operations without a death. The tumours were divided into three classes: 1. Those requiring enucleation; 2. Those requiring abdominal section; 3. Those best treated by removal of the ovaries. His results in enucleation were very unsatisfactory. In those cases where abdominal section was used, five died out of nine. His views on this point agreed entirely with those of Goodell. But as regarded removing the ovaries, he had a different story to tell. In future, he should seldom use either of the first two operations; but the third he had performed thirteen or fourteen times, with only one death; and he had determined never again to remove an uterine tumour by abdominal section, unless the tumour was of enormous size, or was pressing injuriously upon some organ. In all the cases where he had removed the ovaries, the hæmorrhage was completely arrested. He related a case in which this was very well brought out. In this one, as well as stoppage of hæmorrhage, the tumour was becoming smaller. He had observed this reduction of size in other cases also. He should in future always perform oöphorectomy before attempting to remove the tumour.

Dr. MARION SIMS (New York) thought Mr. Wells was right in dividing his series of cases according as they were performed antiseptically or not. This system had revolutionised surgery. As far as removing tumours by abdominal section went, there were some cases in which they must be removed on account of their size or pressure. He quite agreed that oöphorectomy would in future be very generally used in cases of bleeding fibroids. He had seen some tumours reduced in size to an enormous extent by the mere lapse of time and advance of life, and related a very remarkable case of the kind, where a tumour, which must have weighed about thirty pounds, in ten years had quite disappeared. He would have liked more details of Mr. Wells's fatal cases. He would prefer Péan's method to that of Schroeder in removing uterine tumours. Removing the whole organ was a safer operation than cutting out a portion of it.

Professor MACLEOD (Glasgow) said that for five years he had performed ovariotomy and all other operations strictly antiseptically, and he had learned that, with these precautions, the utmost boldness could be used in undertaking such operations. Abdominal section had now been robbed of so much of its danger, that, even for diagnostic purposes (when the ordinary means failed), it could be had recourse to with little anxiety or hesitation. For some years, he had performed all his hospital ovariotomies in the open theatre, just like any other operation; and, in two instances, when operating at the "Home for Training Nurses"—the weather being sultry—he had successfully operated, in very complicated cases, before an open window. During the recess, he had repeatedly dealt with these cases throughout in the common ward; and in no case had he considered isolation requisite, or any special care as to clothing. The success which, with so few special precautions, had attended the ovariotomies in the general hospital with which he was connected, had been remarkable. As regarded anæsthetics in ovariotomy, he infinitely preferred chloroform. If properly used, it was by far the most satisfactory agent. Always with the proviso that it was administered rightly, he asserted that it need cause no nausea or retching. The patient should have her bowels brought into good order beforehand: the stomach should be at the moment empty, but food of a sustaining and digestible kind should be given three hours before the chloroform was administered. He preferred beef-tea with pepsine, made somewhat thick with bread or rice. The anæsthetic should be given boldly on a towel, and the patient put very fully under its influence; and its effects carefully observed by watching the colour of the lips and the breathing. Whenever the least indication of returning consciousness was observed, a slight whiff would restore the condition required, and this should be attained by the introduction of as small an amount of the vapour as possible. The administrator should keep his towel well charged, and be most watchful of the patient's condition. If the patient were allowed to recover too far, then the application had to be begun *de novo*, and much more chloroform would be absorbed than was necessary. When well managed, a patient could be kept sufficiently under the anæsthetic during a long operation, revive rapidly when it was withdrawn, and have no abiding nausea (not to say retching). The pushing forwards of the lower jaw was so effective a mode of improving the breathing, that the practice of drawing out the tongue with forceps had, in his experience, been almost entirely done away with. A cup of tea given as soon as possible, with the recumbent posture, quietness, and darkness, would obviate any after sickness. During the operation of ovariotomy, it was important to keep the chest and limbs warmly covered, and afterwards to place hot bottles to the feet and limbs. A good supply of soft flannel should be placed under the loins during operation, so as to keep them dry and clean. He had long discarded the India-rubber sheet, made adherent to the abdomen, and having an aperture for the incision. It embarrassed the operator, and did little good in protecting the patient. He seldom used any drainage. He took care to secure all bleeding points, if possible, as they appeared, with fine catgut or the cautery. The thermo-cautery was convenient for this purpose. After the removal of the tumour, he cleared out the cavity with much care; and, if any obnoxious fluid had gained admission, he poured one or more kettlefuls of warm carbolic solution (1 in 40) into the abdomen, and allowed it to escape by turning the patient on her side, the viscera being protected by a large soft sponge. This he had done repeatedly, with the best immediate and ultimate effects, and without in any case having afterwards any signs of irritation of the peritoneum or any undue absorption of the carbolic acid. If a drainage-tube were thought necessary, he had for a couple of days placed a large-sized vulcanite tube, having a metal end, and eyes only near its extremity, in the lower corner of the wound, and had withdrawn the fluid by means of a syringe whose nozzle fitted the tube. The tube was cut off flush with the surface and retained by a thread. As to the treatment of the pedicle, a few years ago he advocated torsion; and it was not because that method failed that he had abandoned it for catgut and the cautery, but simply because he had found the latter less troublesome and quite as efficient. He believed it to be important to drop the pedicle, and not suspend it by using a clamp. Silver sutures, passed through the peritoneum, he had found, on the whole, the best mode of closing the wound—placing them closely, and supporting them by gentle but not over-firm bandaging. He objected to strips of adhesive plaister being applied across the abdomen and the pressure of bandages being great, as they often occasioned much discomfort, misled as to the cause of the pain, and interfered with repair. He renewed the dressing as seldom as possible, leaving the first often for eight or ten days, but being guided chiefly by the patient's feelings and her temperature. He had given up using opium as much as possible, as it caused sickness and loss of appetite, and excited thirst, which led to the inordinate use of fluid, and thus increased that flatulence which was one of the chief annoyances after ovariotomy. Of course, if there were pain,

opium might be required; and then it was best administered subcutaneously. After operation, iced milk would probably be the only nourishment of which the patient would be disposed to partake; but the sooner more solid food was taken (in the form of soup thickened with bread or sago, and liquid jelly, porridge, etc.) the better, as in this not only would the strength be better sustained, but the flatulence would be diminished. Occasional enemata were also of great service after the second day. The tendency had been, he thought, to keep the patient too low after operation. So far as he had been able to judge, the danger was not (with antiseptics) from inflammation (which was usually of septic origin), but the reverse, a failure of the vital powers. He often gave champagne with much advantage. Placing the patient on a water-bed after operation relieved much of the uneasiness which was apt to arise from the constrained dorsal position she were forced to assume. Giving the patient quinine for a short time before operation, and resuming it as soon afterwards as she could consume a fair amount of food, had, he thought, proved useful. He had never yet had to leave an operation uncompleted, nor to close the abdomen, from the discovery of conditions which had not been foreseen. These few observations he made with much deference in the presence of Mr. Spencer Wells, before whose experience the observations and operative attempts of others could not but appear feeble and trifling.

Dr. BANTOCK (London) did not agree with Dr. Macleod that ovariotomy was a simple operation. Referring to the natural history of uterine tumours, he said some required no treatment; others must be treated either by abdominal section or by oöphorectomy. In some of them there was a fairly good pedicle; in others there were such great adhesions that they could not be removed at all.

Dr. H. BENNET (Weybridge) said that, if the patient could be brought on to the period of change of life, she would be landed in a condition of more infirmity where the risk to life would cease. His results were very satisfactory. In the Salpétrière he had years ago performed very many *post mortem* examinations, and found numberless fibroids in them. If such were the natural way of cure, it seemed to point to the propriety of removing the ovaries, as suggested by Mr. Tait, so as to produce a premature change of life.

Mr. SHERBURN (Hull) exhibited a specimen of a large fibroid tumour (weighing 5 pounds 8½ ounces) successfully removed *per vaginam*. He said that the question of surgical interference in fibroid tumour of the uterus was one of very great importance. The fact must not be forgotten that there was great probability of the patient improving when she arrived at the menopause, and when the uterus ceased to be such an important organ in the human economy; and if by treating symptoms we could tide over the child-bearing period, we might in many cases trust to natural resources. But, on the other hand, cases occurred in which surgical interference was urgently called for. In the specimen he exhibited, operative interference was forced upon him. He had either to do nothing, and let the woman die, or to attempt to remove the growth, with some hope of success.

Mr. SPENCER WELLS, in reply, agreed with Mr. Thornton as to the importance of a proper selection of cases for operation. No operation should be advised where a patient was able to live in tolerable comfort, and where diminution of the tumour might be expected after cessation of the catamenia. But there were cases where, either from the size and pressure of the tumour, or from the amount of bleeding, the patient must soon die, or lead a life of constant suffering. In all his own cases, with only one exception, there was this clear necessity for operation. The particulars of the one exceptional case had been lately brought before the Obstetrical Society by Dr. Godson. The tumour, a subperitoneal fibroid, was successfully removed, although it was known that the remaining portion of the uterus was the seat of fibroid enlargement. The result was quite successful in relieving pain, but the operation was perhaps hardly justified by the amount of distress caused by the tumour. In no other of the sixty cases, however, could this be said. Of course in some of them the removal of both ovaries, as practised by Hegar and Battey, and now recommended by Mr. Tait, might have been better practice than removal of the tumour. But, before this could be decided, we must have much fuller and more trustworthy statistics than had as yet been given. Mr. Tait referred to Dr. Goodell's remarks upon the large proportion of deaths in recorded cases, and the probability that many fatal cases were not recorded. This was in reference to the removal of uterine tumours; but might not the same be true with respect to Battey's operation? Whether all the cases had or had not been recorded, it was quite certain that the records of many of them were so very imperfect as to be absolutely worthless. It had been a great satisfaction to him that the plan which he and some other ovariotomists had established of publishing every case as it occurred, whether successful or fatal, and with sufficient detail of the leading points in the case, had extended to other departments of surgery; and he trusted that the moral sense of the profession would prevent any return to the old bad habit of publishing successful cases only, concealing failures, and reporting particulars so imperfectly that the report could be of no use to anybody. This discussion would answer its purpose if it led to an accurate report of all the cases where uterine tumours were removed, or where Battey's operation was performed in the hope that removal of the ovaries would stop menorrhagia, and be followed by diminution in the size of the tumour, or of the uterus. He (Mr. Wells) regretted that Dr. Macleod should still advocate so dangerous an anæsthetic as chloroform. Scarcely a week passed without the record of a death from its use; and the very careful watching of the effects which Dr. Macleod insisted on so strongly, was quite enough to prove that we should employ some safer anæsthetic. They who objected to ether, might use bichloride of methylene, as he had done with very few exceptions for several years. The few cases where chloroform, or ether, or nitrous oxide and ether had been used, had confirmed him in his preference for methylene. He had never known it fail to produce sufficiently complete anæsthesia, nor had he ever once been in the smallest degree anxious as to the safety of any patient while under its influence. Referring to the remarks of Dr. H. Bennet and the other speakers, Mr. Wells said in conclusion, that, while there were undoubtedly many cases where large uterine tumours might exist without shortening life, or even causing great discomfort, it was equally certain that there were very many others where the patient must soon die, or live on in a state of continual suffering, or recurring dangerous bleeding, if surgical aid is refused.

Mr. C. B. KEETLEY (London) related a case of fibroid, in which he had removed the tumour by enucleation during labour, immediately after the birth of the child.

Sterility: Excision of Anomalous Membrane: Conception. By E. D. MAPOTHER, M.D. (Dublin).—In October 1878, a lady, aged 28, and married seven years, consulted Dr. Kidd and the author concerning sterility. She was a person of great beauty and large frame, and with full breasts. A symmetrical and evidently congenital membrane was found to cross the vagina at right angles about three inches beyond the myrtiform caruncles. There was a central circular aperture, about two lines in diameter, and a sound passed through it found a cavity about an inch long before the cervix. The front of the membrane being smooth and convex might be mistaken for this part, save for the very different shape of the opening. At its circumference posteriorily it was thick enough to suggest the possibility of there being a peritoneal inflexion. There was no other abnormality, and the patient and her husband had been quite unaware of any. The possible risk abovenamed having been explained, Dr. Kidd wholly excised the membrane with the aid of the scalpel and the forceps usually employed in paring vesico-vaginal fistulæ. A perfectly normal cervix and os uteri were disclosed. A glass dilator was worn with intervals for five weeks. The lady was now in the last month of pregnancy. The author regretted he had not searched for muscular tissue, which might have, sphincter-like, excluded spermatozoa. As the aperture in the membrane was above the level of the os, apposition of the meatus with the latter could not occur, and the expulsion of cervical mucus which probably preceded, and the aspiration which succeeded, the ejaculation of semen, would be interfered with. Embryology scarcely explained the existence of such a symmetrical partition in a vagina of otherwise normal form, for the hypothesis of the suppression of one Müllerian canal above, the other below, would be farfetched. While no record of this precise condition existed, cases of double uterus and vagina of the marsupial type, from want of fusion of the Müllerian canals, were pretty frequent. The very dilatable sphincter between the urogenital canal and the vestibule in the monotremes was somewhat similar.

Dr. BYRNE (Dublin) related a case where labour was obstructed by a large membranous septum, which was apparently similar in nature to that mentioned in Dr. Mapother's paper.

Obstetrical Knowledge in its Relation to the Present Standard of Medical Education. By H. MACNAUGHTON JONES, M.D. (Cork).—Dr. Macnaughton Jones drew attention to the disproportion between the obstetrical and gynæcological acquirements necessary in the practitioner, and the opportunities of learning afforded in many schools to the student; as also the inadequate requirements of the medical corporations which had to be complied with previously to qualifying. Taking the wide field of study included in these branches into consideration, he did not hesitate to say that these conditions of the educational bodies were miserably defective. In view of approaching changes in medical education, and bearing in mind that the General Medical Council had recently declined to recommend any change in the present system of education in obstetrics, and had resolved that the corporations should be permitted to continue to grant qualifications in midwifery, on an acknowledged imperfect clinical and technical training, he thought that now was the time for obstetric and gynæcological teachers, all over

the United Kingdom, to speak with no uncertain voice on this subject. Nor could an opinion emanate from a more suitable source than the Obstetrical Section of the Association. The President of this Section had elsewhere drawn attention to the impracticable task allotted to obstetric teachers in some schools; viz., to teach these combined subjects in the short course of lectures generally devoted to their consideration. He (Dr. Jones) had drawn up in tabular form the conditions of examination to be fulfilled by a candidate, as imposed by all the licensing bodies in the United Kingdom. He found that all were satisfied with certificates of attendance on one six months' course of lectures. In seven instances, this single course might be a summer course. Taking the average number of lectures in both winter and summer courses, and allowing for the exclusion of physiological and embryological subjects, remembering also the amount of practical demonstration required, he contended that an impossibility was expected, both from teacher and student—the former to impart, the latter to imbibe, anything like adequate information in any short course of lectures. He took as a test the matter contained in any of the more frequently used and popular text-books, both obstetrical and gynæcological, and contrasted the mere time necessary to read any one of these and the time occupied in a course of lectures. Turning to the practical or clinical experience required of candidates, the result was still more deplorable—attendance on six cases of labour being all that a large number of the licensing bodies required; that attendance being certified, not at any regular school, but by any friend of the candidate—all these, perhaps, natural cases, possibly the application of the binder seen in the majority, or, it might be, "the dressing of the baby". The conditions varied from six cases to thirty cases; and, on this *clinical knowledge*, the practitioner attended his first case of convulsions, version, hæmorrhage, or instrumental delivery. Then, as to clinical work, in diseases of women, but one corporation in the United Kingdom demanded any proof of such—the College of Physicians in London. Dr. Jones concluded by putting three propositions before the Section. 1. The efficient teaching of an obstetric class cannot be effected in a course of less than one hundred lectures. In schools where the winter session does not embrace this number of lectures, either an additional summer or winter course should be required before the candidate is permitted to present himself for his final examination; there being an understanding that the lectures on gynæcology are delivered as a distinct part of the course or courses attended by the candidate. 2. An attendance on at least twenty cases of labour should be required of the candidate before he is permitted to present himself for his final examination; these cases to be attended in some recognised hospital, or maternity, or under the supervision of a recognised teacher. 3. The candidate should be required to produce proof, by notes of cases or otherwise, that he has attended in the wards or extern department of a general hospital, or hospital specially devoted to the treatment of such diseases, a given number of cases of uterine disease.

SECTION E.—PSYCHOLOGY.

Wednesday, August 11th.

THE chair was taken by J. CRICHTON BROWNE, M.D., F.R.S.Edin., Lord Chancellor's Visitor of Lunatics, President of the Section, who delivered an address, which was published at page 262 of the JOURNAL for August 14th.

Mr. MOULD (Cheadle) proposed a vote of thanks to the President for his address.

Dr. HACK TUKE (London) seconded the motion, which was carried.

DISCUSSION ON THE INFLUENCE OF ALCOHOL IN THE CAUSATION OF INSANITY.

The discussion on the Influence of Alcohol in the Causation of Insanity was opened by Dr. G. M. BACON, M.A. He commenced by alluding to the prevalent opinion that a large proportion, both of insanity and of crime, was attributed to intemperance; and declared it to be his opinion that the matter was by no means proved, and was greatly exaggerated. He contended that, as a sole or main cause, intemperance did not hold the chief place, and that the most reliable statistics did not support this conclusion. Dr. Bacon showed that, in several of the agricultural counties, the proportion of cases attributed to drink varied from 5 to 14 per cent.; that in several others, where coal-mines and iron manufactures existed, the percentage varied from 3 to 29; while, in certain large towns, the rate varied from 2 to 30 per cent. He argued that such figures disproved themselves, and were unreliable. He further showed that, in a majority of cases, numerous potent causes were associated with intemperance—such as the existence of organic disease, like general paralysis, or hereditary influences, blows on the head, sunstroke, etc.; and urged that these influences were not sufficiently regarded. He proceeded to illustrate his views by his experience in the Cambridge Asylum. He had analysed 1,950 separate cases, and found that, of 75 attributed to drink, at least 40 could be assigned to other causes—such as those before alluded to; and, moreover, that the ages of the patients and the history of their symptoms were inconsistent with the common experience of those cases in which intemperance was the main or sole cause. It was, therefore, he said, impossible to accept the statement that 14 per cent. of the insanity of the kingdom could be properly attributed to drink; and suggested that 4 per cent. would be nearer the truth, though admitting that great differences existed between the large towns and the rural population. He exhibited tables, showing the proportion of cases attributed to drink in eleven rural and in five mining districts, and in several large towns. It appeared from these that, while Ipswich had only 2, Norwich was credited with not less than 30 per cent.; and hence Dr. Bacon suggested the absurdity of the inference, as there could not be this difference in the habits of the people of two adjacent towns.

Cases of Alcoholic Insanity in Private Practice. By H. SUTHERLAND, M.D. (London).—Two hundred cases had been carefully considered; one hundred male, and one hundred female, private patients. Out of one hundred male cases, twenty-six, and out of one hundred female cases, six, were alleged to have been caused by intemperance. These percentages—twenty-six for males and six for females—corresponded pretty accurately with the percentages given in the Report of the Commissioners in Lunacy for 1879, where the percentages were 21.3 for males and 7.9 for females. But, on closer investigation, Dr. Sutherland found that eight of his twenty-six male cases, and two of the six female cases, were cases in which alcoholic excess was only a premonitory symptom; in other words, he believed that one-third of the cases for both sexes, usually said to be caused by intemperance, were in reality cases in which alcoholic excess was only a premonitory symptom. The distinctions between cases of insanity caused by intemperance and cases in which alcoholic excess was only a premonitory symptom were stated to be as follows. When intemperance was a cause, the previous habits of the patient were those of a drunkard; when it was a symptom, the previous habits had been, comparatively speaking, those of sobriety. When intemperance was a cause, frequently no other influence could be detected which had produced the insanity, or the proofs of intemperance were so marked as to obscure all other etiological points in the previous history. When intemperance was a symptom only, some other distinct influence was found to have existed, which was more likely to produce mental symptoms than alcohol itself—for instance, a blow on the head. When alcohol was a cause, habits of intemperance had preceded the appearance of the mental symptoms, which had only been developed gradually. When the intemperance was a symptom, the mental aberration had preceded the abuse of alcoholic stimulants, and the mental symptoms were developed more suddenly. When alcohol was a cause, the mental symptoms were most frequently those of homicidal mania, or suicidal melancholia, with acts of eccentricity. When intemperance was a symptom, the mental phenomena were those of melancholia of a subdued form, or of delirium tremens. The writer had observed a transient attack of epilepsy on the admission of two cases where intemperance was only a symptom of insanity. This he had only seen in cases caused by intemperance, in the last stages of the disorder, and the epilepsy was then permanent and incurable. When intemperance was a cause, the delusions were of a disagreeable character, and were either those of suspicion or of grandeur. When intemperance was a symptom, the delusions were either of a quiet order, referring to persons other than the patient, or they partook of the peculiar nature of those accompanying delirium tremens. Acute cases of alcoholic insanity recovered; but, if the intemperance had been a cause, the patient invariably took to drinking again as soon as he was at liberty, and died an early death, frequently from cirrhosis of the liver. On the other hand, when the intemperance was merely a symptom, the patient frequently remained sober after his discharge from the asylum, and was able to return to his duties of social life. Chronic cases of alcoholic insanity did not recover; but, if the intemperance had been a cause, there was a constant craving for drink, whether the patient remained in an asylum or were discharged. Such patients drifted rapidly into the abyss of chronic dementia. If, on the contrary, the intemperance had been merely a symptom, the patient was always contented with a moderate supply of stimulants; his delusions and his mental condition remained stationary, but he did not become afflicted by dementia, even when advanced age came upon him. Cases were read illustrating these points of distinction.

Dr. HACK TUKE (London) said that, whatever opinion might be entertained as to the question under discussion, all would concur in holding that it was only by following out the method which had been adopted by the readers of the papers that they could arrive at correc conclusions. Those who wished to arrive at the truth must base thei deductions upon ascertained facts, and not rest satisfied with vagu

generalisations. With reference to the statistics of the Commissioners, he agreed with Dr. Bacon's criticism that they had in some particulars broken down, though the general result might be about right. There were so many factors requiring careful observation and consideration that they need not be surprised at its being shown that some mistakes had been made in the figures. He had at one time collected particulars respecting a great number of cases, and had come to the conclusion that there were twelve or thirteen per cent. of cases of insanity due to drink. Though no doubt many cases were, as alleged, put down to this cause which ought not to be, yet it should not be forgotten that many of the friends of patients did their best to conceal the cause of insanity when it arose from drink. In reference to the amount of insanity produced by it in Cornwall, to which reference had been made as the lowest in the list in the tables of the Commissioners, he remembered the estimate given to him when visiting the asylum at Bodmin. The superintendent told him, that up to that time drink had produced only about five per cent. of the insanity there, and any one who had any experience of Cornwall knew that one would expect to find a low percentage of insanity from this cause. In this particular the Lunacy Blue-Book was confirmed. The percentage was high at Birmingham, as he had reason to know from Dr. Whitcombe, and in this instance also the Commissioners' tables were correct. Reference had been made to the York Retreat; and, as he had lived some years in that institution he was able to say it was a fact that the patients who came there were very rarely intemperate in their habits. One of the remarkable results of his experience at that institution was that along with this fact, though whether in consequence of it he did not pretend to say, he had rarely seen cases of general paralysis there, to study which he had at that time to go to the neighbouring county asylum. As to the relative prevalence of the insane in the Society of Friends, to which Dr. Bacon had referred (quoting Dr. Clouston), that was a difficult question to decide, because, while their number could be accurately ascertained in a small body, this could not be done in the population at large. He differed entirely from the statement that fifty per cent. of the cases of insanity were due to drink; at the same time he should expect to find that a considerable portion of the insanity existing owed its origin to this cause, but there was a great difference between fourteen or fifteen per cent. which the Commissioners' tables showed, and the estimate put forward by Lord Shaftesbury. Certainly a strong *à priori* argument might be raised in favour of the probable influence of drunkenness, for they all knew the action of alcohol in producing morbid products in the brains of animals fed upon it, and no one denied that it caused delirium tremens in man. It was, however, only by a careful analysis of cases, such as they had had that day, that they could arrive at the real proportion of cases of insanity caused by drink. When at the Paris International Congress of Mental Medicine, he met with M. Dagonet, who had investigated three hundred cases of patients who were drunkards before they were insane. These should go side by side with Dr. Sutherland's two hundred cases. Supposing that in Cornwall the drinking habits of the people increased, what might be expected to be the result, as regards the frequency of mental disease? We might judge from the experience of France. M. Lunier, one of the Inspectors of Asylums, had shown that the departments in which the consumption of alcohol had increased most, were those in which there had been a corresponding increase of insanity. This was shown most strikingly in regard to women, at the period when the natural wines of the country gave way to the consumption of spirits. He had given a most instructive table of the increase per head in the consumption of alcohol from 1831 to 1869, accompanied by the corresponding increase of cases of insanity. It could not be said that this resulted from an insane craving for drink. It was not a premonitory symptom. The alcoholic beverages had been brought to the people. Without taking an exaggerated view of the general subject, there were reasons, therefore, not only for expecting alcohol to cause a considerable amount of insanity, but there appeared to be facts within reach to prove this to be actually the case.

Dr. James Edwards (London) said that nothing could be more difficult than any attempt to disentangle the facts connected with our drinking habits, and the occurrence of insanity. Insanity seemed to crop out as the result of two directly opposite conditions of life. One condition existed among the Society of Friends, in which the weaklier members were taken so much care of, that they survived to reproduce weakly and neurotic members, who might be said in the next generation to go on adulterating the national stock. Out of such a condition a large number of insane persons would naturally grow, inasmuch as under ruder conditions of life their progenitors would have been killed out in the struggle for existence. Thus, it was, that among the Society of Friends, where intemperance was very uncommon, there was a large proportion of insanity. On the other hand, in a place like Birmingham, where human beings grew up as if tagged to the machinery of our factories, and where the mothers left their children to be nursed in *crèches*, there children grew up with stunted and imperfect constitutions, and a large number of insane cases would be naturally developed. In the conditions which existed at Birmingham, the temptations to drink were also very great; and, therefore, insanity became associated with drink, although drink was often rather a premonitory symptom of insanity than a direct cause. In Cornwall again, where only 3½ per cent. of insanity was set down to drunkenness, there was a hard working and hardy community, who died by violence rather than by slow decay, and who had for two or three generations been completely permeated by religious influences, and of whom a large number were total abstainers. Without attempting to define the exact relationship of drunkenness and insanity as cause and effect in these various communities, he would refer to certain things on which every one present would be agreed. Firstly, men, if of strong constitutions and fairly organised all round, might go on drinking considerably and continuously to an advanced age without apparent injury, although, in point of fact, they underwent a slow degeneration of tissues. Certainly, also, such drinkers did accumulate masses of spongy tissue which had been referred to by Dr. Crichton Browne as denoting not the highest type of human development, while in their children much more serious degenerations were seen. Then, again, where alcohol was taken in somewhat large quantity, it produced in the individual drinker, firstly, disease of the liver; secondly, disease of the kidneys and of other excretory organs; thirdly, coarse forms of degeneration, such as atheroma, and fatty change in the blood-vessels and other structures. Out of these degenerations came ruptures of the blood-vessels, clotting in the arteries, heart-failure, and as a direct consequence, paralysis, apoplexy, and other coarse neuroses. In acuter forms of alcoholic poisoning, also, epilepsy occurred in consequence of urea accumulating in the blood, and fœtid breath demonstrated a generally putrescent condition of the drinker. Dr. Hack Tuke had stated that, in the Friends' Retreat at York, he had almost never seen a case of general paralysis, and that the effects of drinking were extremely rare in the patients. It was reasonable to suppose that alcohol, which in the rest of the body was known to be a powerful degrading agent, would produce lesions in the brain also, and that out of these lesions there would come purely mental defects, analogous to the paralysis, disease of the kidney, disease of the heart, and disease of the blood-vessels in other parts of the body. As the result of much careful observation, he was distinctly of opinion that the free use of alcoholic beverages brought those cases which Dr. Crichton Browne had described as neurotic into the crazy or insane circles; and that, where the brain itself was much exposed to other injurious influences, a reliance on alcohol brought strong healthy persons into the neurotic or crazy circles. It would be interesting to have statistics from those gentlemen whose practice lay in idiot asylums, as to whether idiocy seemed to be largely connected with the free use of alcoholic beverages by the mother during the period of gestation, delivery, and nursing. It was well known that in some parts of the country women were in the habit of making themselves drunk with alcohol at the time of delivery, and that many women drank freely during the periods of gestation and nursing. The question whether the use of chloroform in labour damaged the infant's brain was also worthy of consideration.

The Intemperance of Parents a Predisposing Cause of Imbecility in Children. By FLETCHER BEACH, M.B., M.R.C.P. (Darenth Asylum).—The author commenced his paper by referring to the fact that the part which alcohol played in the production of insanity had, for some time past, occupied the attention of the medical profession, and had been the subject of discussion at various associations. His experience led him to assign to parental intemperance a more important part in the production of imbecility than was assigned to it by the other superintendents of public institutions for imbeciles in the United Kingdom; and he believed that the prevalence of parental intemperance, in his cases, was due to the fact that his patients were drawn from a lower class of society, in whom intemperate habits largely prevailed. The history of the subject was then given, reference being made to a table, drawn up by the medical officers of American institutions for idiotic and feeble-minded persons, showing that parental intemperance was present in 38 per cent. of the cases. Eight hundred and thirty-three patients had been under the care of the author of the paper, and of these he was able to obtain histories in 430 cases. Of these 430 patients, there was a history of parental intemperance in 138—an average of 31.6 per cent. Statistics of these 138 cases were given, showing that 72 were males and 66 females. Of the 72 males, 47 were congenital and 25 acquired cases; of the 66 females, 44 were of congenital and 22 acquired origin. It was shown that parental intemperance was far more common among the fathers than the mothers of the patients; and that all degrees of intemperance, from occasional drunkenness up to delirium tremens, were

present. In a few cases, it was found that drunkenness was a family failing. The following classification of the 138 cases in which parental intemperance prevailed was adopted: 1. Intemperance alone apparently the only predisposing cause; 2. Intemperance accompanied with fright; 3. Intemperance associated with phthisis; 4. Intemperance complicated by insanity or imbecility; 5. Intemperance in conjunction with neuroses of different kinds; 6. Intemperance associated with insanity, or neuroses and phthisis; 7. Intemperance complicated by several predisposing causes. Taking these classes in the above order, it was found that 27 were included in the first; 16 in the second; 22 in the third; 15 in the fourth; 17 in the fifth; 26 in the sixth; and 15 in the seventh class. A table showing the number of congenital and acquired cases, the proportion of males and females, and giving other particulars, was exhibited. Reference was made to the type of case produced; and the author concluded his paper by stating that the opinion which he held, as the result of a careful study of the figures contained in his paper, was: that parental intemperance alone, in a few cases (27 out of 138), acts as a main or direct cause; but that, in the great majority of cases, it was only an indirect, accessory, or predisposing one. He did not believe it to be usually the chief cause; but he thought it was one which the medical profession should not overlook. [The paper was illustrated by some excellent photographs.]

Dr. SHUTTLEWORTH (Lancaster) remarked that the statistics of Dr. Fletcher Beach, as to the influence of parental intemperance in the causation of idiocy, showed a much larger percentage than did those brought forward by himself in a paper read some years ago at the Manchester annual meeting of the Association. Whereas in that paper he himself ascertained parental intemperance as a factor of idiocy in no more than sixteen cases out of three hundred cases investigated at the Royal Albert Asylum, Lancaster, Dr. Beach showed no less than 31 per cent. of his cases in which parental intemperance was traced. Whence arose this discrepancy? Mainly, no doubt, from the difference of social level of the two classes of patients. Dr. Beach's patients belonged to the class of metropolitan paupers, amongst which there was undoubtedly much intemperance, and the vice was readily acknowleged. The patients of the Royal Albert Asylum, who furnished his own statistics, were not paupers, and many of them came from agricultural districts. In estimating intemperance as a cause of idiocy, the negative as well as the positive aspect of the question should be considered. In how many cases was drunkenness a cause of pauperism, without being also a cause of idiocy in the offspring? and what more natural for a pauper to assign as the cause of idiocy in the offspring than intemperance, overlooking hereditary neuroses or other influences? In making these remarks, he only desired to speak in the interests of scientific accuracy, and not to diminish aught from the excellent moral lessons of Dr. Beach's paper. He might add that, in his own paper, he had considered none but congenital and non-epileptic cases. Passing to the American statistics, he said that he had carefully examined the Massachusetts and Connecticut tables, and the conclusion at which he arrived was that they displayed such an array of concurrent causes that it was improper, on their authority, to assign to drink that pre-eminence in the causation of idiocy which had sometimes been done. With regard to the more recent statistics of Dr. Kerlin (of the Pennsylvania Institution), his impression was that the 38 per cent. quoted by Dr. Beach was scarcely comparable with the 31 per cent. derived from Dr. Beach's own observations, inasmuch as not only parents, but grandparents, on each side, had been taken account of by Dr. Kerlin; and, as he read the tables of the latter, out of one hundred idiotic children, thirty-eight would have had intemperate *parents or grandparents;* that is to say, for this percentage, the history of *six hundred* progenitors (parents and grandparents) would be scrutinised, against *two hundred* (fathers and mothers only) for the percentage (31.6) quoted by Dr. Beach. The method adopted by Dr. Kerlin, of extending his inquiries to two generations of progenitors, was much to be commended; and in this way the influence of intemperance would come into the etiology of idiocy to a considerably increased extent. He himself was of opinion—and he knew of several instances—that not unfrequently idiocy was connected with the intemperance, not of parents, but of grandparents.

Dr. MORE MADDEN (Dublin) would not regard the question of intemperance and insanity from a sensational point of view. Different people were differently affected by alcohol. Some were better without any. Others could take large quantities and live a long life; but he believed that such persons accumulated spongy elements of tissue in their brains, which prevented them from doing justice to themselves. The question as regards the mother's intemperance should be considered under the heads of drunkenness during pregnancy, during parturition, during lactation, and under chloroform.

Dr. J. SEATON (Sunbury) was disappointed with the experiences of Drs. Beach and Sutherland. He had never met with a case in which intemperance was a premonitory symptom. He was unable to remember any case of general paralysis caused by intemperance.

Thursday, August 12th.

The Chair was taken by the President, J. CRICHTON BROWNE, M.D.

THE INFLUENCE OF ALCOHOL IN THE CAUSATION OF INSANITY.

The discussion on this subject was resumed.

Dr. LANGDON DOWN (London) remarked that his statistics corresponded almost exactly with those produced by Dr. Shuttleworth, and believed that the discrepancy between Dr. Shuttleworth's and Dr. Beach's statistics was due to the fact that they had to deal with different classes of society. Dr. Down remarked that Dr. Beach had not alluded to developmental cases—these were those connected with the first and with the second dentition, and with puberty—as immediate causes. He believed that intemperance in the parents produced only 2 per cent. of idiocy in the offspring. He had known one instance of four children being born idiots, in which the only cause that could be detected was intemperance in the parents. He quite believed that drunkenness during the time of procreation was a frequent cause.

Dr. HARRINGTON TUKE (London) considered that we ought not to be too hasty in setting down intemperance as a cause, in our present condition of knowledge. He had never met with a case, in the upper classes, of general paralysis being produced by alcohol; and considered that this disorder ought to be removed from the category of those diseases produced by alcoholic excess.

Dr. RIDGE (Enfield) believed that Lord Shaftesbury, and those who had recorded large percentages of cases of insanity caused by alcohol, had been misunderstood. The indirect influence of alcohol in the production of mental disease was more to be considered.

Dr. BRUSHFIELD (Woking) alluded to the discrepancy between the experiences of medical men regarding this question. He alluded also to three classes of insanity caused by alcohol.

Dr. BATEMAN (Norwich) remarked that Dr. Kerlin of America had produced some valuable tables, in which 32 in 100 cases of idiocy were considered due to intemperance in the parents.

Dr. EASTWOOD (Darlington) remarked on the difficulty of treating cases of dipsomania. He believed Lord Shaftesbury's statement, that 50 per cent. of the cases were due to intemperance, was excessive. He considered that intemperance was seldom a cause of general paralysis; that it was more often due to overwork, and to not taking proper holidays. In such circumstances, a man would take alcohol as an artificial stimulant. It should, therefore, be considered as secondary.

Dr. TURNBULL (Liverpool) had seen cases of idiocy in private practice, but none due to intemperance in the parents.

The PRESIDENT remarked upon the great moderation and temperance which had been displayed during the discussion. He thought medical psychologists could not sanction extreme views on the one side or the other as to the relations of intemperance and insanity. They could not admit that 50 per cent. of mental disease was due to drunkenness; nor could they allow that alcohol was a harmless agent, that never did any mischief in the nervous system. Alcohol seemed to him to have an immediate and deleterious effect upon the highest nerve-centres, and might induce insanity where there was no predisposition to nervous disease, and no intermediate conditions of tissue-degeneration. Perfectly healthy persons, if saturated with alcohol for a sufficient length of time, might be made insane; and there was a continuous series of mental diseases which might be traced to the toxic action of alcohol upon the nervous system. This series consisted of—1, delirium tremens; 2, mania à potu; 3, the monomania of suspicion; 4, alcoholic dementia. In these diseases, no question could possibly arise as to whether drinking was a cause or an early symptom. In all of them it was a cause, and an efficient cause, which might by its sole action establish the pathological state; just as lead might, unaided, bring on colic or wrist-drop. But alcohol might be not only an efficient and direct cause of insanity, it might also be a contributory or a remote cause. It was a contributory cause when, in conjunction with hereditary predisposition or enfeeblement of the nervous system produced in other ways, it brought on mental derangement, in the causation of which it was an important, but not a sole, factor. Under these circumstances, it was the spark applied to a prepared train, or the last straw that broke the camel's already overstrained and yielding back. In general paralysis, alcohol was, when it played any part in the etiology of the disease, invariably a contributory cause, conspiring, with functional abuses of other kinds, to bring about the pathological catastrophe. But alcohol might also be a remote cause of insanity, as when a state of drunkenness led to a cranial injury in the tottering drunken man himself, or in some one who was the victim of his vio-

lence—this cranial injury resulting in mental degeneration; or, as when a career of intemperance led to the squandering of wages which ought to have been spent on food, and consequently to the partial starvation of wife and children, and to an attack of melancholia in the former, made anæmic by lactation, an inadequate supply of nutrition, and household cares. Dr. Crichton Browne referred to the researches of Marcet, Anstie, and Magnan, as supporting the conclusions at which he had arrived; and mentioned that he had himself at one time produced in dogs, by continuously administering small doses of alcohol to them, a succession of disordered mental states strikingly analogous to those which were seen in the human subject as the results of alcoholic poisoning, again and again repeated. He thought that the statistics of the Commissioners in Lunacy as to the influence of intemperance in the production of insanity, notwithstanding the discredit that had been thrown on them, represented pretty nearly the true state of the case. No doubt, in these statistics, there were included, under the heading of "Intemperance as a Cause of Mental Disease", a certain proportion of cases in which intemperance was an expression of a diseased state already established, and had nothing to do with causation; but, on the other hand, there were certainly included in that large mass of cases at the end, in which the cause of the insanity was unknown, a certain proportion of cases in which secret, or concealed, or unrecognised drinking was really the undiscovered cause. The one error, he thought, balanced the other; at any rate, in two distinct and very minute investigations in which he had himself engaged, embracing 1,000 cases, and in which he had carefully distinguished between intemperance as a cause and as a symptom of insanity, the result obtained corresponded closely with that of the Commissioners, and showed that about 15 per cent. of the insanity of Yorkshire must be ascribed to alcoholic excesses in that county. The men supplying the material for these statistics to the Commissioners were not mere tyros, and it was no new discovery that intemperance, like other varieties of vicious indulgences and changes in character and conduct, might be the fruit, as well as the seed, of a morbid growth. Dr. Crichton Browne then showed that intemperance, and its injurious effects upon the nervous system, were most abundant, not, as has been ignorantly alleged, in times of high wages and prosperity, but in periods of widespread poverty and destitution. He quoted the observations of Binz of Bonn, and argued from them that alcohol might arrest the growth of the nervous system. He offered a physiological explanation of the actions of alcohol on the nervous system, maintaining that it first excited and then paralysed every nerve-centre in succession, beginning with the highest and ending with the lowest, and that its action was not simple, but doubly and trebly compound. The highest inhibitory and controlling centres upon which its primary action was exercised could not be paralysed repeatedly without grave danger to mental integrity. To weaken volition was to promote anarchy in mind.

Mr. MOULD (Cheadle) remarked that the discussion had proved that figures were not of any very great value. General paralysis, in his experience, was often caused by alcoholic excess. With regard to dipsomaniacs, his experience pointed to a recurrence of bad habits. One patient had been maniacal not less than one hundred and fifty times, and on each occasion he recovered in three days. He believed that the effects of alcohol were the same in both classes of life, although the quality of the alcohol might differ.

Dr. HARRINGTON TUKE (London) believed that a rich man might drink with less risk to his prospects than a poor one, who would by such conduct be thrown out of work and become destitute.

Dr. MARTIN contrasted the percentage of insanity from drink of Cornwall, 3·5 per cent., with that of Durham, 29.2 per cent.

Dr. STEWART (Clifton) considered that all remote causes of insanity from alcohol should be excluded from the discussion. We should rely only on the statistics of those who had read papers which could be thoroughly depended on. The poorer classes, however, supplied a larger proportion of statistics. He believed that the word "dipsomania" should be excluded from our nomenclature. Alcohol might produce very bad effects upon a patient, without such patient having been ever intoxicated. This was frequent in the upper classes. Constant contact with persons of stronger will was the only mode of curing dipsomania.

Dr. CHEVALLIER (Ipswich) could not speak so respectfully of statistics as did Drs. Bacon and Sutherland. He believed the reason for the differences in the asylum statistics with regard to etiology were due to the loose method which existed in taking the cases on admission, the statements of the relieving officers being frequently untrustworthy. The relieving officer was not the proper person to say what was the cause of the insanity. The medical men who signed the certificate should alone be depended on. His experience differed from that of Dr. Seaton, having met with two cases in which intemperance alone was the cause. In one, the mental disease undoubtedly came first, and the disease afterwards.

Dr. BACON was glad that his statements had been so unanimously received. He did not agree with Dr. Stewart's statement, that general paralysis was so unfrequent in Ireland, because there whisky was drunk instead of beer.

Dr. SUTHERLAND remarked that he relied upon a group of symptoms, not a single one, in his distinctions between insanity caused by, and that accompanied by, intemperance. He was unable to understand how Dr. Seaton could state that general paralysis was not caused by alcohol, when the tables of the Commissioners gave such large percentages.

Dr. FLETCHER BEACH remarked that his paper was founded upon careful inquiries directed to the parents of idiot children, by a series of questions he had prepared on the subject. In many cases, tedious labour and the use of instruments produced asphyxia and subsequent stupidity.

Certain Cases of Functional Ischæmia of the Brain. By B. BALL, M.D. (Paris).

The PRESIDENT remarked that Professor Ball's paper, although highly interesting and suggestive, was not, perhaps, calculated to promote immediate discussion, as the interpretation of the cases which he had recounted depended on a number of minute symptoms and circumstances, which required to be carefully weighed in order to justify a judgment. He was disposed to agree with Professor Ball in his general enumeration of the symptoms of ischæmia, but he could not at once assent to the proposition that the cases adduced were instances of cerebral ischæmia. They might be so, but they admitted, as Professor Ball would allow, of other explanations, as by small extravasations, embola, or patches of neuritis.

Dr. STEWART related a similar case, where deafness had been produced by the firing of a large gun, with subsequent recovery.

Dr. WOLFE (Nova Scotia) recorded a case where a language had been suddenly restored. The patient at first could only speak in Irish, till the sight of a canary bird made her speak English, which she knew perfectly before the attack.

Dr. BALL agreed that such cases agreed entirely with those mentioned in his paper.

Cutaneous Discolorations in the Insane resembling Bruises. By G. F. BLANDFORD, M.D. (London).—The object of the writer was to draw attention to certain discolorations which were occasionally seen on the bodies of insane patients, and which, at first sight, so closely resembled bruises, that blame might be unjustly cast upon attendants, unless considerable care were taken in the diagnosis. Attention was directed to such cases by Dr. Bucknill so far back as 1855; and, in the first volume of the *Asylum Journal*, was a paper by him on the subject, and some examples were given, to which, in a subsequent paper, others were added by another gentleman. In the rest of the volumes of the *Asylum Journal* and *Journal of Mental Science*, no mention was made of such cases, and for this reason the writer described one in his own practice: a gentleman in a state of acute melancholia, over whose gluteal region a large discoloration was discovered, of a dark plum colour, exactly resembling a bruise, and at first thought to be one. Gradually, however, it spread up the back; and, as he was lying in bed, the idea of bruising was precluded. Such discolorations might appear in parts where it would be difficult to apply external violence, and they were uniform in the parts affected at the same time, whereas bruises presented different degrees of shade and colour. They depended on the condition of the patient, a condition allied to scurvy, and it was important to consider the diet of such patients, and to take care that the necessary elements were supplied.

Dr. CHEVALLIER (Ipswich) asked whether or not such discolorations were found in those not insane.

Dr. HARRINGTON TUKE (London) had seen such discolorations in alcoholic cases not insane.

Dr. RICHARDS (Hanwell) had seen such discolorations in patients fed only with a spoon, without vegetable diet. Such spots were allied to purpura.

The PRESIDENT believed that such ecchymoses occurred in old people, but believed they were more common in the insane.

Dr. BEACH (Darenth) had seen similar discolorations in low imbeciles.

Dr. SUTHERLAND (London) had seen a case where a slight injury produced a large bruise in an insane patient who died shortly after from natural causes, proved by *post mortem* examination.

Dr. WOLFE (Nova Scotia) also spoke on the subject.

Dr. HUGARD remarked on the similarity of the cases to purpuric affections.

Dr. BLANDFORD (London) remarked upon the medico-legal importance of recognising the fact that such ecchymosis could be produced in the insane apart from injury.

Rapid Death from Hæmorrhage into the Pons Varolii and Medulla Oblongata. By W. JULIUS MICKLE, M.D., M.R.C.P.—In the case described there was sudden profound apoplexy; respiration ceased at once; slight momentary revival followed artificial respiration, which was carried out effectually; but life was extinct within seven or eight minutes (at the most) of the sudden seizure. Although the lesion present was too severe to permit of recovery, yet one of the practical bearings of the case was in support of Schiff's teaching that artificial respiration was the appropriate remedy when death was imminent from such intracranial hæmorrhage as threatened to suspend the functions of the medulla oblongata more especially. Very obvious medico-legal importance also attended a case such as this, in which death occurred with extreme or unusual rapidity. Some pathologists had denied to intracranial hæmorrhage the power to kill very rapidly, much less instantaneously. Nevertheless, that the rapidity with which intracranial hæmorrhage might prove fatal had been underrated by some, was obvious, from the examination of certain cases already on record, few although these might be. If one examined the question of rapid death from hæmorrhage into the pons Varolii and medulla oblongata, more especially, the easily available examples were apparently rare. The usual explanation of more or less rapid death in the latter group of cases was, that suspension of the respiratory function occurred from injury or inhibition of centres in the medulla oblongata, ministering to respiration. But in the case forming the basis of this paper, artificial respiration was fully carried out. Death, therefore, was here apparently due to the influence of shock, and the inhibitory influence on the heart of the lesion of the medulla oblongata and pons.

Friday, August 13th.

On the Best Way of Tabulating Recoveries from Insanity in Asylum Reports. By D. HACK TUKE, M.D. (London).—Dr. Tuke insisted on the importance of distinguishing between recoveries of patients and recoveries from more than one attack of insanity in the same person. He illustrated his observations with several tables, which he proposed to have introduced into future reports of asylums, the time for making improvement being especially opportune, as the annual meeting of the Medico-Psychological Association had just appointed a committee to revise the statistical tables of asylums. Dr. Tuke summed up as follows. 1. The statistical tables in the reports of asylums for the insane should contain a clear statement, not only of the readmissions (specifying the number for each person, and distinguishing between readmissions after recovery, improvement, non-improvement, etc.), but of the recures, showing separately the number of persons who have recovered. 2. The percentage of recovery given in these tables should be that of persons recovered, calculated on persons admitted. 3. The usual method of obtaining the percentage of recovery by calculating the cases of recovery on the cases admitted, though frequently producing nearly the same result, does not afford a reliable proportion of the number of persons who recover to the number of persons admitted. 4. If it be desired to include the number of times the patients recover, this object is not secured, as some suppose, by the usual method of calculating the percentages of recovery, but by calculating the gross number of cures and recures upon the persons admitted. 5. The present method of jumbling together, in the statistical table of recoveries, the gross number of cures and recures, is misleading, and occasions exaggerated views as to the curability of insanity, and proportionate disappointment when the demand is made for additional asylums.

Dr. BLANDFORD (London) agreed with Dr. Hack Tuke's proposal, that the mode of taking statistics at present in vogue required amendment. He pointed out the fallacies which might arise if a patient were admitted to an asylum different to that he became first an inmate of.

Dr. SUTHERLAND (London) hoped that Dr. Tuke would supplement his paper on a future occasion by stating us what forms of insanity were most liable to recurrent attacks. This was most important in private practice, where the relations were not only anxious to know if the patient would recover from a first attack, but also what might be his or her liability to a second one.

The PRESIDENT said that, while agreeing on the whole with Dr. Tuke, he thought that, for scientific purposes, the method of calculating recoveries on cases was more valuable than that of calculating them on persons. The latter method would lead to mistakes and confusion more serious than had arisen out of the former. Patients recovered from insanity completely, and two attacks of insanity in the same person might have distinct starting points. Thus, a man might have an attack of mania due to a disappointment in love at nineteen, and an attack of dementia due to a sunstroke at fifty. In what sense could these two attacks be said to be connected with each other? It would be an abuse of language to speak of the latter as a relapse of the former. The more asylum statistics were assimilated to those of general hospitals, the better would it be for all concerned; and in no general hospital would an attack of bronchitis occurring in a man who had had a similar attack twelve months before, but had been perfectly well in the interim, be spoken of as a relapse. Complete recovery did take place in insanity. Complete repair did take place in nerve-tissue. Two inches of the sciatic nerve cut out had been completely renewed with perfect restoration of function.

Dr. HACK TUKE (London) agreed with Dr. Blandford, that statistics were more reliable in public than in private asylum practice. He hoped to write a paper at some future date concerning the forms of insanity most liable to relapse, as suggested by Dr. Sutherland. "Relapse" meant a return to an asylum after having been returned "recovered", without reference to the interval of time which might have existed between the two attacks.

A Plea for the Minute Study of Mania. By J. CRICHTON BROWNE, M.D. (London).

Dr. FERRIER (London) had listened to Dr. Browne's paper with much interest, it being the first attempt that had been made to correlate his experimental researches with the phenomena of insanity. He considered mania to be, perhaps, too difficult a subject to commence with in this line of inquiry, as so many of the movements in that disorder depended upon external irritation, as well as upon disease of the cortex.

Dr. HACK TUKE quoted a case in which a man had sustained an injury on the right side of the occipital lobe. When his attention was not attracted, there were twitchings of the left arm, and flexion of the left leg upon the thigh.

On Subvarieties of Neurasthenia. By G. M. BEARD, M.D. (New York).—Dr. Beard, adopting the scheme of the President of the Section as set forth in his address, showed that neurasthenia occupied the outer circle, and described a number of its varieties: the cerebral, spinal, vaso-motor, sexual, etc.

The PRESIDENT said he could only concede to Dr. Beard a section of his outer circle. He demonstrated how the three circles might be divided into sections, and showed that progressive cases of nerve-disease might pass in a straight line from circumference to centre or might pursue an erratic course.

Dr. HACK TUKE thought we should not rely upon statistics, as persons on the borderland of insanity, or afflicted with neurasthenia, were not included.

Dr. BEARD remarked that he and Dr. Browne were agreed as to the sections into which the circles should be divided, but that time prevented his entering into further details.

Case of Menstrual Epileptic Mania treated by Oöphorectomy. By LAWSON TAIT, F.R.C.S.—The case was that of a girl aged 17, an inmate of the Birmingham Borough Asylum, who had suffered all her menstrual life from severe menstrual epilepsy. Lately, this had assumed the additional character of acute mania at the periods. Dr. Green and Dr. Lyle, the superintendent and assistant-superintendent, were of opinion that oöphorectomy afforded a possible means of relief; and, for the purpose of having this operation performed, she was, with the consent of the Lunacy Commissioners, placed under the care of Mr. Lawson Tait. Her ovaries were removed, and proved to be perfectly healthy. The effect of the operation was an immediate and most marked improvement in her physical health, an entire arrest of the mania, and a diminution of the fits from fifteen in the month to three, with a marked amelioration of their severity. Mr. Tait thought further improvement was to be expected.

Dr. BACON (Fulbourn) had castrated two male epileptics, with the result, in one case, of great improvement.

Dr. HACK TUKE asked under what conditions such an operation would be indicated.

Dr. BACON replied, in cases of confirmed masturbation in incurable cases of epileptic insanity.

The PRESIDENT considered Mr. Tait's paper suggestive and illustrative of the importance of what he had long urged, an increased attention to the state of the sexual organs and functions in insane females. In various forms of insanity, the thorough investigation of these by a person having special skill ought to be a matter of routine practice. Surgical procedures such as those adopted by Mr. Lawson Tait and Dr. Bacon, ought only, of course, to be resorted to in extreme cases and with great caution. He referred to a case, seen in consultation with Mr. Tait many years ago, in which a bearded lady had been benefited by the introduction of a galvanic pessary. The beard subsequently fell off, and the patient's mental condition, which was that of melancholia, improved so that she recovered completely. He alluded to Dr. Sutherland's researches at the West Riding Asylum, which proved that menstrual irregularities were more common amongst the insane than the sane.

Dr. BLANDFORD believed that the improvement from such operations would be temporary.

The following were taken as read.

A Case of Multiple Apoplexies Simulating General Paralysis in a Woman. By G. H. SAVAGE, M.D. (Bethlehem Hospital).

On the Medical Study of Mental Diseases; and on a School of Medical Psychology in London. By J. CAMPBELL PRICHARD, M.D. Edin.

The Administration of the Insane in Workhouses. By T. M. DOGAN, L.R.C.P. (Halifax).

SECTION F.—PHYSIOLOGY.

Wednesday, August 11th.

IN the absence through indisposition of Professor RUTHERFORD of Edinburgh, the appointed President, the Section of Physiology was presided over by MICHAEL FOSTER, M.D., LL.D., F.R.S., Prælector of Physiology in Trinity College.

THE EVIDENCE DERIVED FROM CLINICAL OBSERVATIONS AND PHYSIOLOGICAL EXPERIMENTS AS TO THE SEAT OF THE FORMATION OF UREA IN THE BODY.

The discussion on this subject was opened by Professor ARTHUR GAMGEE, F.R.S. (Manchester). He pointed out to what a large extent our knowledge of this subject was based upon clinical observation as distinct from physiological experiment; for which reason the question was one especially appropriate to the physiological section of a medical association. The whole of the nitrogen which finds its way into the body is introduced in a proteid form; and, of this nitrogen, at least eleven-twelfths escape from the body in the urine, chiefly as urea. The broad question, therefore, is: How and where is the transmutation of nitrogen from the proteid to the urea form brought about? It has been long known, from the researches of Christison, Prévost, Dumas, and others, on Bright's disease, that the kidneys eliminate urea from the organism; but it is another question whether any formation of urea happens in those organs; and observers have not been wanting—as, for example, Oppler and Zalesky—who asserted that urea was generated as well as separated in the kidneys. Their argument, as is well known, was based on experiments which seemed to show that, when the kidneys are extirpated, there is no accumulation of urea in the system; while, when the ureters are simply tied, such an accumulation always discovers itself. This argument derived great support from the statement of Ssubotin, that, when creatine is rubbed up with kidney-substance and digested, there seems to be a conversion of creatine into urea. The experiments have, however, been completely re-examined by Meissner and Voit, and found to be incorrect and misleading; hence, notwithstanding the recent assertion of a Brussels professor, that the kidneys do take part in the manufacture of urea, we may disregard the kidneys as having any important function in urea-formation. If urea be not formed in the kidneys, is it formed in the blood? It is impossible to deny that, in the normal physiological changes of the protoplasmic structures of the blood, some nitrogen, possibly, assumes the form of urea. But it is equally certain that the blood gives rise to extremely little urea. The blood contains a small proportion of urea, but it cannot be regarded as the sole source even of the small amount present in it. Is urea formed in the normal activity of muscular tissues? It used formerly to be taken for granted that the richly nitrogenous tissue of muscle was the chief source of the urea in the urine; and Liebig was long the main exponent of this view. But most observers have failed to detect any trace of urea in muscle itself; and although, by the refinement and perfection of methods of separation, urea has indeed been detected by Demant and by Haycraft, it is present only in the smallest amount. Further, elaborate series of experiments, conducted in many ways, have established the practical independence of urea-secretion and muscular exercise. Among these experiments, it is sufficient to mention those of Fick and Wislicenus. There is a very slight, but wholly insignificant and inconstant, increase of urea excreted after muscular exercise, especially if severe. It cannot fail, however, to be a matter of astonishment that the highly nitrogenous tissue of muscle should contain practically no urea; and the apparent anomaly has been attempted to be explained by supposing that, in muscle itself, there occurs only some preliminary step of the whole process of urea-formation. It is not difficult to find in the circumstance that considerable quantities (.2 to .3 per cent.) of creatine can be extracted from muscle, a powerful support for this view. Creatine, out of the body, readily lends itself to conversion into urea; may it not be assumed that the proteid juice is brought down to a creatine stage in muscle, in order to be removed into some other organ where it may be perfected into urea? Unhappily for this view, physiological experiment altogether disappoints us: notwithstanding the seeming ease of the transformation of creatine into urea, it always seems easier, in the economy of the body, to excrete creatine, as such, *per vesicam*, than to change it into urea. Creatine injected into the blood enlarges the excretion of creatine, but not of urea. Further, it may be permitted to doubt whether creatine actually exists as such in living muscle. May it not be formed at death and in the course of necessary preparation for extraction and estimation? Is urea produced in the nervous system? There is certainly a little urea to be detected in nerves and brain-substance, but not enough to warrant the view that any considerable fraction of that excreted arises there, especially if we are allowed to assume, from the slow wasting of nerve-tissue during inanition, that the normal tissue-changes of nerve are slow. But, on the other hand, diet undoubtedly does influence and modify the amount of urea excreted. A dog, whose normal excretion of urea is six to eight grammes daily, may, by increasing its nitrogenous food, be made to excrete 80 to 130 grammes in the same time (Voit). If, further, we examine the rate of excretion of urea after injection of nitrogenous food, we find little or no rise of excretion in the first hour, while from the second to the sixth the excretion rises to a very great height. Now, this period is precisely that in which the digestive processes reach their maximum—*i.e.*, when the absorption of proteids and their immediate derivatives from the alimentary canal is greatest. If urea be not found in quantity in muscle, in blood, or in nerves, where is it more likely to arise than in the glands? The simplicity of a secreted fluid is no index whatever of a simple process of separation from the body. The salivary juice is simple in constitution, but the glandular processes of its secretion are complex, as we know from the great heat evolved (Ludwig). It has, indeed, long been known that blood from certain glandular organs is very hot, and this especially refers to the blood and tissue of the liver during digestion. There is much reason to suppose that proteid matters are rapidly broken down in the processes of secretion generally; and when we turn to the case of liver, this view is abundantly supported by other facts. Glycogen may be stored up in the liver, even on a proteid diet—a circumstance which seems to render it very probable that proteids are split up in that organ. If it could be proved that urea is formed in the liver, we should have an absolute proof that proteids are decomposed there. Heynsius, in 1858, believed that he had proved that the liver does as a fact contain much urea; but his processes were not accurate. It was Meissner, in 1864, who first established the presence of urea in the liver. Cyon, in 1870, performed experiments in which the liver was washed out with blood, with the result of showing that urea is formed in the liver *post mortem*, as blood which had passed the liver received an addition of urea; but his experiments were, as Gschleidlen afterwards showed, vitiated by fallacies which rendered them valueless. Gschleidlen also showed that the liver contains urea, as do the spleen, lungs, bile, etc.: but that the urea in the liver is independent of the food taken, and is not more, proportionately, than that in the blood. And, finally, Meissner, in 1876, always found urea in the liver in greater quantity than in the blood. From a review of the foregoing physiological work, in connection with similar experiments performed by the author, it may fairly be concluded that urea is formed in the liver, but that no physiological facts are known which limit the formation of it to that organ. The pathological aspects of the whole question are extremely important and suggestive. Numerous cases are known connecting the liver with the excretion of urea. Beginning with the celebrated case of Bouchardat (recorded in 1846), in which a sudden attack of simple jaundice enlarged the excretion of urea fourfold, the author reviewed the cases which bear on this point published by Genevois (a case of Simple Jaundice, 1876), Parkes (Cases of Hepatitis of Warm Climates, 1871), Vogel (a case of Carcinoma of the Liver, 1854), Frerichs (Acute Yellow Atrophy, 1856), and observed by himself. This line of his argument Dr. Gamgee followed by an analysis of the important work of Brouardel (*L'Urée et le Foie; Variation de la Quantité de l'Urée Chimie dans les Maladies du Foie.* Paris, 1877); and also of Professor Charcot's *Leçons sur les Maladies du Foie.* Paris, 1877), accompanied by criticisms. In conclusion, Dr. Gamgee dwelt upon the extreme importance of accurate clinical and pathological observations in view of the questions under review. He noted in much of the work which had been done already: 1, the almost universal failure to determine, or even to obtain, an approximate estimate of the nitrogen in the diet; 2, the common mistake of omitting to record the *post mortem* condition of other organs, and especially the kidneys, in these cases; 3, how valuable it would have been to have determined the total nitrogen excreted, as well as the urea. From a review of the whole question, Dr. Gamgee was of opinion that the following conclusions might be drawn, which, he suggested, might be usefully discussed in the debate about to follow. 1. It appears likely that the formation of urea does not occur, or occurs in insignificant amount, (*a*) in the blood, (*b*) in the muscles, (*c*) in the nervous organs. 2. It is reasonable to suppose that, in the glandular organs, urea or its antecedents are formed. 3. The researches of various observers

render it certain that urea is formed in the liver, though they do not warrant us in saying that the liver is the only seat of formation of urea. 4. Pathological observations establish a very strong presumption in favour of the liver being the organ in which the largest quantity of urea is formed. If properly pursued, pathological investigations afford the best possible means of proving conclusively whether urea is formed in the liver. 5. In order to obtain thoroughly satisfactory information from such investigations, it will be necessary that in future the total amount of nitrogen in the food shall be rigorously determined, as well as the total amount of nitrogen in the urine and the urea. Moreover, the participation of other organs, and especially the kidneys, in the morbid condition supposed to be connected with a deficient formation of urea must always be carefully investigated.

On Urea in Blood and Muscle. By J. B. HAYCRAFT, M.B. (Edinburgh).—This paper contained the description of a method for the quantitative estimation of urea in blood, by dialysing into absolute alcohol. The defibrinated blood was placed in the dialyser, forming a thin layer on the parchment paper. In a few hours the fluid parts passed through into the alcohol, which filled the outer vessel; the greater part of the urea also passed. The blood was now mixed several times with fresh water and redialysed. The alcohol was evaporated, the residue re-extracted with absolute alcohol, washed with petroleum ether, extracted with acetic ether, and estimated according to the method of Huefner. The average quantity found was about thirty parts per hundred thousand. A demonstration of urea might be obtained from ten cubic *centimètres* of blood. A modification of this method enabled one to demonstrate the existence of a small quantity of urea in muscle. The adductor muscles of a dog were freed from blood, pounded with glass, and extracted with water, and the watery extract was then treated in the same way as the blood. Ten parts per hundred thousand were found on an average. Dr. Haycraft then showed that during muscular activity no increase of the urea occurred, but that it probably varied with the amount present in the blood. Also, from several experiments performed upon dogs and rabbits with the above methods at his disposal, he had proved that during a fasting condition the quantity of urea in the blood was very low, but that three or four hours after taking solid proteid food, a very marked increase occurred, amounting in all of those experiments which are described fully, to more than fifty per cent. The author of the paper considered the urea as a substance separated from the proteid food-stuffs before they underwent tissue-assimilation. It was, in fact, a phase of digestion.

On the Presence of Leucin and Tyrosin in the Urine in Numerous Diseases. By E. C. ANDERSON, M.A., M.D. (Darlington).—The substance of this paper was imparted by the President, in the absence of the author. Dr. Anderson remarked that text-books taught that leucin and tyrosin were present most especially in acute yellow atrophy; one or both had, however, been discovered in a few other diseases, viz., by Beale, in chronic wasting of the liver; by Frerichs and Städeler in typhus, small-pox, in one or two of the other exanthemata, and in leucocythæmia. In November 1877, in a case of jaundice arising from obstruction, the author examined the urine for leucin and tyrosin, and discovered them; during convalescence, tyrosin first disappeared, and finally leucin; and during each return of the symptoms, on future slight recurrences, leucin re-appeared. Out of fifty-two individuals observed and recorded, in whose urine either leucin alone, leucin and tyrosin, or tyrosin alone existed, there were of jaundice, two; cirrhosis, one; acute rheumatism with pneumonia, two; heart-disease, three; hepatic derangements, ten; phthisis, three; hemiplegia, one; sciatica, one; cholerine, one; chronic dysentery, one; colic, one; pneumonia, one; pleuropneumonia, one; nephritis, etc., one; anæmia, one; Bright's disease, one; measles, with peritonitis, etc., one; rötheln, two; tabes mesenterica, with obstruction, one; chronic bronchitis, two; puerperal eclampsia, one; chronic asthma, two; delirium tremens, one; pertussis, one; cancer, one; puerperal septicæmia, one; cardialgia, one; measles, one; general decay, one; that is to say, there were twenty-nine different diseases in which either leucin alone, leucin and tyrosin, or tyrosin alone, exist, not inclusive of acute yellow atrophy, chronic yellow atrophy, leucocythæmia, typhus, small-pox, or, with the exceptions of measles and rötheln, the other exanthemata, and daily observation and analysis only added to the number. The author had only recorded cases in which leucin and tyrosin existed in the urine in very appreciable amount. The urine of many persons had been examined, and, by reason of mere traces being found, the cases were rejected. He drew attention in the recorded cases to the almost universal prevalence of interruption of hepatic functional activity, and likewise to the equally universal presence, in minute amount, in the urine of all persons, particularly of leucin, so as to suggest the possibility of these constituents, in minute quantity being, if not normal, at least subnormal. Notwithstanding this, however, they had not been discovered by the author in the urine of those enjoying the highest state of health, and who, in addition, led the most temperate active lives. He believed that the existence of leucin and tyrosin in the urine was due to corresponding deficiency of urea, and stated briefly his reasons.

The discussion was maintained until nearly the close of the sitting of the Section, by Dr. Lauder Brunton, Dr. Stirling, Mr. Lea, Professor Bowditch, Dr. Mahomed, Dr. Haddon, and Mr. Langley. Dr. Gamgee's reply brought the discussion to a close.

In the course of the sitting, Dr. HAYCRAFT gave a demonstration of the urea obtained from blood and muscle in a crystalline state; also crystals of the same converted into the nitrate. Blood and muscle extracts were also shown after dialysing into alcohol.

On the Action of the Ribs in Forced Expiration. By ARTHUR RANSOME, M.D. (Manchester).—The paper was illustrated by an experiment on the living subject. Dr. Ransome pointed out that, in forced expiratory efforts, the lungs were compressed not only by the descent of the anterior ends of the ribs, and by their rotation laterally, but also by a shortening of their chord-lengths; in other words, by their inbending in the latter portion of the expiratory act. The amount of this bending varied in different individuals, according to the elasticity of the ribs, being large in the young, and very small in the aged. In some cases, it amounted to seven-tenths of an inch for the third and fifth ribs. The fact of the shortening of the chord-length of the ribs was proved—1. By measurements made on the recent subject; 2. By direct measurements on living persons, with calipers devised for the purpose; 3. By the proportions between the upward and forward stethometric measurements; 4. By the nature of the tracings obtained with the stethograph; 5. By pathological facts in various diseases of the chest. The observation had important bearings on the physiology of spasmodic effects of breathing, and on practical medicine in chest-diseases.

On the Contraction of Striated Muscle. By DAVID NEWMAN, M.B. (Glasgow).—A muscle might be said to be in one of four states:—1. Shortened, and at rest; 2. Stretched and contracted; 3. Expanded and at rest; and, 4. Shortened and contracted. When a muscle was examined in a state of perfect rest, the transverse striation was absent, but on contraction gradually appeared; first, as a broad, dark, transverse bar, with a double contour, afterwards becoming narrow, the breadth being in an inverse ratio to the amount of contraction; the longitudinal striation was also absent while the muscle was at rest, but appeared during contraction, particularly when the muscle was stretched and contracted. The *muskel-kästchen* were in the form of plain hollow cylinders, united at their bases more firmly than at their sides; these cylinders contained a fluid—muscle-plasma—which, during a state of rest, held a certain quantity of fat in solution, so that the whole of their contents possessed the power of double refraction; but when either the electrical or chemical condition of the plasma was altered, first the plasma at the sides of the basic membranes, then progressively towards the centre, precipitated its fat, and as the fat was thus precipitated, it collected itself in the form of a flattened disc at the centre of the cylinder, by reason of which the walls of the cylinder were bulged out laterally so as to give the fibrilla a varicose appearance, causing shortening of the cylinder in its longitudinal, and lengthening in its transverse axis, and at the same time rendering the striation (longitudinal) more distinct. If this change were now supposed to occur throughout all the cylinders of the muscle, it was evident that the muscle would contract, and at the same time increase in its transverse measurement, without actual diminution in volume.

Thursday, August 12th.

DISCUSSION ON SLEEP AND HYPNOTISM.

The introduction of the subject had been kindly undertaken by Professor W. PREYER, of Jena, who was well-known to have devoted much attention to the subject. The President, in introducing Professor Preyer, referred very briefly to the history of the question, pointing out the part which Englishmen took in the earliest observation of the facts of hypnotism, how the subject had until recently been left in the hands of nostrum-mongers and quacks, and how at last the scientific handling of the question seemed, to a great extent, to have passed over to the Germans.

Professor PREYER (who spoke in excellent English) said he felt deeply honoured by the invitation which had been given to him to open the discussion on sleep and hypnotism. In view of the extreme complexity and obscurity of both phenomena, and the diverse and contradictory views respecting them, he had found it impossible, on such an occasion as the present, to treat the physiology of the sleeping and the hypnotised brain as fully as it deserved to be treated. He deemed it advisable rather to indicate the problems which must be solved empirically, and to state what he considered to be new in his own researches

into the causes of sleep and hypnotism, than to enter into a detailed description of the facts. Four years ago, he published a theory of the cause of sleep, which was founded on the fact that natural sleep is the direct consequence of fatigue, whenever the conditions of the fatigued animal are such as to exclude all continuous and intense stimuli. According to the theory, there occurs, during muscular and cerebral activity, the formation and accumulation of certain substances, which hinder further activity by attracting to themselves the oxygen which, in the last instance, is necessary as well for the activity of the muscular fibre as for that of the nervous cell. Both these organs fail to execute their specific function if they are not supplied with oxygen by the red blood-corpuscles. To these noxious substances the term *Ermüdungsstoffe* (fatigue-products) has been applied. They are easily oxidisable bodies; and, according to this theory, they accelerate the dissociation of the oxygen and hæmoglobin in the capillaries of the brain and muscles. Sleep then ensues, and the tissues which most depend upon a regular supply of oxygen, viz., the grey substance of the hemispheres and the muscle, are the first to be affected by the accumulation of *Ermüdungsstoffe*. As soon as the oxidation-process has reached a certain degree, the oxygen of the blood is no longer used up so quickly, and now even weak stimuli suffice to arouse into activity the nervous and muscular tissues; and the animal is awake once more. If this theory of sleep be true, the following two inferences should stand the test of experiment. 1. The artificial injection of the products of activity which accumulate during fatigue ought to cause sleep. 2. The direct withdrawal of oxygen from the brain ought also to cause sleep. Both consequences have been put to the proof. With regard to the first, the results have been conflicting. But most experimenters have agreed with Professor Preyer in finding that one of the principal products of muscular and of cerebral activity, viz., lactic acid, is a true hypnotic. Others have denied this, because in many cases, and especially in cases of insanity, no hypnotic effect is brought about. Nevertheless, this point is by no means settled. We know very little about the products of cerebral activity; and even if lactic acid *alone* fails as a hypnotic in many cases, we yet cannot say that it would have no hypnotic action when combined with other fatigue-products. It is highly probably that creatin is a hypnotic; but we must await other experiments before this first inference can be fairly criticised. The second inference that withdrawal of oxygen from the brain should cause sleep, is verified by many experiments in which the want of oxygen produces hypnotic effects. Observations conducted in Professor Preyer's laboratory have proved the great affinity of the grey substance of the brain for the oxygen of the blood-corpuscles; and have shown that, by slowly diminishing the quantity of oxygen in the air breathed by animals, somnolence is invariably induced. Other observers have reached a similar conclusion by a different way. Nevertheless, it is not proved that common sleep is identical with the condition which is the effect of continued and slow withdrawal of oxygen. In fact, the word sleep is applied to many different states of repose of the mind of various characters but closely linked together. Thus, somnolence, drowsiness, reverie, on the one hand; and coma, lethargy, asphyxia, hybernation, syncope, alcoholism, narcotic intoxication of different degrees, on the other, may show identical symptoms in depression of mobility and sensibility, and cessation of the intellectual faculties, without the same changes in the brain being the cause in each case. Even common sleep is of variable intensity; and children, who sleep deeper and longer than grown-up people, are individually of a widely varying inclination to sleep and dream. With men also, individual differences in this respect are of daily occurrence. Now, if natural sleep have the same etiology for all men and all animals, then such individual differences must all be accounted for on one principle. The theory proposed does, in Professor Preyer's opinion, account for them, *assuming the quantity of oxygen which is necessary for activity to vary greatly according to the mode of life and hereditary or acquired qualities of the individual.* This is proved by experiments on animals; and Professor Preyer believes that the different capacity of individuals to support the want of oxygen, is also a fact of great importance for understanding the genesis of artificial sleep, and especially of hypnotism. Hypnotism was known in India more than 2,000 years ago; and the sect of religious fanatics called Gogins, are undoubtedly the originators of most of the hypnotic manipulations. In Europe, it has been called at different times by various names, as electro-biology, bio-magnetism, animal magnetism, mesmerism, etc. But the first who investigated the matter in a scientific way, and who deserves more honour than he has yet received, was an Englishman, James Braid, a Manchester physician. At first a sceptic, holding that the whole of the so-called magnetic phenomena were the results of illusion, delusion, or excited imagination, he found in 1841 that one, at least, of the characteristic symptoms could not be accounted for in this manner: viz., the fact that many of the mesmerised individuals are quite unable to open their eyes. Braid was much puzzled by this discovery, until he found that the "magnetic trance" could be induced, with many of its marvellous symptoms of catalepsy, aphasia, exaltation and depression of the sensory functions, by merely concentrating the patient's attention on one object or one idea, and preventing all interruption or distraction whatever. But in the state thus produced, none of the so-called higher phenomena of the mesmerists, such as the reading of sealed and hidden letters, the contents of which were unknown to the mesmerised person, could ever be brought about. To the well defined assemblage of symptoms which Braid observed in patients who had steadily gazed for eight or twelve minutes with attention concentrated upon a small bright object, and which were different from those of the so-called magnetic trance, Braid gave the name of *hypnotism* in 1843. This was in his book bearing the unfortunate title of *Neurypnology*, a name which doubtless went far to gain for the book the unmerited oblivion which has been its fate. In addition to *Neurypnology*, Braid published in 1846 an interesting paper on *The Power of the Mind over the Body*, which conclusively showed how erroneous is the view that anything passes over from the operator to the patient in the course of these experiments. In his paper on the so-called *Phenomena of Electro-Biology*, printed in 1851, his views are again and more explicitly proved by experiments. *Hypnotism* is a condition or series of conditions which may be induced in a person by rigorously concentrating attention on some one point, even when no other person is present, and when the patient is wholly ignorant of mesmerism and the like. Although thirty-seven years have elapsed since Braid published his numerous experiments, his works are very little known. In Germany and France many of his discoveries have been re-discovered; as for example, by M. Ch. Richet, of Paris, in 1875, and by Professor Heidenhain in Breslau, during the present year; while Professor Arthur Gamgee's careful and judicious account of Charcot's wonderful hystero-epileptics, published in 1878 in the BRITISH MEDICAL JOURNAL, goes far to make us think that these cases also resemble exactly cases of hypnotism. It is hard to withstand the suspicion that Braid over-rated the curative powers of hypnotism; but, in respect of his statements on this head, nobody has, as yet, publicly proved him to have been careless or uncritical like the mesmerists. Are the main symptoms of hypnotism well established? From the results of his own experiments, Professor Preyer could admit no doubt whatever that they are. The only objection which has been urged against them, and which has not been entirely removed, is the possibility that the operator might be deceiving, or might himself be deceived. To meet such an objection, as far as possible, Professor Preyer was careful, when experimenting on men, to make use of such only as might reasonably be supposed to be trustworthy; and, further, to extend his experiments wherever it was practicable to the lower animals. In the latter case, he found that two different states of *abulia* (want of will?) can be artificially obtained; one by suddenly and strongly irritating or frightening the animals, the other by a slow, continuous, uniform irritation. The latter is the hypnotic state; the former, Professor Preyer proposed to call *cataplexy*. Nobody has yet attempted fully to enumerate all the symptoms of the hypnotic state; and the symptoms differ both according to the normal susceptibility of the hypnotised individual, and according to the variations of susceptibility from time to time in the same individual. Hence the great importance of carefully observing and arranging the facts. This may readily be done by the physician. So far as we know—and thousands of experiments have been performed—hypnotism is entirely harmless, at least if not practised to excess; and whether or not any beneficial curative results are obtained from its practice in nervous affections, at least the physician can collect and group the facts for the physiologist. Assuming, then, that the hypnotic phenomena are admitted to be beyond doubt established as facts, the question arises, is hypnotism merely a species of the genus sleep, or is it something totally distinct? Cataplexy is undoubtedly very different from sleep. At first sight, hypnotism also seems to belong to another category; but a closer inspection and comparison of the two conditions discovers so many points of analogy, that it becomes difficult, if not impossible, to say where exactly the distinction lies. Physiological researches on common sleep have been so neglected in our day, that we are not able to mention the particular changes in the brain during sleep; nor has the natural normal sleep of those who may be readily hypnotised been accurately observed or controlled. Professor Preyer had himself seen cases of persons who answered questions in their sleep exactly as hypnotised persons will do; and on the other hand, he had, amongst the students hypnotised in his laboratory this year, some who, after having steadily fixed their eyes on a glass bottle, placed about four inches in front of the forehead, appeared to be in every respect asleep, and not hypnotised. Certainly some of the phenomena of hypnotism—*e.g.*, catalepsy, are not phenomena of com-

mon sleep; but who can say whether these inconstant symptoms may not be found to make their appearance during the natural sleep of the hypnotised? Somnambulism may be said to be natural hypnotism. The only specific difference which exists between hypnotism and sleep seems to be the curative power of the former. But such curative power is altogether doubtful; and the so-called hypnotic cures, where they do exist, may possibly have to be ascribed to some emotional or psychical cause rather than to the artificial sleep. This influence is the most intricate problem of all relating to hypnotism and sleep, the limit of physiological inquiry being here drawn by the impossibility of ascertaining the physiological conditions of the brain when attention is directed to one point and when it is not. Professor Preyer found that a concentrated attention is the only *conditio sine quâ non* in order to hypnotise an individual. If the attention is be the least distorted or distracted, hypnotism becomes impossible. If, by strong and sudden stimulation, attention be forcibly concentrated on one impression, as in fright, then cataplexy is the consequence in both man and in animals. If the will direct consciousness to a certain point without any excitement, it will in many cases lose its power, and hypnotism is the consequence—*abulia*. Possibly, this occurs because the oxygen of the arterial blood in the brain has so quickly been used up, that there is not enough left to keep the grey matter of the hemispheres awake. The nervous cells are separated from each other by inactive regions, and, as in natural sleep, only certain centres remain active—for example, the respiratory and other co-ordinating centres. Here, then, is the *terra incognita*, ready to be explored. In conclusion, Professor Preyer thanked his audience for their kind attention, and hoped that he might have the gratification of knowing that he had, if in a small degree, excited an interest for the scientific examination of hypnotism, such as had happily sprung up on the Continent. Professor Preyer then attempted to illustrate some of the cataplectic phenomena on fowls and guinea-pigs; but the success of the experiment was not complete, owing to the incessant small noises within and without the lecture-room, which it seemed hopeless to attempt to check. Similar experiments were, however, attempted on the next day, in the Physiological Laboratory, both by Professor Preyer and Mr. Langley, on animals and men, with much greater success.

The following gentlemen took part in the discussion; Dr. Brown-Séquard, Mr. Braid (a son of the late Dr. James Braid), Dr. Bowditch, Dr. Glaister, Dr. Beard (New York), Dr. A. Gamgee, Dr. Harvey, Mr. Langley, Dr. Norris, Dr. Gerald Yeo, and Dr. Tuke. Professor Preyer replied on the whole debate, and the discussion was brought to a close.

The Effects produced by various Lesions of the Base of the Brain on the Excitability of the so-called Motor Centres. By C. E. BROWN-SÉQUARD, M.D., F.R.S. (Paris).—Dr. Brown-Séquard related the results of some experiments, showing that a number of lesions of the nervous system could produce two kinds of effects absolutely distinct one from the other. One of those effects was well known; it was *inhibition*. The other, which was quite an antagonistic one, and had not yet been studied. He proposes to call it *dynamogeny*. In one experiment, particularly, the characteristic features of these two kinds of effects were exhibited to the highest degree. If the head of a guinea-pig were suddenly crushed, it was almost always found that the two parts of the spinal cord that gave rise to nerves of the limbs were in absolutely opposite states: the upper, *i.e.*, the cervico-dorsal enlargement, was in a condition of complete inhibition, having lost all activity, all power, reflex or of any other kind; while the dorso-lumbar enlargement was in a state of immensely increased power, giving rise to the most violent convulsions. This augmentation of power was more remarkable than could be expressed; not only were the convulsions more violent than in any other case, but they would last one, two, three minutes, and even a little more; and besides, the cord, far from being exhausted by such an expenditure of force, had a marked reflex excitability for one minute or a little more after the cessation of the convulsions. Dr. Brown-Séquard had found that transverse sections of a lateral half of the base of the brain also produced in certain parts those two opposite states—inhibition and dynamogeny. The excitability of the so-called psycho-motor centres, and that of the sciatic nerve on the side of the lesion, increased considerably, while inhibition of power showed itself in the motor parts of the brain on the opposite side. Other experiments gave similar results: a section of the right sciatic nerve, or of the right half of the spinal cord, or of the base of the brain up to the optic thalamus, gave rise to dynamogeny in every excitable part of the brain on the right side, and to inhibition in a more or less considerable degree in every excitable part of that great centre on the opposite side. On the other hand, every section made on one side of the base of the brain or of the spinal cord produced a notable increase of the excitability of the sciatic nerve. This was seen even when, before the division of one lateral half of those nervous centres, the heart had been excised. Dr. Brown-Séquard also called attention to the light thrown by his experiments on the two series of facts observed in hypnotism—viz., the loss of certain faculties or powers, while in some parts there was a great increase of certain powers. The first series of effects belonged to inhibition; the second to dynamogeny.

Dr. GERALD YEO read a paper giving an account of experiments performed by Dr. Ferrier, F.R.S., and himself, on the Cerebral Visual Centres; and the following engaged in the subsequent discussion: Dr. Bastian, Professor Bowditch, Professor Preyer, Dr. Ferrier, and Dr. Yeo.

The hour of closing the sectional meetings having arrived, it was decided to take as read the report of the Committee on Anæsthetics, which Dr. D. Newman had in charge to communicate to the Section.

Friday, August 13th.

Demonstrations of Microscopic Sections of the Brain.—The Section assembled in the Clinical Lecture Room in the Museum, under the presidency of Dr. A. Gamgee, F.R.S., to witness a demonstration, by Mr. D. J. HAMILTON of Edinburgh, of certain large microscopic sections taken through the whole brain. The enormous sections were mounted between glasses, and supported in frames in which they could be introduced into an oxy-hydrogen lantern. A lantern and screen had been provided, and Mr. Hamilton was able to project images of the extensive sections upon the screen and demonstrate many points of interest in the anatomy of the brain. At the conclusion of the demonstration, Mr. Hamilton briefly explained the method which he adopted to make the sections; and some of the specimens were handed round.

New Form of Recording Cylinder.—M. MAREY (Paris) exhibited a new portable polygraph, or recording cylinder, with a clockwork inside, for the purpose of tracing simultaneously the pulsation of the heart and the arterial pulse. This instrument is the smallest and handiest which the author has yet devised. It is furnished with an apparatus for starting and stopping the cylinder without using the hands, consisting of a tube passing from the mouth of the operator to the instrument. On expiring air into this tube, the cylinder is started; while on aspiring from it, the cylinder is stopped. The simultaneous tracing of different pulsations then becomes easy; and it is apparent that tracings of the right and left ventricles, respectively, may be obtained from different parts of the chest-wall—that of the right at a point a little below the nipple, that of the left five to six *centimètres* farther out. The two tracings have different forms, the right reaching its maximum at the beginning of systole, the left at the end of it. Suppression of respiration lessens the amplitude of pulsation of the right heart, while it enlarges that of the left. The pulsation of the left ventricle bears an intimate relation to the arterial pulse, and sometimes presents a bifurcated apex; this occurs when the arterial tension is low, and has for its cause the waves which oscillate along the aorta and flow back into the left ventricle. M. Marey spoke in French; and Dr. Gamgee subsequently gave a short *résumé* of his description and argument.

Demonstration of Physiological Instruments and Histological Specimens.—The Section adjourned to the Physiological Laboratories, where demonstrations of a large number of physiological instruments and histological specimens had been arranged. This exhibition formed a most valuable and interesting part of the work of the Section. The numerous rooms of the Physiological Department were all devoted to the demonstrations. Among other apparatus, the method of working the pendulum-myograph was shown. An arterial schema was fitted up as if for a class demonstration. Spectroscopes were exhibited in their application to physiological research; as well as other apparatus for illustrating the physiology of vision.

Mr. LEA several times demonstrated the action of the media of the eye by means of Kühne's artificial eye.

Mr. SEWALL gave a demonstration of the visual purple of the frog's retina.

Dr. NEWMAN exhibited a form of recording apparatus adapted to taking simultaneous tracings of heat, respiration, etc.; and also an apparatus for artificial respiration in the frog.

Dr. HAYCRAFT showed some specimens of urea which he had obtained from blood and from muscle by his method of separation.

Professor BOWDITCH demonstrated Kronecker's thermometers for registering internal maximal temperatures. These consist of small elongated bulbs, with a very small hole leading into them, which are filled with mercury by being heated in a bath of mercury. They are first filled, and may then be placed in the blood-vessels, or in the alimentary canal, or in any internal cavity. They may even be enclosed in a metal capsule, and having been swallowed may be made to traverse the alimentary canal. As the temperature rises, the mercury expands,

and escapes through the small aperture. After the experiment, the bulb is taken out, and the mercury of course shrinks to the bottom of the small bulb very rapidly. In order to find the temperature to which the bulb has been subjected, all that is needed is to find what degree of heat is required to again expand the mercury until it exactly fills the bulb.

Apparatus was shown for measuring the "reaction-time".

A demonstration was given of Buchanan's "washed blood-clot", and the ferment which Dr. Gamgee has succeeded in preparing from it.

Perhaps the most attractive demonstration was Dr. GASKELL'S, of the action of acids and alkalies on the tonicity of the frog's ventricle, a detailed account of which is about to be published. The apparatus is that of Dr. Roy, described in Foster's *Journal of Physiology*, vol. i, much modified and perfected.

In the microscopical laboratory were exhibited some most remarkable specimens, including nerve-terminations in normal tissues, by Professor Ranvier. Other interesting preparations were shown by Mr. BALFOUR, Professor SCHAFER, and by Mr. SEWALL; and Mr. LANGLEY demonstrated some of his recent discoveries of the changes in glandular cells during activity.

Professor PREYER repeated his experiments on hypnotism and cataplexy, under circumstances of greater quietness than could be obtained in the lecture-room; and Mr. LANGLEY induced hypnotism in a boy with a view to examining the state of his colour-perception.

SECTION G.—PATHOLOGY.

Wednesday, August 11th.

The Chair was taken at 2.30 P.M. by Sir JAMES PAGET, Bart., F.R.S., President of the Section.

DISCUSSION ON THE INFLUENCE OF INJURIES AND MORBID CONDITIONS OF THE NERVOUS SYSTEM ON NUTRITION.

The discussion on this subject was opened by Mr. JONATHAN HUTCHINSON (London). He said that it appeared that, while some held that the phenomena under consideration were to be explained by reference to the functions of the vaso-motor nerves, others taught that the nervous system had a direct control over nutrition, in addition to that which it exerted by regulating the supply of blood; and an advanced section of this school (with Samuel) recognised the existence of special trophic nerves. His object would be to try how far the phenomena of disease, which had been believed to support a theory of the direct influence of the nervous system upon nutrition, might be explained in other ways. Among the facts which seemed to discredit the hypothesis of trophic nerves, and of direct trophic influence as a nerve-function, were the following: the great rarity of some of the diseases supposed to illustrate it; the very peculiar features of some of them; their remarkable differences one from another; the close resemblance between most of them and certain other diseases which there was no reason to suspect of being of neurotic origin. Among the principal disorders which had been supposed to be due to nerve-influence were bed-sores and cystitis in the paralysed; ulceration of the cornea in paralysis of the fifth nerve; sympathetic ophthalmia and neurotic iritis; herpes zoster and other forms of herpes; glossy skin after injuries to nerves; arthritis after spinal disease or injury; digiti mortui and "symmetrical gangrene of the extremities"; morphœa and allied forms of scleriasis cutis; disorganisation of joints in locomotor ataxy; brittle bones and osteomalacia in the insane, and in disorders of the nervous system; disturbances of nutrition of the skin and bones in leprosy. Reasons were given for doubting that the nerves had a direct power in the production of these conditions by an influence transmitted to the periphery, without reference to the blood-supply.

Dr. BROWN-SÉQUARD (Paris) said that, although much interested in Mr. Hutchinson's able and lucid statement, he dissented from him on many points. As to bed-sores, there could be no doubt of the effect of irritants and pressure in aiding in their formation; but beyond this, there could be no question that they would arise simply from nervous influence. Artificial myelitis in a dog caused bed-sores, corresponding in situation to those in man, though there were no contact whatever either with decomposed urine or excrement, or other irritants; and even if the parts were carefully washed. But, by the alternate application of heat and cold, the formation of bed-sores could be prevented, both in typhoid fever and in myelitis. Dr. Weir Mitchell of America, from his experience during the war, stated that no case of bed-sores occurred where this treatment was early applied. Dr. Brown-Séquard was convinced that loss of sensation did not account for their formation. As to vaso-motor influence, all evidence showed that this was immense; but there were, he thought, at least five or six other modes in which the nervous system influenced nutrition. Growth, *e.g.*, in the embryo, preceded the development of the nerve-system, which was not, therefore, essential to it; but, after the nervous system was developed, independent nutrition was questionable. Dr. Brown-Séquard then described in detail illustrative experiments: the effect of section of the sciatic and crural nerves in the guinea-pig on the healing of wounds of the leg; the influence of section of nerves in inflammation. He also described, and illustrated by numerous diagrams, recent experiments in proof of the fact that collapse, however induced, altered the nutritive relations of the blood and tissues, and the respiratory function; and that this was due to a direct influence propagated from the medulla oblongata, and capable of being excited in a reflex manner.

Dr. BUZZARD (London) was impressed with the extreme importance of Mr. Hutchinson's suggestions, which opened out new lines of observation on a variety of interesting subjects. Whilst allowing that unilateral furring of the tongue could be caused by disuse, he thought that it might also depend upon the influence of a nerve; and he cited a case which he had published, of neuralgia of the fifth nerve, in which salivation occurred on the same side with furring on the tongue; an association which, to his mind, suggested a common cause. The peculiar character of the bed-sores occurring in the course of acute myelitis, which involved the posterior roots of nerves, contrasting strongly with the trifling wounds which might occasionally happen in cases of equal powerlessness, but in which there was no loss of sensibility, pointed to the operation of an influence beyond that of mere pressure in the production of such lesions. However helpless or neglected were patients suffering from anterior polio-myelitis (adults and children), they were never, in his experience, attacked with the characteristic bed-sore belonging to transverse myelitis. Any sores that might occur (and such were rare, and due to neglect) were comparatively superficial, and easily healed. He reminded Mr. Hutchinson that changes in the spinal cord had been recently discovered by Tschiriew in a case of leprosy.

Dr. CLIFFORD ALLBUTT (Leeds) observed that, although pressure and external irritation must, in most cases, be factors in the production of bed-sores, nevertheless, they could scarcely be the only causes. He adduced cases of anæsthesia of the buttocks and limbs without bed-sores, and he contrasted cases of anæsthesia, in some of which, in spite of muscular wasting, the skin remained velvety, and even fat, and in which no tendency to bed-sore occurred. He also denied that, in those worst cases of bed-sore rapidly following paraplegia and hemiplegia, the care given to other cases of anæsthetic palsies would arrest the local sloughing. This, too, he contended was too profound and rapid to be compared with the effects of excoriation or pressure upon a part otherwise in normal nutrition. He also stated that, in two cases of palsy of the fifth nerve, he had failed, by plaistering up the eye, to prevent ulceration of the cornea. With respect to unilateral furred tongue, again, Dr. Allbutt could scarcely believe that mechanical causes were alone concerned, as these would not explain the almost constant thick fur upon the tongue in ordinary sudden sanguineous apoplexy—a state usually attributed to disorder of the liver, and treated (not unwisely, perhaps, from a practical point of view) with calomel, etc. In respect of the influence of nerves upon nutrition, Dr. Allbutt thought that, in the development of life, the nervous system gained an increasing control and domination over nutrition; that nutrition, once independent, became more and more subordinate to a central government, until finally it was so enthralled that it could not stand alone. Lizards remade an amputated tail; the sound eye of a dog could defy ciliary ophthalmitis in the other eye, and so forth; so that results of operations in guinea-pigs must not be taken as parallel with those of injuries of like extent in man. Respecting the neurotic origin of herpes zoster, Dr. Allbutt described a case in which first severe pain, and then herpes zoster, appeared around one half of the trunk of a woman, whose upper dorsal spine had been injured by a fall.

Dr. WILKS (London) considered that the matter must be discussed from the point of view of clinical observation, rather than of physiological experiment. He suggested that erysipelas might in some cases be produced by the same causes as neuralgia—exposure to cold in one case causing neuralgia, in the other erysipelas. So also in interstitial neuralgia, in one case the same cause might set up pleurisy, in another herpes.

Dr. DICKINSON (London) referred to the mental influences which might modify nutrition, with especial reference to the pigmentary changes occurring in relation to uterine irritation or mental anxiety.

Mr. HUTCHINSON, in reply, maintained that his views were the result of extensive observation; and, although he had stated them rather dogmatically in order to elicit discussion, he thought them in the main true.

The Joint-Affection in Locomotor Ataxia, and its Association with Gastric Crises. By THOMAS BUZZARD, M.D. (London).—Three cases were related, and photographs of them exhibited, which had come under

the author's observation since he introduced the subject to the London Pathological Society in February last. In the first, a man aged 60, who had suffered from shooting pains in his legs for fourteen years, whose gait was characteristically ataxic, and whose pupils contracted during accommodation but not to light, the left knee, one year ago, began to swell; and, in the course of three months, the whole limb was enlarged from knee to ankle. The swelling went down in February, but left the joint in its present state of uselessness, the tibia being capable of extraordinary abduction, and the leg hanging like a flail from the thigh. The bones constituting the joint could be audibly knocked against each other. The second, a man aged 62 (for the opportunity of examining this case the author was indebted to Dr. Whitmore of the St. Mary Abbott's Infirmary, Kensington), had no marked illness till ten years ago, when he had dreadful pains in the epigastrium, followed by retching and vomiting, and these symptoms lasted daily for nine months; after which he returned to work, and only suffered from diarrhœa, slight pain in the stomach, and retching at times. Then again, he was laid up for three months with an attack like the first. Altogether, he had since had half-a-dozen such attacks, lasting six or seven weeks each, during which he had been quite incapacitated. He suffered from sharp pains in the legs and arms. Patellar tendon-reflex was absent. The left shoulder-joint was enlarged and contained fluid, the quantity of which had been much greater than it was now. The joint was unnaturally movable, and crepitus was heard when the humerus was rotated. The arm, when pushed up, was more than an inch shorter than the right, and the head of the bone was partially absorbed. There was no marked ataxia, and the patient could stand with the feet together and the eyes closed. The arm was affected three years ago, and at first the swelling, which was enormous, extended to the elbow. It pointed and discharged at the elbow. The pupils were small. There was no contraction to light, nor during accommodation. The third patient was a female aged 50 (a patient of Dr. Radcliffe), who had had pains in the arms and legs for fifteen years, and inability to walk in the dark for five years. Eighteen months ago, her left hip-joint gave way with a snap without pain, followed by swelling in the groin, loss of power to stand, and shortening of the limb. There was a difference of an inch and a half in the length from the anterior superior iliac spine to the ankle. The head and neck of the left femur had apparently disappeared altogether, and the bone could be rotated in an arc of a circle, of which the shaft was the centre. The limb could be readily placed in abnormal positions. The patellar tendon-reflex was absent on both sides. There was delay in transmission of impressions of pain from the skin of the legs. The pupils did not contract to light, but during accommodation. For seventeen years, the patient had been subject to attacks of vomiting and epigastric pain, and lately these had recurred every three weeks or so. There were much nausea, retching, and flatulence. The presence of food did not affect the attacks. Dr. Buzzard observed that, out of seventy cases of tabes which had occurred under his own observation, typical gastric crises had only been met with in seven. On the other hand, out of twenty-nine published cases of tabetic arthropathy to which he had referred (including seven of his own), gastric crises were observed in no fewer than thirteen. He thought this association depended on something more than a coincidence. The arthropathy could not be referred to disease of the anterior cornua; for, in three of his cases, the electric irritability of the muscles about a completely disorganised joint was normal; and in one case (a female, whose knees were useless), the muscles of the arm were hypertrophied like those of a labouring man. Moreover, neither in progressive muscular atrophy, nor in infantile paralysis (when the lesion was in the anterior cornua) were joint changes of this destructive character ever met with. Nor could it be referred to the disease of the posterior root-fibres; for the most advanced changes in these were compatible with complete exemption from arthropathy. His further experience had tended to strengthen the view put forward by him in February last at the Pathological Society, that the striking association of the osseous and articular lesions with gastric crises in tabes pointed to a lesion of the medulla oblongata in the neighbourhood of the nuclei of the vagus. He suggested, as a working hypothesis, the existence of a centre for nutrition of the osseous and articulatory system in the medulla oblongata; and reminded the meeting what material aid the existence of such a centre would afford in explaining the sweating, the frequent cardiac complication, and the occasional hyperpyrexia in acute rheumatism, as well as perhaps throwing light upon the obscure pathology of arthritis deformans.

Thursday, August 12th.

Sir JAMES PAGET, President, took the Chair at 2 P.M., and delivered an address which will be published in a future number of the JOURNAL.

Professor HUMPHRY moved a vote of thanks to Sir James Paget for his address; which was seconded by Professor GROSS of Philadelphia, and carried unanimously.

DISCUSSION ON MICRO-ORGANISMS: THEIR RELATION TO DISEASES.

Professor LISTER opened the discussion. His paper is published at page 363.

Anthrax Vaccinations. By Dr. TOUSSAINT (Toulouse).—Dr. Toussaint said that he had been for four years occupied with the study of the disease caused by the bacteridium (Davaine), or bacillus anthracis (Cohn), and had, from his experiments, gained many valuable facts with regard to the natural history of the parasite, which he had utilised so as to render the animal organism incapable of harbouring it. He had vaccinated young sheep and dogs in such a way that they would resist the inoculation and intravascular injection of large quantities of bacteridia, whether in the form of spores or of short rods. With regard to the method of vaccination, he thought it better not to make it known until he had ascertained that it was not likely to cause death to the animals vaccinated. M. Toussaint said a few words in French in response to the cordial welcome which he had received.

Dr. W. ROBERTS (Manchester) referred to the fact that micro-organisms played an important part in the economy of existence, especially in the protection of articles of food, and said that this should be considered in relation to the part they play in disease.

Bacillus Malariæ. By LAUCHLAN AITKEN, M.D. (Rome).—Dr. Aitken described the researches of Klebs and Tommasi-Crudeli on the nature of malaria. These observers had examined the air of the Pontine Marshes, and had found in it a microphyte of the genus *Bacillus*, to which the name *Bacillus Malariæ* had been given. They had injected under the skin of animals water taken from malarious localities, with the result of producing intermittent fever, with enlargement of the spleen. The lymph and spleen were found to contain oval shining bodies, exhibiting active movements. On the other hand, the injection of fluids obtained from cultivated soil produced only very slight intermittent fever—showing that cultivation of the soil diminished the production of the malarial germs. The bacillus had also been found in the spleen and bones of three individuals who had died of pernicious malarial fever.

Anthrax and Anthracæmia in Woolsorters. By J. H. BELL, M.D. (Bradford).—Dr. Bell described the disease to which woolsorters were liable as being of two forms: internal or constitutional; and external, caused by the introduction of the poison at the part affected. The former (anthracæmia) was a general blood-disease, caused by the introduction into the circulation of the spores of bacillus anthracis, derived from the fleeces of animals which had died of anthrax. The blood of persons who died of this disease, when injected under the skin of rabbits or other animals, produced death in two or three days; and, on *post mortem* examination soon after death, the animal's blood was frequently found to swarm with the bacillus anthracis. Several typical cases, which had come under Dr. Bell's notice, were related. Finally, reference was made to the occurrence of anthracæmia from mohair among heifers.

Mr. MALCOLM MORRIS (London) said that he had tried several methods of growing favus fungus on his own arm. In only one instance did it take, when the incubation-period was six days. He had succeeded in growing this fungus in various kinds of staining fluids, but the one that stained best and gave the most satisfactory result was aniline blue. He stated his acknowledgment to Dr. Heneage Gibbes for his assistance concerning the various dyes. Mr. Morris then briefly compared certain characteristics of the favus fungus with the *Bacillus anthracis*, but added that the matter was at present being more fully investigated, and therefore it was not wise to draw any deductions.

Dr. GREENFIELD (London) remarked upon the fact that, though a very wide range of subjects had been opened by Mr. Lister's introduction and the subsequent paper, it was difficult to seize any points for discussion. In fact, he thought the subject hardly admitted of a general discussion at present, for every day the field was widening, and it was necessary to concentrate attention on one or two subjects in order to do any good work. The experiments of Buchner were amongst the most important advances recently made, for although it had been long ago suggested that there must be this relation between the bacillus of hay infusion, and bacillus anthracis, all previous experimenters had failed to produce the latter by any mode of cultivation. Buchner's success introduced an entirely new subject of study. The loss of infective properties of the bacillus anthracis when artificially cultivated, which had been described by Buchner, was in entire accordance with the results of his own experiments recently communicated to the Royal Society; and although he must differ from Buchner as to certain phenomena in his experiments to which the latter attached some importance, the production of a bacillus having properties resembling those

of bacillus anthracis was of extreme importance. Again, the protective inoculation of M. Toussaint with material in which he had eliminated and destroyed the bacillus anthracis, when compared with his own (Dr. Greenfield's), in which he attained similar results with material rendered less virulent by cultivation, opened a new field of study which must have very important bearings in explaining the pathology of anthrax and similar diseases, and the relation of micro-organism to disease. As to fowl-cholera, the only important fact discussed by M. Toussaint, that the disease thus named was only a spontaneous septicæmia which could be produced experimentally from putrefying blood, showed that there might be other anomalous forms of blood-poisoning, which became contagious and simulated acute specific diseases. Lastly, he insisted on the necessity of caution in drawing conclusions from too small a number of observations, and the importance of not generalising in the present state of our knowledge.

Letters were received from Dr. Vandyke Carter, Dr. Maclagan, and Dr. Sansom, expressive of their regret at their inability to take part in the discussion as they had intended to do. Professor Klebs and others who had intended to be present, were also prevented from coming.

Minute Anatomy of Pyæmia.—Dr. STEPHEN MACKENZIE (London) exhibited and demonstrated, in the Pathological Museum, throughout Thursday, a large number of microscopic specimens illustrating the minute anatomy of pyæmia. Of the many cases shown, micrococci were present in most of the cases (in twelve distinct cases of pyæmia). The micrococci were situated in the capillaries, attached to the walls of larger blood-vessels, or free in their channels, in the metastatic abscesses, and free in the various tissues. They were present in the heart, the lungs, the liver, the kidneys, thyroid body, etc. Some beautiful specimens of pulmonary infarcts were exhibited, showing the vessels plugged, the alveolar epithelium detached, and the alveoli filled with blood-corpuscles and leucocytes. Giant-cells were shown in the inflamed lung and lymphatic glands. The characteristic appearances of the local lesions, and the diffused changes in various organs, were also shown.

Friday, August 13th.

Dr. WILKS, F.R.S., Vice-President, took the Chair at 11.30 A.M.

Glomerular Nephritis. By D. J. LEECH, M.D. (Manchester).—Dr. Leech said that glomerular nephritis was characterised by an accumulation of cell-elements between the glomerulus and its capsule, and an increased nuclear growth in the glomerulus itself; it was accompanied by interstitial, and sometimes by parenchymatous, changes. Though at first described as peculiar to post-scarlatinal nephritis, the glomeruli were often more or less similarly affected in nephritis arising from other causes; and sometimes their structural alterations formed as prominent a feature in the pathological changes observed as in post-scarlatinal nephritis. The writer had met with three instances of this. In the first, a boy aged 16, the evidences of nephritis were only noticed two months before death. There was much anasarca; the urine was scanty, highly albuminous, and contained a little blood. Death occurred from œdema of the lungs. The kidneys seemed typical examples of the large white kidney; but, on microscopic examination, interstitial and glomerular nephritis were found. The glomeruli throughout the kidney were pressed upon by cell-accumulations between the capsule and the glomerulus. The cell-growth had assumed a fibroid appearance. The nuclei in the glomerulus itself were not much, if at all, increased in number. In the second and third cases, the symptoms were of longer duration; in both, the urine was scanty, highly albuminous, and contained blood; in both, too, the anasarca was considerable, and death occurred from uræmia. The kidneys were large and white, and under the microscope presented very distinct evidence of glomerular change; interstitial and parenchymatous alterations being also present. The cell-accumulation did not press so markedly on the glomeruli as in the first case, nor did it present such a fibroid appearance; but in both instances considerable increase of the nuclei in the glomeruli was manifest. From the microscopic examination of the kidney in the cases recorded, and of the changes met with in post-scarlatinal nephritis, it seemed evident that, in glomerular nephritis, the cell-accumulation between the glomerulus and the capsule was derived from the layer of epithelial cells lining the interior of the capsule, and from the epithelial covering of the glomerulus itself; sometimes chiefly from the former, sometimes from the latter, occasionally from both equally. The tendency to fibroid change in the cells varied much, and was not always most marked in chronic cases. The increase of the nuclei in the glomerulus itself was partly due to the proliferation of the epithelium, which dipped down and divided the glomerulus into segments; partly to increase in the nuclei of the capillary walls. No evidence could be obtained that the increase of nuclei was due to proliferation of connective tissue corpuscles between the capillaries composing the glomerulus, the existence of which was by no means yet proved. The passage of scanty highly albuminous urine, of normal or slightly decreased specific gravity, served to characterise glomerular nephritis. In cirrhosis of the kidney, many of the glomeruli were pressed upon and atrophied by the growth of interstitial tissue and the capsular changes often present; yet here the urine was abundant, and contained but little albumen. It would seem as if either a greater number of the glomeruli escaped pressure than in glomerular nephritis, or else that, the pressure being chiefly from precapsular growth, the function of the glomerulus was not so much interfered with.

Dr. DICKINSON (London) remarked on the importance of the subject.

Dr. SILVER (London) related a case in which he had found similar changes.

Dr. GREENFIELD said that Dr. Leech's observations were fully in accordance with what he had himself observed and described in many cases. He thought the changes, which he discussed in some detail, were comparatively common, and not only found in exceptional cases.

Two Cases of Cerebral Embolism. By W. H. DICKINSON, M.D. (London).—Dr. Dickinson described two cases occurring in girls, aged respectively 13 and 18, under his care in St. George's Hospital. The leading symptoms in both were high fever and delirium, without any definite paralysis, and without aphasia. The temperature in one case was always between 102° and 103°; in the other, generally between 103° and 105°. In both, there was much evidence of pulmonary congestion; and both rapidly died by coma. There was, on superficial examination, a striking resemblance to a specific fever, especially typhoid; but the fever was too high, and the cerebral embarrassment too great, for so early a stage of that disease as would be represented at the time when the patients came under observation. The pathological condition found was the distribution through the brain of embolic dust, which was so fine as to traverse without hindrance the larger arteries of the base of the brain, to be finally arrested in the minuter channels of the pia mater.

Dr. WILKS (London) expressed the view that these cases ought to be described by a special name. He had called them arterial pyæmia; some called them ulcerative endocarditis; but neither expressed the clinical and pathological facts.

Dr. CREIGHTON (Cambridge) inquired whether the blocks were hæmorrhagic.

Dr. GREENFIELD (London) asked whether there were distinct rigors, and whether minute aneurisms were found in the arteries. He referred to the peculiar symptoms sometimes observed, such as periodicity of rigor simulating ague; and the observation on the occurrence of cerebral aneurisms in such cases. He also asked whether micrococci were found in the valves of the heart, or in the organs.

Dr. SILVER (London) mentioned similar cases.

Dr. WILKS referred to a case of the periodic rigors simulating ague, as in the case mentioned by Dr. Greenfield.

Dr. DICKINSON, in reply, said that the valves had not been examined for bacteria. Possibly they might have been found if they had been looked for, and yet no great pathological interest might be involved. With regard to the question of aneurism, it was, of course, perfectly well known that embolism was a very frequent cause of aneurism of the small arteries, whether in the brain, in the heart, or elsewhere. These arteries were dissected out and carefully examined, in knowledge of this liability; and it was made clear that there were no aneurisms visible to the naked eye. These cases differed from those of ulcerative endocarditis with symptoms of pyæmia in the absence of rigors, which did not occur either at the beginning or in the course of either of these cases.

On the Pathology of Psoriasis. By GEORGE THIN, M.D. (London).—The paper dealt with the histological appearances observed by the author in sections of a portion of skin removed by him from the back of a patient, a young adult male. The portion excised included the margin, part of the centre, and the healthy skin beyond the margin of a patch of psoriasis nummularis of a year's duration. There had been no local or general treatment during that time. Sections carried from the sound into the diseased tissues showed a large accumulation of horny epithelium on the border of the patch, increased thickness of the interpapillary cones of the rete mucosum, and corresponding elongation of the papillæ—appearances coinciding with those recently described by Dr. B. Robinson of New York. The author found, however, in this case that over the apices of the papillæ the rete mucosum was much thinner than in healthy skin, two or three, and in some instances only one, layer of cells separating the vascular tissue from the horny epidermis. The horny epidermis beneath the scales attained considerable thickness. He found in the papillæ and around the superficial blood-vessels of the corium the moderate amount of cell-infiltration described by previous

observers. The appearances observed warranted him, he believed, in considering psoriasis as primarily a disease affecting the epidermic cells of the rete mucosum, characterised by a want of stability in these cells, and by their premature transition to the horny condition. The anatomical changes in the corium were secondary to this condition, and were due to a moderate chronic inflammation excited by the diseased epidermis. The form assumed by the rete mucosum depended on pressure by the effused serum, the thickening of the interpapillary growths being analogous to that observed in other skin-diseases, attended with continued pressure from below. The thickening only affected the interpapillary growths. Immediately above the papillæ the thin rete yielded, and the arrangement of the cells betrayed the effect of the surface from the serous effusion from the papillary vessels. The one peculiar and characteristic change being limited to the thin part of the rete, which was immediately above the apices of the papillæ, the author was led to seek the cause of the papillary congestion and weak formation of epidermis in this situation in the effects of irritation from without, acting on a constitutionally susceptible epidermis. The result of this action was the production in the epidermis of a diseased element. This morbific agent was innocuous over the interpapillary projections, because it was separated there from the blood-vessels by a thick barrier, but acted as an irritant on the blood-vessels of the papillæ, to which it found easier access. The degree of inflammation which this element was capable of inducing being strictly limited, and the effects being definite within certain limits, the author suggested that it was specific in its nature (the term "specific" not being here used as indicating any supposed relation to syphilis). The excessive production of scales was due to the defective constitution of the epidermic cells of the rete, which were thrown off rapidly as they are reproduced, instead of forming by their cohesion a resistant living membrane.

On the Relation of Irritation and Chronic Inflammation to Epithelial Cancer. By FREDERICK S. EVE, F.R.C.S. (London).—1. In a case of epithelioma of a tongue, which had been affected for years with chronic superficial glossitis (smooth tongue), the apparently unaltered mucous membrane, far beyond the morbid growth, showed papillary ingrowths from the rete Malpighii, the larger of which contained "cell-nests", and an inflammatory change in the superficial epithelium with thickening and infiltration of the corium with indifferent cells. In three cases of "smooth tongue", Mr. H. T. Butlin found papillary ingrowths from the rete more common and larger as the epithelioma was approached. 2. In a case of ichthyosis of the tongue, in which there were raised patches of thickened epithelium, not presenting the appearances of epithelioma, the slightly affected portions of the tongue showed thickening of the superficial epithelium, which dipped down slightly in places, with distinct elongation of the interpapillary processes of the rete Malpighii, containing indications of "cell-nests". At the margin of the raised patches, a transition was observed from this slight ingrowth to round- and club-shaped processes of epithelium, containing numerous "cell-nests", and extending down as far as the muscular tissue. The chronic inflammatory change—ichthyosis—was in this case apparently set up by the irritation of jagged and carious teeth. 3. In cases of epithelioma of the scrotum of chimney-sweeps, portions of apparently normal or perhaps slightly thickened skin, taken in one from the scrotum, in the other from the perinæum far removed from the epithelioma, showed a very decided elongation of the interpapillary processes of the rete Malpighii, some thickening of the cuticle, and infiltration of the corium with indifferent cells. Separate warts from the same situations in the respective cases showed, in addition to the usual appearances, the same ingrowth of epithelium in a higher degree; and, at the margin of an epithelioma in an early stage of formation, the same transition was observed as described in the tongue. Microscopic sections at the margin of an epithelioma, occurring in the site of a corn on the heel, showed somewhat similar changes. The conclusion drawn from these cases was, that the general slight ingrowth from the rete Malpighii was due to the long continued irritative or inflammatory process; and since no definite line could be drawn between it and the widely extending ingrowth constituting epithelioma—a direct transition from the one into the other being observable—there was the strongest evidence that the inflammatory or irritative process was the direct cause of the epithelioma. In cases of balanitis associated with specific or non-specific sores, a very distinct elongation of the interpapillary processes of the rete Malpighii on the mucous surface of the prepuce was observed. 4. An ordinary-looking flat warty growth from the perinæum, produced by irritation, showed apparently a transition to epithelioma, as in the warts of chimney-sweeps described. Long anastomosing papillary processes, containing many "cell-nests", extended down from the rete. Other cases cited also indicated that the border-line between the so-called hypertrophies of epithelium (callosities, warts, etc.) and epithelioma was of the slightest description, and that a continuance of the causes which give rise to the former might lead to the latter. Some remarks followed on the influence of hyperæmia in the over-production of superficial epithelioma, as in corns, or downwards from the rete Malpighii, as in a case of aneurism by anastomosis referred to. The production of epithelioma by chronic inflammatory or irritative processes was doubtless frequently favoured by hereditary and constitutional tendency, and the nutritive conditions accompanying advanced age. The disease should be excised more widely than usual in cases of epithelioma following irritation, in order to remove portions of epithelial surfaces from which an ingrowth had commenced.

Dr. WILKS (London) referred to Mr. Stanley's preparations of papillary epithelioma of bone following chronic ulceration, in the Museum of St. Bartholomew's Hospital.

Dr. CREIGHTON (Cambridge) discussed the pathology of secondary growths of cancer, maintaining that they might be produced by an infective process from connective tissue corpuscles.

Mr. EVE maintained that epithelial structures could only originate from epithelium.

Congenital Neurotic Papilloma. By WYNDHAM COTTLE, M.B. (London).—Mr. Wyndham Cottle read a description of the case of a boy, whose skin presented lines of dark wart-like growths in the course of certain nerves. These lines were confined to one side of the body and limbs, and the rest of the skin was normal. These markings had existed from birth, and followed the course of the cutaneous branches of the fifth nerve, the internal cutaneous, the intercosto-humeral, and saphenous nerves; and also occupied the middle line in front. These black markings were limited to the right side, and were composed of contiguous filiform papillomata, and, in structure, corresponded to ordinary filiform warts. The mother had experienced a severe shock from a house catching fire near her own during the fourth month of her gestation of this boy, when she fainted from fright. These lesions were closely allied to ichthyosis hystrix, from which they were separated by being unilateral, following the course of certain nerves, and being attended by no accumulation of epithelial *débris*, horny plates, etc., from alterations in the sebaceous glands. Warty growths were distinguished by a vascular base, by increasing in size independently of the growth of the part on which they occurred, and by not being always congenital. The connection of these abnormalities with nerve was closer. Their analogy with the herpes zoster of later life had been long ago pointed out, and rested on their occurring in the course of definite nerves, and on their being unilateral, and on their presenting a papillary hypertrophy. They probably depended on morbid intra-uterine nerve influence, akin to the zoster of later life, and formed a striking example of perverted nerve-action in nutrition. A similar case, reported by Dr. Church, had a like history of mental shock during gestation. Mr. Cottle proposed to designate such a condition, "congenital neurotic papilloma".

The Life-History of Contagium—By P. M. BRAIDWOOD, M.D. (Liverpool).—Dr. Braidwood exhibited a series of drawings in the Pathological Museum, which accompanied his third report on the life-history of contagium. Illustrations A to I (inclusive) showed the changes seen in the skin on section and in the lungs, induced by measles. Besides appearances in the skin similar to those found in scarlatina (as shown in the last report), these drawings illustrated well the presence of contagious particles in these tissues. Dr. Braidwood stated that he had distinguished these particles as sphericles or spores, and as elongated bodies or adult organisms in the breath of measles patients, but had not found them either in the breath of healthy persons, or of persons affected with scarlatina or typhus. The drawings K to W illustrated the naked-eye appearances, and the microscopical characters on section, of viscera from rabbits, in which septicæmia with secondary deposits had been induced by injecting into their pelvic peritoneal cavity, solutions of human lochia, or of Sanderson's putrid infusion of pus, or of human lochia which had been filtered through porcelain. He drew special attention to the facts that, in all these instances, the primary cause of the local lesion was capillary embolism, while the characters of the secondary deposits varied according to the solution used. Normal human lochia induced secondary deposits in the liver, characterised by plugging and simple effusion of blood or serum; while the same fluid, after filtration, when partly putrid, caused some breaking down of tissue; and this change was most marked in the animals injected with Sanderson's putrid infusion of muscle. The normal lochial fluid contained no organisms, although it induced septicæmia, while the putrid fluids swarmed with bacteria and vibrios.

Case of Tubercular Tumour of the Pons in an Infant, associated with Conjoined Deviation of the Eyes. By D. B. LEES, M.D. (London).—Dr. Lees read the notes of this case. An infant of six months had facial paralysis on the left side, gradually developing.

A week later symptoms of meningitis came on, and the child became semi-comatose. When brought to the Hospital for Sick Children, three weeks after the commencement of the illness, she was almost unconscious, but could be roused. She was found to have left facial paralysis in a marked degree, and also conjugate deviation of the eyes and head to the right. Reaction to faradism was lost in the left cheek, whilst in the right it was normal. Reaction to galvanism was much diminished. Hence it was clear that either the nucleus or the trunk of the left facial nerve was affected, and the co-existence of the symptom of conjoined deviation of the eyes warranted a diagnosis of a lesion of the nucleus itself rather than of the trunk. The child died in five days. At the necropsy it was found to have general tuberculosis, involving the brain, lungs, and bronchial glands. In the substance of the pons Varolii was found a tubercular tumour of the size of a pea, placed exactly at the position of the "conjoined nucleus" of the left facial nerve. A very minute tumour of the size of a pin's head was found in the right half of the pons, but at a lower level there were no other tumours except two very small ones projecting from the surface of the cerebellum. Reference was made to the observations of Dr. Graux of Paris,* who seemed to have proved by clinical and pathological evidence, confirmed by experiments on dogs, that conjugate deviation of the eyes to the opposite side was the result of a lesion of the "conjoint nucleus". He believed that the nucleus of the sixth gave origin also to a band of fibres which passed forwards immediately below the floor of the fourth ventricle, crossing the middle line to join the third nerve on the other side just below its nucleus. He alleged that he had demonstrated these fibres in the cat. In the human brain he discovered corresponding fibres, but could not distinctly prove their decussation. If these statements were true, the internal rectus muscle of each eye had two sources of innervation, the nucleus of the third nerve supplying the stimulus to movements of convergence, and the nucleus of the sixth governing the conjoined lateral movements in which the internal rectus of one eye had to act along with the external rectus of the other. This double origin of the third nerve is not yet recognised by physiologists, but it seemed fairly demonstrated, and the case now reported was of some value in illustration.

A Brief Résumé of Pathological Researches on Tubercle and allied Affections of the Lung. By D. J. HAMILTON, M.B., F.R.C.S.Ed. (Edinburgh).—Mr. Hamilton's remarks were mainly confined to an explanation of the preparations he exhibited, bearing upon a series of articles published in the *Practitioner* during the last two years. The following is a brief synopsis of some of the results obtained in his researches on the above subjects. 1. Tubercle of the lung is always the result of irritation of an endothelium by a peculiar chemical agent, probably a ferment, produced in the softening of a caseous mass. 2. The source of this caseous infection may be situated in any tissue. 3. Tubercle may be primary or secondary in the lung. By primary tubercle of the lung is meant a disease in which the tubercle forms the first and only lesion, the caseous source of infection being situated in some distant organ or tissue. By secondary tubercle is meant a disease in which the caseous deposit is the primary disease in the lung, and where the tubercle is of secondary occurrence. 4. In the primary form, the caseous ferment is brought to the lung from some distant part by the blood-vessels, and the tissue first irritated by it is the endothelium of the alveolar capillaries. In the secondary form of the disease, the lymphatics absorb the caseous irritant, and it is from their endothelium that the tubercle originates. 5. A tubercle, wherever it exists, is invariably composed, when fully developed, of the following parts: *(a)* one or more giant-cells; *(b)* a reticulum formed by processes given off from the sides of the giant-cell, on which nuclei lie as on any connective tissue; *(c)* a peripheral capsule. 6. The giant-cell represents an over-developed connective tissue corpuscle. The processes correspond with an attempt on its part to throw out an organised periplast. 7. The action of the irritant, which gives rise to the abnormal activity of the blood-vascular or lymphatic endothelium, is apparently evanescent, and, when its energy is expended, the whole of the structures composing the tubercle develope into fibrous tissue. By so doing, if the subject overlive the acute attack, a cirrhosis of the lung or other organ is frequently induced. 8. The commonest cause of the primary form is the softening of a caseous gland. That of the secondary is chiefly either a caseous catarrhal pneumonia, or a chronic interstitial pneumonia, with bronchiectatic cavities containing caseous debris. 9. Tubercle, especially the secondary form, is a commoner disease of the lung in adults than in children or youth. The primary form is oftener met with in childhood. 10. Catarrhal pneumonia passes through three stages. The first is the acute or subacute, in which the alveolar epithelium proliferates. The second is the stage of caseation, in which the elements so formed, and which have accumulated in the air-vesicles, caseate. The third is the stage of excavation, in which the necrotic caseous matter softens and forms cavities. 11. The softening is a purely chemical process. 12. Small tubercles are commonly found in the neighbourhood of the cavities; but they are usually invisible to the naked eye—the bodies pointed out as tubercles being isolated catarrhal pneumonic nodules. 13. The development of tubercles in such a part has very little to do with its disintegration. They rather tend, by their fibrous organisation, to induce cicatrisation. 14. There is no such thing as "tubercular phthisis", in the sense of a primary tuberculous deposit, leading to destruction of the lung substance by softening and excavation of the individual tubercles. They certainly caseate in the centre; but, as soon as resolution occurs in the caseous part, the resulting debris is absorbed, and the capsule at the periphery contracts so as to obliterate the cavity. 15. Secondary tubercle of the lung is frequently associated with bronchiectasy. The bronchiectatic cavities are apt to be mistaken for those formed by destruction of the lung-tissue, or true phthisical excavations. 16. There is a form of catarrhal pneumonia in which the caseous nodules are distributed universally throughout the whole lung, and which is very apt to be mistaken for tubercle. It is not uncommon, and generally occurs in children.

* *De la Paralysie du Moteur Oculaire Externe et de sa Perturbation Consécutive.* Paris: Baillière, 1878.

SECTION H.—OPHTHALMOLOGY.

Wednesday, August 11th.

THE Chair was taken by the President of the Section, W. BOWMAN, Esq., D.C.L., F.R.S.

The Section was opened by a few introductory words from the PRESIDENT, who regretted the short time to which the many papers offered, and the discussions arising out of them, must be restricted. The subject of glaucoma was about to be treated by men who had given great attention to it, and who had turned to the best account the large opportunities they had had of ascertaining the facts. On facts alone a true explanation of its phenomena must needs be based. With the greatest desire to arrive at a true result, the problems were beset by great difficulties, which could only in any case be gradually overcome. But, nevertheless, real progress was being made; much had already been accomplished, and it might be reasonably hoped that the contributions and discussions of that day would mark a real advance of knowledge.

DISCUSSION ON GLAUCOMA.

Pathology of Primary Glaucoma. By PRIESTLEY SMITH, M.R.C.S. (Birmingham).—The fundamental and essential cause of primary glaucoma was stated to be an abnormality situated within the eye itself, viz., an insufficiency of space between the ciliary processes and the lens. All conditions which tended to promote venous turgescence, arterial hyperæmia, or increased secretion within the eye, might become exciting causes of glaucoma, provided this abnormality were present. The outline of the argument was as follows. The intra-ocular fluid escaped from the interior of the eye at the angle of the anterior chamber. In glaucoma this angle was compressed or closed; hence the excess of fluid within the eye, and the increase of tension. Experiment showed that when the vitreous pressure was raised slightly above the aqueous pressure, the ciliary processes were driven forward against the periphery of the iris, and the angle of the anterior chamber was closed thereby, precisely as in glaucoma. This suggested that the starting point of glaucoma was some condition which raised the vitreous pressure slightly above the aqueous pressure. In health a current of fluid passed constantly from the vitreous to the aqueous chamber through the "circumlental space", *i.e.*, the space which separated the margin of the lens from the ciliary processes. Narrowing of the circumlental space would tend to raise the vitreous pressure. Circumstantial evidence favoured the idea that narrowing of the circumlental space was actually the starting point of primary glaucoma. The examination made recently of a series of healthy and glaucomatous eyes had lent support to the foregoing theory, by showing (*a*) that in the healthy eye the diameter of the lens increased with age; (*b*) that this increase was accompanied by a diminution of the circumlental space; (*c*) that in certain stages of glaucoma the circumlental space was, as a fact, abnormally narrow. Measurements in three cases tended to show that the lens of the glaucomatous eye had a greater diameter than the lens of the healthy eye at the same period of life. These, however, justified no general conclusion as to whether the abnormality of the circumlental space depended primarily upon the size of the lens, or upon the situation of the ciliary processes.

Dr. BRAILEY (London) said that the increase of the lens with age was unproved, and that he had not found it increased in glaucomatous eyes, frozen in a delicate membrane directly after excision. The same appeared to be the case in many sections of eyes figured by Becker, Knies,

and Pagenstecher. Dr. Brailey further stated that the ciliary processes were atrophied in all the primary glaucomatous eyes he had examined, that they were extra large, with diminished tension, and that they therefore were not the cause of the iris periphery being advanced. He was also of opinion that their atrophy was not due to pressure, for in iritis serosa, or keratitis punctata, or aquocapsulitis, all appearing to be to some extent synonymous, the ciliary processes were of good size, though the anterior chamber was extra deep. Dr. Brailey then referred to his paper, "On the Size of the Aqueous Chamber in Glaucoma", and expressed the opinion that, in atrophy of the ciliary body, and especially of the ligamentum pectinatum, part of it approximated the iris periphery to the cornea, or the ligamentum pectinatum gave origin, by its innermost stratum on the one hand, to the connective tissue fibres of the iris, and, on the other, was connected, through the open meshwork leading to the canal of Schlemm, with Descemet's membrane. He explained that the operation of sclerotomy cut through this contracting band, and allowed the base of the iris to recede from the cornea; that of iridectomy prevented mischief by removing the base of the iris; and that of hyposcleral cyclotomy cut through the ciliary body, and made a new approach to the canal of Schlemm. The atrophy of the ciliary body in old persons was accompanied with the development of dense connective tissue in it, and was, Dr. Brailey believed, in nearly all cases the result of an inflammation, which, however, was generally but slight.

Mr. COWELL (London) pointed out the impossibility of any one theory of glaucoma being sufficient to explain all cases of the disease. He believed that there were many causes, mechanical, nervous, and nutritive, of the loss of balance between secretion and absorption within the eye, and the resulting increased tension, and alluded to the analogy of this loss of balance in other cavities of the body. He accepted many of the recent theories as applicable to various cases, and believed that future work would be more valuable if we ceased to expect to find any one theory to explain all cases of the disease. With regard to treatment, he thought that in most cases iridectomy was the best and most successful, and endeavoured to point out some of the causes of the unpopularity of the operation.

Dr. ANDREW (Shrewsbury) asked, as glaucoma could undoubtedly take place in an eye in which the lens was absent, how Mr. Priestley Smith would then explain the theory brought forward by him.

Professor DONDERS (Utrecht) said he took a great interest in the new facts. 1. He thought that in inflammatory cataract, during life, it was directly seen that the lens was advanced and pressed against the pupillary parts of the iris. Here the (merely physical) adhesive apposition would suffice for impeding the free communication between the peripheric part of the posterior chamber and the anterior chamber. In the posterior there might be higher pressure, accounting for the dilatation found by Dr. Brailey, the atrophy of the ciliary processes, and pulling of the periphery of the iris in the direction of the ligamentum pectinatum, with inflammation and adhesion to the cornea near the canal of Schlemm. 2. The dilatation of the peripheric arteries of the iris seemed to be in relation to the visible dilatation of the anterior ciliary arteries. Injection might be tried even in extirpated eyes (as Schroeder van der Kolk was able to do). 3. The lens seemed swollen in every acute glaucoma. As to the suggested increase of size of the lens with increasing years, even up to the extreme old age, it would be a good plan, not only to test it by measurements, but also to weigh the lens, as great accuracy could be thus attained.

The Cicatrix of Filtration Theory. By G. E. WALKER, F.R.C.S. (Liverpool).—Mr. Walker gave his views of iridectomy, sclerotomy, and hyposcleral cyclotomy: viz., that tension was diminished by relieving the inflammatory infiltration of the ciliary body.

Hyposcleral Sclerotomy. By C. HIGGENS, F.R.C.S. (London).—In this paper, reference was made to Mr. G. E. Walker's *Essays in Ophthalmology*, in which hyposcleral cyclotomy was described, and its results in several cases given. The expectations raised by perusal of the essay in question were scarcely realised. Seven cases were reported; and the experience of these led the writer to believe that "hyposcleral cyclotomy", as a means of reducing ocular tension, was inferior to iridectomy, but superior to sclerotomy, trephining, or seton.

Mr. VOSE SOLOMON (Birmingham) gave several reasons which, he thought, explained the alleged prejudice among some general practitioners against the employment of iridectomy. Referring to the first introduction of that operation as a remedy for tension of the eyeball, he confessed to have been much pained at the time—and even now in the retrospect—by the hostility and discouragement, emanating from an influential centre, directed against all independent efforts to cure ocular tension by any other surgical procedure than an excision of the iris. He had seen tension that persisted after an iridectomy permanently relieved by a section made through the base of the coloboma and the ciliary structures. The same operation, attended by an escape of vitreous humour, he had known to permanently relieve other cases. From the dictum that, given tension, iridectomy must therefore be performed, he had always withheld his assent. The operation of intra-ocular myotomy, which he proposed some few years ago, divided, to the extent of two lines, all the structures depicted in Dr. Brailey's diagram; and cases of acute glaucoma so operated upon had suffered no relapse in the course of fourteen years. The incision was made through the corneo-scleral tissue, removing the pillars of the iris and the ciliary muscle; the sclera was not cut in this operation, and the vitreous humour should not enter the wound.

Dr. ARGYLL ROBERTSON (Edinburgh) expressed his dissent from the views of Mr. Priestley Smith, as to the causation of glaucoma. He also thought that the approximation of the anterior surface of the iris to the inner surface of the cornea could not be satisfactorily explained by a contraction of the fibres of the ligamentum pectinatum, which, in his opinion, could only draw the pupillary margin of the iris nearer to the ciliary processes, but could not alter the plane of the iris. He further expressed the opinion that the occurrence of a cystoid cicatrix after iridectomy was of the greatest benefit in securing a permanent diminution of tension by permitting transudation of fluid from the interior of the eye, and cited a case in which, on recurrence of glaucomatous tension after iridectomy, he had recourse (on the advice of Mr. Bowman) to sclerotomy, which was followed by a cystoid cicatrix, and a permanent reduction of tension. In his own operation of trephining the sclerotic, his object was to replace a disc of the firm resisting sclerotic by a loose, yielding, readily permeable tissue, which acted the part of a safety-valve to a boiler, saving the sensitive retina, etc., from the evil effects of pressure, and also allowing the transudation of fluid from the interior of the eye. He desired to mention that, in the case narrated in his original paper, in which, both eyes being affected with glaucoma, he performed a free iridectomy on the better eye, and trephined the sclerotic on the worse, the patient was now blind in the eye that was iridectomised, but retained fair vision in the other.

The PRESIDENT, in bringing the discussion to a close, remarked upon the immense advance achieved through the researches—anatomical, physiological, and pathological—which the glaucoma problem had been the means of eliciting during the last twenty years. We now looked upon the aqueous chambers of the eye, not only as a space within which the relative position of certain optical structures and their needful movements were provided for, but also as an arrangement securing a nearly equable elastic support for all the parts within the globe under varying nervous and vascular conditions. The aqueous humour seemed not to be a stationary fluid, or quite a fixed quantity. It was being ever secreted, and ever in course of being removed, through the rim of the anterior chamber, from the receptacle which it occupied. It also probably served for the more effectual nutrition of the neighbouring non-vascular vitreous body and lens. By it, the intravascular and intraocular pressures were held in mutual harmony within certain limits, the limits of health. When this harmony was impaired by an arrest of the due escape of aqueous humour through Schlemm's canal, the intraocular tension rose, and the secondary evils of glaucoma followed. Most interesting questions had been propounded, and still awaited solution, as to how, under different circumstances, the balance of elasticity was lost; and especially how that adhesion of iris to cornea, and consequent mechanical closing up of the rim of the anterior chamber, was brought about, which in many, though not all of the cases of established glaucoma, seemed to account for the high tension. It appeared to be a matter of the greatest interest, and might have the most direct bearing on practice, that we should, if possible, understand the *rationale* of the glaucomatous process. He entirely agreed with Professor Donders, that the most exact anatomical account of the natural structures, and of the morbid deviations, was our first requirement—the *sine quâ non*. We still wanted also the detailed clinical histories of numerous cases, in connection with the indispensable, exact, and true examination of the tissues concerned, for there were many anomalies waiting for explanation; and this, to be satisfactory, must be a general and comprehensive one.

Instruments.—Some improved Ophthalmic Instruments were exhibited and explained by Dr. Landolt of Paris; and a New Instrument for Tattoing the Cornea, by Dr. C. E. Fitzgerald of Dublin.

The remaining part of the report of the proceedings of the Section of Ophthalmology will appear in a subsequent number.

MR. THOMAS HUNTER HUGHES, M.R.C.S.Eng., of Plasyward, Pwllheli, has been elected Coroner for the Southern Division of Carnarvonshire, in succession to his father, the late Mr. Hugh Hunter Hughes, M.R.C.S.Eng., who held the appointment for upwards of forty years. The former was Deputy Coroner for many years.

SUBSECTION OF OTOLOGY.

Wednesday, August 11th, 1880.

The chair was taken at 2 P.M. by W. B. DALBY, F.R.C.S., M.A., M.B., Aural Surgeon to St. George's Hospital.

Chairman's Address.—In opening the business of the section, Mr. DALBY said: We have this year the opportunity of listening to addresses from such eminent sources, that I think I shall best consult the interests of this meeting by proceeding at once to the discussion of the subjects which are appointed for consideration, and to reading the papers which have been promised. Before doing so, however, I must be allowed to say that any success which may attend this Subsection of Surgery will be mainly due to the ability and energy of the Honorary Secretaries; and, indeed, it is to them that this Subsection owed its very existence, when it was inaugurated at the last general meeting of the Association. I hope I shall not be thought presumptuous, if I suggest that it is not so much ourselves as aural surgeons who are to be congratulated on the progress which our branch has made during the last few years, as the wide domain of medicine, upon the result of our labour in our especial department. In support of this proposition, I may be permitted to draw attention, amongst other matters, to the fact that the loss of hearing power, without any perceptible lesion of the auditory apparatus, will at one time point to the early development of atheroma in the arteries throughout the body; at another, to pathological change in nervous structure as a direct result of emotional influences. Again, are we not led to observe in the peculiar manifestations of inflammation within the middle ear, and especially in that low form which invades the bony structures, a tendency to tuberculous deposit; and to notice the peculiar liability of such patients to the serious complications of meningitis, cerebral abscess, and pyæmia? There is no need for me to call attention to the wide differences which characterise the practice of aural surgeons of to-day and fourteen years ago, when Mr. Toynbee, the then leader of our department, after having done so much good work in the pathology of ear-diseases, passed away. Not only the literature of the subject, but the every-day practice of surgeons, will sufficiently demonstrate the great changes which have taken place. It has now become recognised on all sides that catarrhal affections of the middle ear, and especially those which are common in childhood, should be submitted to treatment in their early stages; and that, when this is done, the mucous membrane which forms the lining of the middle ear will recover as completely as it does in other parts of the body; and that it is as senseless a proceeding to leave this tract of mucous membrane uncared for as it would be to neglect any other tract of similar structure, as in the case of bronchitis or purulent ophthalmia. Thus, when the tympanic membrane is ruptured from pressure of pus from within, if submitted to the ordinary rules of surgery, it exhibits as great a tendency to heal as other tissues which have been subjected to the process of ulceration. It is also recognised that an affection of the posterior nares will constantly be the source and origin of recurring attacks of catarrh of the ear, and that this part must be restored to a condition of health before the middle ear has a prospect of permanent benefit from treatment; that perhaps no two cases of perforate tympanum require absolutely the same treatment, and that nothing short of a laborious attention to details will enable us to recognise the direction which such treatment should take. Such attention has long since taught us to abandon any universal form of so-called artificial membrane, to discover by repeated trials what especial form may be applicable to each case, and to place as much importance on the fact of protecting the tympanic cavity from the air as in supplying the necessary support to the stapes. A similar care in the selection of cases, I think we must all admit, has not only, during the past few years, reduced the number of operations on the tympanic membrane, but has given immensely better results when such interference is seen to be demanded. This will especially apply to those instances where purulent or semifluid mucous accumulations can be shown to require an excision for their expulsion. The occasional urgent necessity of opening into the mastoid cells is now fully understood. All these, and a host of other matters which are passing daily under our notice, have, comparatively speaking, received but recent recognition; and I should be expressing the general feeling if I were to acknowledge that our attention to these subjects has received a stimulus from the original researches of our continental and American brethren, to whom we not only accord a warm welcome to this meeting, but hope to see in increased numbers at the International Medical Congress, which is to be held next year in London.

DISCUSSION ON THE THERAPEUTIC VALUE OF ELECTRICITY IN EAR-DISEASE.

Dr. WOAKES (London) opened the discussion by reading a paper on the diagnostic and therapeutic value of electricity in ear-disease. For the purposes of discussion, this subject was viewed under two heads; first, as to the indications afforded by electricity for diagnostic purposes; and second, as to its therapeutic properties. Under the former head, the experiments of Brenner were briefly considered, and two circumstances were advanced which tended to vitiate the conclusions arrived at by this author from his researches. The audiometer, an instrument designed to measure the hearing power, was next referred to, and the limited scope of this invention as it appeared to the author was indicated. Under the latter head, the author pointed out the class of cases in which, in his experience, electricity was calculated to be of curative value. Also the property of the electric current of inducing dilatation of vessels, and therefore of adding to congestive states of the auditory apparatus, was shown to be adverse to its general applicability in ear-disease, and essentially to limit its usefulness as a curative agent. The methods of using the current were next described; the appliances best calculated to accomplish the object in view was also indicated, and examples of the latter exhibited. Dr. Woakes showed an ordinary catheter electrode, Weber-Liel's electrode, a laryngeal electrode, and an external meatus electrode.

Dr. PIERCE (Manchester) thanked Dr. Woakes for the very clear indication of the symptoms of ear-affections, in which the electrode might be used. He was sure that by all present electricity in all its forms had been used, and thought that the universal conclusion would be, that the result had not been encouraging. He had not entirely abandoned electricity, but he only used it in isolated favourable cases. He applied the direct current by placing a sponge on the point of a wire, which was introduced through a speculum on to the drum. He said that, after electricity had been applied, the tinnitus ceased for the time, but it almost invariably returned. He had seen no case where the improvement had been constant. He looked upon electricity as practically of little value in ear-disease.

Mr. GARDINER BROWN (London) said that one pole of the electrode applied to the mastoid process, and the other pole to the Eustachian tube, provided with a small piece of sponge, did more good than an application in one spot. He thought Weber-Liel's method a good one. He had had no brilliant results.

Mr. BABER (Brighton) had found a distinct temporary improvement in the hearing after the simple introduction of the catheter without inflation.

Dr. CASSELLS (Glasgow) said that his own experience with electricity in all its forms confirmed what Dr. Woakes had said, but that he had applied it with a good, but not permanent result, in cases of supposed paralysis of the tube-muscles, after the mode of Weber-Liel. Too much was expected from the use of electricity in the disease of the ear. It could not create new tissue, but might improve or restore the weakened or lost power of a muscle. There was no clear evidence that the auditory nerve could be stimulated by electricity.

Dr. WOAKES sometimes got indications of an improved action of the tensor tympani after applying electricity.

The CHAIRMAN said that electricity had been introduced into practice under good auspices, but that its value for diagnosis was very slight. He preferred any other indication, such as might be obtained from clinical observation. He had for some years given it up. The conclusion at which the meeting arrived was, that electricity might be expected to be useful in ear-diseases in proportion to the necessity which existed for increasing muscular power in some portion of the conducting apparatus, but that, up to the present, experience pointed to the fact that it was an open question, whether in such cases the results of electric treatment were permanent.

Considerations on Paracusis Willisii. By Dr. LOEWENBERG (Paris).—Several explanations had been proposed of the fact of some deaf persons hearing better as long as certain strong noises were produced, especially by rolling carriages or waggons, mills, etc. Willis proposed to explain this phenomenon by a relaxation of the membrana tympani, the normal tension of which would be restored by the noise or vibrations of the atmosphere; and other observers admitted a separation in the chain of ossicles. Careful examination of cases of this kind suggested to Dr. Loewenberg different explanations. The very different signs he had noticed in examining with great care the ears of a large number of persons affected with paracusis Willisii, by means of the usual methods of inspecting and testing, gave very divergent results as to the state of the drum; and it was impossible, therefore, to abstract from them a common feature as to the trouble of the middle ear. On the contrary, the symptoms which he had found in all cases were the following. Both ears were affected with deafness, often to different degrees on each side; hearing was good for high tones, especially the higher ones; and, finally, as a negative sign, there was absence of perforation of the drum-head. As a rule, he noticed such troubles as headache, giddiness, and in some cases even serious accidents, as

apoplexy. The preceding facts seemed to exclude the idea of an affection of the middle ear as the cause of paracusis Willisii. He proposed to seek the explanation of this phenomenon in the following consideration. "We know, especially by recent researches, that excitations, which follow each other but which are not strong enough to provoke a manifestation of the specific vitality of a nerve, can, under certain circumstances, induce a higher degree of excitability in the nerve, so that it now responds to excitation which would have had no effect under ordinary conditions. In the same manner it seems admissible that there may be certain cases of diminished excitability of the acoustic nerve, and that in these cases the strong commotions produced more or less periodically by the aforesaid noises, may increase the sensibility of the auditory nerve, which is lessened by the disease, and thus enable the patient to perceive vibrations he would not perceive under ordinary circumstances." It appeared to him very probable that such was the case with the persons who offered the striking phenomena of Willis's paracusis.

The CHAIRMAN said that this was a grave symptom. This paper tended to show that it was a secondary symptom, and that it was the beginning of an affection of the auditory nerve. He completely endorsed Dr. Loewenberg's views. According to his experience, this symptom was more common in youth than in later life.

Dr. CASSELLS (Glasgow) regarded it as a sign of incurable disease, looking at it clinically. It occurred in the course of adhesive catarrhs; and the patient might be assured that his hearing would not become worse when he heard louder in a noise.

Dr. PIERCE (Manchester) asked, whether it was always and under all conditions a grave symptom; whether it was due to affections of the auditory nerve, to relaxation of the ossicles, or to relaxation of the tympanic membrane.

A New Standard of Measurement for Hearing-power by Comparison with the Sense of Touch. By A. GARDINER BROWN, F.R.C.S.Ed., (London).—When we strike a tuning-fork and apply it to the head, the "dying-away" of the sound vibrations will furnish us with a valuable clinical means of measuring the sensibility of the acoustic nerve, providing we are able to refer them to some fixed standard of observation. Now the tactile sensibility of the thumb and finger furnishes us with such a standard, which is at once ready, accurate, and simple. The results, moreover, are, in Mr. Brown's opinion, far more valuable than those obtained by the watch only, whether used on the skull, or for producing aerial vibrations. The procedure is as follows. Take a middle C tuning-fork by its stem, and having lightly struck it, place it in the ordinary way on the mastoid. On your part note the point at which you lose the vibrations, while the patient on his part signals to you when he is unable to hear them any longer. The period at which you cease to feel is a fixed point in the scale of the lessening amplitude of the vibrations, whether the fork be struck lightly or heavily. This being so, it is obvious that we are in possession of a practically unvarying standard to which to refer the power of audition in the patient. If the hearing falls short of this point, it is convenient to consider it *minus*; if it exceed, then it may be called *plus*. The *degree* of the *plus* and *minus* condition is found with considerable accuracy by counting in half seconds the interval between the patient's signal and the standard point. The bottom of the fork, or coin, should be made to press the head firmly just above the mastoid. If the part be fleshy the pressure must be greater. If this mode of testing be combined with examination by the watch, very important inferences may be drawn as to the exact seat and nature of the deafness. This may be illustrated in this way: A patient hears the watch +30″ on the right, and +2″ on the left side, but hears the fork +14 on the right, and +20 on the left. The diagnosis points to obstruction in the other or middle ear on the left side, as the sound-waves are reflected by such obstruction, and so are heard for a longer period by the patient.

The CHAIRMAN had no doubt that the method described would be largely used. People whose vessels were atheromatous heard watches very badly, and not generally high tones well.

Mr. BABER (Brighton) thought that the sense of touch might vary with the different surgeons; also, that some patients might be more or less prompt in indicating the exact moment in which they ceased to hear the sound of the tuning-fork.

Dr. PIERCE (Manchester) said that this new method brought forward by Mr. Brown did not appear to him to be a measurement for an universal standard of hearing, for which every one was anxiously looking.

Mr. GARDINER BROWN, in reply, related that he got three students to test a patient with the method advocated by him, and all obtained the same result. He considered the tuning-fork to be the complement of the watch, and the watch the complement of the fork.

Lupoid Eczema of the External Meatus Auditorius. By F. M. PIERCE, M.D. (Manchester).—Dr. Pierce described a case of this affection occurring in a lady aged 23, who came under his care in June 1879. She had generally had good health. Her sister, mother, and grandmother (on the mother's side) were subject to skin-affections. She had had occasional slight attacks of eczema of the neck, elbows, knees, and hands. Two years previously, she noticed slight itching, with redness and swelling of the concha and posterior edge and wall of the external meatus of the left ear. The swelling was about the size of a hazel-nut, of bluish colour, rather firm, and frequently painful. It involved the whole circumference of the meatus; and a small quantity of clear, yellow-brownish, sticky fluid constantly oozed from it. She had otorrhœa when a child. The walls of the meatus were seen to be much swollen, red, and doughy. The membrana tympani could not be seen, even by expansion with the forceps or speculum. The Eustachian tube was fairly pervious. She had been treated by caustics and other remedies. The treatment, which was continued for nearly a year, consisted of incision of the parts; the local application of zinc and alum lotion, perchloride of iron, nitrate of silver, tincture of iodine, chromic acid, Valette's lotion, lotion of acetate of lead, ointment of iodide of potassium, laminaria tents, liquor carbonis detergens; and the internal administration of strychnia with iron, bichloride of mercury, liquor arsenicalis with iodide of potassium, and Donovan's mixture. At the last report (in June 1880), the calibre of the meatus was normal; there was no discharge, pain, or itching. In the concha, there was a slight bluish elevation.

Dr. WOAKES (London) had seen a similar case several years ago. He called it then elephantiasis. It yielded ultimately to a solution of iodoform.

Mr. PINDER (Manchester) saw a similar case on the auricle. He applied chloride of zinc paste three or four times; and afterwards used the scoop. The result was complete recovery, with loss of the lobe.

A New Method of Treating the later Stages of Chronic Suppuration of the Middle Ear. By F. M. PIERCE, M.D. (Manchester).—The method advocated by Dr. Pierce was the use of plugs of medicated cotton-wool pressed down on the suppurating surface, and renewed daily or as often as appeared desirable. He thought he had obtained more benefit by this plan than by the use of lotions or powders. The cotton was attached to a piece of thread, like Yearsley's artificial membrane, and introduced in the same way. Dr. Pierce could not find any mention of this plan in the writings of authorities on the ear. Bezold—whose remarks were unknown to Dr. Pierce until recently—advocated, indeed, the use of cotton medicated with carbolic acid or salicylic acid, to close the meatus after the introduction of powdered boracic acid. Becker disapproved of the use of fluids in otorrhœa, and advocated the use of cotton to wipe out the discharge; relying, however, chiefly on the application of powders.

Mr. BABER (Brighton) had used boracic acid blown into the ear, and found it of great value. It could be blown in by the patient himself. It created slight noises in the ear for two or three hours afterwards, but they did not continue.

Mr. PINDER (Manchester) said that the tympanic cavity must be cleared of granulations, or the mucous membrane brought into a healthy state through an enlarged opening, before any benefit could be expected. He thought that any case of suppuration that could be got at in any way, unless the patient's health were broken down, could be cured. In his early practice, a running ear was a bugbear, but at present he was always quite satisfied to meet with a case where suppuration existed.

Mr. GARDINER BROWN said that, after diminishing the suppuration, Ferrier's snuff, which at the same time closed the ear, soothed inflamed or irritable tissues—thus giving good results.

Dr. PIERCE had lately a case where the whole meatus was filled with boracic acid, the hearing being almost normal. In this case, it acted simply as an artificial membrane.

Thursday, August 12th.

The Chair was taken at 3 P.M. by W. B. DALBY, F.R.C.S., Chairman of the Section.

DISCUSSION ON THE COMPARATIVE VALUE OF THE VARIOUS MECHANICAL AIDS TO HEARING.

Dr. URBAN PRITCHARD (London), in opening a discussion on the various aids to hearing, made some preliminary remarks on the functions of the tympanum. The function of the tympanic apparatus—membrana tympani and ossicles—was twofold: 1, to obviate the great loss of sound-waves which occurred when they passed from a gaseous to a fluid medium; 2, to act as an intensifier. Dr. Pritchard had some time ago constructed a vibrating disc rendered tense by means of a string, with a small piece of boxwood attached to the style, and a speaking-tube attached. After some trials, however, he found that it was inferior to the ordinary speaking-tube or ear-trumpet; and he had not succeeded in overcoming its imperfections. Rhodes's audiphone

he had found not to act as a sounding-board, by receiving the vibrations of sound and transmitting them to the ear; it received the vibrations from the air, and transmitted them to the skull—thus performing the function of the membrana tympani. He had found, however, that the instrument was open to the same objection as his own. The audiphone of Collardon of Geneva—a large piece of hard flexible cardboard—he had found the most perfect of all the instruments he had used; but it was not yet perfect. He had found the dentiphone inferior to the other forms.

An Improved Osteophone. By E. CRESSWELL BABER, M.B. (Brighton).—Mr. Baber exhibited a simple and convenient instrument for transmitting articulate sounds directly from the skull of the speaker to that of the deaf person, being a modification of the rod-osteophone described by Dr. C. H. Thomas, which consisted of a straight rod of hard wood, one end of which was applied to the teeth of the speaker, and the other to those of the listener. Mr. Baber described his instrument as consisting of a number of flat pieces of wood, firmly jointed together, the two end-segments terminating each in a wooden or ivory knob, with a groove round its circumference. The osteophone resembled in general structure an ordinary wooden yard-measure. For use, the instrument is straightened out, and one knob grasped between the teeth of the deaf person, or placed against his upper teeth. The other knob is placed against the upper teeth of the speaker. For persons sitting or standing side by side, the instrument may be curved on the flat into the form of a semicircle, without materially impairing the transmission of sound. This instrument conveys the vocal vibrations powerfully to the skull of the listener. The author thought that further experience would have to show the extent to which this osteophone would be of practical use for communicating with deaf persons, and whether, as seemed not improbable, it would in some cases replace the speaking-tube, or be of use in cases in which the speaking-tube was useless. In conjunction with the tuning-fork, the author thought it would be of service for ascertaining impairment of the auditory nerves in doubtful cases, especially in children. Lastly, it might be of benefit for ascertaining the amount of skull-hearing (for the voice), if any, present in deaf mutes. This instrument had the advantage over the rod-osteophone of being to a certain extent flexible, and at the same time very portable.

Mr. EGLIN (Glasgow) showed several forms of Rhodes's audiphone, and gave a demonstration on them.

Dr. CASSELLS showed a new hearing instrument, called "tonomittor", made of ash-wood, with a resonating bar attached. He said that this was an attempt to provide a cheap instrument for poor people and hospital patients, which was equal to Rhodes's audiphone. He also showed a hearing-tube, the mouthpiece of which was held between the teeth of the deaf person. This instrument surpassed the audiphone of Rhodes in many cases.

Dr. PIERCE (Manchester) thought it unnecessary to dwell upon the statements which had been circulated regarding the audiphone. His experience of it was most unsatisfactory, the percentage of individuals who benefited by it being extremely small. Out of three hundred patients, there had not been more than four or five who derived a distinct benefit. He only met with one case where a marked improvement was shown, that of a man at the Ear Institute, Manchester. He could not be made to understand a single word when standing in front of him at a distance of one foot and a half, but he heard very well with the audiphone. Dr. Pierce thought that it might be hoped some day that an instrument would be found of a smaller compass than the audiphone, something in the shape of a respirator, to perform its function. He was disappointed with Toynbee's India-rubber artificial drumheads. He had successfully applied an artificial membrane of stout linen with a thread passed through it; this answered better than any other material.

Dr. CASSELLS had considerable experience as regards the audiphone. In cases of catarrhal deafness, especially in those where the deafness was very dense, it helped the patients very much. The principle of Rhodes's audiphone was as old as the time of Hippocrates, who tested the sensibility of the hearing-nerve by rapping on a key held between the teeth. He was quite certain that, in cases of non-suppurative catarrhal deafness, when the watch was heard on the teeth alone, or better on them than on the temples, and not at all on the auricle, the audiphone was of great use in about 75 per cent. of the cases above described. But Rhodes said in his pamphlet that its use did not only improve defective hearing, but also normal hearing. That it certainly did not; nor did it help deaf mutes, who did not know what sound was; nor did it even help those who once heard and knew sound, but had forgotten it. Regarding the artificial membranes, he said that for several years he had used Yearsley's.

Dr. LOEWENBERG (Paris) asked whether anyone present knew anything about the microphone. He said that M. Paul Bert of Paris contrived to use it as a great improvement in the construction of a hearing-instrument.

Dr. PIERCE (Manchester) said that the microphone had never been used for transmitting articulate sound. Professor Stewart of Owens College, Manchester, had said that it was not adapted for articulate sound.

Dr. WOAKES (London) said that he had intended to get a microphone made for hearing the tinnitus in patients' ears. He had consulted an instrument-maker about it, but was told that the microphonic principle could not be adapted for this purpose.

Mr. GARDINER BROWN (London) said that he had found an artificial membrane of simple India-rubber to be the most effective material he had ever used. As long as there was a discharge, he questioned whether it was wise to use an artificial membrane at all until the discharge was removed.

Dr. PRITCHARD (London) considered the cotton-wool plug to be the simplest and best mode. He did not agree with Mr. Brown, because the discharge was removed by the plug. He knew of an interesting case. A man, aged 50, had a discharge since infancy, so bad in both ears that he only learnt to speak when five years of age. He was under Mr. Yearsley's care for several years. Mr. Yearsley tried at last cotton-wool, which improved one ear, the other not at all. After using the plug for six months, the discharge diminished greatly; and, after eighteen months, the other ear also answered to the plug. The discharge entirely ceased from both ears, and, for thirty years afterwards, they never discharged again. This showed that, in obstinate cases, the treatment must be patiently persevered in.

Mr. ABBOTT showed a little instrument as a basis for fastening wool to allow the introduction of medicated fluids or powders, for cleaning the ear, and for causing pressure on the stapes.

Mr. BABER used cotton-wool chiefly lately. He also used Gruber's artificial drumheads and simple paper discs.

Dr. CASSELLS used absorbent cotton-wool in the fabrication of Yearsley's so-called artificial membrane. He never found a failure in well selected cases, especially where the membrane was destroyed entirely, or only in the posterior half, and the stapes exposed.

Dr. WOAKES had a patient some time ago, a lady, who had been deaf for many years in both ears, and was supplied by Mr. Yearsley with an artificial membrane of India-rubber provided with a silver pin. She wore such membranes for twenty years; after that, she could not get any more, the maker having died. She brought to Dr. Woakes the fragments of the artificial drumhead, but he could see no difference in it from others. He tried the right ear, which had been given up as hopeless, with a membrane made of dentists' gold-leaf; and, to his great surprise, he succeeded in making her hear moderately well with this ear. The improvement remained as long as he saw the case. He intended to demonstrate by this, that there was some quality in the gold-leaf which was worth experiment. Dr. Richardson used a stouter kind of gold-leaf at first, but found that the dentists' gold-leaf answered better.

The CHAIRMAN said that this discussion tended to the conclusion that the audiphone was only useful for incurable cases of disease of the middle ear or closure of the external canal. In both classes of cases, it was absolutely necessary that the nervous structures should be unimpaired. The best forms of artificial membrane would be those by which pressure could be exerted by the patient on the stapes, at the same time that the tympanic cavity was protected from the air, and the discharge absorbed. No especial form could be recommended as likely to be universally useful.

Instruments.—Dr. WOAKES showed his shuttle-needle for cleft palate, and described its application. This instrument was considered by all present to be a most useful and ingenious contrivance.

Mr. PINDER showed several instruments, and explained their use, viz.: for removing polypi; for applying medication to the internal ear, etc.; powder insufflators; a fluid insufflator; an instrument for perforation of the mastoid.

Vote of Thanks to the Chairman.—Dr. CASSELLS informed the meeting that Mr. Dalby was obliged to leave Cambridge in the evening, and, therefore, proposed a vote of thanks to him for the able manner in which he had conducted the business of the Subsection.

Dr. WOAKES seconded the motion, which was unanimously carried.

Friday, August 13th.

In the enforced absence of Mr. Dalby, the Chair was taken by Dr. LOEWENBERG of Paris at 11.30 A.M.

Antiseptic Aural Surgery.—Dr. CASSELLS (Glasgow) gave an address on this subject. He said that his first acquaintance with antiseptic surgery dated back nearly to the birth of this method of dressing

wounds. In his attempts to attain to a perfect antiseptic dressing in the suppurative forms of ear-diseases, he had used, among other things, carbolised oil; watery solutions of this acid; alcohol, 60 degrees o. p.; solutions of common salt; liquor carbonis detergens; solutions of chloride of ammonium and of chloral; carbolised wool; fir-wool; prepared oakum; insufflation of various powders, such as talc; tannin; iodoform; sulphurous acid; boracic lint; and boracic acid. To each of the above-mentioned medicaments he had given fair and long-continued trials, with the following results. Carbolic oil or water failed to do any good in arresting putrefaction in ear-diseases, and often irritated the tissues. In 1872, after seeing Dr. Loewenberg of Paris pour pure alcohol into the ear with a remarkable effect, he used this remedy with encouraging results. In the *Lancet*, in March 1874, he gave his experience in the use of alcohol in ear-diseases to the profession. Strong alcohol—say 60 per cent.—or even absolute alcohol, had to be employed; otherwise it was of no service in controlling suppuration from the ear. He had used a 20 per cent. solution of common salt to wash out hardened mucus from the tympanum, after free incision of the membrana tympani; and he never saw a case where it provoked suppuration. He also washed out putrid mastoid abscesses with it, with an excellent and almost perfect antiseptic effect. Dilute liquor carbonis detergens had given very nearly perfect antiseptic results. Solutions of chloride of ammonium seemed inactive; and the same remark applied to solutions of chloral. Carbolic wool, fir-wool, and oakum, he found to be of no benefit in putrid chronic affections of the middle ear; but these did not irritate the tissues. A fair trial was given to sulphurous acid (*B. P.*). At first contact with the tissues, this acid did not irritate; but after a few minutes it began to cause a severe and increasing pain. Frequent trials of it invariably had the same result. On investigation, this was explained by the fact that the sulphurous acid, in contact with the highly turgid tissues of the middle ear, became oxidised and converted into sulphuric acid, this latter acting on the tissues as a corrosive. No antiseptic results, therefore, followed the use of the sulphurous acid.* In the further search after a perfect antiseptic, he then used boracic acid as a crystal and as a rough powder, but with no result in respect to preventing or arresting suppuration. He then tried the insufflation of various powders into the meatus and down upon the diseased structures. Talc lessened the suppurative action, and seemed to be antiseptic in its action. Tannin alone had no effect on the putrefactive action. When used in alcoholic solution, it formed hard blackish masses in the meatus, and in contact with the diseased structures. Therefore, despite the fact that this solution was very nearly a perfect antiseptic, its use had to be abandoned because of these masses tending to accumulate in the ear with the continued use of the remedy. Iodoform in fine powder failed in most cases to arrest putrefaction; while in the few cases in which it did, its disagreeable odour was an objection to its employment. He then conceived that the boracic acid had failed on account of the roughness of the powder used. He, therefore, procured boracic acid in an impalpable powder; and the moment he began packing the meatus tightly with it, he got excellent results. But even then he saw that subsequent syringing of the ear with tepid water was followed by a return of the discharge and irritation. In consequence of this, he came to the decision that the ear-syringe was used too often and without due discrimination in the suppurative forms of ear-disease. He had, therefore, given up syringing the ear with pure water in cases in which the antiseptic treatment was to be carried out, preferring to cleanse the tissues with absorbent wool, or, when this did not suffice, by gently syringing the parts with a saturated solution of boracic acid. Therefore, when the above antiseptic treatment was to be employed, the ear should not be syringed at all; it should be cleansed out in the best way possible. Absorbent wool should be used by preference, or a saturated solution of boracic acid. The acid down must be packed into the bottom of the meatus, and the dressing must not be changed unless it were stained by discharge. Not a single case went wrong with him under this treatment. He searched no further, for he had found a perfect antiseptic in boracic acid. All cases of suppurating ear could be treated in the way indicated; and, if properly applied, no danger followed the closure of the meatus by the powder. In many of his chronic cases of profuse suppuration, the first dressing had remained in the ear for weeks, and without being stained. This showed clearly that all putrefactive action had ceased with the application of the boracic acid dressing.

Dr. PIERCE (Manchester) said that cotton pushed down the meatus through a tube on the top of boracic acid, as Dr. Cassells recommended, was analogous with the medicated cotton he advocated. He had been using it, and of course would not use it in any other way than in an impalpable powder, because otherwise it would produce the action of a foreign body. He could not say that boracic acid was a perfect remedy. He had used other acids with good results. The boracic acid formed a cake; and as to blowing it out, he feared that this could be done only in a few cases.

Mr. BABER (Brighton) said that the antiseptic method could not strictly be applied to the ear. He had used finely powdered boracic acid, though not impalpable. In acute cases, he had had less benefit from it. Some chronic cases could be cured almost by anything, while others were very intractable. It had the advantage of destroying the smell entirely.

Dr. LOEWENBERG (Paris) said that the absolute alcohol he used was nearly 98 per cent. He never applied it in this strength at once; he diluted it first; but many patients were soon able to use the absolute alcohol. As to syringing with salt solutions, he thought that the effect was to avoid a too energetic exosmotic exchange with the tissues, as it might happen with pure water. As to antiseptic treatment, he had prepared a paper for the Milan Otological Meeting on this subject. When the ear had been badly cleaned out, the epidermic fragments extracted from the meatus were surrounded by a concentrated layer of micrococci. M. Pasteur found a special microbium in boils; Dr. Loewenberg found the same in furuncle of the ear.

Dr. CASSELLS, in reply, said that he used boracic lint a year before Bezold recommended it. Dr. Pierce spoke of Dr. Cassells' method of packing the ear with boracic acid as being analogous with the medicated cotton-wool treatment recommended by himself; but this was not the case. Cotton was not necessary at all for his method; it was only put into the ear for the protection of the acid from water, etc. In children's cases, he did not put in any cotton-wool, he only cautioned the parents to be careful when the children were washed. Boracic acid formed a mass, but only coherent on the surface; underneath it remained in powder. The mode of removal he advocated was safe in any case, viz., to use the inflating bag, and blow vigorously into the external meatus from the outside after having broken up the encrusted surface. He would suggest here that also foreign bodies might be blown out of the ear in this manner. He used boracic acid in case of mastoid abscesses with excellent effect. They generally healed up after the second dressing, and without putrefaction. Regarding the treatment with alcohol, the less water there was added to it the better was the result. He always put in strong alcohol at once, never telling the patient what he was about to do. The patient's face would easily show whether pain was caused by it or not. But even if it caused pain, the meatus should be emptied, and the alcohol reapplied in the same strength at once. This manœuvre would ease the pain. He had, however, almost given up using alcohol in favour of boracic acid. He had not prescribed a single lotion of alcohol in the Glasgow Hospital for the Diseases of the Ear for the last six months, always filling the ear with boracic acid.

Dr. PRITCHARD (London) could not regard it as a scientific antiseptic treatment, such as Professor Lister carried out, because the germ of disease might possibly be introduced through the Eustachian tube, while Lister's method implied a perfect closing up of the parts antiseptically treated.

Dr. CASSELLS asked Dr. Pritchard whether he could substantiate, as a scientific fact, that a germ might pass through a Eustachian tube impermeable to air. He was sure Dr. Pritchard could not do that. He was satisfied that excellent results could be got by this treatment.

Dr. PIERCE asked whether it was possible to completely apply antiseptic treatment, such as Lister practised, to the ear.

Dr. CASSELLS said that he never compared his antiseptic treatment of ear-diseases with that of Lister; besides, long before the method of Lister came into practice, the word antiseptic was known and used to denote an antiputrefactive agent. His results showed that ear-diseases could be treated antiseptically.

Mr. BABER said that Bezold called it antiseptic treatment in his book.

Mr. HEMMING (Bournemouth) asked whether the benefit derived was not due as much to completely plugging the meatus as to the material used for plugging. He also thought that the word antiseptic should not be applied to this treatment.

Dr. CASSELLS referred Mr. Hemming to the remarks which he had already made on the subject as an answer to his observations.

The CHAIRMAN was sure all were much obliged to Dr. Cassells for the admirable address he had delivered, and thought that his results would be very useful in urging on further researches in the same direction.

The Secretaryship of the Subsection.—Dr. CASSELLS said that he wished to resign the Honorary Secretaryship of the Subsection, which he had held for two years. He had organised the first meeting of otologists ever held in Great Britain last year at Cork, and also the present meeting at

* Particulars as to the action of this acid in ear-diseases are given in a paper by Dr. Cassells in the *Practitioner* for March 1877.

Cambridge, and he found that he could not undertake the duties again. He therefore asked that some of the younger members should step in and carry on the work he had begun. He had shown that successful otological meetings could be got up at these yearly meetings of the Association; and, if necessary, he would in a pinch lend a helping hand to his successors if they met with any difficulties in keeping up the success which so far attended these meetings. Otology ought to be a section by itself at the next meeting of the Association, as it would be at the International Medical Congress to be held in London next year, when Mr. Dalby would be President, Dr. Fitzgerald and himself Vice-Presidents, and Drs. Pritchard and Purves Honorary Secretaries.

The CHAIRMAN said that Dr. Cassells' remarks should be recorded in the minutes of this meeting.—Messrs. Hemming and Baber were recommended unanimously for the joint Secretaryship of the next meeting.

Dr. LOEWENBERG proposed a vote of thanks to Dr. Cassells for the great services rendered by him in the advancement of otological science in England, which was seconded by Dr. PRITCHARD, and carried by acclamation.

Mr. BABER proposed a vote of thanks to the Chairman, which was seconded by Mr. PINDER, and carried by acclamation.

ENTERTAINMENTS.

SOIRÉE AT THE FITZWILLIAM MUSEUM.—On the evening of Wednesday, August 11, a *soirée* was given by the President and Reception Committee, in the Fitzwilliam Museum and the gardens of Peterhouse, to which an entrance was effected through one of the windows in the statuary-room on the ground-floor of the building. The Museum, both inside and also in the entrance staircase, was brilliantly illuminated with the electric light, under the superintendence of Dr. Siemens, F.R.S., which was in every way a great success, enabling the visitors to inspect the selected specimens of the remarkable collection of prints, drawings, paintings, etc., in which the building abounds. The gardens of Peterhouse were lit with Chinese lanterns, presenting a most picturesque appearance. Here the band of the (Prince of Wales's Own) Norfolk Artillery performed a selection of music, while the Orpheus glee singers delighted the audience within the Museum. The entertainment began at nine o'clock, and many hundreds of visitors were present. Refreshments were provided in one of the basement rooms. The company remained for some time, seeming thoroughly to enjoy the entertainment, which was in every way one of the most brilliant gatherings that Cambridge has witnessed for many years.

CONVERSAZIONE AT ST. JOHN'S COLLEGE—On Friday evening, August 13, a *conversazione* was held in the grounds of St. John's College, commencing at nine o'clock. Some three thousand persons thronged the lawns and walks, and were delighted beyond measure with the fairy-like scene prepared for them. The grounds were illuminated in all directions by thousands of Chinese lanterns, while blue, green, and crimson fires occasionally imparted a yet more weird-like beauty to the scene. Neighbouring bridges were illuminated, and the ivy growing against the wall of the Trinity Fellows' garden was also lighted with lanterns placed among it. The *contour* of the "Bridge of Sighs" was beautifully traced by the glimmering of hundreds of the Chinese lanterns disposed symmetrically over the structure. On the water, a kind of Venetian serenade was improvised. A number of members of University choirs and others sang a variety of airs, gliding meanwhile in their boats up and down the stream. At intervals, they were accompanied by the band of the 1st Cambridgeshire Rifle Volunteers, stationed in the centre of the grounds. Refreshments were liberally supplied in the dining-hall of the College, and everything else that was possible was done to enhance the enjoyment of the evening. The whole entertainment was greatly appreciated, and when, at 11.30, the National Anthem was played, the visitors seemed loth to quit the grounds. The illuminations were planned and executed by Mr. T. Hyde Hills and Dr. Armistead, who also superintended the lighting up of the grounds at Peterhouse on the night of the *soirée*.

GARDEN PARTY.—On Friday, August 13th, at half-past three P.M., a garden party was given by the President and Mrs. Humphry, in the grounds of King's College, and was very numerously attended. The band of the 50th (Queen's Own) Regiment, and the Concordia Glee-singers (consisting of members of the University) performed at frequent intervals.

The chapel of King's College was open to members and their friends on the evening of Thursday; and an Organ Recital was given in Trinity College Chapel at 5 P.M. on Wednesday.

EXCURSIONS.

AUDLEY END, SAFFRON WALDEN, ETC.—About forty members, accompanied by several ladies, availed themselves of the above excursion, which proved to be one of great interest, and was most thoroughly enjoyed by all. Starting from Cambridge at nine o'clock, Audley End Station was reached in half an hour; and the party were conveyed in open carriages to Audley End House, the magnificent seat of Lord Braybrooke, where they were received by Lord Braybrooke's brother, the Hon. and Rev. Latimer Neville, the Master of Magdalen College, who had kindly come over to conduct the guests over the hall. The House was thrown open by the order of Lord Braybrooke (who was absent in Scotland); and the whole of the beautiful interior was thoroughly inspected by those present; the gardens being afterwards visited, and the party conducted through the magnificent park to the Saffron Walden gate, where Mr. Neville left them, and Dr. Hack Tuke took charge of the excursionists, who visited, under his guidance, the lovely grounds of S. M. Gibson, Esq.; inspecting also the Saxon skeletons which were accidentally discovered in excavating for building purposes. Mr. Gibson also most kindly allowed the members to inspect, in his house, the Saxon ornaments, rings, etc., discovered at the same time as the skeletons. (It is supposed by some that the remains were deposited after a battle, no fewer than forty being found side by side.) The beautiful church of Saffron Walden, one of the finest parish churches in England, having been visited, the party were entertained by the Mayor and Corporation of Walden at the Town Hall; a most sumptuous cold lunch being ready, to which ample justice was done by at least seventy guests. Dr. Tuke proposed "The Health of the Mayor and Corporation", thanking them most heartily, on the part of the Association, for their generous hospitality. After lunch, the visitors inspected various curiosities, antiques, engravings, etc., which were arranged round the room; and J. Smith, Esq., of Saffron Walden, read a most amusing and witty composition of his own relative to the discovery by Sir W. Cust of the celebrated Cheshire skull. (At the unanimous request of those present, the author kindly consented to have the *brochure* reprinted.) The whole party were then conveyed in carriages to Shortgrove Hall, the seat of W. C. Smith, Esq.; visiting on their way the Saffron Walden Hospital, over which they were shown by Messrs. Stear and Buck, two of the surgical staff. At Shortgrove, the members were received by Mrs. Smith. One and all thoroughly appreciated the kindness and affability of their hostess, and the beauty of the many objects of interest in the house and gardens. A likeness of Pitt, by Gainsborough, was much admired, and was given by that statesman to Mr. Smith's father, who was his private secretary. Another beautiful Gainsborough—the portrait of a lady—was greatly admired, one of the party asking if it were the "lost Gainsborough". Refreshments having been bountifully supplied, at half-past four some left for Audley End Station, those going to Newport Station being hospitably entertained by Dr. and Mrs. Buck of Newport; the whole party leaving for Cambridge or London, having thoroughly enjoyed a most "enjoyable outing".

ELY AND PETERBOROUGH.—On Saturday, August 14th, about a hundred members and their friends started for Ely, where they were conducted over the Cathedral by Mr. R. R. Rowe, of Cambridge, Surveyor to the Dean and Chapter. From Ely the party proceeded by rail to Whittlesey, and lunched at the Falcon Hotel, after which, the Vicar, the Rev. J. Cantley, gave a fifteen minutes' address on the Abbey, and afterwards pointed out the perfect sanitary arrangements of some model cottages in the vicinity. The party then journeyed to Croyland Abbey where the Rev. Canon Moore, Rector of Spalding, gave a short account of the Abbey, and pointed out the objects of interest. Peterborough was next proceeded to. The party alighted at the Bishop's Palace, where tea was provided, after which, Canon Westcott conducted the members over the Cathedral.

ROYSTON.—A party went to Royston to see the Royston Cave, and were entertained at lunch by D. B. Balding, Esq.

BEDFORD.—Another party went to Bedford, where Springfield Asylum was visited, and the Bunyan memorial inspected. Dr. David Bower kindly acted as guide, and invited a number of the members to luncheon at his house, where he gave a demonstration of the working of the open door system in asylums, introduced by Dr. Batty Tuke, and recently carried out in its entirety by Dr. Rutherford, of Lenzie.

On Saturday, the Observatory on the Madingley Road was opened to the inspection of members. The County Lunatic Asylum at Fulbourn was open to inspection throughout the week.

BEQUESTS, ETC.—Mr. Edward Pease, of Greencroft West, has bequeathed £1,000 to the Saltburn Convalescent Home.—The London Hospital has received £152 3s. 2d. from the *employés* of the Locomotive Department of the Great Eastern Railway Works at Stratford.

MEMBERS PRESENT AT THE ANNUAL MEETING.

THE following list includes the names of the members and visitors attending the annual meeting in Cambridge, which were entered in the book provided for that purpose in the reception-room.

Abbott, Charles E., Esq., Braintree; Abbott, Geo., Esq., London; Abraham, P. S., Esq., Dublin (n.m.); Acland, H. W., M.D., F.R.S., Oxford; Addison, J. A., M.A., Cambridge (n.m.); Agar, Samuel H., Esq., Henley-in-Arden; Aikins, M. H., M.D., Toronto (n.m.); Aikins, W. T., M.D., Toronto (n.m.); Aitken, Lauchlan, M.D., Rome; Aldred, H. Allen, M.D., London; Alford, Henry, Esq., Taunton; Alford, Henry J., M.D., Taunton; Alford, Stephen S., Esq., London; Allbutt, H. Arthur, Esq., Leeds; Allbutt, T. Clifford, M.D., Leeds; Allen, Bryan H., M.D., Hastings; Allen, Joseph, Esq., Norwich; Allott, A. J., M.D., Sevenoaks; Anderson, E. C., M.D., Darlington; Anderson, M'Call, M.D., Glasgow; Andrew, Edwyn, M.D., Shrewsbury; Andrews, Fred. F., M.D., London; Anningson, Bushell, M.D., Cambridge; Archer, H. R., M.D., Royston; Arlidge, J. T., M.D., Newcastle, Staffordshire; Armistead, William, M.B., Cambridge; Ashby, Henry, M.D., Manchester; Askwith, R., M.D., Cheltenham; Asplen, G. W., M.A., Cambridge (n.m.); Atkinson, Edward, Esq., Leeds; Atkinson, Geo. P., Esq., Pontefract; Atkinson, Robert, Esq., Rippondon, Halifax; Aust-Lawrence, A. F., M.D., Clifton; Axford, W. H., M.B., Southsea.

Baker, E. Cresswell, M.B., Brighton; Babington, Charles C., M.A., Cambridge (n.m.); Bacon, G. M., M.D., Fulbourn Asylum; Bagshaw, T. W., Esq., Birkenhead (n.m.); Bagshawe, F., M.D., St. Leonards; Bailey, Francis J., Esq., Liverpool; Baker, Alfred, Esq., Birmingham; Baker, J. Wright, Esq., Derby; Baker, W. Merrant, Esq., London; Balding, C. C., Esq., Sheffield; Balding, D. B., Esq., Royston; Balding, Mark, Esq., Royston; Ball, Alfred, Esq., York; Ball, Benjamin, M.D., Paris; Bampton, A. H., M.D., Plymouth; Banham, G. A., Esq., London (n.m.); Banham, H. F., M.B., Sheffield; Barclay, G. G., M.B., London; Barber, J., Esq., Sheffield; Barclay, A. W., M.D., London; Barford, J. G., Esq., Wokingham; Barker, A. J., M.D., London; Barker, John, Esq., Coleshill; Barlow, T., M.D., London; Barnes, Edgar G., M.D., Eye; Barnes, J. Wickham, Esq., London; Barr, James, M.B., Liverpool; Barratt, James G., M.D., London; Barrett, T. B., Esq., Welshpool; Barron, T. W., M.B., Durham; Barrow, B., Esq., Ryde; Bartlett, Edward, Esq., London; Bastian, H. Charlton, M.D., F.R.S., London; Bateman, F., M.D., Norwich; Bayley, C. S., Esq., Rockledge, Cork (n.m.); Beach, Fletcher, M.B., Darenth; Beales, Robert, M.D., Congleton; Beard, George M., M.D., New York (n.m.); Begley, W. C., M.D., Hammersmith; Bell, Anthony, Esq., Newcastle-on-Tyne; Bell, Rev. D., M.D., Goole; Bell, John H., M.D., Bradford; Benfield, F. W., Esq., Leicester; Bennet, Henry, M.D., Weybridge; Bennett, A. Hughes, M.D., London; Bennett, E. H., M.D., Dublin; Bennett, F., Esq., Linton; Benthall, W., Esq., Sherborne; Berkart, J. B., M.D., London; Berry, G. W., M.B., Edinburgh; Beverley, M., M.D., Norwich; Bird, Peter H., Esq., London; Black, W. T., Esq., Surgeon-major, Edinburgh; Blake, W. H., M.B., Harpenden; Blandford, G. F., M.D., London; Blenkinsop, W. H., M.B., Bournemouth; Blomfield, Arthur G., M.B., Lynn; Boileau, J. P. H., M.D., Netley; Bond, Francis T., M.D., Gloucester; Booth, J. L., Esq., Barrow-in-Furness; Borchardt, L., M.D., Manchester; Borel, H. W., M.D., Connecticut (n.m.); Bowditch, H. P., M.D., Boston, U.S.A.; Bower, D., M.D., Bedford; Bower, R. N., Esq., London; Bowkett, T. E., Esq., London; Bowles, R. L., M.D., Folkestone; Bradbury, J. B., M.D., Cambridge; Bradshaw, J. D., M.B., Manchester; Braid, James, M.D., Burgess Hill; Braidwood, P. M., M.D., Liverpool; Brailey, W. A., M.D., London; Bramwell, Byrom, M.D., Edinburgh; Branson, F., M.D., Baslow; Brett, A. T., M.D., Watford; Bride, John, M.D., Wilmslow; Bridger, John, Esq., Cottenham; Bridgman, I. T., Esq., Berkeley; Briggs, H., M.D., Burnley; Bristowe, J. S., M.D., London; Broadbent, S. W., Esq., Dalton-le-Dale; Bromfield, J., Esq., Whitchurch, Salop; Brookhouse, J. O., M.D., Nottingham; Brooking, C. H., M.D., Felsted; Brown, A. Gardiner, Esq., London; Brown, C. F., Esq., Leamington; Brown, J. Macdonald, M.B., Manchester; Browne, J. Crichton, M.D., LL.D., F.R.S.E., London; Brown-Séquard, C. E., M.D., D.C.L., F.R.S., Paris; Brunton, T. Lauder, M.D., F.R.S., London; Brushfield, T. N., M.D., Brookwood, Woking; Bryan, Richard, Esq., Cambridge; Buck, C. W., Esq., Settle; Buck, H. J., Esq., Newport, Essex; Buckenham, John, Esq., Cambridge; Buckley, H. C., M.D., Llanelly; Bulkeley, L. D., M.D., New York (n.m.); Bull, W. C., Esq., Shortlands (n.m.); Bull, W. H., Esq., Stony Stratford; Bunting, James, Esq., Tottenham; Burd, E., M.D., Shrewsbury; Burgess, D., Esq., Cambridge (n.m.); Burrell, E., M.D., London; Burrell, L., M.D., Cambridge; Burrows, Sir G., Bart., M.D., D.C.L., F.R.S., London; Burt, J. K., M.B., Kendal; Burton, S. H., M.B., Norwich; Bury, Judson S., M.B., Pendleton, Manchester; Busch, F., M.D., Berlin (n.m.); Buxton, H. F., Esq., Cambridge; Buzzard, T., M.D., London; Byrne, J. A., M.B., Dublin.

Cadge, William, Esq., Norwich; Caldwell, W. H., Esq., Highgate (n.m.); Campbell, A., Esq., Dundee; Cameron, Charles A., M.D., Dublin; Candy, John, M.D., Surgeon-Major, London; Cane, Leonard, M.D., Peterborough; Cant, W. J., Esq., Lincoln; Carmichael, A. H., Esq., Liverpool; Carpenter, Alfred, M.D., Croydon; Carruthers, William, M.B., Dumfries; Carter, Charles T., Esq., Hadley; Carter, James, Esq., Cambridge; Carter, T., Esq., Richmond; Carter, William, M.D., Liverpool; Carver, Edmund, M.B., Cambridge; Cash, J. Theodore, Esq., London; Cassells, Jas. Patterson, M.D., Glasgow; Cathcart, Charles W., M.B., Edinburgh; Caton, R., M.D., Liverpool; Ceely, Robert, Esq., Aylesbury; Chadwick, Charles, M.D., Tunbridge Wells; Chambers, Thomas, F.R.C.P.Ed., London; Chard, O. F. P., M.B., London; Charles, J. J., M.D., Cork; Cheadle, W. B., M.D., London; Cheatle, T. H., Esq., Burford; Chevallier, B., M.D., Ipswich; Chiappini, P. J., M.D., Cape of Good Hope; Chiene, John, Esq., Edinburgh; Clapham, John, Esq., Thorney; Clark, James, M.D., Lichfield; Clark, Thos. E., M.D., Weston-super-Mare; Clarke, J. M., Esq., Clifton (n.m.); Clarke, W. Bruce, M.B., London; Clegg, Joseph, Esq., Epping; Clouting, J. R., Esq., Thetford; Cockcroft, Wm., Esq., Catterick; Cocks, Benjamin, Esq., Buntingford; Coleman, Henry W., Esq., Armley, Leeds; Collier, Wm., Esq., Cambridge; Collins, F., Esq., Caius College (n.m.); Conolly, Charles T., Esq., Wood Green; Cooper, Frank W., Esq., Leyton-stone; Cooper, W. White, Esq., London; Corbin, M. A. Bazille, Esq., Guernsey; Cornwall, James, Esq., Fairford; Cossar, Thos., M.D., Edinburgh; Couper, John, Esq., London; Cousins, John Ward, M.D., Portsmouth; Cowell, George, Esq., London; Crean, Richard, M.D., Manchester; Creighton, C., M.D., Cambridge; Cresswell, Pearson R., Esq., Dowlais; Crichton, George, M.B., Twickenham; Crickmay, Edward, Esq., Laxfield; Critchett, George, Esq., London; Critchett, G. Anderson, Esq., London; Crocker, H. Radcliffe, M.D., London; Crossby, H. Ewbank, M.D., Nice; Crothers, R., M.D., St. Leonards-on-Sea; Crowfoot, W. M., M.B., Beccles; Cumming, H. Gordon, Esq., Exeter; Cunningham, John, M.B., Cambeltown.

Dalby, W. B., Esq., London; Daniell, R. T., M.B., London; Darby, Thos., Esq., Bray; Darling, W., M.D., New York; David, W. W., Esq., Cymer, Pontypridd; Davidson, A., M.D., Liverpool; Davidson, A. Dyce, M.D., Aberdeen; Davidson, Charles, Esq., Hackney; Davies, Andrew, M.D., Cardiff; Davies, H. N., Esq., Cymer, Pontypridd; Davies, J. Sides, Esq., Oswestry; Dawson, Richard, M.D., Brighton; Day, W. H., M.D., London; Deighton, J., Esq., Cambridge; Denton, Edward R., Esq., Leicester; Dewar, James, Esq., Buxton; De Wolf, J. B., M.D., London; Dickson, Rev. T. M., M.A., Claughton (n.m.); Dickson, Walter, M.D., London; Dill, J. Gordon, Esq., B.A., Caius College (n.m.); Dixon, J., M.B., Highgate; Dixon, W. H., M.D., Sunderland; Dolan, Thomas M., Esq., Halifax, Yorkshire; Dolman, A. H., Esq., Derby; Donaldson, James, M.D., London; Donders, F., M.D., Utrecht (n.m.); Donkin, H., M.B., London; Donovan, William, Esq., Whitwick; Down, J. Langdon, M.D., London; Drage, Charles, M.D., Hatfield; Drapes, Thomas, M.B., Famsworthy; Dreschfeld, J., M.D., Manchester; Druitt, Lionel, M.B., London; Drury, C. D. H., M.D., London; Drysdale, Charles R., M.D., London; Duffey, George F., M.D., Dublin; Duncan, H. M., M.D., London; Duncan, J. Matthews, M.D., London; Durrant, C. M., M.D., Ipswich; Dyer, Samuel S., M.D., Ringwood.

Eade, Peter, M.D., Norwich; Eager, Wilson, Esq., Melton, Suffolk; Easby, William, M.D., March; Eastwood, J. W., M.D., Dinsdale Park, Darlington; Ebden, William, Esq., Haughley; Eddison, John F., M.D., Leeds; Eddowes, Alfred, M.D., Market Drayton; Edis, Arthur W., M.D., London; Edmunds, James, M.D., London; Edwards, G. C., Esq., Ipswich; Elias, D., Esq., Southport; Elliot, Robt., M.D., Carlisle; Elliott, C. N., Esq., Whittlesea; Ellis, Alfred H., Esq., Meldreth (n.m.); Ellis, J. W., Esq., Swansea; Ellis, R. S., Esq., Willingham; Ellison, E. H., Esq., Sowerby Bridge (n.m.); Ellison, James, M.D., Windsor; Elliston, W. A., M.D., Ipswich; Elsnete, Edward, M.B., Shrewsbury; Embleton, Dennis, M.D., Newcastle-on-Tyne; Emmerson, J. B., M.B., Biggleswade; Ennals, C. T., Esq., Louth; Erichsen, J. E., Esq., F.R.S., London; Erskine, Robert, M.D., Cambridge; Erskine, Wm., M.B., Sydenham; Erskine-Reid, W., Esq., London (n.m.); Evans, Chas., Esq., Bakewell; Evans, Maurice G., M.D., Cardiff; Evans, T. M., Esq., Hull; Eve, Frederick S., Esq., London; Everett, David, Esq., Worcester; Ewart, Joseph, M.D., Brighton; Ewart, Wm., Esq., London; Ewen, Arthur B., Esq., Exmouth.

Fawcett, R. M., M.D., Cambridge; Fawssett, Fred., M.D., Louth; Felce, Stanford, M.R.C.P.Ed., London; Fenoulhet, J. H., B.A., London (n.m.); Fenton, Henry, Esq., Shrewsbury; Ferrier, David, M.D., F.R.S., London; Field, George, P., Esq., London; Finlayson, James, M.D., Glasgow; Firth, Charles, Esq., Norwich; Fitch, Frederick, M.D., Chaddesley, Kidderminster; Fitzgerald, C. F., M.D., Dublin; Fitzpatrick, W. H., M.D., Liverpool; Forbes, D. M., Esq., London; Ford, J., M.D., Eltham, Kent; Foster, Balthazar, M.D., Birmingham; Foster, M., M.D., LL.D., F.R.S., Shelford; Fotherby, Henry I., M.D., London; Fothergill, J. Milner, M.D., London; Fowler, J. K., M.B., London; Fowler, Robert, M.D., London; Fowler, Trevor, L.K.Q.C.P.I., Epping; Fox, Edward Long, M.D., Clifton; Fox, T. Colcott, M.B., London; Frank, H., M.D., Cannes; Frazer, William, Esq., Dublin; Frazer, William, M.D., Bournemouth; Freeman, A. J., M.D., San Remo; Frost, W. Adams, Esq., London; Fyfe, J., M.D., Kineton.

Gairdner, Wm. T., M.D., Glasgow; Galton, E. H., Esq., Brixton; Gamgee, Arthur, M.D., F.R.S., Manchester; Garner, John, Esq., Birmingham; Gaskell, W. H., M.D., Grantchester; Gay, John, Esq., London; Gervis, Henry, M.D., London; Gervis, W. S., M.D., Ashburton; Gibson, Chas., M.D., Newcastle-on-Tyne; Gibson, John H., M.D., Hull; Giles, John, Esq., Caxton; Gilman, John H., M.D., Lowell, Massachusetts; Glaister, John, M.B., Glasgow; Glazebrook, Smith, Esq., Liverpool; Godson, Alfred, M.B., Cheadle, Cheshire; Going, J. A., Esq., Cambridge (n.m.); Goldie, R. W., Esq., London; Goodchild, J. A., Esq., Bordighera; Goodridge, Henry F. A., M.D., Bath; Gorham, Richard J., Esq., Yoxford; Gosling, Sam. F., Esq., Biddulph, Congleton; Gould, A. Pearce, M.B., London; Gould, John, Esq., Hatherleigh; Gowers, W. R., M.D., London; Graham, William, M.D., Middleton, Manchester; Gray, Clement F., Esq., Newmarket; Green, J. Lardner, Esq., Salisbury; Greenfield, W. S., M.D., London; Gregory, George, M.D., Great Lever, Bolton; Griffith, Samuel, M.D., Portmadoc; Griffiths, T. D., M.D., Swansea; Grigg, W. C., M.D., London; Groom, William, Esq., Wisbech; Gross, S. D., M.D., Philadelphia; Grossmann, Karl A., M.D., Liverpool; Grove, William R., M.D., St. Ives; Grubb, J. S., Esq., Waterbeach; Gull, Sir W. W., M.D., D.C.L., F.R.S., London; Gunn, R. Marcus, M.B., London.

Haddon, John, M.D., Eccles; Hales, Robt. T., M.D., Holt; Hall, Frederick, M.D., Leeds; Hall, William, Esq., Leeds; Hall, William, Esq., Lancaster; Hamilton, D. J., M.B., Edinburgh; Handcock, George, Esq., Leeds; Hardie, Gordon K., M.D., London; Harding, H. W. R., Esq., Leeds; Hardwicke, H. J., M.D., Sheffield; Hare, Charles J., M.D., London; Harker, John, M.D., Lancaster; Harle, Ezra, Esq., Lakenheath; Harris, F. H., Esq., Mildenhall; Harris, Henry, M.D., Redruth; Harrison, Charles, M.D., Lincoln; Harrison, J., Esq., Braintree; Harrison, R., Esq., Liverpool; Hart, Ernest, Esq., London; Hartley, R., Esq., Pemberton, Wigan; Harvey, R. J., M.D., Dublin; Haughton, Edward, M.D., Upper Norwood; Haughton, Rev. S., M.D., D.C.L., F.R.S., Dublin; Haward, Edwin, M.D., London; Hawksley, T., M.D., London; Haycraft, John, M.B., Edinburgh; Hayden, Thomas, M.D., Dublin; Hayman, Henry, M.A., Hoxton (n.m.); Haynes, Sydney, Esq., Stansted, Mountfitchet; Hayward, H. Howard, Esq., London; Head, Robt. T., Esq., Balsham; Heath, Fred. Ashton, Esq., Manchester; Heath, Richard, M.D., St. Leonards-on-Sea; Hedges, J. A., Esq., Leighton Buzzard; Hemming, J. Hughes, Esq., Kimbolton; Hemming, W. Douglas, Esq., Bournemouth; Henry, Alexander, M.D., London; Hensley, Henry, M.D., Bath; Herman, G. Ernest, M.B., London; Hewitt, Graily, M.D., London; Hicks, J. Wale, M.D., Sidney College (n.m.); Higginson, Alfred, Esq., London; Hill, Berkeley, Esq., London; Hills, T. Hyde, Esq., Cambridge; Hinton, Joseph, Esq., Warminster; Hoar, William, Esq., Maidstone; Hodges, Frank H., Esq., Leicester; Hodson, Charles, Esq., Bishop Stortford; Hogg, Jabez, Esq., London; Hoggan, George, M.B., London; Holden, J. Sinclair, M.D., Sudbury; Holden, Luther, Esq., London; Holdsworth, Samuel, M.D., Wakefield; Holman, C., M.D., Reigate; Holmes, F., Esq., Leeds; Holmes, T., Esq., London; Holthouse, C., Esq., London; Hough, James, Esq., Cambridge; Howell, D. DeBerdt, Esq., Clapton; Howard, Benjamin, M.D., New York; Howard, H. F., Esq., New Buckenham; Howard, I. Fielden, M.D., Shaw, near Manchester; Hudson, R. S., M.D., Redruth; Huggard, William R., M.A., M.D., Hammersmith; Hughes, J. B., Esq., Macclesfield; Hulke, J. W., Esq., F.R.S., London; Humphreys, J. R., Esq., Shrewsbury; Humphry, G. M., M.D., F.R.S., Cambridge; Humphry, Lawrence, M. A., M.B., London; Husband, W. D., Esq., Bournemouth; Hutchin-

son; Jonathan, Esq., London; Hutchinson, S. J., Esq., London; Hyde, G. E., Esq., Worcester.

Ilott, James John, Esq., London; Imlach, F. B., Esq., Edinburgh; Ingle, James Brierley, Esq., Naulefield; Ingle, Robt. N., M.D., Cambridge.

Jackson, Arthur, Esq., Sheffield; Jackson, George, Esq., Plymouth; Jacob, A. H., M.D., Dublin; Jacob, Edward Long, Esq., Clapham; Jacob, Ernest H., M.D., Leeds; Jagielski, Victor, M.D., London; Jalland, W. H., Esq., York; James, Prosser, M.D., London; Jeffreys, Richard, Esq., Chesterfield; Jenner, Sir William, K.C.B., M.D., F.R.S., London; Jenner, William, Esq., Newark; Jones, Jepson, Octavius, M.D., Stone, Dartford; Job, Samuel, Esq., Aberdare; Evan, Esq., Ty Newydd, Ruabon (n.m.); Jones, Evan, Esq., Long Melford; Jones, H. Macnaughton, M.D., Cork; Jones, R. E., Esq., Wrexham; Jones, Jones, Talfourd, M.B., Brecon; Jones, T. Eyton, M.D., Wrexham; Jones, William, Esq., Ty Newydd, Ruabon; Jordan, Furneaux, Esq., Birmingham; Joy, John Holmes, M.D., Tamworth.

Kealy, J. R., M.D., Gosport; Keetley, C. B., Esq., London; Keetley, Thos. B., Esq., Grimsby; Kendall, Bernard, Esq., Clifton; Kenyon, G. A., M.B., Chester; Ker, H. R., Esq., Dudley; Kerr, Norman, M.D., London; Kershaw, Alfred, Esq., Farnworth, Bolton; Kiallmark, Henry W., Esq., London; Kilner, C. S., M.B., Bury St. Edmunds; Kilner, John, Esq., Bury St. Edmunds; King, Kelburne, M.D., Hull; Kingman, R. A., M.D., Boston (n.m.); Kirkwood, Geo., M.D., Peterborough; Knaggs, Samuel, Esq., Huddersfield; Kynsey, W. R., Esq., Guildford.

Laidlaw, W. G., M.D., Birkenhead; Laird, John, L.K.Q.C.P., Sligo; Lamb, William H., M.B., London; Lanchester, Henry T., M.D., Croydon; Landolt, E., M.D., Paris (n.m.); Langmore, J. C., M.B., London; Latham, P. W., M.D., Cambridge; Latimer, H. A., Esq., Swansea; Lawford, Edward, M.D., Leighton Buzzard; Leak, T. Mallorie, Esq., Hemsworth, Pontefract; Ledlie, William, Esq., Christ's College (n.m.); Leech, D. J., M.D., Manchester; Lees, D. B., M.D., London; Leeson, David, M.B., Dumfries (n.m.); Lewis, E. J., Esq., Christ's College (n.m.); Ley, H. Rooke, Esq., Prestwich; Lister, Joseph, D.C.L., F.R.S., London; Lithgow, R. A. Douglas, LL.D., Wisbech; Little, David, M.D., Manchester; Liveing, Robert, M.D., London; Loane, Joseph, Esq., London; Lockie, Stewart, M.D., Carlisle; Lodge, Llewelyn, Esq., St. Asaph; Longmore, Thos., Esq., Netley; Lorimer, George, M.D., Buxton; Love, John Henry, Wolverhampton; Lowenberg, B., M.D., Paris (n.m.); Lucas, Herbert, Esq., Huntingdon; Lucas, Robert, Esq., Bottisham; Lucas, R. H., Esq., Bury St. Edmunds; Lucas, R. Clement, Esq., London; Lucas, Thos., Esq., Burwell; Lucas, Thos., Esq., Cambridge; Lurey, William C., M.D., Southampton; Lund, Edward, Esq., Manchester; Lunn, W. J., M.D., Hull; Lyle, Thomas, M.D., Birmingham.

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Page, H. W., M.B., London; Paget, G. E., M.D., F.R.S., Cambridge; Paget, Sir James, Bart., D.C.L., London; Palmer, J. M., L.K.Q.C.P., Armagh; Parker, Geo., Esq., St. John's College (n.m.); Parkinson, F. W., Esq., Melbourne; Parr, Alfred, M.D., Bedworth; Parsons, Charles, M.D., Dover; Parsons, F. H., M.D., South Hastings; Parsons, F. W., M.D., Wimbledon; Parsons, H. F., M.D., Dublin; Norwood; Partridge, Richard, Esq., Frome; Patton, Alex., M.D., Finglas, Dublin; Payne, J. F., M.D., London; Pearse, W., Esq., St. Tudye, Bodmin; Pearse, W., M.D., Paris (n.m.); Pearson, David R., M.D., London; Pearl, Robert S., M.D., E. Finchley; Peck, E. G., Esq., London; Peele, Edward, Esq., Brighton; Philipson, North Shields; Pemberton, Oliver, Esq., Birmingham; Penrose, Henry, Esq., Brighton; Phillipson, Pemberton, Oliver, Esq., Birmingham; Penrose, Henry, Esq., Brighton; Phillipson, G. H., M.A., M.D., Newcastle-on-Tyne; Phillipps, Sutherland Rees, M.D., Exeter; Phillips, H. H., M.D., Reading; Phipps, G. C., M.D., Manchester; Pierce, F. M., M.D., Manchester; Pilcher, W. J., Esq., Boston; Pinder, T. H., Esq., Manchester; Pitt, J. B., Esq., Norwich; Playfair, W. S., M.D., London; Pollock, James, F., M.B., Blackrock, Dublin; Pooley, J. J. B., Esq., Accrington; Postgate, John, Esq., Birmingham; Powell, R. Douglas, M.D., London; Power, Henry, Esq., London; Prankerd, John, Esq., Langport; Prankerd, O. R., M.D., Hackney (n.m.); Pretty, Geo., W. Esq., Fressingfield; Preyer, Wm., M.D., Jena (n.m.); Price, Wm. Nicholson, Esq., Leeds; Prichard, Augustin, Esq., Clifton, Bristol; Prichard, R. M., M.D., Denbigh; Pridham, Charles, Esq., London; Priestley, John, Esq., Greenheys, Manchester; Prince, A. E., Esq., Jacksonville, U.S.A. (n.m.); Prince, C. E., Esq., Buckhurst Hill; Prince, Thomas, Esq., Balsham; Pritchard, Urban, M.D., London; Probert, J., Esq., Merthyr Tydfil; Prosser, R., Esq., Bromsgrove; Prowse, Arthur, M.B. (n.m.); Prowse, William, Esq., Cambridge; Putnam, Charles P., M.D., Boston; Puzey, Chauncy, Esq., Liverpool; Pye, Walter, Esq., London.

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Tait, Lawson, Esq., Birmingham; Tandy, B. L., Esq., Haverhill; Tapson, J. A., Esq., Clapham; Tatham, John, M.D., Salford; Taylor, Geo. S., Esq., Sheffield; Taylor, Michael W., M.D., Penrith; Taylor, William, M.D., Edinburgh; Taylor, William, M.D., Cardiff; Teale, T. Pridgin, Esq., Leed; Teevan, W. F., Esq., London; Temple, Alfred Robt., Esq., Cambridge; Terry, Henry, Esq., Northampton; Thane, G. D., Esq., London; Thimbleby, John, Esq., Spilsby; Thin, George, M.D., London; Thomas, Fredk., Esq., Swaffham; Thomas, Her bert H., Esq., Hebden Bridge, near Manchester; Thomas, Jabez, Esq., Swansea; Thomas, Robert, Esq., Rawdon, Leeds; Thompson, Sir Henry, London; Thompson, James, M.D., Leamington; Thompson, John, M.D., Bideford; Thompson, Robt., Esq., Melrose, Johnstown; Thomson, G. Lawson, M.D., Newbury; Thomson, St. Clair, Esq., London (n.m.); Thorburn, J., M.D., Manchester; Thornton, J. Wigton; Tilley, S., Esq., Cranford; Tomkins, Henry, M.D., Manchester; Tothersdale, Knowsley, M.B., London; Tubbs, Edwd. T., M.D., Bradford; Tullen, Robt., M.D., ick, James Y., M.D., Wolverhampton; Toussaint, Dr., Toulouse (n.m.); Townsend, Knowlson, Esq., London; Travers, W., M.D. London; Trollope, Thomas, M.D., St. Leonards-on-Sea; Tuke, D. Hack, M.D., London; Tuke, Harrington, M.D., London; Tunstall, J., M.D., Liverpool; Turnbull, Matthew J., M.D., Colchester; Tunnell, A. P., Esq., Cambridge; Turner, Horace, Esq., Norwich; Tyson, W. J., M.B., Folkestone; Tytler, Peter, M.D., Manchester.

Underhill, C. E., Esq., Edinburgh; Underhill, T. Edgar, M.B., Tipton Green.

Vacher, Francis, Esq., Birkenhead; Vale, J. T., Esq., Bidford, Warwickshire; Veale, Henry, M.D., Notley; Veasey, Henry, Esq., Aspley Guise; Vinen, F. H., M.D., London.

Wade W. F., M.B., Birmingham; Wales, Thomas G., Esq., Downham; Walker, G. F., Esq., Liverpool; Walker, James P., M.D., Surgeon General, London; Walker, Thomas, Esq., Wakefield; Walker, Thomas James, M.D., Peterborough; Wallace, Frederick, Esq., London; Wallis, G., Esq., Cambridge; Walter, Wm., M.D., Manchester; Warren, Charles, M.D., Boston, U.S.A. (n.m.); Watchouse, Chas. H., M.D., Ilkley; Watkins, R. W., Esq., Towcester; Watkins, J. Hancocke, Esq., Fishguard; Watkins, R. W., Esq., Towcester; Watkins, Walter, Esq., Doncaster; Watson, A., M.D., Paris; Watson, George S., Esq., Penge; Watson, John, Esq., Hemingford Grey; Waylen, Edward, Esq., Colchester; Webb, Wm., M.D., Wirksworth; Webber, E. S., Esq., B.A., London (n.m.); Weber, Dr., Paris (n.m.); Weber, Hermann, M.D., London; Webster, A. B., M.D., Craigkhart; Webster, H. W., M.D., London; Webster, Thos., Esq., Bristol; Webster, Thos. J., Esq., Merthyr Tydfil; Weir, J. Wallace, M.D., Glasgow; Wells, T. Spencer, Esq., London; Welsh, F. F., Esq., Saffron Walden; West, E. L., Esq., Launceston; West, R. H., M.D., Taunton; Westbury, H. P., B.D., Marlborough (n.m.); Westphal, C., M.D., Berlin; Wheeler, Daniel, Esq., Chelmsford; Wheelhouse, C. G., Esq., Leeds; Wherry, George F.

M.B., Cambridge; White, H. F. L., Esq., Caxton; White, James, Esq., Wigan; Whitmarsh, J. Ll., Esq., Southgate; Wigg, F. Carter, M.D., Derby; Wilcox, Henry, M.B., Lewisham; Wild, Thomas, Esq., Langstone Cliff, Devon; Wilks, Samuel, M.D., F.R.S., London; Williams, C. Theodore, M.D., London; Williams, T. Watson, Esq., Birmingham; Wilmot, Thomas, Esq., Bradford; Wilson, Daniel, M.D., Dilwyn, Leominster; Wilson, E. T., M.B., Cheltenham; Wilson, J. Mitchell, M.B., Doncaster; Wing, C. E., Esq., Bury St. Edmunds; Winterbotham, W. L., M.B., Bridgwater; Withers, R. W. O., Esq., Shrewsbury; Woakes, Edward, M.D., London; Wood, Andrew, M.D., Edinburgh; Wood, John, Esq., F.R.S., London; Wood, Wm., M.D., London; Worley, W. C., Esq., London; Worms, S. J., M.D., Paris (n.m.); Worship, J. Lucas, Esq., Riverhead, Sevenoaks; Wright, Chas. J., Esq., Leeds.

Yeo, Gerald. F., M.D., London; Yeo, I. Burney, M.D., London; Young, Thos. F., Esq., Bootle; Young, Wm. Butler, Esq., Reading.

(The letters "n. m." after the names in the preceding list, denotes those who were not members of the Association. Medical students of the University were admitted to the Sectional Meetings, Addresses, and Museums; and a good number availed themselves of the privilege.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE LIEBIG COMPANY'S EXTRACT OF MEAT.

AMID the variety of extracts which are now being introduced to public notice, it would certainly not be fair that the extracts prepared by the Liebig Company, to whom we first owe the commercial introduction of this invaluable resource, should be forgotten. This company carries on its operations under circumstances very advantageous for the production, on a large scale, of an extract at moderate price and of reliable quality. Possessing large works in a district of South America, where herds are abundant, and operating with apparatus and under conditions rigidly prescribed by Baron Liebig himself and by Professor Pettenkofer, this company has never failed to maintain a high and uniform character for its products, and we have recently had the opportunity of ascertaining that they still maintain that standard of great excellence; the whole of their proceedings being supervised by the best engineering and chemical authorities, and their products tested in the laboratory of Liebig, and every pot guaranteed by the signature of Hermann von Liebig.

PUBLIC HEALTH.—During last week, being the thirty-fourth week of this year, 4,118 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 17 in Edinburgh, 19 in Glasgow, and 38 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bristol, 16; Oldham, 19; Plymouth, 21; Portsmouth, 21; London, 21; Brighton, 21; Bradford, 24; Newcastle-upon-Tyne, 26; Birmingham, 27; Wolverhampton, 27; Sheffield, 30; Leeds, 30; Sunderland, 31; Hull, 31; Norwich, 32; Nottingham, 32; Manchester, 33; Salford, 33; and the highest rate, 35, in Leicester and in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 8.6 per 1,000 in the twenty towns, and ranged from 4.6 and 4.9 in Bristol and Brighton, to 15.7 and 20.9 in Salford and Leicester. In London, 1,488 deaths were registered, which were 6 below the average, and gave an annual death-rate of 21.3 per 1,000. The 1,488 deaths included 3 from small-pox, 16 from measles, 53 from scarlet fever, 13 from diphtheria, 23 from whooping-cough, 17 from different forms of fever, and 270 from diarrhœa—being altogether 395 zymotic deaths, which were 9 below the average, and were equal to an annual rate of 5.6 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 152 and 167 in the two previous weeks, declined 124 last week, and were 14 below the corrected weekly average; 63 were attributed to bronchitis, and 40 to pneumonia. Different forms of violence caused 40 deaths; 31 were the result of negligence or accident, including 13 from fractures and contusions, 3 from burns and scalds, 6 from drowning, and 4 of infants under one year of age from suffocation. —At Greenwich, the mean temperature of the air was 62.7°, being 1.7° above the average. The general direction of the wind was north-east, and the horizontal movement of the air averaged 9.1 miles per hour, which was 0.6 below the average. Rain fell on Wednesday to the amount of 0.10 of an inch. The duration of registered bright sunshine in the week was equal to 15 per cent. of its possible duration. No ozone was recorded during the week.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 4TH, 1880.

WOOLSORTERS' DISEASE.

THE Government inquiry lately conducted at Bradford into what is popularly known as woolsorters' disease has brought the subject prominently before the public. For a great many years, suspicions have arisen from time to time that woolsorters were subject to the occurrence of certain febrile attacks of an alarming and often speedily fatal nature, which there was strong reason to believe to be due to the nature of their employment. So far back as 1846, public attention was directed to the occurrence of a group of deaths among the operators at Queensbury; and the late Dr. McLachlan of Shelf, and Mr. Corrie of Thornton, both expressed strongly the opinion that somehow the deaths were due to working in wools. The manufacture of alpaca and mohair was introduced into the Bradford district about the year 1837; and it seems to have been after this date that complaints began to be made of the unhealthy character of woolsorting. The operators themselves took steps from time to time to have matters inquired into, and on several occasions had *post mortem* examinations made in fatal cases, and clinical records taken of the course of the disease, but with little result, so far as the discovery of the cause or causes was concerned, and certainly with no appreciable influence in diminishing the fatality of the malady. Woolsorters have not, as a class, a very high rate of mortality, though the ratio of their mortality from chest-affections is above the average; but the occurrence of cases of a mysterious and fatal illness was alarming, and led to a general feeling of uneasiness which was not to be wondered at. A few weeks ago, matters were brought to a crisis by the following case. A man aged 35, who was at work woolsorting on a Saturday, went home early, as he did not feel very well. On Sunday, he was still unwell, but not so much so as to think himself in need of medical assistance. The following day, as he was rather worse, a medical man was sent for, who found the patient with a temperature about 101°, a small pulse of 130, rapid breathing, and the skin feeling cold to the touch, and covered with a clammy sweat. There was some slight dulness on the right side of the chest, with puerile respiration on the other. The man did not complain of any particular pain; and, in answer to inquiries, said only that "he felt sickly". There was also vomiting. These symptoms continued through the Tuesday, the temperature in the rectum remaining high, while that in the axilla was below the normal. On the evening of Tuesday, the patient was visited by two other medical men; and all three, in the evening, came to the conclusion that the man would probably not live for twenty-four hours. He died of apparent collapse on the Wednesday evening. The medical man who was originally called in certified that the death was due to the neglect of the patient's employers for not having the wool properly disinfected, which deceased had been sorting on the Saturday when he was taken ill. The coroner's jury did not sustain the implied charge of manslaughter which was thus brought against the employers, a decision which was, no doubt, in accordance with the law and the evidence before them; but enough had been said to stimulate all the parties concerned in the wool-industry to further sifting of the matter. The consequences were an inquiry, conducted, on behalf of the Government, by Dr. Spear; the issuing of a number of circulars from the health-department of the corporation, requesting information on the subject;

and the appointment, by the local medical society, of a commission to inquire into the whole question. Ths matter is still, of course, under investigation; but it may not be out of place here to state a number of facts concerning this interesting disease.

The symptoms above described are fairly typical of the majority of the cases, some of which, however, unlike the one referred to, recover. It is generally noticed that, if the patient live a week, he gets well. On the other hand, the disease has been known to be fatal in as short a time as fifteen hours, and some have even said in twelve. There is another form, however, in which the malady appears, that, namely, known as anthrax. In this form, a vesicle filled at first with clean serum appears on an exposed part, such as the forehead, the temple, or the arm. The base of the vesicle, which may be as large as a shilling, or sometimes a florin, is dark-crimson or black-coloured, and soon the contents of the vesicle assume the same colour. By-and-bye, the vesicle bursts, and a series of small vesicles form round the larger one. The next step in the course of the affection is the separation of the eschar left by the drying of the vesicle. This form of the disease is not by any means so fatal as the other, the rule, it may even be said, being that recovery takes place. Constitutional symptoms may or may not be present in this phase of the affection. If, just before or just after death, the blood of the patient suffering from the pneumonic variety of the disease be examined microscopically, or if the serum of the vesicle in the anthrax variety be examined in the same way, there can generally be made out numerous specimens of the bacterium *bacillus anthracis*. That this is the active cause of the disease is evident from the fact that, if blood containing it be injected into the circulation of animals, such as guinea-pigs, rats, sheep, etc., death occurs in from thirty to sixty hours; while their blood is found loaded with the *bacillus*, and can in turn be used to inoculate the disease. In some animals, the spleen tends to become much disorganised and softened; hence the name splenic fever, by which the affection is known in sheep. The *bacilli*, in some cases, are so numerous in the blood as to interfere with the motions of the red corpuscles, and to prevent their forming rouleaux. It is a curious fact that no large development of these organisms seems to occur till just before or just after death in the pneumonic variety of the malady; and hence the failure to find them experienced by some observers. Also, it has been observed in the anthrax form of the affection that, while *bacilli* may be present in the serum of the vesicle, they may be absent from blood taken even from its base. This form of the disease in man is believed to be always due to the direct action of the infected wool upon the exposed part or parts of the body. The other, or pneumonic, variety is generally produced by inhalation of the dust given off by the wool when the bags are opened. This dust, in some mills, is very thick, rising as a cloud, and covering all the objects in the rooms, but being most abundant in the parts nearest the floors. The disease, as observed in man, has never been known to pass from person to person. Patients generally attribute their illness to a definite cause, and will complain, for example, of being taken ill after opening a particular bag.

It is only recently that much has become known regarding this affection, but lately many workers have been occupied in investigating the subject. The experiments of Drs. Burdon Sanderson and Greenfield at the Brown Institution, and those of M. Pasteur in France on charbon, have thrown much light on various questions related to the subject; and, among medical men who have had to deal with the disease in actual practice, Dr. Russell of Glasgow, and Dr. Bell of Bradford, may be mentioned. From these and other investigations, it seems certain that woolsorters' disease in men is identical with that known as anthrax or splenic fever in animals. This conclusion is arrived at from the experiments already referred to, in which splenic fever has been produced in animals by their inoculation with the blood of human beings suffering from woolsorters' disease, the *bacillus anthracis* being found abundantly in the blood of the latter. Lately, an additional piece of evidence has completed the chain, and, if possible, strengthened this conclusion. This is, that recently, in the neighbourhood of Keighley, water used for washing the fleeces before being sorted has been run upon the land; and, from eating grass wet with this water, or from drinking the water itself, both sheep and cattle have been infected, and have died of splenic fever, the *bacillus anthracis* beingf ound abundantly in their blood.

Space does not allow of many more remarks, though a good deal still remains to be said. Perhaps the phase of the question that has in it most promise for the future is that brought out by Mr. Duguid and Dr. Burdon Sanderson, in which they show "that, when the disease is transmitted by inoculation from cattle to small rodents, such as guinea-pigs, and then from them back again to cattle, the character of the disease so transmitted is *much milder than that of the original disease acquired in the ordinary way*". Does this experiment hold out the hope that, failing other means, we may be able to deal with woolsorters' disease as successfully and in the same way as Jenner dealt with small-pox?

Finally, in reference to this matter, we would direct the attention of our readers to the report, at pages 363 and 385, of the highly interesting discussion on micro-organisms in the Pathological Section at the recent meeting of the Association in Cambridge.

THE METROPOLITAN RAILWAY TUNNELS.

One of the most needed sanitary reforms in the metropolis is that for the purification of the air in the tunnels of the Metropolitan Railway, more especially on that portion of the line lying between Edgeware Road and King's Cross. This portion, although one of the busiest, is so contaminated with sulphur-fumes, carbonic acid, and carbonic oxide, as to be injurious to the health of many thousands of persons who, unfortunately, are compelled to travel over it daily. Even during the cold weather in winter, the air is such as to cause so much discomfort that many persons are entirely prevented from travelling on the line; and, during the summer time, it is simply stifling and unbearable. It is not to be wondered at that notice has been taken of the state of these tunnels in Parliament; the wonder is that the inhabitants of London should have displayed so much indifference on the subject; that means have not been taken to compel the railway company to do something for the purification of the air. Many plans have been recommended from time to time for this purpose, many of which, doubtless, were not feasible; though, had the company the slightest regard for the comfort of passengers, matters might have been long ago remedied. The air may be purified in two ways: firstly, by causing a continuous current to pass along the tunnels; or by destroying the noxious gases by means of chemical reagents. Openings made here and there in the roof are of no use, unless combined with some means for drawing the foul air out. The first might be easily accomplished by building a chimney-shaft, perhaps about two hundred or two hundred and fifty feet high, and rarefying the air in it by means of a furnace, thus ventilating the tunnels in the same way that coal-pits are ventilated. Before the company could erect a chimney, however, it seems that they would require to obtain a special Act of Parliament; this we do not suppose would be very difficult to get, as we cannot believe that it would be opposed by any party in Parliament, although it might entail some expense to the company, and so reduce the dividends, in the first instance, to a slight extent. The second method—namely, by acting chemically on the air—was brought under the notice of our readers in our issue of the 28th of last month, by Dr. Richard Neale, but had been suggested previously. Its principle consists in taking advantage of the readiness with which sulphur-fumes and carbonic acid are taken up by solutions of caustic soda, potash, lime, and other chemical salts. In order to render this plan effective, it is absolutely necessary that the air should be driven against a moistened surface of lime or soda with some force. To our mind, therefore, the plan recommended some years ago in the *Engineer*, by Dr. Scoffern, would be almost useless. It was, that each carriage should carry a flat tray of slacked lime on its roof; but it is evident that, unless the trays were placed

obliquely, the air, instead of impinging against the lime, would pass over the top of it, only an infinitely small quantity coming into contact with it. So unpractical is the scheme, from the difficulty of obtaining a sufficiently large superficial area, and keeping the lime damp, in addition to the radical defect mentioned, that it may be laid aside, although we are greatly surprised to see it advocated in only last week's issue of the *Engineer*. Equally useless is the plan which, we learn, has been suggested of placing tanks of a solution of lime along the top of the tunnel. It is undoubtedly, we believe, only by having the chemical agent carried along by the train, and exposed in such a manner that a strong current of air will forcibly impinge against it, that any good results will be obtained from this method. A plan having in view these points has recently been invented and patented by Dr. Neale. His proposal is to have a carriage (an ordinary old third-class carriage, from which the ends, and the greater part of the sides, have been removed) fitted up with trays of lime exposed obliquely, and kept moist by water trickling down from the top of the carriage, attached next to the engine of each train. By calculating the size of the tunnel and the number of trains passing per hour, besides several other considerations, Dr. Neale has shown that air could be perfectly well purified by this means of the sulphur and carbonic acid gases. As the train progressed, a large quantity of the impure air of the tunnel would rush against the lime, be robbed of the noxious gases, and escape purified at the back end of the carriage. The quantity of air passing through the "chemical lung", as the inventor calls it, might be increased by having an oblique projection from the top of the carriage, so as to catch more air and force it through the "lung". This proposal seems to be the most practical remedy that has yet been proposed, and the efficiency of which might easily be tested by having one carriage fitted up and attached to a train. A sample of the air passing into the carriage at the anterior end, and a sample of that passing out at the other end after being in contact with the chemicals, might easily be procured and examined, when it would soon be found whether the advantages claimed for the scheme theoretically would be realised practically. Were it found to be satisfactory, some trains at least might be fitted up with the "chemical lungs", as any slight purification of the air would be an improvement upon the present conditions. Doubtless there would be some expense incurred by having trains fitted up in this way, but we believe this would be more than covered by the increase of passenger traffic which would take place were the condition of the air on the line improved. We trust that the directors of the railway will have the necessary experiments made; and, if successful, will give the scheme a fair trial. It is useless, however, to hope that the company of themselves will attempt any reforms as long as there is no pressure brought to bear upon them by the public. We hope, therefore, that the public will demand a trial to be made of the new scheme, which, as far as we can judge, bids fair to be a success, and to be of a practicable nature. The trial of a modification of this scheme was, we learn, under consideration on Monday last. The plan proposed was to have a screen, consisting of several layers of coarse canvas or similar material moistened with soda solution, erected at one end of the tunnel at Portland Road station; but this would obviously be of little use. The area of such a screen and the amount of air that would be driven against it are so small, that its effect would be unappreciable, and only tend to bring discredit upon a scheme which may prove successful if properly carried out.

The method above described, however, does not get rid of the carbonic oxide, with which Dr. Neale proposes to deal in another way. Carbonic oxide is converted into carbonic acid by supplying it with another atom of oxygen, which can readily be done by burning it. What Dr. Neale proposes to do, therefore, is to collect the electricity generated by the friction of the engine-wheels, and employ it to burn the carbonic oxide as it escapes out of the funnel of the engine, and so convert it into carbonic acid, which would in turn be got rid of by the "chemical lung". If, however, the sulphur and carbonic acid were destroyed, he thinks that the greatest sources of annoyance to passengers would be removed.

A DISTINGUISHED Service Reward of £100 *per annum* has been conferred upon Sir W. M. Muir, M.D., K.C.B., Director-General of the Army Medical Department, on the special recommendation of the Field Marshal Commanding-in-Chief.

A PARLIAMENTARY return has been issued stating the number ofcases of glanders and farcy that had been reported in the metropolis, from January 1st 1879, to April 30th 1880. The number of cases of glanders was 1088, and of farcy 662.

LADY HARRIET SCOTT BENTINCK has given £4000 to the International Hospital at Naples in order to enable the committee to buy, or build premises of their own. It is amongst the conditions of this gift that an English speaking physician and English nurse be always kept at the hospital.

THE *Broad Arrow* states that the Queen has caused a letter to be written to Mrs. Deeble, the lady-superintendent of Nurses at Netley, thanking her and the staff under her orders for the excellent services rendered in Zululand. Though stricken down by fever in the middle of the campaign, Mrs. Deeble performed her duties to the last, and resumed them when she was barely convalescent. This is but one testimony from our troops in South Africa as to the efficiency of our nursing establishment.

DEATH FROM CHLOROFORM.

A CASE of death from inhalation of chloroform occurred at the City Hospital, Hamilton, Ontario, on June 3rd. The patient was a woman who had been admitted for the treatment of mammary abscess. The anæsthetic used, was a mixture of one part of spirits of turpentine and eight parts of chloroform. The patient had, a very short time previously, been anæsthetised for the purpose of incising the breast, and although a similar agent (but containing somewhat more turpentine) was made use of, no bad effects were observed. On this occasion, however, after inhaling for a few minutes only, the quantity first administered, there occurred sudden spasm, pallor, difficulty of breathing, and cessation of pulse. Every effort was instantly made and persisted in by Dr. Kittson, the attending physician, and Dr. Mills, the resident surgeon, to restore animation, but in vain. The *post mortem* examination failed to reveal any organic lesion, and the following verdict was rendered by the coroner's jury: "That Catharine Donahue came to her death on June 3rd, 1880, from chloroform administered in the Hamilton City Hospital, and it appears to this jury that the chloroform was administered in a proper manner, and her death could not have been foreseen, and no blame can be attached to anyone."

COLOUR-BLINDNESS.

IN consequence of the investigations made by order of the United States Government into the prevalence of colour-blindness, some practical results have been arrived at. Both in the army and the navy, and in the case of pilots, systems of examination have been devised and are enforced to secure the detection of colour-blindness in all cases in which such a defect would be likely to lead to inefficient discharge of duty, The State of Connecticut insists that all railway *employés* within its borders be tested for the same purpose, under the following rules:—1. For the qualitative estimation of colour-blindness the following tests are to be employed: Holmgren's worsteds, the tables of Stilling, Donders' colour-test patterns, Pflüger's letters with tissue papers. Daae tests and Woinow's revolving cards may also be used. For the quantitative test for colour-blindness, Donders' reflected spots, Donders' method with transmitted light, Holmgren's shadow-tests shall be employed. 2. The following are the requirements for a certificate in the first class: *(a)* Healthy eyes and eyelids without habitual congestion or inflammation; *(b)* Unobstructed visual field; *(c)* Normal visual acuteness; *(d)* Freedom from colour-blindness: *(e)* Entire absence of cataract or other progressive disease of the eyes. The second class shall have:—*(a)* Healthy eyes and eyelids without habitual congestion or inflammation; *(b)* Unobstructed visual field. *(c)* Visual acuteness at least equal to

three-fifths without glasses and normal with glasses in one eye, and at least one-half in the other eye with glasses. *(d)* Freedom from colour-blindness in one eye, colour perception at least equal to three-fourths in the other eye. 3. In the case of *employés* who have held their positions five years or more, the standard required in each class shall be determined under special instructions from the Board of Health.

THE "HORRORS" OF VIVISECTION.

THE total number of vivisections in England and Wales, during the year 1879, was 270. Of these, the number of experiments "in which", to use the language of the report, "there is reason to believe that some material suffering was caused," was about twenty-five. Of these twenty-five, fifteen were cases in which disease followed the inoculation of infectious matter, but in which no painful operation was performed; and ten were experiments upon as many frogs, in which an incision of the skin was required for the introduction of a medicinal substance. To endeavour to abate the barbarities indicated above, (says the *New York Medical Record* of August 7th), a meeting of the International Association for the Total Suppression of Vivisection took place a short time ago. Earls, and knights, and marquises and the like, who spend their winters running foxes out of breath, and then shooting them, met and passed various resolutions for the furtherance of their cause. It is beautiful to think how much tenderness the sufferings of ten frogs can awaken.

VACCINATION IN MONTREAL.

THE annual report of Dr. Larocque, the health officer of the city of Montreal, Canada, notes that it is satisfactory to find vaccination is being fairly well looked after by the district officers acting under the Board, and that there is every reason to believe that the supply of vaccine is well kept up and of excellent quality. The natural result of this is, that no more is heard of the ulcerated arms, erysipelas, etc., following vaccination, which gave rise to such an outcry from the Canadian anti-vaccinators a few years ago.

DEATH FROM CHLOROFORM.

WE are indebted to Dr. Packer of Huyton for particulars as to the death of Mrs. Levinton, referred to in the JOURNAL of August 28th. He writes:—I had no hesitation in giving chloroform, as I had done so on two previous occasions without any inconvenience to her. I had examined her heart with the stethoscope many times, and the last occasion was on the morning before giving it. There were no indications, as far as I could make out, of heart-disease. Nitrous oxide was not used, because the dentist had to remove too many teeth. Ether was not used, because I believed that, as she had taken chloroform so well before, it was as safe in her case as anything else. She became very excited when the dentist commenced to remove the stumps, crying out and laying hold of his hand; we neither of us thought she had enough. Suddenly, she jumped up, and commenced to struggle with us, as if hysterical. This state lasted about two minutes, when she swooned back, and was dead in less than five. No more chloroform was given after the dentist commenced to operate. The amount of chloroform sprinkled on the inhaler was little more than two drachms; I am sure of this, for I sprinkled it from a graduated bottle. The inhaler used was a piece of flannel stretched over a wire framework, in the form of a bowl; it is known as "Skinner's Inhaler".

NURSES IN HOSPITAL.

WE are very glad to learn that the Westminster Hospital has secured an efficient lady-superintendent to replace Mrs. Merryweather, whose loss has been greatly felt; and that the new lady-superintendent, Miss Pyne, belongs to the school of lady-nurses who felt themselves deeply aggrieved by the aggressive publications of Miss Lonsdale, and are shocked at the proceedings at Guy's Hospital, which have elevated self-conceit and disloyalty to the doctors into a laudable principle of action among nurses and nursing bodies. Miss Pyne—one of the most trusted Nightingale nurses—has for some time acted as assistant-superintendent at the Edinburgh Royal Infirmary. Her principal, Miss Pringle, in an admirable short paper in the *Edinburgh Medical Journal*, which has been reprinted for the Journal of the Nightingale Fund, answered "the young recruit", whose utterances have given rise to so much anger and disgust, with a few pregnant words:

"The young recruit makes appalling charges against the medical staff: that they love the old style for its licence to coarseness, and because, before ignorant nurses, they were more at liberty to make experiments. The writer of this, a pupil of Miss Nightingale, has had to do, for the last twelve years, with two of the largest hospitals nursed under the ideas of that chief of nurses. She finds that doctors will not tolerate interference with their province, and do not appreciate education and smartness if unaccompanied with loyalty and real nursing power; that they welcome and prize highly all who have the proper gifts—the more refined and intelligent the better; that they help most generously, often at a great sacrifice of their valuable time, and entirely without reward, in the teaching and training of the nurses; that their conduct to them is full of courtesy and consideration, and that they lose no opportunity of showing them kindness. In the public life of a hospital, a woman will meet with many and keen trials; but she has generally in her own conduct and tone a sufficient safeguard from insult; and, as to little annoyances arising from want of refinement or perception, a woman is certainly wanting in herself who cannot soon win round patients and students and doctors to gracious and delicate ways. This must be done by individual influence in the individual case, not by rule or controversy. The experience of the present writer goes, also, dead against the other charge. She has found doctors, young and old, from residents to seniors and professors, delighted to explain to an intelligent and modest nurse the principles of their treatment, and the reason for particular remedies. And she shares with many the pain caused by the wanton charges brought by a young member of her profession against a body to whom nurses owe so very much, and without whose cordial co-operation they could do nothing in hospitals for the service of the sick poor."

Miss Pyne has served in a good school, and has won golden opinions. We hear, with genuine satisfaction, of the appointment, at the head of an important training establishment, of a lady holding views so sensible, so just, and so conciliatory. There can be no doubt that the proceedings of Miss Burt and Miss Lonsdale, under the tutelary ægis of Mr. Lushington, have inflicted a severe blow on the progress of nursing reform. For many years to come, medical men will look askance at lady-nurses, until they know that they are not tainted with conceit, insubordination, and self-will. For yet more years, they will feel an unconscious bias towards nurses who claim only to be nurses, and who are free, by their circumstances in life, from the temptation to set themselves up above their masters, and play the part of social critics and magazine-reviewers of the conduct, skill, and motives of the hospital medical officers. Very great judgment will be needed on the part of the lady-nurses of the more judicious sect to overcome the prejudice and dislike which have thus been raised.

ANTHRAX IN ANIMALS, AND MALIGNANT PUSTULE AND INTESTINAL ANTHRAX IN MAN.

MR. JAMES LAW, Professor of Veterinary Medicine in Cornell University, has sent in an interesting Report to the American National Board of Health on Diseases of Domestic Animals. In connection with a subject which is now attracting much attention, both here and on the continent, we reproduce the following remarks on malignant anthrax as it manifests itself in America. Mr. Law writes: In all the protean forms of malignant anthrax in animals, we find an infecting material which is not only deadly to quadrupeds, birds, and even reptiles and fishes, but which may be successfully inoculated from any one of these upon the human subject. The malady, when conveyed to the human being, is a very deadly one, whether it shows itself on the surface in the form of malignant pustule (Siberian boil plague), or internally, as *carbuncular sore-throat* or *intestinal anthrax*. In America, it prevails mostly among butchers, tanners, and workers in hair: but is also well known as the result of consuming the flesh of infected animals. Infection from simple contact is by no means uncommon. Quite recently I saw an outbreak in which one hundred cattle and three men suffered. In a second, twelve cattle and two men. In a third, a cat conveyed the malady to a young lady who nursed it. Where the disease becomes

widespread, the resulting human mortality may be excessive, as when, in 1770, fifteen thousand men died in six weeks, in San Domingo, from eating the diseased beef. Cooking is a very insufficient protection, as the spores have been shown to survive a boiling temperature, and, in particular cases, even 300° Fahr.; and a whole family were poisoned in Aberdeen, Scotland, by the beef that had been boiled for hours in broth. Further, and contrary to what holds with most other forms of virus, it is not essential that the skin should be broken in order to its absorption; and numerous instances can be adduced in which fatal results followed when it was deposited on the sound skin. Frost has no influence on its potency, and I have known a number of animals fatally infected by licking the frozen blood from a stoneboat, when the temperature was below zero. Nor is time nor putrefaction to be relied on. I have known cattle to perish promptly after lapping the liquids that leaked from a grave in which an infected carcass had been buried nearly a year before. I have further known pastures, on which the disease had been developed for the first time in the memory of the inhabitants, maintain their infecting qualities for six years in succession, and to yield hay which continued to infect animals when fed to them at a distance from such pastures.

LEPROSY IN THE SANDWICH ISLANDS.

FROM the report of the Board of Health of Honolulu, we learn that the Leper Hospital, island of Molokai, contained 684 patients on March 31st, 1880, three being children of lepers, and under one year of age. There were 424 males and 260 females. The greater portion of the lepers are treated as out-patients, and it is stated that a large number remain mixed with the people in the several islands. The average mortality among the lepers in the establishment at Molokai has been nearly 58 per 1,000 *per annum*. Dr. N. B. Emerson, physician to the establishment, states that, on the approach of damp and chilly weather in November, there is a general aggravation of symptoms in leprous persons, with fresh eruptions, attended with chill and fever closely resembling intermittent. Dr. Emerson concludes that, while much may be done to palliate, no curative means have yet been found in this disease. He is convinced that the disease is contagious, and states that, though first introduced into the Sandwich Islands about 1856, there are now thousands of lepers, and the disease is still rapidly increasing among the native population.

EMPLOYMENT OF CHILDREN IN FRANCE.

A RECENT order has been issued by the French Government, containing a supplementary list of occupations in which the employment of children is forbidden, principally on account of the danger of explosions, burning, or deleterious vapours. The industries thus vetoed are the manufacture of aniline, benzine, collodion, nitrate of methyl, sulphuret of arsenic, sulphuret of sodium, and of blister leaves, and rag sorting, and the scouring of skins and woollen waste with petroleum or other hydro-carburetted oils, and the galvanising of iron. Children are also not allowed to be employed in places where chemical *allumettes* are stored, nor in those processes of their manufacture where the mixture is prepared or the matches are put up into packets. A partial employment only, under certain conditions, is allowed in industries where sulphuric acid is disengaged, such as in wool and silk bleaching, as well as in those where unwholesome dusts are given off, as in the preparation of tow for rope, and in the manufacture and cleaning of bladders for toy balloons.

PRELIMINARY EDUCATION.

THE Tri-State Medical Society (United States), have been discussing at great length the subject of maternal impressions upon the fœtus. Numerous cases were related of deformities resulting to the child in consequence of the mother having been frightened by animals, etc. An instance is mentioned of a negro woman being butted by a ram when she was pregnant, and bringing forth at full term a child with the peculiar white-looking eyes of the sheep, with hair white as wool, and, more remarkable than all, with "the peculiar scent of the sheep, it being especially notable when he was heated and perspiring freely". A Maryland physician, however, according to the *Dublin Medical Journal*, leaves these merely physical phenomena far behind. The following occurred in his practice. "A lady during pregnancy carried with her a pocket edition of Moore's *Poetical Works*, which she read almost constantly. Her child at three years of age, exhibited a most wonderful gift of putting sentences in rhyme—in fact, naturally expressed his little ideas and thoughts in flowing measure!" Blame not the bard; but a case like this shows how important is a well-assorted library to a gravid uterus.

THE LINCOLN LUNATIC HOSPITAL.

THE Lincoln Lunatic Hospital, which was honourably associated with the earliest efforts to introduce the non-restraint system of treating the insane into this country, continues to offer excellent accommodation to lunatics of the middle classes and of small means. The Commissioners in Lunacy are strongly disposed to think that, if the advantages which it affords were more widely known, the vacant beds in it would be speedily occupied. Under the superintendence of its present energetic medical officer, Dr. Russell, various structural improvements are being carried out.

THE WEST RIDING ASYLUM.

DR. HERBERT MAJOR, in his able and highly satisfactory report on the state of the West Riding Asylum during 1879, intimates that, as in former years, drugs have been extensively used, and nervine sedatives freely prescribed. Without entering on any discussion of the moot point as to the efficacy, or the reverse, of neurotic remedies, Dr. Major does not hesitate to express his belief, upon which he invariably acts, that, given judiciously, their effects are, in a large class of cases, distinctly beneficial.

THE NORTHAMPTON COUNTY LUNATIC ASYLUM.

THE Northampton County Lunatic Asylum, which was opened for the reception of patients only five years ago, and which was supposed to contain all the most recent improvements in lunatic hospital construction, has already been the scene of outbreaks of dysentery and erysipelas. Mr. Richard Greene, in his recently published report, states that, during the first eight months of 1879, cases of these diseases were of constant occurrence on both sides of the asylum. There were twelve fresh cases of dysentery, and four of erysipelas every month. Suspicion having fallen on the state of the drains, a competent engineer was appointed to examine them and inquire into the sanitary state of the asylum generally. He at once detected numerous faulty points in the system of drainage, and made recommendations for their rectification. The adoption of his recommendations have been followed by the disappearance of dysentery and erysipelas from the establishment.

A FRENCH VIEW OF THE FEEDING OF INFANTS.

THE permanent Commission on the hygiene of infancy, after examining a number of papers and letters sent in in competition for the prize offered for the best treatise on "Artificial Nursing", report that nearly all those who have considered the subject arrive at the following conclusions. 1. When absolutely uncontrollable circumstances make it impossible that the child should be suckled, either by the mother or by a wet-nurse, artificial nourishment should be resorted to at home, only by the mother, or under her immediate superintendence. 2. When there is a necessity for bringing up the infant by hand, and not under the mother's care, it should be placed under the care of a conscientious, careful, and experienced woman, having a good supply of fresh milk. 3. Mixed feeding is a good method, and accustoms the child to artificial nourishment. 4. Bringing up by hand, when employed under good conditions, for robust children, the offspring of healthy parents, gives, when employed at home, and especially in the country, excellent results, and is certainly superior to suckling by wet-nurses living at home with their husbands, and poorly remunerated. 5. Bringing up by hand, when employed beyond the reach of family superintendence, yields results inferior to suckling under the same con-

ditions. 6. Bringing up by hand in a collection of children certainly exposes the infants to great risks, and generally ends fatally, whatever may be the precautions taken and the hygienic measures adopted. To these conclusions, M. Villiers, the Secretary of the Commission, adds the following recommendations: 1. Where breast-milk is wanting for the infant, the milk of a cow or goat which has recently been delivered, or of milk of the first milking; or, if that cannot be had, warm milk diluted with half water during the first week, and, during the second week, with a fourth part of added water slightly sweetened, according to the digestive power of the child. 3. This milk should be given to the children from glass or earthenware vessels, which should be carefully washed every time they are used. No vessels should be used which contain lead nor mouthpieces made with vulcanised India-rubber. 4. It should be borne in mind that feeding with the bottle or feeding-cup entirely without the breast greatly increases the chances of illness and death to the child, unless such method of nourishment is made use of in the family circle, and by experienced persons. This plan of feeding cannot be adopted in the midst of a collection of children without causing them to incur the greatest risks.

ASYLUM-MORTALITY AND NON-RESTRAINT.

THE influence of modern improvements in asylums and in the treatment of the insane, in diminishing the mortality and prolonging the lives of lunatics, is very clearly brought out by Dr. Cassidy in the recently issued annual report of the County Asylum at Lancaster. The average annual death-rate in that institution in the decennium 1829 to 1839, was 21.58 per cent. of the average numbers resident. In the decennium 1839 to 1849, it was 11.24 per cent.; in that of 1849 to 1859, it was 9.89 per cent.; in that of 1859 to 1869, it was 8.93 per cent.; and in that of 1869 to 1879, it was 7.62 per cent. The first great reduction took place at the period when Mr. Gaskell abolished the restraint system, and introduced many improvements in management and treatment, in doing which he was warmly supported by the Committee of Visitors and the late Dr. de Vitre, then Visiting Physician. Subsequent reductions, although less conspicuous, have been steadily maintained, and have corresponded with those progressive ameliorations in the condition of the insane which have grown out of that momentous revolution, the abolition of restraint. Dr. Cassidy's statistics should be well pondered by those reactionists who now suggest the reintroduction of restraint into asylums, and who can only be classed with the short-sighted advocates of protection as against free trade.

MR. TOMES AND THE DENTAL PROFESSION.

WE read with interest, in the *Monthly Review of Dental Surgery*, a report of a meeting of members of the British Dental Association for the purpose of presenting testimonials to Mr. John Tomes, F.R.S., and to Mr. James Smith Turner, in recognition of their services as President and Secretary of the Dental Reform Association. Although a handsome sum was subscribed for the purpose, Mr. Tomes accepted only a portrait of himself as a presentation to his family; and to Mr. Smith Turner was presented a clock, and cheque for the balance of 350 guineas. Anyone who is aware of the part which Mr. Tomes has played in the recent organisation of dentists under the Dental Act, will know that it is very greatly to his exertions that the dental profession and those who are registered under the Act owe their present organisation. Differences of opinion exist as to the justice of the particular provisions of this Act, which allows the title of Dental Surgeon to Licentiates in Dentistry of the College of Surgeons in lieu of limiting it, as many contend it ought to be limited, to members of the College of Surgeons. Apart from this contention, which admits of indefinite argument, but which at present settles the question on the larger basis, everyone will acknowledge that to Mr. Tomes, more than any other man, is due the present state of things, which has, at least, the advantage of laying a comprehensive basis for the organisation of the dental profession; and the establishment of a *Register*, to which, in future, no one will be admitted who has not made good his claim by an excellent preliminary education and a satisfactory examination by one of the chartered bodies. Mr. Tomes has devoted himself to the work with unswerving firmness, singular energy, and great practical skill. Many of those with whom he had been in the habit of working in the past separated themselves from him; and if any man had a peculiar temptation to adhere to a very rigid and particular standard of qualification, or, at least, some distinguishing aristocratic mark for those who bear such qualification, it would be Mr. Tomes, who in his own person, and in that of his son, has shown not only how to value, but how to attain, the highest scientific titles which are within the reach of any professional man. The more democratic view which he took was certainly not dictated by any class sympathy; and, in separating himself from the majority of qualified surgeons practising dentistry on the point at issue, Mr. Tomes must have made no small personal sacrifice to a principle which he believed of public value. His personal influence with members of the Medical Council; his excellent scientific position, and the facilities which he had for devoting to this cause time, faculties, and experience, which he had set free from the exigencies of active practice, enabled Mr. Tomes to achieve a rapid and complete success, which astonished his own profession, and completely outstripped the slow movements of the Medical Council. It is curious, to this day, to notice how little even the leaders of that Council either understand their position, or have grasped the meaning of the war which wages. At the recent dinner of the Association of Surgeons practising Dentistry, leading members of the Council stood up to protest against the provisions of the Dental Act which give the title of Dental Surgeon to other than members of the College of Surgeons, apparently not seeing that they are the persons responsible for it; for, by lifting their finger, or by a word from their President, Dr. Acland, they could have prevented it; and although, if one can accept the individual utterances of most influential members of the Council, they agree with the Association of Surgeons practising dentistry, yet it is certain such was the influence of Mr. Tomes, and such the glamour which he exercised over the president and members of the General Medical Council, that they allowed his Bill, a private Bill, to go through unopposed in a busy session, although it was, in a number of respects, essentially different from the Bill which they had approved in Council, and although it is now declared to contain provisions of which they strongly disapprove. Whatever may be said of this from the point of view of medical policy, at least it reflects credit on Mr. Tomes. He knew his own mind; he framed a definite scheme which should be all conclusive, and should settle for ever the question of making a register; and he carried his scheme. No wonder, then, that the dentists feel that they owe to him and his able lieutenant, Mr. Smith Turner, a debt of gratitude; and it is fitting that one of the first acts of the British Dental Association—which has been framed on the model of the British Medical Association—should be to testify, in an open, public, and lasting manner, how great is their sense of the value of the services which these gentlemen have rendered to the profession of dentistry.

SANITARY PROGRESS IN THE UNITED STATES.

DR. ACLAND, in the course of his address to the Section of Public Medicine, took occasion to remark on the sanitary progress made by the executive in the United States. "No sanitary work", said he, "at the present moment, exceeds in interest the proceedings in respect of health-organisation and administration inaugurated last year by the National Board of Health in the United States"; and, in illustration of this, he submitted several numbers of the New York official journal —*The City Record*—and copies of recent statistical summaries and reports. A collection of the forms and circulars in use by the New York Board of Health was also passed round for the consideration of those attending the Section; and as these forms, etc., excited considerable attention, and many of them are singularly suggestive, it may not be out of place to give a list of them here. The forms, taking them as they come, are as follows: 1. Return of a still-birth. 2. Return of a marriage. 3. Report of sanitary inspector after examining premises

dangerous to life or detrimental to health—constituting complaint and proof. 4. Report of sanitary inspector as to case of infectious disease. 5. Register for tenement-house (particulars of measurements). 6. Complaint as to condition of tenement-house. 7. Sanitary superintendent's semi-weekly report. 8. Undertaking, to be signed by consignees of bales of rags imported, not to break any of the same so long as they remain within the limits of the city and county of New York. 9. Sworn deposition of scavenger that he has duly emptied privy-vaults. 10. Application for transit or disinterment permit. 11. Application for permit to carry on a noxious trade; to bring persons or articles from quarantine; to land rags, hides, skins, etc.; to remove and deposit manure, garbage, etc.; to keep swine; to open yarding for cattle, sheep, etc.; to keep cows; to conduct business of butcher, cattle-dealer, or vegetable-dealer; to open slaughter-houses; to conduct business of scavenger; for bells, blasting, or firearms; for keeping or transporting explosive substances; as pound-keeper; to occupy street or public place; to build vaults, etc.; for furnace, mill, or factory; to dwell or lodge in or near a slaughter-house. 12. Certificate of death. (The physician who attends any person in a last illness is responsible for the presentation of the certificate, accurately filled up, to the Bureau, within thirty-six hours after said person's death.) 13. Sworn deposition of health-inspector of violation of —— section of Sanitary Code. 14. Transit or disinterment permit. 15. Permit of Sanitary Bureau to discharge cargo. 16. Notice to alter, repair, cleanse, or improve premises for the abatement of nuisances. The circulars or hand-bills issued by the Sanitary Bureau bear the following titles: 1. Instructions for disinfection. 2. Sanitary regulations against small-pox, scarlatina, measles, and diphtheria. 3. Report of the Sanitary Committee of the Board of Health on Diphtheria. (Mode of attack, symptoms, precautions, etc.) 4. Report of the Sanitary Committee of the Board of Health on Sunstroke. (Its causes, and precautions to be taken to avoid it.) 5. Instructions regarding the prevention of cholera, ordered to be sent to the agents of steamboats and railroads communicating with New York, and to the keepers of hotels, lodging-houses, emigrants' and sailors' boarding-houses, to ferry-masters, and to be widely distributed. 6. General directions to be followed after vaccination. (A doctor visits each house twice a year, and offers free vaccination. Vaccination is also performed daily at the office of the Board of Health, between 9 A.M. and 4 P.M.) This circular is issued in English and German. 7. Rules for the care of infants. (Nursing of infants, feeding of infants, and summer complaints.) This circular is issued in English and German. 8. Notice to parents from the Board of Education. "A physician from the Board of Health will call at —— school to examine the pupils on ——. If your child require vaccination to protect it from small-pox, it will be sent home for your consent, and will be vaccinated on the following day. Bovine vaccine virus only is used by the Health Department. A certificate will be given with each successful vaccination. Any other physician may vaccinate the child." Dr. Acland also submitted copies of circulars issued by the State Board of Health of Massachusetts. Among them were a letter addressed to medical men and householders on diphtheria, a paper of able suggestions for preventing the spread of scarlatina, and "a description of the symptoms of the disease in animals known as hydrophobia". This last circular is printed on every dog-licence issued by the State.

VACCINATION AND REVACCINATION.

DR. BERNARD of Cannes has sent to the Société Française d'Hygiène an account of the vaccinations and revaccinations performed by him from March of this year to August 19th. The results are 330 vaccinations, of which 325 were successful; and 79 revaccinations had 12 characteristic successes. The vaccine used was cow-pox, cultivated by the Milanese Committee, and sent to M. Bernard by Dr. Janssens of Brussels. With two double plaques, he vaccinated six children with a perfectly satisfactory result. M. Bernard writes that he is specially interested in diffusing vaccination in his district, because, during the last summer, he closely observed a small epidemic of small-pox, in which he found that, out of forty deaths that occurred, none were of persons who had been vaccinated. Of all the small-pox patients who had been vaccinated, whether recently or at a distant period, not one succumbed to the disease.

PINE-WOOL CLOTHING.

THROUGHOUT France and Germany, a considerable reputation has been achieved by the product of the pine-wool fabrics of Remda, in Thüringen. The jerseys, drawers, and under-clothing made of this product are woven into warm aromatic nether garments, which are much worn as under-clothing, and which have a considerable reputation for use as preventitives of rheumatic affections, and for protecting the body against sudden changes of temperature in inclement weather. We are not aware of any English experience of them; but they are now being introduced by Messrs. Welch and Margetson, and claim attention in any case as warm, well made, and comfortable woollen under-clothing, particularly well adapted for wear during the colder seasons of this climate.

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

FROM the Registrar-General's returns for the week ending August 21st, it appears that the death-rate in the eight principal towns was 18.6 per 1000 of estimated population. This rate is 1.5 above that for the corresponding week of last year, and 1.5 below that for the previous week of the present year. The lowest mortality was recorded in Perth, viz., 9.7 per 1000; and the highest in Paisley, viz., 27.6 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.1 per 1000—a slight increase on the rate for last week. Acute diseases of the chest caused 39 deaths, being 31 less than the number for the previous week. The mean temperature was 59.0°, being 4.0° below that of the week immediately preceding, and 1.5 above that for the corresponding week of last year.

THE HEALTH OF GLASGOW.

FROM the report of the medical officer of health, it appears that, during the fortnight ending August 21st, there were 447 deaths registered, as compared with 443 in the preceding fortnight, representing a death-rate of 21.5 in place of 21.3 per 1000. The mean temperature during the fortnight was 66.4° Fahr. The number of deaths from pulmonary diseases was 107, in place of 100 during the preceding fortnight. The deaths from fever were 16 in number—12 from enteric fever, and 4 from typhus—while from the infectious diseases of children there were 45 deaths, viz., 16 from whooping-cough, 10 from measles, and 19 from scarlet fever. The number of cases of fever registered was 122, viz., 109 from enteric fever, 11 from typhus, and 2 undefined. There are at present in the Belvidere Hospital 136 cases of enteric fever, 78 of scarlet fever, 9 of measles, 26 of typhus, 2 of small-pox, and 7 of whooping-cough—in all, 258, as compared with 263 this day fortnight.

REPORT OF THE LUNACY BOARD FOR SCOTLAND.

THE twenty-second report of the Commissioners in Lunacy for Scotland states that the number and distribution of the insane in Scotland, exclusive of unreported lunatics living in private dwellings, were as follows. In royal and district asylums, 2,867 males and 2,931 females; of the former, 674, and, of the latter, 555, were private patients, while 2,193 males and 2,376 females were paupers; in private asylums, 51 males and 107 females; in parochial asylums, 564 males and 665 females; in lunatic wards of poorhouses, 298 males and 378 females; and in private dwellings, 609 males and 914 females, 42 of the former being private patients, and 66 of the latter the same, while 567 males and 848 females were paupers. There were, in the lunatic department of the General Prison, Perth, 43 males and 18 females; and, in training-schools, 109 males and 70 females; of whom, 60 of the former and 51 of the latter were private patients, while 49 males and 19 females

were paupers. There were thus, in Scotland, 9,646 lunatics, of whom 1,606 were private patients and 7,957 paupers. There has been (1) a somewhat greater increase than usual in the number of private patients; (2) the population of private asylums has decreased appreciably; (3) the rapid increase in the number of pauper lunatics, which characterised the four previous years, has somewhat abated; (4) the pauper lunatics are all provided for in public establishments; (5) there has been a slight decrease in the number of private lunatics provided for in private dwellings, and an increase in the number of pauper lunatics so provided for since January 1858, when the Commissioners first entered upon their duties. During that time, the number of lunatics officially known to the board has increased from 5,823 to 9,624. After making due allowance for the increased population of the country, the report shows that the number of private lunatics in asylums has increased 12 per cent. since 1858, while the number of pauper lunatics in asylums and similar establishments has increased 82 per cent. The number of pauper lunatics, which, in 1858, was 157 per 100,000, amounted on January 1st, 1880, to 217 per 100,000; although, during the same period, the number of registered paupers fell from 2,630 to 1,718 per 100,000. During the last twenty years, the mortality of private patients has remained much the same, but there has been a slight diminution in the mortality of pauper lunatics, due, doubtless, to improved hygienic and dietetic and regimenal conditions. The report contains much interesting material, and will repay perusal. As to the financial part of the report, it shows that, since 1858, the total expenditure has increased 133 per cent., the expenditure for asylum treatment having increased 168 per cent., and that of boarding in private asylums 30 per cent. The average cost *per annum* for each patient has increased in asylums and in lunatic wards of poorhouses from about £20 to £26; in private dwellings, it has increased from about £8 to £13; the average expenditure for establishments and private dwellings, taken together with all other costs, have increased from about £16 to about £24.

HEALTH OF EDINBURGH FOR JULY.

THE monthly report of Dr. Littlejohn, medical officer for the City of Edinburgh, showed that, during July, the 340 deaths registered gave a mortality of 18.30 per 1000. The average rate in the month of July for the five preceding years was 18.49. Of the 340 deaths, 103 occurred in the New Town, 200 in the Old Town, and 37 in the southern suburbs, the respective death-rates being 14.67, 21.04, and 17.94. Fully 43 per cent. of the deaths were of children under five years of age. Diseases of the chest caused fully 25 per cent., zymotic diseases fully 14 per cent., and debility of age fully 9 per cent. of the entire mortality.

IRELAND.

IN consequence of want of funds, twenty-five beds have been closed in the Meath Hospital, Dublin. This is the first time that this circumstance has occurred for the past hundred years.

THE Local Government Board have informed the Cork Board of Guardians that they have recommended the Loan Commissioners of Public Works to lend the guardians £2,000 for the Intercepting Hospital, the repayment to extend over thirty-five years.

QUEEN'S COLLEGE, BELFAST.

THE report of the President for the year ending 19th July last, states that the college continues to prosper in the numbers of students attending the various classes, in the efficiency of the professorial teaching, and in the distinguished successes achieved by those trained in the institution at the examinations for admission into the several departments of the public service, and in open competition for some of the highest honours awarded by the older universities of the United Kingdom. The number of students has gradually increased: for example, the average attendance during the ten years 1849-59, was 180; during 1859-69, it was 368; during 1869-79, it was 400; while the number of students enrolled during the past session, was 494. It is satisfactory also to learn that the steady increase from year to year has been mainly in the faculties of arts and medicine, showing that the Queen's College, Belfast, is largely contributing to the intellectual and professional education of the people of Ireland, and is thus most efficiently fulfilling the important purposes for which it was established. The steady and rapid increase of the medical school is encouraging, but there appears to be an urgent necessity for the enlargements of the medical buildings, more especially in the departments of chemistry, natural history, experimental physics, and anatomy; while no provision has been made for an efficient physiological laboratory, now essential in every medical school. The president points out the importance in the present condition of Ireland of giving the fullest encouragement for the systematic study of those branches of knowledge which contribute to the development of the natural resources and staple manufactures of the country. Reference is made in the report to the loss the college sustained by the resignation of Thomas Andrews, M.D., F.R.S., Vice-President and Professor of Chemistry. Of the services rendered by Dr. Andrews to the college and to the cause of science throughout the world, the president remarks, it would be impossible to speak in too high terms. His skill as a teacher, and his celebrity as an original investigator and discoverer, placed him in the very first rank among the chemists of the age. But while they lament his loss, it is some satisfaction to know that his name and the memory of his scientific achievements will be perpetuated in the Queen's College, Belfast, by a scholarship, founded by his admirers and friends, which will be awarded from year to year for high attainments in chemical science.

WATERFORD WORKHOUSE.

THIS institution appears to be much overcrowded, and the Local Government Board have recently drawn the attention of the guardians to the matter. They state that the Board have too long deferred the necessity of providing additional buildings, and that they will be incurring a great responsibility if the subject be allowed to remain longer in abeyance. The guardians will consider the matter at a future meeting.

BELFAST ROYAL HOSPITAL.

AT a quarterly meeting of the General Committee held last week, it was reported that, during the quarter ending July 31st last, 404 intern patients had been treated in the hospital, and 33 operations performed; while 2,871 were extern patients, necessitating 1,279 operations. The Board, being of opinion that the last Sunday in the year was not the most suitable day for Hospital Sunday, called a special meeting to discuss the subject; when it was unanimously resolved that the day should be altered to the last Sunday in November. The bequest of the late Miss Hutton, about £1,500, having, within the last week, become available, a question arose as to whether the Board should be allowed to utilise a portion of it to pay off all the outstanding accounts due to the close of the financial year, viz., August 31st; and, after some discussion, a resolution granting the necessary permission was adopted. A special meeting of the Committee was held last Monday for the election of a physician in the room of Dr. J. W. T. Smith, and of a surgeon in the room of Mr. John Moore, who retired by rotation. Both gentlemen were re-elected, the chairman observing that, while they had paid a compliment to them by re-electing them, they had, at the same time, honoured themselves. It was quite unnecessary to speak of their qualifications; and it was a source of confidence to the subscribers, as well as an advantage to the patients, that they had on their staff eminent surgeons and physicians who gave their most valuable time to the services of the institution.

PRESENTATION. Dr. Wheeler of Belfast has been presented with a handsome brougham and victoria, as a mark of esteem and affection from his friends and patients.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting of the Poor-law Medical Officers' Association (England and Wales) was held on Thursday, August 12th, in the Council Room, Guildhall, Cambridge; JOSEPH ROGERS, M.D., in the chair.

The CHAIRMAN stated that, three years before, in consequence of the extreme difficulty in getting the country Poor-law medical officers to come to London, the Association decided to attend the annual meetings of the British Medical Association, and to take the opportunity so afforded of coming into contact with the Poor-law medical officers, and addressing them. Three years previously they were at Manchester, and addressed a large meeting of guardians and others; and he hoped they did some good. Two years ago, they were at Bath, and sowed a little seed, which he hoped had fructified. Last year, they went to Cork, and talked about the grievances of the service, and counselled unanimity in the advocacy of the wrongs of which they complained. He had occupied his present position for more than twenty years, and he should have to travel over much of the ground he had traversed before; but these repetitions were unavoidable. They must go on "pegging away" if they wished to gain the objects they had in view. One thing which occurred to him was, it was only due to the apathy of the profession that they had not accomplished more. He should content himself on this occasion by briefly citing facts which would prove that medical relief in the rural districts (they had achieved all they wished for in the metropolis) was unsatisfactory, to the medical officer, to the poor, and to those who had to provide the funds. It was unsatisfactory to the ratepayer, because he had to pay more in localities where the medical service was badly paid, and where, as an inevitable consequence, the sick poor were more or less neglected. His old friend Mr. Richard Griffin had for a series of years ventilated what he called the grievances of the Poor-law medical officer. Twenty years ago, he (the chairman) came to the conclusion that he was on the wrong tack, and that such a mode of agitating the question would never lead to any reform. The public did not care anything about them, but left them to do their best or their worst, perfectly indifferent as to what happened to them, unless they got into a scrape, and then they came down upon them, utterly regardless of their treatment. He made up his mind, therefore, to drop the medical officer altogether, and to show the evil results entailed upon the sick poor. It was in that spirit that he advocated a reform before the Select Committee which sat in 1860-1-2, when he urged the advisability of guardians supplying all medicines and dispensaries, so that the medical officer might not be encouraged to scamp the provision and dispensing of drugs. He was, however, unsuccessful on that occasion in getting the Committee to adopt his views in their entirety. Several divisions took place on the subject, and ultimately a compromise was effected and a recommendation was sent to the House of Commons, embodied in a report of the Committee, that guardians should be advised to find cod-liver oil, quinine, and other expensive medicines. Now when a Committee of the House of Commons reported in favour of a change, and the House of Commons adopted their report, it was the duty of the department affected by that recommendation to immediately take steps to urge upon the various boards of guardians or other bodies throughout the country, the conclusions arrived at by the Committee; but the permanent officials of the department put every possible difficulty in their way; and the result in this particular instance was, that it was not until after repeated requests on the part of the President of the Board that Mr. Henry Fleming, the secretary, was induced to send out a circular letter to the boards of guardians thirteen months after the report was made. In 1867, he asked his friend Sir J. Simeon to move for the circular letter, and what had resulted from it. The reply was, that 401 unions had adopted the resolution in whole or in part, and 225 (amongst them Cambridge) declined to do anything in the matter. The return furnished no details of what unions had and what unions had not, and to what extent they had carried out the resolution. In 1876, he (the chairman) drew up the following form of return, and asked Dr. Lush to move for it in the House. It was as follows: "Return from the Unions and Parishes under separate Boards of Guardians in England and Wales, showing, 1. Whether the Guardians supply cod-liver oil, quinine, and other expensive medicines; and if so, at what date they began to do so: 2. Whether they supply all medicines, either to paupers in the workhouse or to those receiving out-door medical relief, and if so, at what date they began to do so." As the annual meeting of the British Medical Association was to be held in Cambridge, it occurred to him that he would extract from the return all the points which bore on the subject, so far as the Eastern Counties were concerned. As to Cambridge, he had known that, for the past twenty-five years, it had been distinguished as the worst managed union in the kingdom as regards its Poor-law medical relief. For years, it was at variance with its medical officers, and now treated them on the starvation principle, and the ratepayers had to pay for it. Cambridge had a population of 30,000 in 1871; and it provided no quinine, cod-liver oil, or other expensive medicines. It gave the munificent sum of £376 per year for medical relief, which was at the rate of 3d. per head of population. The total expenditure on poor-relief was £25,446, or 16s. 11d. per head of population. He did not think there was a town or rural district in the kingdom which paid so heavily for the maintenance of its poor as Cambridge. On the other hand, Oxford had a population of 21,000—9,000 less than Cambridge—the amount paid for medical relief was £418, which was 4¾d. per head of population, against £376 for Cambridge. The gross amount spent for poor relief was £10,302, or 9s. 10d. per head. The argument which he wished to found on that, was this, that the great bulk of pauperism arose from sickness; and if they starved the system whereby the sick poor were provided for, the medical officers were led into carelessness. A man might make sacrifices of time and trouble, but when he found the guardians of the poor utterly indifferent to the needs of the sick, he was apt to become negligent. The result of his inquiries in Cambridge was, that every possible discouragement was given to the administration of proper medical relief to the sick poor. The districts were so arranged that the poor had to travel needlessly long distances for medicine. The guardians were too much in the habit of looking upon the poor as troublesome individuals, without thinking of the evil results that accrue in the way of pecuniary expenditure from such a course. In the Cambridge union, and in the neighbouring union of Chesterton, there was hardly an extra fee that ever found its way into the pockets of the medical officer. [*A Voice:* "That is wrong."] They made arrangements with Addenbrooke's Hospital to take all the cases which carried a fee, and the result was that, whilst they made a practice of paying a minimum salary to their medical officers, with the idea that these salaries should be supplemented by fees, and these fees were diverted from them to the hospital, and their medical brethren, who delighted in giving so much voluntary assistance to their fellow creatures, did the work of the district medical officers. After a limb had been set, the patient was discharged to the district in which he lived, and the Poor-law medical officer was told to look after the case, for which he could not charge because the limb had been set in Addenbrooke's Hospital. He would say one word for the Chesterton guardians: they did find quinine and cod-liver oil. Their medical relief was £476, or 4d. per head on a population of 27,948, whilst their Poor-law relief expenditure was £16,580, or 11s. 1d. per head only, instead of 16s. 1d. at Cambridge. With regard to Oxford, with the view of getting the necessary information, he (the chairman) wrote to the clerk of the union, and in reply he received the following letter.

"43, Corn Market Street, Oxford, July 29th, 1880. Dear Sir,—The Oxford Board of Guardians find medicines and appliances for both indoor and outdoor sick. The board have a dispensary where physic and appliances are supplied, and the former made up by a dispenser who has a salary of £50 a year. The medical officers simply see patients and prescribe. The expenditure for the year ending Lady Day 1880 amounts to £138. The system is considered to work well. On the back hereof I give statement of account of medical relief.—Yours truly, WALTER THOMPSON, Clerk to the Guardians. Joseph Rogers, Esq., M.D., 33, Soho Square, London.

"District medical officer, £100; workhouse medical officer, school medical officer, £120; extra medical fees, £10; drugs, etc., £138; dispenser, £50; total, £418."

Time would not permit his quoting from the return at greater length; but he would place in the hands of members of the Association copies of the return, which would show the exact condition of things in Cambridge, Bedford, Huntingdon, Hertford, Suffolk, and Norfolk. In 1878, he was asked by the guardians of the Westminster Union to take charge of their school on Wandsworth Common, owing to an outbreak of purulent ophthalmia. He replied that he would, if liberty of action was given him; and he took it for eight months. The first thing he did was to put the children on a liberal dietary, with wine, tonics, and expensive medicines. At the end of six months, every child was well. He wrote to the dispenser of the union, and asked him to extract from the books the absolute cost of the medicines he ordered whilst he had charge of the schools, and it turned out that the absolute cost of the medicines whilst he had the charge of the schools was about £20 12s. 2d. Thus upwards of £20 had been absolutely expended, and he had ordered everything he thought necessary at the time for the treatment of forty-eight cases of purulent ophthalmia. The amount was found by the guardians of the Westminster Union, and to the liberal diet he (the chairman) attributed the fact of having saved the sight of those

children. What he was driving at was exactly the same thing he had been driving at for the past twenty years: that all drugs should be found by the guardians, and, where practicable, dispensed by an independent dispenser; that the medical officers throughout the country, when they went to the bedside of the sick man, should have no thought of pecuniary interest in the supply of drugs. Mr. Hart, Dr. Anstie, and himself commenced their agitation in the metropolis in 1865, and these reforms were now being carried out in the metropolis and forty-eight provincial unions. The same thing had been adopted in Ireland since 1850, and was recommended by the Select Committee that sat on Scotch Poor-law relief to be universally carried out in Scotland. In 1869, Mr. Goschen, one of the most intelligent and far-seeing of the Presidents of the Local Government Board, directed some of the Poor-law inspectors to investigate the question of the district medical relief in rural districts. In the annual report of 1870-1, they stated that they found that the system of providing dispensers had only been established in nine unions (exclusive of the metropolis); which, however, had since been extended to forty unions; and wherever it had been tried, it was found to work satisfactorily. In the appendix of the report would be found detailed reports from Mr. Cane, Mr. Peel, and Mr. Farnell. The last named gentleman said he considered the remedy was to be found in "appointing dispensers in every union". The Chairman of the Board of Supervision of Scotland thus replied to a question: "I think their being called upon, out of a certain fixed salary, to supply any amount of medicines which may be required, is a great mistake." He was of opinion that the salary of the medical officer should be exclusive of the cost of medicines. In June 1871, he addressed the Central Chamber of Agriculture on the subject; and at the conclusion of his address, and after the discussion which took place, the following resolution was proposed, unanimously adopted, and ordered to be sent to the Local Government Board: "That the present system of Poor-law medical relief is unsatisfactory in its results, and needs amendment." In the August following, he (the Chairman) addressed a similar meeting at Plymouth, and in the winter he addressed a similar meeting at Framlingham in Suffolk, and in 1872 at Worcester, where similar resolutions were adopted. He wished to ask the present meeting to adopt a resolution similar in character to that which was adopted at that large lay meeting of noblemen and gentlemen at the Central Chamber of Agriculture nine years ago, which had attracted the attention of a large number of gentlemen to the subject; among them, Mr. Hardy, when he was President of the Local Government Board, and many others. He wished to say a word about the superannuation question. About nine years ago, a Bill was carried through the House of Commons to superannuate the Poor-law medical officers. He (the Chairman) was one of those who waited upon Mr. Goschen in respect to the second reading. Mr. Goschen said "they very often found considerable difficulty in dealing with aged medical men who had Poor-law appointments. From their inquiries, they knew that many of them were in such indigent circumstances that they had hardly any other source of sustenance; and, when they had performed their duty for a long course of years, they were asked to retire from office. Therefore, on the part of the Government, he supported the system of superannuation; so that they might make some provision for those aged medical men, and have their places filled by younger and more active ones." In that spirit the Bill was introduced and passed. In the House of Lords, Lord Redesdale opposed the Bill, and it was only by a system of compromise that they were able to pass it. The result of that compromise was, that the guardians had paid little or no attention to the recommendations of the Select Committee. They took care in many cases to make no provision for the medical man when he was past work, but let him go into the union if he were so disposed. On several occasions, they had gone to the Local Government Board and asked that the measure should be compulsory instead of permissive, and had received very satisfactory replies that the department was very anxious that there should be amendments to the Superannuation Bill. He hoped what he had said would shame the Cambridge Board of Guardians into a more enlightened action. If it did not, Heaven help them!

Mr. EDWARDS (Ipswich) had been a Poor-law medical officer for thirty-five years, he was upwards of sixty years of age; but he dared not apply for his superannuation allowance, for the reason that his board of guardians might say, "Let him retire, we cannot do anything for him." They were told to leave it to the liberality of their boards, but he advised them not to put their faith in this.

Mr. W. DONOVAN (Whitwick) said he had been a medical officer in Ireland, and for the last three years had been a medical officer in England. He concurred with what Dr. Rogers had stated with respect to the supplying of drugs by the medical officer. He received a salary of £60 a year, and he was quite sure if he were to prescribe quinine and cod-liver oil for his patients, it would take a great deal more than his salary to pay for them. He did not think cod-liver oil should be regarded as a medicine at all. In a case of typhoid fever it was impossible, with the miserable stipend the medical officers received, to give it proper attention. If they could make £2 a day from private patients, they could not be expected to give it up for 2s. or 3s. per day. In Ireland they had a dispenser for each district, and an unlimited supply of drugs as well as instruments.

Mr. PRATT (a former guardian of the Westminster Union) said, when he joined the Board of Guardians of the Westminster Union he had occasion to inspect the workhouse, and, when doing so, he saw a number of ginger-beer bottles which were doing place for the ordinary bottles of medicine for the sick. On inquiry what medicine it was, he was told that the medical officer did not believe in medicine at all, and so he gave the patients water. During the time he was guardian they changed the system, and found the medicines for the sick poor, and their number immediately decreased, and went on decreasing. He attributed this to the fact that they were supplied with medicines by the guardians, and not by the doctor. If they wanted to get the sick poor well they should not let the doctor find the medicine, but find the medicine themselves, and they would have the patients well much quicker, and have less poor-rate to pay.

Mr. SIDNEY CAMPKIN (of the Cambridge Board of Guardians) said although Dr. Rogers had made something like an attack upon them, he did not feel ashamed of his position. Dr. Rogers had stated £25,446 to be the gross amount of poor relief, but he had a balance-sheet for the half-year ending Michaelmas, which showed that their gross amount of relief had been something like £16,000 or £18,000; that was to say about £9,000 for the half-year. Dr. Rogers had said their medical officers had not received extra medical fees, he could show that for the half-year ending Michaelmas they received as medical fees £32 17s. 1d.; and whenever they had bills brought before them for extra medical fees they invariably passed them. He believed Oxford was under two unions, and the one which the chairman had taken was the one that embraced the centre of the town. Suppose they (in Cambridge) could take the part that only embraced the central part of the town, and he thought they could show themselves in as good a position as, if not better than, Oxford. He quite agreed with what Dr. Rogers had said respecting the advisability of providing such expensive medicines as quinine and cod-liver oil; and, if such a proposition were brought before their board, he would quite concur with such an arrangement; and he thought it would be a very desirable thing if all unions were to take this into their serious consideration. He did not think their medical officers were overpaid if they found no medicines at all. It had been suggested that cod-liver oil should be placed on the dietary system, and he should have great pleasure in supporting some such a proposition, and also the recommendation that the whole of the drugs be supplied by the union.

Mr. Alderman COOK (Chairman of the Cambridge Board of Guardians) had been acquainted with the working of the Poor-law in that union for thirty years in succession. In some of the remarks which had been made by the Chairman, he thought he could recognise the influence of Dr. Ransome. There were some things which were not altogether deserving of the censure which the chairman had bestowed upon them. It had been said that the guardians of the Cambridge Union had paid no regard to the convenience of the medical officers in the arranging of the districts. If Dr. Rogers had been so informed, he had been misinformed. For the past thirty years, they had been always desirous of suiting the convenience of the medical officers, and he thought he could show that the districts were arranged in the best possible manner. The next charge was the one of meanness. He admitted the salaries of the medical officers were far too little; and, if a proposition was made to the board to raise the salaries of the district medical officers of that union 50 per cent., he should certainly support it. Considering the perils they had to undergo, and the responsibilities attaching to the office, he thought a salary of £80 per year far too little. Then, as to the question of fees, he was not aware that they had refused any extras except extras for fractures.

The CHAIRMAN said his charge was, that, whilst they allowed the medical officers to do all the hard work, the fees which would occasionally fall to them were taken from them by an arrangement entered into with Addenbroke's Hospital. His opinion was there should be no fees, that the salary should carry everything; but not to supplement the salary by fees, and then to take away the fees, for this constituted a breach of contract.

Mr. Alderman COOK said that the extras in that union amounted to nearly the amount of the salary, and had done so for many years. He had never known an appeal to the Local Government Board to disallow any extras which the medical officers had charged. As to the finding of the drugs, he concurred with the remarks of the previous

speaker, that it would be a good thing if all the unions were to supply the drugs themselves. As to the other question of superannuation, he had never had the question brought before him at Cambridge, but he for one, and he thought the other members of the board of guardians, would not be adverse to allow superannuation, if those medical officers chose to vacate their position whose years of service were sufficient to justify it. They had had no difficulty in getting officers; if there had been a vacancy, there were always three or four applications. If they wished to remedy their position, it lay in their own hands; it was of no use trusting to the board of guardians, who were hampered by the ratepayers. If they could prevail upon the Local Government Board to adopt a certain rule, such as that the medical officer should have a salary according to the amount of population or mileage, even if it came to double the amount of the present salary, he did not think there was a member of the Cambridge Board of Guardians who would disagree with it. Everything was done by agitation. A half-dozen strong, energetic men could do that for themselves which the whole neighbourhood of one town could not do for them. One thing he was very pleased to acknowledge, that they (the Association) had, through their instrumentality, induced the present Government to withdraw the Vaccination Act Amendments Bill.

Mr. WICKHAM BARNES (Honorary Secretary) said he had had practical experience in the dispensary system. He believed they would find it most thoroughly satisfactory. The medical officer saw the patient, and wrote out his prescription, a copy of which was kept, and always to be had afterwards. This was taken to the dispensary, and there made up; there was no stinting; everything was done in order. He had had experience in London of the working of this dispensary system, and it was wonderful the pleasure it gave to all parties. After alluding to the unsatisfactory state of the superannuation question, he suggested that the medical officer should first of all endeavour to ascertain the feeling of the board before he resigned; and, when he found the feeling was favourable to superannuation, that he should do so.

Mr. J. B. FETCH (Clerk to the Board) said that the total relief of the poor at Cambridge was under £15,000; but then they had a borough-rate of £9,000, and there was nothing of the kind at Oxford.

The CHAIRMAN said it afforded him a considerable amount of pleasure to find so many members of boards of guardians present. He did not expect to find all his views endorsed, which, however, were addressed to them in their corporate, and not in their individual, capacity. It was a great source of gratification to him that two of the number had spoken so extremely well and so fairly upon the question. He knew, from his own experience, it was a question which required fairly going into; and all he had done was, to urge upon his professional brethren upon the one hand, and upon boards of guardians and the public on the other hand, the necessity for a modification of the arrangements for the sick poor. The interests of the sick poor and the ratepayer were so blended, that he did not wish to separate them. He could corroborate what Mr. Pratt had said. He happened to know pretty well, for he was the successor of the gentleman who boasted he never gave any medicines to the sick poor. He might state, for the consideration of the guardians of that union, that nine years ago they were at Plymouth, and advocated exactly the same things as they were advocating now, and they had succeeded in establishing the dispensary system at Plymouth, in Oxford, Southampton, Reading, and Birmingham. What he wished to point out was, if it was good for London and Ireland, it was good for the provinces and towns like that of Cambridge. The Chairman concluded by thanking them for the kind attention and consideration with which they had listened to his remarks.

The following resolution was moved by the Chairman, seconded by Mr. WICKHAM BARNES, and carried *nem. con.*:

"That the present system of medical poor relief is inadequate to the wants of the poorer classes, is unsatisfactory in its results, and requires amendment. To this end, it is expedient that the dispensary system should be generally adopted."

A SERIES OF BREECH-PRESENTATIONS.—Dr. Randolph Winslow reports, in the *American Journal of Medical Science* for April, the case of a coloured woman, aged 31, married eleven years, who had borne ten children, all at or near term. In every labour, the breech and inferior extremities presented, and delivery was accomplished in that position. All the children were dead when born, except the fourth, who is alive, and is now nearly seven years of age. This girl was much smaller than any of the others, but nearly perished, either from pressure upon the cord, or from the traction upon the neck, made by the midwife in attendance. In the third and tenth labours, a physician was called, and forceps were applied. In the other eight labours, a midwife was in attendance, and no instrumental interference was necessary.

IRISH GRADUATES' ASSOCIATION.

THE annual meeting of this Association was held at the Lion Hotel, Cambridge, on Wednesday, August 11th; G. E. PAGET, M.D., F.R.S., President, in the Chair.

The PRESIDENT proposed, and Mr. J. STEWART seconded, the adoption of the annual report of the Council. It was as follows.

"Your Council have to report that the second annual meeting was held at Cork, on Wednesday, August 6th, 1879, under the Presidency of W. MacCormac, Esq., of St. Thomas's Hospital, and the annual dinner at the Imperial Hotel on the same evening. The metropolitan dinner took place at the Holborn Restaurant, on St. Patrick's Day, March 17th, 1880. Your Council have to report the loss, by death, of two members, Dr. Arthur Leared, President-elect, and Dr. Gerrard, of West Bromwich. Two members have resigned: one has refused to receive the notices, his name has therefore been removed. There are now one hundred and eighty-nine members. In consequence of the increased numbers, the following gentlemen have been added to the Council: Drs. Griffith, Gerald Yeo, and Mc Beath. We have to acknowledge the assistance we have received from the retiring President, which has materially strengthened the position of the Association. Your Council recommend that a donation of one guinea should confer a life membership, without further subscription. We are compelled to point out to members the necessity of sending their subscriptions, the very small amount seems to create a difficulty in the collection. A large number of subscriptions remain unpaid. We urgently call on those who have not paid, to forward the amount as soon as possible. Your Council report, for the information of members, that the King and Queen's College of Physicians in Ireland has forwarded the new regulations for the grade of member to all its licentiates whose address was known at the College, and also to all medical and surgical institutions and hospitals in Great Britain. A large number of members have accepted the new grade, which is conferred (without expense) on previous licentiates. Your Council desire to express sympathy with the members of the Queen's University in Ireland, on the disestablishment of their Alma Mater. The resolution passed at the annual meeting was received and acknowledged by the Home Secretary. The ultimate fate of the Queen's University graduates is not yet decided. Your Council strongly recommend the members to observe the Parliamentary reports on medical affairs, and to urge on their own Representatives the duty of opposing obnoxious measures. By this means much good may be done. Your Council have not yet availed themselves of your authority to take any steps with regard to the medical Bills now before the House of Parliament, as the state of matters in the House precluded the chance of any legislative proceedings during the present session. Your Council again draw your attention to the continued attempts that are being made by local authorities to make the registration of infectious diseases compulsory on medical practitioners under a penalty, and urge you to continue to protest against this by every available means, as derogatory to the profession, and a distinct infringement of the professional confidence hitherto existing between the profession and the public. In concluding this report, your Council look back on the past year as a most successful one; and, there is every reason to believe that the establishment of this Association has supplied a want which has long existed, and we are confident that the importance of the Association will increase. We finally congratulate the members on the place of meeting selected for this year (Cambridge,) and for having secured such an excellent President (G. E. Paget, M.D., F.R.S.)."

The Treasurer, Dr. FOSTER, presented his report, showing a favourable balance.

A notice on Vaccination, by Dr. Vance, was postponed in his absence.

A list of new members (fifty-five) elected by the Council was read.

It was proposed by Dr. PAGET, and seconded by Dr. DUFFEY: "That J. T. Banks, M.D., Physician to the Queen in Ireland, be elected President for next year."

The places and dates of meetings were referred to the Council.

Votes of thanks to the Committee of Council of the British Medical Association, to the Reception Committee, and to the Honorary Local Secretaries, for their kind assistance, were passed.

The dinner took place, on August 12th, at the Lion Hotel, Cambridge, which was largely attended. Dr. G. E. PAGET, F.R.S., Regius Professor of Medicine in Cambridge, President of the Association, occupied the chair. Among the visitors were Sir James Paget, Dr. Gross, Dr. Donders, Dr. Brown-Séquard, Dr. Acland, Dr. Alfred Carpenter, Professor Lister, the Rev. Dr. Haughton, and several ladies. The members of this Association include female graduates, two of whom—Mrs. Marshall, M.D., and Miss Pechey, M.D.—were present at the dinner.

The CHAIRMAN, in proposing the health of "The Guests", said they were honoured with the presence of the Vice-Chancellor of the University; the President-elect of the International Medical Congress; the President of the Medical Council of the United Kingdom; the President of the Council of the British Medical Association, and many others, whose presence was both an honour and a pleasure to them. It was proposed to drink their health in detachments. The health which he had now to propose was that of guests who came from abroad, and the first name he would couple with that toast was the name of Dr. Gross, who, though a stranger to many, was certainly not a foreigner, though he came from a distance of some thousands of miles across the Atlantic. Those who had met him before were glad enough to have the opportunity of shaking hands with him; and all welcomed him as a worthy representative of medical science in America, and doubly welcomed because what was an honour to America reflected some degree of honour on the old mother country. Another name he wished to mention in connection with this toast was that of Dr. Brown-Séquard, representing the school of medicine and physiology of Paris, and a Knight of the Legion of Honour, whom he regarded as representing not the medical school only, but, in a larger sense, the French people. Dr. Brown-Séquard was welcome, not merely on the merits of those whom he came to represent, but much more on his own merits, on his own great scientific eminence, and his world-wide reputation. There was another guest whose health they should drink in connection with this toast, and with equal satisfaction; and that was Dr. Donders. It was difficult, in the presence of these gentlemen, to speak in terms which would be equal to their merits; and he would not say all that might be said of Dr. Donders, who represented a nation who, in the arts of peace, had been rivals to the greatest nations of Europe. They welcomed him as one who had done much for our knowledge of those organs through which light was admitted, and who had helped them to see light which had never before been seen; and where could he be more welcomed than by the University of Newton and Young.

Dr. GROSS said he felt deeply touched with the kind words which the Chairman had spoken on behalf of him, his profession, and his country. He need not say how delighted he was at being present. He had felt at first somewhat embarrassed that he should be called upon to make any remarks whatever on this occasion: but a gentleman sitting on his left, gifted with a power of eloquence, had remarked to him, "As to the ladies, they are perfectly harmless"; but he begged leave to differ with his friend Sir James Paget on that subject. He (Dr. Gross) had found them always most highly agreeable, but rather dangerous. He came from a country which could lay claim to five millions of Irishmen, and there was plenty of room for many more. He loved the Irish people for their patriotism; and he loved them for the beauty, the accomplishment, and the culture of their women. Many of his earliest professional recollections were intimately associated with Irish physicians. He recollected, when quite a boy in his profession, with what benefit and what interest he read many works emanating from the Dublin press. He had been charmed with the writings of the late lamented Stokes and the like lamented Graves—names engraved in the heart of every Irishman who knew anything of medicine. He saw present that illustrious *savant* Dr. Brown-Séquard, whose name was known throughout the civilised world, and he could say that his reputation was as great upon the other side of the Atlantic as upon this.

Dr. BROWN-SÉQUARD, in responding to the toast, said his grandmother was an Irishwoman, and so he possessed a little of that blood. There was no country in the world where such a cordial welcome could be obtained by foreigners as here, and with this, his friend Dr. Donders would agree.

Dr. DONDERS wished to endorse the words of the previous speakers, to which he did not feel that he could add.

Mr. W. MACCORMAC said there was one thing which must strike them, as Irishmen, as the result of their dinner meetings, that those who came amongst them, if they might judge by their words, had one longing, that they might be in the fortunate position of being Irishmen. The toast which had been placed in his hands to propose, was that of the "Home Guests". He hardly knew what that meant. He supposed it to mean that all their guests felt very much at home. [*Hear, hear.*] He saw for the first time at their meeting ladies present, and he felt somewhat in the same position as Dr. Gross. He should ask the Vice-Chancellor of the University, whose princely hospitality they all knew, to respond; as also his friend Professor Lister, whom they all honoured and esteemed. This toast was drunk with three times three.

The VICE-CHANCELLOR said he could not claim to be an Irishman by descent, but he was true enough Englishman to feel a deep interest in all that concerned Ireland. He hoped one result of that meeting would be, that they would be drawn more closely together. He thought they would all agree the toast had been most happily worded, and he believed the home guests had felt most thoroughly at home that day; and on behalf of himself and those whom he had the honour to represent, he desired to thank them most cordially.

Mr. LISTER said he never dined in the presence of Irishmen without feeling an irrepressible sense of envy for that natural gift of eloquence which had been bestowed upon them. He could not but feel how very successful the British Medical Association had been in enlisting so large a share of the members of this Association from Ireland. He was quite sure the more Irish and the English met together, the greater would be the feeling of mutual respect and affection, and he felt how glorious a freemasonry was that of their profession.

Dr. FOSTER said that he had to propose the toast of "Our Elder Brother." When he first read the words, "elder brother" he felt a pang of regret that it was not an elder sister whose health he was about to propose, but after a little consideration he came to the conclusion that the gallantry of Irishmen could not associate the word elder with the name of lady. An elder brother was a most useful institution. Their elder brother was the British Medical Association, and they found it to their advantage to meet under the protective influence of this elder brother, and so year by year they had gone on and prospered. With this toast, "Our Elder Brother", he desired to couple the names of Dr. Carpenter, the worthy President of the Council, and Mr. Hart, the editor, who had filled that great position so ably.

Dr. CARPENTER, responding, said that he had been in Ireland and knew the feeling of hospitality and geniality, and how it flowed over with love towards a medical brother, elder or younger. He thanked them for the warm reception accorded to the British Medical Association. The position of that Association was one of considerable importance, and there was a fitness of things after all in the fact that a simple practitioner should rise up occasionally to respond for that important body. When they saw the gentlemen who had honoured that Association with their presence that day, and had enabled their Irish brethren to welcome them as their guests, it showed at any rate that the British Medical Association was doing some good; it was doing a wonderful work in the country among medical men, which must tell to the advantage of the profession and the public; for in every county in this kingdom there were Branches of their Association, and members met together and were made to know and respect each other, instead of backbiting and talking against one another, which had been too often the case before they were brought together by the British Medical Association. He would wish the Irish graduates who had banded themselves into an Association for a similar purpose, "God speed" in their purpose. There was their meeting year by year in the large towns, and the advantage of being brought face to face with those eminent men from all parts of the world, who came over to their meetings to assist them, and, as steel sharpened steel, so to give them the benefit of their knowledge, and so to weld the medical profession into one great body, which he trusted hereafter would be found to have an influence on the individual members of it, to raise them in their profession. That was the work the British Medical Association was doing, and he felt sure if they were followed in that work by the Irish graduates, they would have no reason to be afraid, but rather to welcome that society, and wish them God speed in their work. He thanked them for the kind way in which they had received the British Medical Association.

Mr. ERNEST HART said the watchword of the British Medical Association was, *fortior unitate;* and to that, the Irish Medical Graduates' Association seemed to have added *felicior sodalitate.* The Royal College of Physicians in Ireland had, first among British examining bodies, followed foreign precedents in admitting English female graduates to full medical privileges, as the University of London had since; and some of those graduates were to-day present. Those who saw the graduates might feel disposed to say once more, *Non Angli sed Angeli.* The British Medical Association was this year a wanderer, and had not yet settled its place of meeting for next year. The Irish Medical Association had cast in its lot with them, and determined to follow them wherever they might go. Might these close ties of friendship only grow stronger with time!

The PRESIDENT proposed the toast of "Ireland", or rather "Old Ireland", the land of the saints. Ireland had sent forth her sons to carry Christianity and learning to most parts of Europe. She had given us our Arthur Wellesley, and Lawrence, and Garnet Wolseley. She had given us the overflow of her wit and eloquence in Swift and Moore, Burke and Grattan; and in art, Foley and Mulready, also Roland Hamilton, and Ross, father and son, not to mention the two names of Graves and Stokes. Ireland was united to England, not merely by formal bonds of legislative union, but by ties of family and friendship, which did and must year by year become closer and more numerous, not to be parted while the world lasted. He felt some difficulty in

asking someone to respond to this toast. There were present one or two happy-looking men who would be very glad to tell them that, though they were not Irish, they had done the best they could under the circumstances, and had had the good taste and good fortune to secure their better halves out of Ireland. He could not give the honour either to the English or the Scotch; he must, of course, do justice to Ireland. It must be a gentleman who represented the University, and there was one whom they all knew, and how many things he did well; and, whenever he had been in his presence, he had always forgotten his many "ologies", because they were outshone by his wit and his eloquence. They knew to whom he referred. He would associate with the toast of Ireland the name of the Rev. Dr. Haughton.

The Rev. Dr. HAUGHTON, in responding, said that he had often been called upon in mixed company to defend Ireland, not often to praise her. It struck him as a peculiar feature with the speakers who had gone before him, perhaps, in consequence of the excellence of their 7s. 6d. dinner, that they were very anxious to make themselves out Irish because their grandmothers were Irishwomen; but he might mention, in the presence of the Rev. Vice-Chancellor, that at a recent meeting of the Orientalists they determined, to the satisfaction of all reasonable persons that the language which was spoken by Adam and Eve in Paradise was Irish. He appealed to the Rev. Vice-Chancellor of the University if he was not correct, and they need not have gone such a roundabout way to prove they were Irishmen, for they were all Irish. Ireland was called, in the beautiful language of her own country, Shan van Voght, "the poor old woman"; they were very old and respectable, because they had come down from the race who spoke their language in Paradise, but they were "the poor old woman" because they had been badly used; and if they were to touch upon politics, he could give them many reasons why Ireland considered herself the Cinderella of the family. He believed the time would come when England would acknowledge the influence of Ireland, and of Irish eloquence, not directly from Ireland, but through the larger Ireland being established in the United States. Some of those present had the luck to be born in the South of Ireland, he meant no disrespect to Belfast, but certainly the best part of Ireland was the south, the north of Ireland next; he had the good luck to be born in the south of Ireland. Now he came to the most difficult part of his task, and that was to propose the health of the ladies, the ladies were present partly for their own pleasure and gratification, but much more for theirs; there were the lay ladies and the professional ladies, and he wished most heartily to welcome both, and he thought it would be a great improvement if they always had ladies present at their meetings.

Dr. THOMPSON, Honorary Secretary (Leamington), would say, from his knowledge of mankind and womankind, that ladies never showed better skill than in the selection of their ambassadors; and the ladies had held a meeting that day, at which it was proposed, seconded, and carried, that they would do themselves the honour of asking Sir James Paget kindly to respond to this toast for them.

Sir JAMES PAGET said he wished he could speak with half the skill that any one of the ladies could have spoken; but they had acted with that cleverness which belonged to them; for, when they intended to put a difficulty before a man, they did not tell him of it beforehand. But, as members of the profession, they should learn that one of their first duties to the members of the profession was not to lead them into a difficulty. He had to return thanks, as he understood it, for the honour they had done them in drinking their health; but, to assume his own sex, he thought the honour was far greater towards them than it could be to the ladies. If he might be allowed the supposition, he should think the ladies were glad to see how entirely harmless men were when they were met together, and when left to their own diversions. He thought he might say on their behalf that they had felt some measure of gratification at the reception which had been accorded to them, and a pleasure which they would like to see repeated on any future occasion. He trusted the day was not far distant when they would not give this honour of responding to their toast to anyone, but would, with all honour and female grace, assume it themselves.

Dr. ACLAND, in proposing the health of the President, said they had acted most wisely in their choice of a President; he was a person of sterling qualities, scientific and practical; a real true Englishman, which meant a man with not only a head, but a heart; and such a man was Dr. George Paget.

The health of the President was drunk with three times three.

The PRESIDENT responded.

Dr. ROBERT MACDONNELL proposed the toast of "Our Next Meeting", with which he coupled the names of the energetic Secretaries, Dr. Daniell and Dr. Thompson.

Drs. DANIELL and THOMPSON briefly responded; and a most enjoyable evening was brought to a close.

ASSOCIATION INTELLIGENCE.

EAST ANGLIAN BRANCH.

THE annual meeting of this Branch will be held at Lowestoft, on Friday, October 8th.

It is requested that notice of intention to read a paper or other communication may be forwarded to Dr. Elliston by September 14th.

J. B. PITT, M.D., Norwich,
W. A. ELLISTON, M.D., Ipswich, } *Honorary Secretaries.*

PROCEEDINGS OF COUNCIL.

Meeting of Council, 1879-1880: *August 10th*, 1880.

AT a meeting of the Council of 1879-80, held at the Guildhall, Cambridge, on Tuesday, August 10, 1880—Present: Dr. A. Carpenter, President of Council, in the Chair; Mr. W. D. Husband, Treasurer; Dr. J. T. Arlidge, Mr. T. J. Bailey, Mr. A. Baker, Mr. J. W. Baker, Dr. T. W. Barron, Mr. T. W. Benfield, Surgeon-Major Boileau, Dr. Borchardt, Dr. J. B. Bradbury, Dr. H. Briggs, Dr. Chadwick, Dr. A. Davidson, Mr. C. Davidson, Mr. H. N. Davies, Dr. W. Dickson, Dr. C. Drage, Dr. Duffey, Dr. J. W. Eastwood, Dr. W. H. Fitzpatrick, Dr. B. Foster, Dr. E. L. Fox, Dr. J. H. Gibson, Dr. W. G. Grigg, Dr. J. Harker, Rev. Dr. Haughton, F.R.S., Dr. A. Henry, Dr. Hensley, Mr. W. Hoar, Dr. C. Holman, Prof. G. M. Humphry, F.R.S., Dr. Macnaughton Jones, Dr. J. Kirk-Duncanson, Mr. H. Lodge, Mr. F. Mason, Dr. D. H. Monckton, Dr. W. W. Moore, Mr. G. B. Morgan, Mr. H. M. Morgan, Mr. G. W. Mould, Mr. R. H. B. Nicholson, Dr. G. E. Paget, F.R.S., Dr. C. Parsons, Dr. G. B. Philipson, Mr. H. Power, Dr. J. Rogers, Dr. T. L. Rogers, Mr. S. W. Sibley, Dr. Sieveking, Mr. H. Stear, Dr. W. Stokes, Dr. A. P. Stewart, Mr. T. Sympson, Dr. J. Thompson, Dr. E. H. Vinen, Dr. W. F. Wade, Dr. E. Waters, Dr. W. Webb, Mr. C. G. Wheelhouse;

The minutes of the last meeting were read, and found correct.

The Annual Report was then placed before the meeting by the President of the Council, who stated that a copy had been sent to every member of the Council a fortnight past.

Resolved: That the Annual Report of the Council of 1879-80 be taken as read.

Resolved: That the Annual Report for the year 1879-80, together with the Financial Statement for the year ending 31st December 1879, be received and adopted as the Annual Report of the Council, and laid before the general meeting of this evening.

Resolved: That the cordial and sincere thanks of the Council of the Association be given to Mr. W. D. Husband, the Treasurer, for his labours in the welfare of the Association.

Meeting of Council, 1880-1881: *August 11th*, 1880.

At a meeting of the Council of 1880-1, held at the Guildhall, Cambridge, on Wednesday, August 11, 1880—Present: Dr. Alfred Carpenter, President of Council, in the Chair; Mr. W. D. Husband, Treasurer; Dr. Acland, F.R.S., Mr. T. J. Bailey, Mr. J. W. Baker, Dr. Barron, Mr. T. W. Benfield, Mr. E. C. Board, Surgeon-Major Boileau, Dr. Borchardt, Dr. Bowles, Dr. H. Briggs, Mr. S. W. Broadbent, Dr. Crichton Browne, F.R.S.E., Mr. J. Burt, Mr. W. Cadge, Dr. W. Carter, Dr. J. P. Cassells, Dr. Chadwick, Dr. W. B. Cheadle, Mr. H. N. Davies, Mr. C. Davidson, Dr. Dickson, Dr. C. Drage, Dr. G. F. Duffey, Dr. J. W. Eastwood, Dr. J. Eddison, Mr. G. C. Edwards, Dr. W. A. Elliston, Mr. Everett, Dr. B. Foster, Dr. W. H. Fitz-Patrick, Dr. W. S. Gervis, Dr. J. H. Gibson, Mr. A. Godson, Mr. R. V. Gorham, Mr. J. Gould, Dr. W. C. Grigg, Dr. Harker, Mr. C. Harrison, Rev. Dr. Haughton, F.R.S., Dr. A. Henry, Mr. W. Hoar, Dr. S. Holdsworth, Dr. C. Holman, Mr. J. R. Humphreys, Mr. A. Jackson, Dr. Talfourd Jones, Dr. J. R. Kealy, Mr. J. Kilner, Dr. Lanchester, Dr. Lunn, Dr. R. Macdonnell, F.R.S., Dr. Matterson, Dr. J. Meredith, Dr. J. Moore, Dr. H. W. Moore, Mr. G. B. Morgan, Mr. H. M. Morgan, Mr. G. W. Mould, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. G. H. Philipson, Dr. Rees Philipps, Mr. H. Power, Mr. A. Prichard, Mr. C. Pozey, Dr. A. Ransome, Mr. W. Rivington, Dr. Lloyd Roberts, Dr. W. Roberts, F.R.S., Dr. Roden, Dr. J. Rogers, Dr. T. L. Rogers, Dr. E. Seaton, Mr. S. W. Sibley, Dr. A. P. Stewart, Dr. Strange, Dr. H. Sutherland, Mr. T. Sympson, Dr. Taylor, Mr. T. P. Teale, Mr. R. Tiffen, Dr. Jabez Thomas, Dr. A. Thomson, Dr. Totherick, Dr. T. Trollope, Dr. E. Vinen, Dr. W. F. Wade, Mr. J. R. Wathen, Dr. W. Webb, Mr. C. G. Wheelhouse, Mr. J. Wood, F.R.S., Mr. W. B. Young;

The minutes of the last meeting were read, and found correct.

The twenty gentlemen nominated by the Committee of Council for

election as members of the Committee of Council having been placed before the meeting, Dr. Joseph Rogers was appointed Scrutineer. A ballot was taken, and the same were declared to be elected for the year 1880-81, as follows, viz.: Dr. T. C. Allbutt, F.R.S., Dr. L. Borchardt, Dr. R. Farquharson, M.P., Dr. B. Foster, Dr. E. Long Fox, Dr. C. Holman, Mr. J. R. Humphreys, Dr. D. J. Leech, Mr. C. Macnamara, Mr. F. E. Manby, Mr. Frederick Mason, Mr. R. H. B. Nicholson, Dr. G. H. Philipson, Mr. Henry Power, Dr. E. H. Sieveking, Mr. Henry Stear, Dr. A. P. Stewart, Dr. W. F. Wade, Dr. A. T. H. Waters, Mr. C. G. Wheelhouse.

The subject of the Annual Meeting for the year 1881 was then considered.

Resolved: That it be remitted to the Committee of Council to consider the place of meeting of 1881, and that it be authorised to pay the expenses of such meeting, if required.

Dr. Strange announced the intention of the Worcester Branch to invite the Association to that city for the year 1882, being the fiftieth anniversary of the Association.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

Meeting of August 10th, 1880.

At a meeting of the Committee of Council held at the Guildhall, Cambridge, on Tuesday, August 10th, 1880. Present—Dr. A. Carpenter, President of Council, in the Chair; Professor Humphry, President Elect, Mr. W. D. Husband, Treasurer, Dr. T. C. Allbutt, F.R.S., Dr. Bushell Anningson, Dr. J. T. Arlidge, Mr. A. Baker, Mr. T. W. Barron, Dr. L. Borchardt, Dr. J. B. Bradbury, Dr. J. K. Burt, Dr. C. Chadwick, Dr. A. Davidson, Dr. G. F. Duffey, Dr. B. Foster, Dr. E. Long Fox, Dr. J. H. Gibson, Dr. W. C. Grigg, Mr. A. Jackson, Mr. F. Mason, Dr. E. Morris, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. G. H. Philipson, Dr. T. L. Rogers, Dr. Sieveking, Mr. H. Stear, Dr. A. P. Stewart, Dr. W. F. Wade, Mr. C. G. Wheelhouse.

The minutes of the last meeting were read, and found correct.

Resolved: That Mr. Cutts, whose name appears upon the circular convening the meeting, be elected a member of the Association.

Resolved: That the 102 gentlemen whose names appear on the circular convening the meeting, and the twenty-four whose names appear upon the supplementary list subsequently issued, be and they are hereby elected members of the Association.

Read letter from Dr. Louis Henry, of Melbourne, asking for the recognition of the Melbourne and Victoria Branch of the Association, and forwarding the forms of applications for election of twenty-three gentlemen, signed by three members of the Association.

Resolved: That the Melbourne and Victoria Branch, having complied with the by-laws of the Association, be, and it is hereby recognised as a Branch of the British Medical Association.

Resolved: That the Committee of Council desire to offer their warm welcome to the Melbourne and Victoria Branch, now formally recognised, and trust that the new Branch may not only be the means of cementing the good feeling which already exists between the members of the medical profession in England and the Colony of Victoria, but may also facilitate the interchange of ideas, and so prove of value in the advancement of medical science, and the interests of the medical profession. Resolved also, that the best thanks of the Association be given to Dr. Louis Henry and others for their successful promotion of the Branch.

The Annual Report and the alterations of the Sub-committee appointed to draft it were then considered.

Resolved: That the same be approved, with the alteration of £1000 to £2000 invested since the first of January last, and that it be placed before the Council of to-day.

Meeting of August 12th, 1880.

At a meeting of the Committee of Council held at the Guildhall, Cambridge, on Thursday, August 12th, 1880. Present—Dr. A. Carpenter, President of Council, in the Chair; Mr. W. D. Husband, Treasurer, Dr. T. C. Allbutt, F.R.S., Dr. L. Borchardt, Dr. J. W. Cousins, Dr. G. F. Duffey, Dr. W. A. Elliston, Dr. B. Foster, Dr. E. Long Fox, Dr. J. H. Gibson, Dr. W. C. Grigg, Dr. C. Holman, Mr. J. R. Humphreys, Mr. A. Jackson, Dr. D. J. Leech, Mr. C. Macnamara, Mr. F. E. Manby, Mr. F. Mason, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. G. H. Philipson, Dr. J. B. Pitt, Mr. H. Power, Dr. Rees-Philipps, Mr. H. Stear, Dr. W. Strange, Dr. W. F. Wade, Dr. E. Waters, and Mr. C. G. Wheelhouse.

The minutes of the last meeting were read and found correct.

Resolved: That the twenty-one gentlemen whose names appear in the Daily Journal of the 11th and 12th inst. be hereby elected Members of the Association.

Resolved: That the gentlemen whose names are as follows, be the Journal and Finance Committee for the ensuing twelve months: Dr. Alfred Carpenter, President of Council; Mr. W. D. Husband, Treasurer; Mr. A. Baker, Dr. L. Borchardt, Dr. C. Chadwick, Dr. R. Falconer, Dr. Foster, Dr. C. Holman, Mr. F. E. Manby, Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. W. F. Wade, Dr. E. Waters, and Mr. C. G. Wheelhouse.

Meeting of August 13th, 1880.

At a meeting of the Committee of Council held at the Guildhall, Cambridge, on Friday, August 13th, 1880—Present: Dr. Alfred CARPENTER, President of the Council, in the Chair; Mr. W. D. Husband (Treasurer), Dr. L. Borchardt, Dr. G. F. Duffey, Dr. B. Foster, Dr. W. C. Grigg, Mr. J. R. Humphreys, Dr. D. J. Leech, Mr. R. H. B. Nicholson, Dr. Charles Parsons, Dr. G. H. Philipson, Mr. Henry Power, Dr. W. Strange, Dr. W. F. Wade, Dr. Edward Waters, Mr. C. G. Wheelhouse.

The minutes of the last meeting were read and found correct.

Read resolution of the General Meeting of members of the 12th instant, of which the following is a copy:

"That it be remitted to the Committee of Council to consider the place of meeting of 1881; and that it be authorised to pay the expenses of such meeting, if required."

Read letters from Mr. Barrow and Dr. Alfred Sheen.

Resolved: That the President of the Council, the Treasurer, Mr. Nicholson, and Dr. Borchardt, be a sub-committee to carry out the resolution of the general meeting, and to report to a future meeting of the Committee of Council.

The TREASURER reported that the sum of £539 13s. 4d. had been paid over to Messrs. Robarts, Lubbock and Company in the name of the Association, on account of the Hastings Memorial Fund.

Resolved: That the Treasurer be authorised to invest the sum of £539 13s. 4d. in a first-class Railway Debenture Stock.

CORRESPONDENCE.

HISTORY OF OVARIOTOMY.

SIR,—Writing to you on June 30th last, Dr. Clay said: "Mr. Wells and Dr. Keith, as well as very many others, witnessed my operations long before any of them operated themselves." Again, in a letter published at page 110 of your present volume, Dr. Clay asserted that I visited him in 1857, before I had operated myself, and said how gratified I was "to see the operation for the first time". At page 151, my positive contradiction of the statement was given, and my statement that I never saw Dr. Clay operate until March 19th, 1863, after I had operated myself on fifty-eight women. In the letter published in your last number, Dr. Clay fails to acknowledge his mistake, and attempts to throw doubt on my assertion because I attempted to express myself as courteously as possible. I am compelled, therefore, now to say that Dr. Clay's statement of my having seen him operate before 1863 is untrue.—I am, yours, etc.,

T. SPENCER WELLS.

3, Upper Grosvenor Street, August 25th, 1880.

UNPLEASANT ODOURS FROM DUST-BINS.

SIR,—No one who passes through the streets of London can fail, especially in hot weather, to notice from time to time most unpleasant odours in localities where they might be least expected. I should say that these indescribable odours, which remind one more of the pig-tub than anything else, are particularly frequent in aristocratic quarters. Whether the agitation that attributes the offensive smells in London streets to the condition of the streets themselves is justified or not, I beg to draw the attention of your readers to the undoubted fact, that many of the vile odours complained of are due to the extreme carelessness of housekeepers in regard to their dust-bins, which are constantly made the receptacles of refuse that ought to be burnt by the cook, or be disposed of before it becomes a heap of reeking putrefaction. I think that the observer of London life will be able to confirm the remark, that wealth and education do not necessarily impart to ladies a knowledge of the condition of the basement of their house. The management of the dust-bin is an important item in the sanitary, or unsanitary, condition of houses and of the streets they adjoin.—I am yours, etc.,

E. H. SIEVEKING.

THE Government of India has offered a prize of £100 for the best manual of hygiene for the use of British soldiers in India. Competitors must send in their primers on or before March 31st, 1881.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following candidates have passed the Preliminary Scientific M.B. Examination.

First Division.

Aikin, William Arthur, Guy's Hospital.
Alcock, Samuel King, High School, Newcastle-on-Tyne.
Allen, Henry, Private study.
Anderson, George Elliott Caldwell, South African College and Guy's Hospital.
Andrews, Charles, University College.
Barratt, John Oglethorpe Wakelin, University College.
*Bowes, William Henry, Epsom College.
Bowman, Henry Claxton, Owens College.
Brock, James Harry Ernest, University College.
Carr, John Walter, University College.
Cave, Edward John, St. Bartholomew's Hospital.
Chapman, Harry Cecil, St. Bartholomew's Hosp. and Royal School of Mines.
Child, Herbert, Yorkshire College, Leeds.
Dunn, Louis Albert, Guy's Hospital.
Edmunds, Percy James, University College.
Flemming, Percy, University College.
Fowler, Alfred Henderson, Guy's Hospital.
Glover, John Philip, St. Thomas's Hospital.
Guy, William, University of Edinburgh.
Halstead, George Ezra, B.A., Guy's Hospital.
Hart, Herbert Wheatley, Westminster and Guy's Hospitals and Birkbeck Inst.
Hurst, Walter, Owens College.
Innes, Charles Barclay, University College.
Jones, Frederick William Caton, St. Bartholomew's Hospital.
Jones, Hugh Edward, Guy's Hospital.
Jones, Samuel Cromwell, University College.
Lyndon, Arnold, St. Bartholomew's Hospital.
Marriott, John, Charing Cross Hospital.
Mathews, Frank Edward, Owens College.
Mumby, Langton Philip, St. Thomas's Hospital.
*Ransom, William Bramwell, University College.
Robinson, Henry Betham, St. Thomas's Hospital.
Shipley, Arthur Everitt, St. Bartholomew's Hospital.
Thane, Edgar Herbert, University College.
Thomas, Benjamin Wilfred, Charing Cross Hospital.
Watson, William Ivens Buswell, Guy's Hospital.
Wells, George Lee, Yorkshire College, Leeds.
Williams, Reginald Muzio, St. Thomas's Hospital.
Williamson, Richard Thomas, Owens College.

Second Division.

*Adami, John George, Owens College.
*Adie, Joseph Rosamond, University College.
*Andrews, Edward Collingwood, University College.
Arkle, Charles Joseph, University College.
Bailey, William Henry, St. Bartholomew's Hospital.
Barnett, Lawrence, University College.
*Biden, Charles Walter, Charing Cross Hospital.
Black, Robert, London Hospital.
Bohrsmann, Matt. C. R., B.A.Syd., University College.
Bown, Arthur Thomas, St. George's Hospital.
Buckmaster, George Alfred, St. George's Hospital.
Bullock, Thomas Warren, St. Thomas's Hospital.
Calvert, James, St. Bartholomew's Hospital.
Carpenter, George Alfred, St. Thomas's Hospital.
Castle, Bernard, St. Bartholomew's Hospital.
*Childe, Letterstedt Frederick, Guy's Hospital.
Cocking, William Tusting, University College.
Crowther, Frederick William, University College, and Private study.
Dreaper, William Grey, Owens College.
Downing, Charles, St. Bartholomew's Hospital.
Earle, Walter George, University College.
Fisher, Henry Holdrich, Epsom College.
Frames, Alfred Cromwell, St. Bartholomew's Hospital.
France, James Mead, Guy's Hospital.
Francis, Alfred George, University College.
Freeland, Freeland John, King's College.
*Gow, William John, Owens College.
*Grant, William Francis, University of Edinburgh.
*Griffiths, William, University and Regent's Park Colleges.
Habershon, Samuel Herbert, Trinity College, Cambridge.
Hart-Smith, Franke Chamberlain, University College.
*Helme, Thomas Arthur, University College and University of Edinburgh.
Kauffmann, Otto Jackson, Owens College.
Larkin, Frederick Charles, Liverpool School of Medicine.
Lawson, Robert, St. Thomas's Hospital.
Leach, Priestley, Owens College.
Macartney, Edward Kendrick, University College.
M'Cabe, William Alexander Bowes, University College, and Victoria College, Jersey.
Melson, George Hyde, Private tuition.
Meyer, Charles Hartvig Lomo, Guy's Hospital.
Moss, Arthur James, Owens College.
*Mukerji, Phani Bhushan, University College.
Muspratt, Charles Drummond, Guy's Hospital.
Napier, Francis Horatio, St. Bartholomew's Hospital
O'Connor, Edward Kersey, University College.
Parker, Herbert, St. Bartholomew's Hospital.
Pearson, James, University College.
Pereira, Conrad, University College.
*Perez, George Victor, University College.
Pollard, George Richard M'Intosh, Guy's Hospital
Purnell, Purnell, Guy's Hospital.
Roome, Stanley Molesworth, Epsom College.
Shilito, Henry, Queen's College, Birmingham.
Spencer, Walter Baldwin, Old Trafford School and Owens College.
*Stevenson, George, St. Bartholomew's Hospital.
Storrar, William Morrison, University of Edinburgh.
Taylor, Charles Henry, King's College.
Taylor, Joseph, University College.
Turner, Philip Dymock, University College.
Vince, John Foster, Queen's College, Birmingham.
Voelcker, Arthur Francis, University College.
Walsh, John Henry Tull, Westminster Hospital.
Warrick, Frederic Walmsley, Private study.
Weighell, Christopher William, University College.
Williams, Patrick Watson, University College, Bristol, and Private study.
Williams Freeman, John Peere, University College.

These candidates have also passed in the Mathematics of the First B.Sc. Examination, and are now admissible to the Second B.Sc. Examination.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 26th, 1880.

Bertolacci, John Hewetson, Park Road, New Wandsworth.
Collins, Edward Tenisen, Bridge Street, Wednesbury.
Parker, Hibbert Sullivan, Disraeli Road, Putney.
Thomas, James Lloyd, Beaumaris, North Wales.

The following gentlemen also on the same day passed their Primary Professional Examination.

Ranson, William Edward, Middlesex Hospital.
Russell, Michael William, Middlesex Hospital.

At the recent Examination for the prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were :

1. Arthur Wm. Wheatly, student of St. Bartholomew's Hospital, a gold medal.
2. William Watson, student of Guy's Hospital, a silver medal and a book.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ABINGDON UNION—Medical Officer and Public Vaccinator to No. 3 District. Salary, £130 per annum. Applications, with testimonials, on or before September 11th.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, near Gloucester—Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

BETHLEM HOSPITAL—Two Resident Medical Students. Applications with testimonials, before October 9th.

BOYLE UNION—Medical Officer for Keadue Dispensary District. Salary, £ per annum, with £ yearly as Medical Officer of Health, registration and vaccination fees. Election on the th instant.

BRIDGWATER INFIRMARY—Dispenser. Salary, £50 per annum, with , lodging, and washing. Applications, etc., to the Honorary Secretary.

CAMBRIDGESHIRE COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and attendance. Applications, etc., on or before September 27th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, before October 10th.

DEVON COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £150 per annum, with board and lodging. Applications, with testimonials, on or before September 7th.

DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich—Dispenser. Salary, £40 per annum. Applications, etc., on or before September 4th.

EVELINA HOSPITAL FOR SICK CHILDREN—House Surgeon. Salary, £70 per annum, with board, washing, and residence. Applications, with testimonials, on or before September 21st.

FLINTSHIRE DISPENSARY—House-Surgeon. Salary, £100 per annum. Applications, with testimonials, to the Secretary on or before September 7th.

LIVERPOOL INFIRMARY FOR CHILDREN—House-Surgeon. Salary, £80 per annum, with board, etc.

NEW ROSS UNION—Medical Officer for Fethard Dispensary District. Salary, £100 per annum, exclusive of sanitary, registration, and vaccination fees. Election on September 7th.

NEWRY UNION—Medical Officer for Mountnorris Dispensary District. Salary, £120 per annum, with £15 per annum as Medical Officer of Health, registration and vaccination fees. Election on September 9th.

RIPON DISPENSARY—Resident House-Surgeon and Dispenser. Salary £ per annum, with furnished apartments, etc. Applications, with testimonials, to the Honorary Secretaries.

*ST. MARYLEBONE UNION—Medical Officer for the St. John's Registration District. Salary, £120 per annum. Applications, with testimonials, on or before September 10th.

WELLINGTON UNION—Medical Officer to the 1st and 2nd Districts and Workhouse.

WESTERN GENERAL DISPENSARY, Marylebone Road—Honorary Surgeon-Dentist. Applications, with testimonials, to the Secretary on or before September 11th.

WESTERN OPHTHALMIC HOSPITAL—Clinical Assistant.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W.—Assistant Physician. For particulars, apply to the Honorary Secretary.

WIMBORNE AND CRANBORNE UNION RURAL SANITARY AUTHORITY.—Medical Officer of Health. Applications, with testimonials, on or before September 16th.

YORK FRIENDLY MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary, £130 per annum. Applications, with testimonials, to the Secretary, before September 14th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

MACDONALD, Keith H., M.D., appointed Surgeon to the Prison, Cupar Fife.

FICHERST, Charles S., M.R.C.P.Ed., appointed Surgeon to the Cottage Hospital, Petersfield, vice T. Moore, F.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

PEACOCK.—On the 24th August, at Forston House, near Dorchester, the wife of Henry George Peacock, L.R.C.P., M.R.C.S., Assistant Medical Officer Dorset County Asylum, Farnham.

NEWTON.—At Worksop, on August 26th, the wife of Isaac Newton, M.R.C.S.Eng., late Surgeon Major I.M.D., of a daughter.

MARRIAGE.

POOLEY—KENDRICK.—On August 10th, at the Parish Church, Bushbury, by the Rev. M. B. Moorhouse, Vicar, assisted by the Rev. R. S. Rowan, Vicar of St. James, Rochdale, Dr. R. C. Mason Pooley of Rochdale, to Rosa, second daughter of David Kendrick, Esq., J.P., Oxley House, Wolverhampton.

DEATHS.

BURGES.—On July 22nd (killed by a fall from his horse, at Meerut, India), William Armstrong Burges, M.D., M.Ch. Queen's University, Ireland, Surgeon British Medical Service, second son of Francis C. Burges, L.R.C.S.I., of Fethard, Clonmel, Ireland, aged 26.

MITCHELL.—At 21, Pepys Road, Hatcham, S.E., on the 31st ultimo, Robt. Mitchell, formerly of Manor House, Deptford, Surgeon, aged 75.

WHITMORE, John, M.D., for many years medical officer of health for Marylebone, aged 70, at Ealing Dean.

RARE CAUSE OF INTESTINAL OBSTRUCTION.—Dr. J. A. Francis of Caledonia, Ohio, relates in the *Ohio Medical Recorder* a case of intestinal obstruction, with severe pain in the abdomen and vomiting of fæcal matter. An injection was given, soon after which it was observed that about a dozen grains of wheat had escaped from the bowel. In reply to inquiry, the patient said that he had constantly been in the habit of eating a grain or two of wheat while at his work (that of a miller); but a few months before he had had all his teeth removed on account of neuralgia, and since then he had swallowed the wheat-grains whole, after holding them a short time in his mouth. Dr. Francis thereon proceeded to give repeated injections of warm water, in which a little lard had been put. After perseverance with this treatment for four or five hours, the whole of the wheat was removed, and he had a natural passage. The quantity of wheat removed amounted to more than a pint and two-thirds.

THE TAMPON IN ABORTION.—Dr. R. W. Griswold writes as follows in the *Louisville Medical News*. For the last twenty years, my reliance has been on a junk of alum in the vagina. If this be not at hand, I take the next best thing that is; but a junk of alum is a part of the contents of my medicine-box. It is of the size of a large hen's egg, ovoid in shape, and generally left a little ragged, though without sharp points. Around the middle is cut a groove, about which is tied a bit of strong, but not large, twine, leaving the ends so that they can hang out of the vagina. No preparation is necessary, nor any exposure of the person needed. The egg is introduced end-way, turned half around so as to bring the long diameter across the vagina, and pushed downward and then upward against the os. In some cases, especially if the canal be large, I back the egg with sufficient packing to secure its retention in position. If the vagina be small and close, there may be no need at all of the supplementary support. This treatment is easy, speedy, and effectual against further hæmorrhage. It has never failed me, and I leave a patient with the feeling that she is safe for the next twelve or fifteen hours, so far as danger from further bleeding is concerned. And I may add, that I have never had any unfavourable effects follow its use in any one of the scores of cases in which it has been employed—no fevers, no septicæmia, no deaths, no anything untoward—and I have never had occasion to use it the second time in any one case. It can be removed when desirable, either by traction on the cord or by the introduction of the fingers, the coagulated blood fished out, the vagina syringed, and the case further treated as circumstances may require. Perhaps this is nothing new; but it is something I have not seen mention made of in any of the standard works that have come under my observation, nor in special papers, nor have I ever heard of in the lectures of the schools.

MEDICAL OFFICERS' APPLICATIONS FOR SUPERANNUATION.—The return granted, on the application of Mr. Thorold Rogers, relative to the superannuation of poor-law medical officers, has just been issued, and is a very interesting document. It appears that, since the passing of the Act in 1870, one hundred and twenty-two applications have been made to the guardians of the various unions named on the return; of this number, seventy were granted, fifty were refused, and two were under consideration, at the date of the return. The reasons alleged for refusal of the grant are extremely divergent. Thus, at Warminster, after twenty-six years' service, the guardians were unwilling to establish a precedent by granting superannuation allowance to medical officers; in other cases, as at Bedminster, one officer, with forty-two years' service, was superannuated, whilst his colleague, with forty-one, was refused, the reason alleged being that the latter was well enough off to do without it. In several instances, no reasons were given for refusal, the guardians not considering it advisable to cause any outcry to be made in their number. At Barrow-on-Soar, after seventeen years, the guardians allege, as their grounds of refusal, "that the officer had been sufficiently paid for what work he had done", etc. Our space does not admit of further reference to the return at present; but we shall again call attention to the subject in a subsequent issue.

DEATHS FROM DIARRHŒA.—The deaths referred to diarrhœa in the twenty largest English towns, which had steadily increased in the ten preceding weeks from 51 to 864, further rose last week to 958, and were equal to an annual rate of 6.7 per 1,000. The diarrhœa death-rate was equal to 3.8 in London, and to 9.4 in the nineteen provincial towns, among which it ranged from 2.7 and 3.2 in Oldham and Bristol, to 13.0 and 18.1 in Sheffield and Leicester.

LEICESTER.—Dr. William Johnston, who holds the post of Medical Officer of Health for this important town, in the place of Mr. Pritchett, sustains, in his report for 1879, the high reputation which he had already gained as assistant officer of health. It is difficult, indeed, to speak in too high terms of his report, which may fairly be taken as a model of what a health officer's report should be. The special features in the Leicester vital statistics—viz., the high infant mortality and the deaths from diarrhœa—receive, as usual, detailed attention. Last year, there were, in an estimated population of 125,622 persons, 4,687 births and 2,651 deaths—equal to rates of 37.3 and 21.1 per 1,000 respectively. The death-rate shows a slight excess (0.5 per 1,000) on the exceptionally low rate of 1878, but was less by 3.5 per 1,000 than the average rate for the nine preceding years. The infantile mortality is still enormously high, the proportion of deaths under one year to births registered being equal to 187 per 1,000, or the highest recorded of any of the large towns. Dr. Johnston devotes an entire chapter of his report to the discussion of the causes of this fatality; and in the end observes, that he attributes "much of the fatality of infants during the summer to the air becoming impure through admixture with sewer emanations, here rendered specially hurtful in that they come from sewers containing deposit. This factor in the causation of infant deaths is, of course, at this season supplemented through the ignorance and neglect shown by mothers in the rearing of their children; and I regard these neglectful habits as constituting the chief cause of a great part of the fatality sustained during the other seasons of the year". For these reasons, Dr. Johnston warmly advocates the establishment, by the health authority, of public nurseries, which would, as he points out, be self-supporting after the first outlay of fitting up. The subject of diarrhœa is one to which Dr. Johnston has devoted very great attention; and the remarkable diminution in the mortality last year (88 deaths, against 302 in 1878, and an average of 275 in the ten years 1869-78) makes his explanation of the causes of the decrease especially interesting. He says: "Speaking generally, the combined effect of the seasonal circumstances of last summer quarter was to reduce to an extent much below the average the amount of putrefactive impregnation of the air in towns which takes place during this season of the year. This fact, taken in conjunction with the very marked decline that occurred in the fatality of diarrhœa, offers, to my mind, the most convincing proof of the excrementitious origin of the disease; and adds further weight to my belief that 'diarrhœa, as it affects both adults and infants during the summer months, depends in the majority of instances upon the introduction into the system by means of air, or in food, of living organic ferments derived from the putrefactive decomposition of animal refuse matter'." The problem of infantile diarrhœa at Leicester cannot, however, be as yet regarded as satisfactorily solved by this explanation. Amongst other items of interest in Dr. Johnston's report, are the conspicuous advantage gained in dealing with an epidemic of scarlatina, by the coming in force of the local Act requiring compulsory notification of infectious diseases, and the increasing use which is being made of the Corporation Fever Hospital.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M. Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M. Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

LIFE-ZEST.

SIR,—Can you give me any idea of the composition of the preparation called "Life-Zest, or Anti-Drink", that is now so freely advertised in the London papers? I should like to try its effects upon a patient, but have an objection to secret remedies. If you can give me any information on the subject, it will be deemed a favour by yours truly, ZEST.

*** We do not know the composition of the preparation to which our correspondent refers.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

MEDICAL TITLES.

SIR,—Would you kindly inform me, in your next issue, whether or not it be lawful for a gentleman holding the L.S.A. of London to put Doctor on his door-plate? and, also, is it legal for one holding the double qualification to style himself Physician and Surgeon? Apologising for troubling you, I am, sir, yours, etc.,
August 26th, 1880. MEDICUS.

*** There is no law bearing on either case. But the use of the title "Dr." by a Licentiate of the Apothecaries' Society (unless he have some special right to use the title) is in very bad taste. Our correspondent does not say what "double qualification" he means. Anyone holding a diploma from a College of Physicians, and another from a College of Surgeons, is certainly a physician and surgeon.

ALPHA had perhaps better ascertain the views of the Registrar of the College on the subject.

COLONIAL APPOINTMENTS.

SIR,—In your reply to "Registered Practitioner" (Grenada) on page 114 of the JOURNAL for July 17th, you state "it would be unusual for the Colonial Office to appoint a gentleman who had not put himself on the *Register*". Your reply was, no doubt, justified by the information you possessed; but it may interest your correspondent to know that not only are many senior practitioners who are not on the *Register* employed by the Colonial Office, but that many junior practitioners have lately been appointed whose names are not on the *Register*, and, further, that several Colonial medical appointments have of late years been conferred on medical men not possessing a registrable qualification. I have known the appointment of an unregistered practitioner to be disallowed by the Secretary of State, but I have also known such a practitioner to discharge the duties and receive the emoluments of a Government appointment for a very considerable period.—Your obedient servant,
August 5th, 1880. ANOTHER REGISTERED PRACTITIONER.

EXPERIMENTAL METER.—M.B. (Edinburgh) asks for particulars (maker, price, etc.) of an experimental meter, as used by the Germans in physiological research.

AN ANCIENT MEDICAL CHARITY.

SIR,—On the boundary line of Rochester and Chatham is situated the Chapel of St. Bartholomew, together with the ruins of the Hospital for Lepers, which was attached to it. These formed one institution, founded by Gundulph in 1078. The lepers' home is replaced by our excellent General Hospital; and we are endeavouring to restore the venerable Norman Chapel, now over eight hundred years old, the sole remaining link which binds us to what is, I believe, the oldest medical charity in England. Plans were furnished by the late Sir Gilbert Scott, who speaks of the Chapel as a "precious archæological and historical relic, the preservation of which is of the utmost importance". The sum of £600 is still required to complete this good work. Will you allow me to appeal to your readers for help on medical, ecclesiastical, archæological, and architectural grounds? I will gladly furnish the fullest particulars to anyone who may be disposed to assist; and I hope that some of those whom God has prospered in their profession may be willing to give of their substance for the preservation of His House.—I am, etc.,
JOHN BAILEY, Chaplain of the Chapel and Hospital of St. Bartholomew, Rochester.

NOCTURNAL INCONTINENCE OF URINE.

SIR,—I have lately had under my care a case similar in many respects to that of your correspondent "A. K." Enuresis is a common disease affecting elderly people (especially females) during sleep, and due to a relaxation of the muscular system. The cause is frequently not far to seek—excessive indulgence in fermented liquors. In such cases, there are no symptoms of a weakness or disease of the viscus. As to treatment, I have found the following most successful. Injections of cold water (at first lukewarm, gradually reducing the temperature); the frequent use of cold baths, and sponging and dashing the scrotum and sacrum with cold water, accompanied by the internal administration of strychnine and tincture of cantharides. I have not tried electricity; Duchenne strongly recommends it; neither have I given creosote, although it is a favourite "specific" with some. As a rule, every means fail, and the unhappy sufferer has no other alternative than to wear during sleep a rubber urinal.—I am, etc.,
J. FERENS OLIVER, M.D.
Staindrop, August 14th, 1880.

WE have received from "A Non-Practising Member" a cheque for £5 for Mr. Buncombe.

REDUCTION OF SALARIES IN CEYLON.

SIR,—From the accompanying notice of resolutions and letter, you will observe that Ceylon is not in a prosperous condition, and it behoves young medical men to think well before coming out here.—Yours faithfully, M.D.

"*Notice.*—A general meeting of the proprietors or their agents or managers in the Dickoya district will be held at Norwood, at two o'clock, on the 3rd of July, for the purpose of considering the two resolutions proposed by Mr. S. G. D. Skrine: 1. 'That this meeting is of opinion that, taking into consideration the general depression in the district, a reduction should be made in the doctor's salary.' 2. 'That after due notice given, the doctor's salary be reduced to Rs. 4,000 *per annum;* that he be allowed to charge all attendance on superintendents as private practice; and that a rate of charges be fixed by the committee, the doctor in future being only asked to attend to the hospital, and not to expect to visit estate lines as previously.'—W. H. FREESE, Chairman and Secretary, D.M.A.C.—Colombo, June 19th, 1880."

"*To the Editor of the Ceylon Times.*—Sir,—I see that a step is being taken in the right direction in Dickoya, in the shape of a motion to reduce the salary of the doctor to Rs. 4000. The whole working of the medical Ordinance is so complete a sham and such a terrible waste of money, that any attempt to reduce the cost to a reasonable limit should be largely supported. In this case the salary is now Rs. 7,000 with private practice. Though doubtless the doctor may be well worth this salary, the point is that proprietors cannot and will not continue to pay a heavy assessment, in order to provide superior medical attendance for the wives and families of superintendents. As far as the coolies are concerned a Calcutta trained native doctor would understand and minister to their wants far better than any English surgeon, and now when economies are being carried into other branches of estate expenditure, let this serious blot be touched also.—ONE INTERESTED"

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

A PLUMSTONE IMBEDDED IN THE RECTUM.

SIR,—On August 5th I was called to see a young girl aged 18. I found her complaining of great pain in the rectum. The pulse and temperature were normal, but the lips were covered with sordes; and she gave one the impression of suffering from severe constitutional disturbance. The hips and back part of the thighs were covered with what appeared to be bruises. On examining the rectum with the finger, a hard substance was found imbedded in the posterior wall, and with difficulty extracted. It proved to be a plumstone: and it appeared she had eaten freely of plums a week previously. Two days afterwards, she was perfectly well. One can imagine the plumstone setting up peritonitis; but how it could give such a bruised appearance to the surrounding parts and sympathetically affect the mouth, which was dry and feverish, the lips being covered with sordes, and yet the pulse and temperature remain normal, was rather puzzling at first. It is a proof, were one wanting, that cases should never be cursorily examined. I am, etc.,

FERGUS M. BROWN, L.R.C.P.Ed.

Wansford, August 11th.

TURPENTINE AND ACETIC ACID LINIMENT.

SIR,—In answer to "Pharmacist", I think the following will answer his purpose. The yolks of five eggs; oil of turpentine, acetic acid, of each ten ounces; water to fifteen ounces. The yolks should be well blended in a mortar; then add the turpentine and acetic acid gradually, put the ingredients into a bottle of the requisite size, and add the water in small quantities, shaking well each time. This liniment, when properly made, is of an uniform creamy consistence, and does not separate on standing. Yours truly, J. H. SCOTT, M.R.C.Q.C.P.

Tudor House, Camberley, August 12th, 1880.

*** In the letter of Mr. O. T. Evans on this subject, at p. 284 of the JOURNAL for August 14th, "acid acetic fort." should be "acid. acetic. fort.", or strong acetic acid.

VISITS TO SPA.

SIR,—In answer to several inquiries which I have lately received from professional brethren who propose visiting Brussels on the occasion of the anniversary fêtes, will you permit me to say, through your columns, that August and September are, perhaps, the most agreeable months in the year for seeing the Ardennes district, of which Spa is the chief town. Spa is distant from Brussels about four hours by rail, and trains run at short intervals. Comfortable board and lodging can be obtained for fifty francs a week and upwards. To any members of the profession desirous of making acquaintance with this historical district and its important chalybeate springs, I shall be happy to afford any information or assistance in my power. I am, etc., LITTON FORBES, M.D., Resident Physician.

Spa, August 12th.

TINEA SYCOSIS.

SIR,—Would any reader inform me what to do with an intractable case of tinea sycosis? The patient's general health is good, and he is neither strumous nor syphilitic. There is a fresh crop of pustules every morning, and the centre of each is occupied by a hair. Internally, he has had Donovan's solution, arsenic, and sulphide of calcium; externally, citrine ointment, lead in every form, oleate of zinc, oleate of bismuth, iodine and sulphur; also, epilation and shaving have been resorted to. I am, etc., MEDICUS.

CONGESTION OF THE NOSE.

SIR,—In reply to "F.R.C.S.I., Dublin", I would remark that I have, in my own person, found the application of cold to the part very efficacious. My plan is to immerse the face in the nose in a basin or large tumbler of cold water and hold it there for five or ten minutes every half-hour, or less, until the burning pain has ceased to be relieved, which generally results after a few applications. No other treatment has been necessary in my own case.—I am, etc., M.R.C.Q.C.P.

SWEATING IN THE HANDS.

SIR,—Would any of your numerous readers kindly inform me what means could be adopted to prevent excessive sweating in the hands? a good many remedies have been tried, but have not acted. The patient, a working man, had to give up his employment in consequence of its deleterious effects on the trade which he followed. It may be mentioned that the feet are in no way subject to sweating. I am, sir, yours truly, MEDICUS.

BICYCLING.

SIR,—Can you, or any of the readers of the BRITISH MEDICAL JOURNAL, inform me if (1) bicycling predisposes one to hernia, when that predisposition does not exist before, and (2) if it be any more dangerous in that respect than horse riding? I enclose my name and address, and remain, yours truly, STUDENT.

DAVOS AS A WINTER RESORT.

SIR,—In my letter which you kindly inserted in the JOURNAL for August 21st, and which I am sorry was not more carefully looked over before sending, I find I have omitted to state what might, perhaps, influence some who may think of spending the winter in Davos, that invalids who improve there regain health and the use of their lungs more rapidly than in other places, so that, towards the latter part of the season, they are able to walk up the mountain-paths, drive in open sledges, join in the skating, curling, and other sports, spend a great part of the day on the skating-rink; the bright, dry, and stimulating atmosphere enabling them to lead such an out-door life as could not be thought of in England and is scarcely possible even on the Riviera. I intend to publish a correct record of cases and results of treatment last winter; I regret that I have not got and knowledge that a very large number certainly did well, especially several of haemoptysis; the latter seem, on the whole, to derive more benefit from residence in the mountain than in the maritime stations. Hoping that future visitors to DAVOS will have as good reason to be thankful as I have had, I am, yours truly, R. C. BUCHANAN, M.D.

St. Leonard's-on-Sea, August 26th, 1880.

THE "EVIL MANIFEST" OF MEDICAL MEN.

SIR,—Every general practitioner must sympathise with Mr. L. Franklyn in being subjected to the recent charge made by the foreman of the coroner's jury in the case of Edward May. He seems to me to have acted perfectly fairly and much more leniently than many would do, and have to do, when our services are suddenly required, under similar circumstances, by those who have been attending quite well for some days, and who suddenly become dangerously ill. Mr. Franklyn did not attempt to treat the child at all, but merely prescribed, as, under similar circumstances, many do every day. It is quite clear, however, from the evidence, that the child had a right to expect, far less to demand, the immediate attendance of medical men at any hour of the day or night without any security being given as regards the trifling matter of "a paltry fee". We often hear of these spurious charges of inhumanity made against our profession by that enlightened section of the public who sit on coroners' juries; but we rarely, if ever, hear the other side. How many of us are disturbed at night to find through wet and cold quite unnecessarily, and without the remotest prospect of payment! Or, as frequently happens, we find our services were merely called in the hope of avoiding an inquest over some hapless child or chronic invalid, whose sufferings ought to have been attended to days before. Surely our cares and anxieties are enough without being worried by the irresponsible utterances of the foremen of juries, as in the case reported. The remedy is in the hands of the public, who must pay to have an organised system of public succour for emergencies. Provident dispensaries will not meet the case, as a surgeon in extensive practice would have to relinquish his connection with them if he were liable to be called at any but the regular hours; and this would damage the provident system, as the poor are shrewd enough to avoid joining a dispensary if the members of the staff are not men of well-known acquirements and position.—

A VICTIM.

I am, etc.,

VACCINATING ECZEMATOUS CHILDREN.

SIR,—I was requested by a gentleman in good social position to see his child, and say whether it was fit for vaccination. I did so, and at once stated that it was not. It was almost covered with eczema. I gave, I think, two certificates of postponement of vaccination, one at the expiration of the time for which the other was granted. During the whole of this time, the child was more or less under treatment for eczema. The father, who had travelled over a considerable portion of the world, and had seen in distant lands the benefits of Jenner's discovery, was anxious to have the child vaccinated; and now another reason was added to those he had before expressed—viz., that his wife was about to have another child, and she wished the vaccination of this one over before the other arrived. I told him that I would rather not then vaccinate the child, in case it did badly; but he was very urgent, and stated that he would accept all responsibility if I would only do it. With considerable hesitancy, I performed the operation in the usual place, which, in fact, was the only part of the arm unaffected with eczema. The case did as well as any case ever could do; good typical pustules were the result, and, to my surprise, the eczema, from the fifth day after vaccination, began to decline. At the same time, I was attending the child of a farmer, about three months old, with eczema covering the whole of the face and head. I mentioned the above case to him and his wife, being anxious to have the vaccination over. I vaccinated the child, the parents accepting the responsibility, and the result was as in the former case. The child did well, and eczema soon disappeared. Some months after this, I vaccinated the eczematous child of a farm-labourer, and the result was equally satisfactory. The success of these cases soon got noised abroad; and two or three medical men, who had been applied to by the parents of eczematous children, wrote to me to ask if it were true that I vaccinated under such circumstances. To all, I answered that I had done so with good results, but that I would not advise them in the matter; they must do so on their own responsibility, and that nothing would induce me to vaccinate an eczematous child unless the parents accepted the weight of the proceeding on their own shoulder.—I am, sir, yours obediently,

C. D. HILL DRURY, M.D.

3, Bucklersbury, August 24th, 1880.

*** It would certainly be unwise to draw any general conclusions from so limited an experience.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Stevelinck, London; Dr. Stephen Mackenzie, London; Our Edinburgh Correspondent; Dr. Ralfaglati, Bradford; Dr. C. Hill Drury, London; Mr. R. Prosser, Bromsgrove; Mr. G. Eastes, London; Dr. H. Cunningham, Dumfries; Mr. C. M. Palmer, London; Dr. John W. Reid, London; Messrs. Dickson and Dickson, Blackpool; Dr. Leslie Jones, Blackpool; Dr. T. Anderson, York; Dr. J. Rogers, London; Another Registered Practitioner; Dr. Dreschfeld, Manchester; Mr. J. V. Solomon, Birmingham; Dr. Fairlie Clarke, Southborough; Dr. Hilbert Fayrer, Liverpool; Mr. G. P. Atkinson, Pontefract; An English Medical Practitioner; A Scotch Surgeon; Mr. H. E. Armstrong, Newcastle-on-Tyne; Dr. Bradbury, Cambridge; Our Glasgow Correspondent; Mr. H. M. Morgan, Lichfield; Dr. Elliston, Ipswich; Inquirer; Mr. T. M. Francis, Cambridge; Our Dublin Correspondent; Mr. F. S. Eve, London; Mr. H. L. Wright, Bootle; Dr. Packer, Huyton, Liverpool; Mr. T. R. Allinson, London; Dr. Managliano, Dr. Cobbold, Browne, London; Dr. Cassells, Glasgow; Mr. Glynn Greene; Dr. Whitton, Liverpool; Mr. Isaac Newton, Woolsop; Dr. Sawyer, Birmingham; Mr. L. Buckenham, Cambridge; Dr. Leech, Manchester; Dr. Norman Kerr, London; Dr. W. Graham, Middleton, Mr. A. Harvey, Birmingham; Dr. Joy Jeffries, Boston; Mr. C. J. Hanbury, London; Dr. Ward Cousins, Southsea; Dr. J. M. Palmer, Armagh; Mr. John Woodman, Exeter; Professor Busch, Berlin; Mr. A. H. Bates, Northampton; Medicus; Dr. E. C. Dudley, Chicago; Mr. Richardson, London; Mr. J. S. Wilkins, Bootle; Dr. C. Graham, Bonn; Dr. A. J. Bannister, London; Mr. J. S. Wilkins, Bootle; Dr. C. Graham, Bonn; Mr. Richardson, Darwen; Dr. David B. Lees, London; Mr. H. Sieveking, London, etc.

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REGULATIONS

OF

THE GENERAL MEDICAL COUNCIL AND MEDICAL LICENSING BODIES.

SESSION 1880-81.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL ON EDUCATION AND EXAMINATION.

PRELIMINARY EXAMINATION.—1. No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided.—2. The Executive Committee is to prepare annually and lay before the Council for recognition a list of examining bodies, whose examinations fulfil the conditions of the Medical Council as regards general education.—3. For the present, testimonials of proficiency granted by educational bodies, according to the subjoined list, are accepted; the Council reserving the right to add to or take from the list. (A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.) I. *Universities of the United Kingdom. Oxford:* Responsions; Moderations.—*Cambridge:* Previous Examination; Higher Local Examinations.—*Durham:* Examination for Students in their second and first years; Registration Examination for Medical Students.—*Oxford, Cambridge, and Durham:* Examination for Degrees in Arts; Local Examinations (Senior), Certificate to include Latin and Mathematics; Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects: viz., Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—*Oxford and Cambridge Schools' Examination Board:** Certificate to include Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, First two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects: Greek, French, German, Mechanical Division of Natural Philosophy.—*London:* Examination for a Degree in Arts or Science; Matriculation Examination.—*Aberdeen, Edinburgh, Glasgow, and St. Andrew's:* Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery.—*Edinburgh, Aberdeen, St. Andrew's:* Honours Certificates granted under Local Examination; Certificates to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, German, Natural Philosophy.—*Glasgow:* Senior Certificate of Local Examination Board; Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, German, Natural Philosophy.—*Dublin:* Examination for a Degree in Arts; Public Entrance Examination.—*Queen's University (Ireland):* Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts; Previous Examination for B.A. Degree; Local Examinations for Men and Women; Certificates to include all the subjects required by the General Medical Council, as set forth in Recommendation 4. II. *Other bodies named in Schedule (A) to the Medical Act.—Royal College of Surgeons of England:* Preliminary Examination for Membership and for Fellowship, conducted under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.—*Society of Apothecaries in London:* Examination in Arts.—*Royal College of Physicians, Edinburgh; and Royal College of Surgeons, Edinburgh:* Preliminary Examination in General Education, conducted by a Board appointed by these Colleges combined.—*Faculty of Physicians and Surgeons of Glasgow; and Apothecaries' Hall of Ireland:* Preliminary Examination in General Education.—*Royal College of Surgeons in Ireland:* Preliminary Examination; Certificate to include Mathematics. III. *Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.—Royal College of Preceptors:* Examination for a First-Class Certificate.—*The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil:* Certificate to include all the subjects required by the General Medical Council. IV. *Indian, Colonial, and Foreign Universities, and Colleges.—Universities of Calcutta, Madras, and Bombay:* Entrance Examination; Certificate to include Latin.—*Universities of M'Gill College, Montreal; Bishop's College, Montreal; Toronto; Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada; Fredericton; Melbourne; Sydney; and the Cape of Good Hope; Medical College, Halifax, Nova Scotia:* Matriculation Examination.—*University of King's College, Nova Scotia:* Matriculation Examination; Responsions.—*University of Otago:* Preliminary Examination.—*University of Adelaide:* Matriculation Examination; Primary Examination; First-Class Certificate, provided it contains all the subjects required by the Council.—*Codrington College, Barbadoes:* English Certificate for Students of two years' standing, specifying the subjects of Examination; Latin Certificate, or "Testamur".—*Tasmanian Council of Education:* Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.—*Christ's College, Canterbury, New Zealand:* Voluntary Examinations, Certificates to include all the subjects required by the General Medical Council.—*South Australia, South Australian Institute, Adelaide:* Preliminary General Examination; First-Class Certificate.—*Michigan College of Medicine:* Matriculation Examination.—*Continental Countries of Europe:* Gymnasial Abiturienten Examen and corresponding examinations required for admission to universities.—4. It is recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in: 1. English Language—including Grammar and Composition;* 2. Arithmetic—including Vulgar and Decimal Fractions; Algebra—including Simple Equations; 3. Geometry—first two books of Euclid, or the subjects thereof; 4. Latin—including Translation and Grammar; 5. One of the following optional subjects: Greek; French; German; Elementary Mechanics of Solids and Fluids (meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics).—[On and after January 1st, 1882, the subjects will be the following: 1. English Language, including Grammar and Composition;† 2. English History; 3. Modern Geography; 4. Latin, including Translation from the original and Grammar; 5. Elements of Mathematics, comprising (*a*) Arithmetic—including Vulgar and Decimal Fractions; (*b*) Algebra—including Simple Equations; (*c*) Geometry—including the first two books of Euclid or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;‡ 7. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Elementary Chemistry.]—5. It is desirable that the examination in general education be left to the Universities and such other bodies engaged in general education and examination as may from time to time be approved by this Council.—6. It is recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in the subjects of general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and the licensing bodies are requested to transmit such reports to the Registrar of the General Medical Council.

REGISTRATION OF MEDICAL STUDENTS.—7. Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council.—8. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council, and has produced evidence that he has commenced medical study.—9. The commencement of the course of professional study recognised by any of the qualifying bodies, shall not be reckoned as dating earlier than fifteen days before the date of registration.—10. The regis-

* The English is provided for by the following resolution of the Executive Committee:—"That, as every candidate for the certificate of the Oxford and Cambridge Schools Examination Board is required to answer questions in such a manner as to satisfy the examiners that he has an adequate knowledge of English grammar and orthography, this shall be held as conforming to the requirements of the Medical Council in reference to English language."

* The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; 2. To write a portion of an English author to dictation; 3. To explain the grammatical construction of one or two sentences; 4. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature; 5. To give the derivation and definition of a few English words in common use. Provided always that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

† The General Medical Council will not consider any Examination in English sufficient that does not fully test the ability of the candidate—1. To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; 2. To write correctly from dictation; 3. To explain the grammatical construction of sentences; 4. To point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; 5. To give the derivation and definition of English words in common use.

‡ This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

tration of medical students shall be placed under the charge of the Branch Registrars.—11. Each of the Branch Registrars shall keep a register of medical students.—12. Every person desirous of being registered as a medical student, shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form, which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study.*—13. The Branch Registrar shall enter the applicant's name and other particulars in the students' *Register*, and shall give him a certificate of such registration.—14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students.—15. The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration for reasons which shall appear to them satisfactory.—16. A copy of the *Register* of medical students, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st of December in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised lists to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.—17. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name has not been entered in the medical students' *Register* at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.—18. The Branch Councils are desired to take means to make these regulations known at the various medical schools.

AGE FOR LICENCE TO PRACTISE, ETC.—19. The age of twenty-one shall be the earliest age at which a candidate shall obtain a licence to practise, and that the age shall, in all instances, be duly certified.—20. No licence shall be obtained at an earlier period than after the expiration of forty-five months subsequent to the registration of the candidate as a medical student.

PROFESSIONAL EDUCATION.—21. The course of professional study required for a licence shall occupy at least four years, of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act.—22. The following are the subjects, without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered: 1. Chemistry, including a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine, and Chemical Physics, meaning thereby Heat, Light, and Electricity; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy; 5. Pathology, including Morbid Anatomy; 6. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 7. Surgery, including Surgical Anatomy and Clinical Surgery; 8. Midwifery; 9. Forensic Medicine.—23. The Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.—24. A certificate shall be required, by each licensing body, from every candidate for its degree, diploma, or licence to practise medicine or surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle and with the methods of preserving lymph, and that he is thoroughly informed in every necessary part of the subject.—25. Such a certificate should be received by any licensing body only from an institution where the appointed teacher of vaccination is recognised by the Local Government Board.

PROFESSIONAL EXAMINATION.—26. It is desirable that the different licensing bodies, whether singly or in combination, should frame their examinations so as to secure that the knowledge of every practitioner whose name appears on the *Register* shall have been tested in all the subjects of professional education which the Council has determined to be essential, viz.: (as in Recommendation 22).—27. It is desirable that there should be in future three professional examinations.—28. The professional examinations shall be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study. The examinations, and the subjects included in each, shall be such, and in such order, as may insure, so far as possible, a due continuity and sequence of study.—29. The first division of the examinations shall include the following subjects: 1. Chemistry and Chemical Physics; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy. The second division shall include the following subjects: 1. Pathology, including Morbid Anatomy; 2. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 3. Surgery, including Surgical Anatomy and Clinical Surgery; 4. Midwifery; 5. Forensic Medicine.—30. It is desirable that an examination in the earlier subjects of professional study should take place before the end of the first year of professional study.—31. The professional examinations shall be conducted both in writing and orally; and they shall be practical in all branches in which they admit of being so.—32. Not less than two examiners shall take part in every oral and clinical examination.—33. The questions to be answered in writing should be submitted to the whole body of examiners for consideration and revision, if desirable, before being proposed to the candidates.—34. The written answers should be submitted to more than one of the examiners.—35. Excellence in one or more subjects should not be allowed to compensate for failure in others.—36. The professional examinations shall be held by the several licensing bodies, except in special cases, at stated periods, to be publicly notified.—37. Returns from the licensing bodies in Schedule (A) shall be made annually, on the 1st of January, to the General Medical Council, stating the number of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively; and the registrar shall forward a sufficient number of forms, with a notice for their being returned in due time.—38. It is not desirable that any University of the United Kingdom should confer any degree in medicine or surgery, whether that of bachelor, doctor, or master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed, after due course of education, examinations, such as are *bonâ fide*, academically equivalent to those required for a degree in Arts.—39. It would be desirable, as a general rule, that none of the higher degrees or qualifications in medicine or surgery should be conferred on persons who have not shown evidence of high professional attainments.—40. It is desirable that in the examinations on several of the subjects of the curriculum, such, for example, as chemistry, including chemical physics, physiology, and materia medica, the licensing bodies should limit and define by schedule the extent of examination.—41. It is recommended that in no case should the examination of a candidate by any of the licensing bodies in any subject be conducted wholly by the lecturer or teacher in that subject in the school in which the candidate has been educated.—42. It is desirable that observation with the microscope should form part of the examinations of candidates for a licence.—43. It is recommended that candidates for the final professional examinations be required to give evidence that they have had opportunities of practical study, with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere.—44. It is desirable that, in examinations in anatomy, candidates should understand that they may be called upon to perform actual dissections, and that candidates in examinations in surgery should understand that they may be called upon to perform one or more operations on the dead subject.

preliminary examination; Place of medical study; Applicant's signature; Address; and Date of Application.)

has commenced the study of medicine in (insert name of School, or Hospital, or place of apprenticeship, as the case may be); Signature of Master, Teacher, or Official in

Council for ——.

practitioner whose pupil the applicant may be at the time. The certificate of examination must testify that the student has been examined in the subjects mentioned

Council.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THIS College confers two diplomas; that of Member and that of Licentiate. A synopsis of the regulations for the membership and the license is given at pages 418-19. Certain portions, in addition to those there mentioned, are common to both.

Every candidate must give fourteen days' notice in writing of his intention to present himself for examination, at the same time transmitting the necessary certificates in each case. Blank forms of the required certificates may be obtained on application at the College.

By Practical Pharmacy is meant instruction in the Laboratory of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society, or of a recognised Public Hospital or Dispensary. The course of Botany may be attended prior to the commencement of professional studies; and any candidate proving that Botany formed a subject of his preliminary examination will be exempt from attendance on this course. The Principles of Public Health must be comprised in the course of Lectures on Medicine, or in that on Forensic Medicine. The attendance on Lectures on Medicine and Surgery must not commence earlier than the second winter session; and the attendance on Lectures on Clinical Medicine and Clinical Surgery must not commence until after the first winter session (for members, not until the second summer session). A three months' course of Clinical Instruction in a recognised Lunatic Hospital or Asylum may be substituted for the same period of attendance in the Medical Wards of a General Hospital.

Every candidate must produce a testimonial of moral character and conduct; in the case of the membership, from a Fellow or Member of the College.

Exemptions.—The following exemptions are common to the Membership and the Licence.

Any candidate who shall produce satisfactory evidence of having passed an Examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the primary examination. Any candidate who shall produce satisfactory evidence of having passed an Examination on Chemistry and Materia Medica, required for a Degree in Medicine at an University in the United Kingdom, in India, or in a British Colony, will be exempted from re-examination on those subjects. Any candidate who shall have obtained a Degree in Surgery at an University in the United Kingdom, or who shall have passed the Examination on Surgery conducted by any one of the Royal Colleges of Surgeons in the United Kingdom, after a satisfactory course of study and examination, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

MEMBERS.

Any person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the By-Laws and Regulations of the College, may be proposed to the College to be admitted a Member. (For synopsis of Regulations, *see* pages 418-19).

Every candidate who has prosecuted his studies abroad, whether in part or to the full extent required (except such as shall be exempted), shall nevertheless bring proof of his having attended, during at least twelve months, the medical practice of a hospital in the United Kingdom containing at least 100 beds.

Examinations.—Every candidate for the Membership of the College (except such as are exempted) must pass the following examinations.

First Examination; Monday: 7 to 10 P.M., written questions on Anatomy and Physiology. Tuesday: 7 P.M., *vivâ voce*, on Dissections and Preparations.

Second Examination; Monday: 1 to 4 P.M., written questions on Materia Medica and on Chemistry in its application to Pathology, Pharmacy, and Toxicology. Tuesday: 1 to 4 P.M., the same subjects; the examination being partly *vivâ voce* and partly practical: 7 to 10 P.M., written questions on Midwifery and the Diseases peculiar to Women. Wednesday: 7 to 10 P.M., written questions on Surgical Anatomy and on the Principles and Practice of Surgery. Thursday: *Morning*, Practical Examination at the College or in the Wards of a Hospital; 7 P.M., Principles and Practice of Surgery and Midwifery, *vivâ voce*.

Third or Pass Examination; Thursday: 2 to 6 P.M., written questions on Medical Anatomy and on the Principles of Medicine. Friday: 2 to 6 P.M., written questions on the Practice of Medicine, including the Principles of Public Health, and on Psychological Medicine. Saturday or Monday: Practical examination at the College or in the medical wards of a Hospital. Tuesday and Wednesday: Examination *vivâ voce*.

The third or pass examination for the membership will be held on Thursdays, October 21st, 1880; January 21st, April 21st, July 21st, and October 20th, 1881. The first and second examinations are generally held at the commencement of the same months.

Certificates required: Primary Examination.—Evidence of having passed an Arts' Examination; and in the case of those who shall have commenced professional studies after 1861, evidence of having previously obtained a Degree in Arts from some University of the United Kingdom, or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. All other candidates for membership shall be examined on the subjects of General Education by the President and Censors of the College.

Second Examination.—Evidence of having completed four years of professional study; of having attained the age of twenty-one years; of Instruction and Proficiency in the Practice of Vaccination; and of having attended not less than twenty labours; and of having discharged the duties of Clinical Clerk and of Dresser, for periods of not less than three months.

Pass Examination.—Proof of having attained the age of twenty-five years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of professional study.

Exemptions.—1. Any candidate who produces satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, is exempt from re-examination on the subjects of the primary examination. 2. Any candidate who has obtained a Degree in Surgery at an University in the United Kingdom; or (3) who has passed the examination on Surgery conducted by either of the Royal Colleges of Surgeons in the United Kingdom, after a course of study and an examination satisfactory to the College, is exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery. 4. Any candidate who produces satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a Degree in Medicine at an University in the United Kingdom, in India, or in a British Colony, is exempted from re-examination on those subjects. 5. Any candidate who has already obtained the Degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, in India, or a British colony, or who (6) has obtained a qualification entitling him to practise medicine or surgery in the country where such qualification has been conferred, wherein the courses of study and the examinations to be undergone previously to graduation have been adjudged by the Censors' Board to be satisfactory, is exempt (if the Censors think fit) from all or any parts of the examinations, except the Third or Pass Examination. The nature and extent of this examination will, in the case of each candidate, be determined by the Censors' Board. Every candidate for the Membership must, however, translate into English a passage from a Latin author, and he has the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages. 7. If any candidate who has attained the age of forty years produce testimonials, not merely satisfactory as to his moral character and conduct and his general and professional requirements, but further showing that he has improved the art or extended the science of medicine, or has at least distinguished himself highly as a medical practitioner, the Censors may, if they see fit, submit the testimonials to the Fellows at a general meeting, and it will be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination.

No candidate is admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist or any other person for the supply of medicines; or who practises medicine or surgery in partnership; or who refuses to make known, when required by the President and Censors, the nature and composition of any remedy he uses.

LICENTIATES.

A new Code of Regulations for the licence has been recently issued, and will be applicable to candidates commencing professional study after March 25th, 1880. Candidates who commenced their study previously to this date will be admitted under the old regulations. The synopsis at pages 418-19 represents the new Regulations.

OLD REGULATIONS.—Candidates must be twenty-one years of age, and have been entered in the Medical Students' Register and engaged in professional study during four years, of which at least three winter and two summer sessions must have been passed in a recognised school or schools. One winter and two summer sessions may be passed in either of the following ways: 1. Attending the practice of a hospital or other institution recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attend-

TABULAR VIEW OF THE REGULATIONS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, AND OF THE SOCIETY OF APOTHECARIES IN LONDON.

	ROYAL COLLEGE OF PHYSICIANS OF LONDON.		ROYAL COLLEGE OF SURGEONS OF ENGLAND.		APOTHECARIES' SOCIETY.
	Members.	Licentiates.	Fellows.	Members.	Licentiates.
Age Required	Twenty-five.	Twenty-one.	Twenty-five.	Twenty-one.	Twenty-one.
Evidence of General Education before Commencement of Professional Study.	A Degree in Arts of an University, or evidence of having passed examinations equivalent to those for a Degree in Arts.	Certificate of having passed examination in subjects of General Education recognised by the General Medical Council.	Degree in Arts of recognised University; or evidence of examination in Arts recognised by College; or examination in English, Classics, and Mathematics.	Degrees in Arts of recognised University; or evidence of an examination in Arts recognised by College; or to pass an examination in English, Classics, and Mathematics.	Examination in Arts by the Society's examiners; or certificate of having passed an examination in Arts recognised by the Medical Council.
Duration of Professional Study.	Five years, of which four must have been passed at a school or schools recognised by the College.	Forty-five months; at least three winters and two summers at a recognised school or schools.	Six years; for members, two years in addition to the certificate for the diploma of member.	Four years, or not less than four winter and four summer sessions.	Four years; not less than three winters and two summer sessions at a school or hospital.
Courses of Lectures, etc., required.					
Anatomy and Dissection	Two winter sessions.	A course of Anatomy; Dissections 12 months.	Lectures during two winters; dissections three winters.	Lectures, two winters; dissections, two winters.	First two winter sessions.
Physiology	Two winter sessions.	Physiology and Practical Physiology, each one course.	Lectures one winter; and Practical Physiology, another session.	Lectures, one winter; Practical Physiology, another session.	First two winter sessions.
Chemistry	Six months.	Instructions; time not specified.	One course.	One course.	First winter session.
Practical Chemistry	Three months.		Three months.	Three months.	First summer session.
Materia Medica	Three months.		One course.	One course.	First summer session.
Practical Pharmacy	Three months.		Three months.	Three months.	Three months.
Botany	Three months.		Not required.	Not required.	First summer session.
Morbid Anatomy	Six months; including instruction in hospital *post mortem* room.	One course, with instruction in *post mortem* room.	Lectures, three months; demonstrations, three winters and two summers.	Lectures, three months; demonstrations in *post mortem* room.	Third winter session.
Medicine	Two winter sessions.	One course.	One course.	One course.	Last two winter sessions.
Clinical Medicine	Three winter and three summer sessions.	Nine months.	One winter and one summer session.	One winter and one summer session.	Third winter session.
Surgery	Two winter sessions.	One course.	One winter session.	One winter session.	Not required.
Clinical Surgery	Two winter and two summer sessions.	Nine months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winters and two summers. Observation and examination of patients, three months.	Not required.
Practical Surgery	Not required.	Required.	Six months.	Six months.	Not required.
Midwifery and Diseases of Women.	Three months; not less than twenty labours.	One course; not less than twenty labours.	One course; not less than ten labours.	One course; not less than ten labours.	Second summer session; twenty cases of labour.
Clinical Study of Diseases of Women.	Six months.	Three months.	Not stated.	Not stated.	Not stated.
Forensic Medicine	Three months.	One course.	One course.	One course.	Second summer session.
Hospital Practice	Medical practice, three winters and three summers; surgical, three winters and two summers.	Medical and surgical practice, three winter and two summer sessions.	Surgical practice, four winters and four summers; medical practice, one winter and one summer.	Surgical practice, three winters and two summers: Medical practice, one winter and one summer.	Medical practice, beginning with second winter session to end of period of study.
Hospital Appointments	Clinical clerk, six months.	Clinical clerk, six months; dresser, six months.	Dresser, six months; house-surgeon or dresser, six months.	Dresser, or (after a year of study) charge of patients under superintendence of a surgeon, six months.	Clinical clerk, six weeks at least.
Other Certificates	Instruction and proficiency in Vaccination. Moral character, from a Fellow or a Member. Registration as a Student as directed by Medical Council.	Practical Instruction in Medicine & Obstetric Medicine. Instruction and proficiency in Vaccination. Moral character. Registration as a Student.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and proficiency in Vaccination.	Having been examined at class examinations. Instruction in Vaccination. Moral conduct.

NUMBER OF EXAMINATIONS. FIRST EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	Three. After end of second winter session. Subjects: Anatomy and Physiology.	Three. After registration as a student; Chemistry and Chemical Physics; Materia Medica, Medical Botany, and Pharmacy.	Two. After third winter session; in Anatomy and Physiology.	Two. After second winter session; Anatomy and Physiology.	Two. After second winter session; Physicians' Prescriptions & Pharmacy, Anatomy and Physiology, General & Practical Chemistry, Botany, Materia Medica and Histology.
SECOND EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	After four years of professional study in Surgical Anatomy and Surgery; Materia Medica; Chemistry in its application to Pathology, Pharmacy, and Toxicology; Midwifery and Diseases of Women; Examination of Surgical Patients.	After eighteen months of study subsequent to first examination; Anatomy and Physiology.	After six years of professional study; in Surgery, including Surgical Anatomy and Pathology, and Medicine (Medicine not required from candidates holding approved diplomas, degrees, or licenses, or from those intending to obtain a medical qualification; in the latter case, the diploma of the College is not issued until proof of having passed the medical examination is produced).	After end of fourth year of professional education; in Surgical Anatomy, Surgery, and Medicine (Medicine not required from candidates holding approved diplomas, degrees, or licenses, or from those intending to obtain a medical qualification; in the latter case, the diploma of the College is not issued until proof of having passed the medical examination is produced).	At end of medical studies, in Medicine, Pathology, Therapeutics, Midwifery and Diseases of Women and Children, Forensic Medicine, Toxicology and Microscopical Pathology.
THIRD EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	After completion of required course of study. Subjects: Medical Anatomy, Medicine, including Public Health and Psychological Medicine; Examination of Medical Patients.	After forty-five months of study; two years after second examination; Medical and Surgical Anatomy and Pathology, including Morbid Anatomy; Principles and Practice of Medicine and of Surgery; Midwifery and Diseases of Women. (Forensic Medicine, Public Health, and Therapeutics are included.)			
FEES PAYABLE	£31.	£15 15s.; £5 5s. at each examination. Candidate rejected at any examination must pay additional £3 3s. before readmission to examination.	At first examination, members £5 5s., non-members £10 10s.; retained in case of rejection. At second examination, member, £10 10s. (above charge for stamps); if not a member, £21 (over and above charges for stamps). In each case, £10 10s. is retained in case of rejection.	£22; £5 5s. at first examination; after failure at this examination, candidate must pay an additional £3 3s. before being again admitted. At Pass Examination, £5 5s. retained on each failure.	Certificate of qualification to practise, £6 6s.; half retained in case of rejection, and accounted for at subsequent examination. First examination, £3 3s., retained in case of rejection and accounted for subsequently.
REJECTED CANDIDATES.....	After first examination, not admitted within three months; after second examination, not till end of six months. In each case, evidence of professional study in interval required. After third examination, not re-admitted (except by permission) within one year.	After rejection at first or second examination, not again admitted until end of three months; after third examination, not till end of six months.	After rejection at first examination, candidates not again admitted for six months; after second examination, not till end of one year, unless Court of Examiners shall otherwise determine.	After rejection at primary examination, candidate must dissect for three months; after rejection at second examination, must attend Surgical Hospital Practice and Lectures on Clinical Surgery for six months.	After rejection at first examination, candidate cannot be again admitted till after three calendar months; after examination for licence, not till after six calendar months.
CANDIDATES (1) EXEMPTED FROM CERTAIN PORTIONS OF THE EXAMINATIONS, OR (2) ADMITTED UNDER SPECIAL REGULATIONS.	(1) Candidates who have passed examinations in Anatomy and Physiology of any other licensing body; who have obtained Degrees in Surgery; or have passed examination in Surgery of a College of Surgeons; or who have obtained degrees in Medicine. (2) Candidates who are above forty years of age; provided that the evidence and testimonials are satisfactory.	(1) Candidates who have elsewhere passed examinations in the subjects of the first and second examinations; who have obtained Degrees in Surgery at a recognised University; who have passed an examination in Surgery at a College of Surgeons; who have obtained foreign qualifications entitling them to practise Medicine.	(2) Candidates who have degrees in Arts of a recognised University in the United Kingdom are required to study for five years only; and members of College, after eight years, admitted to professional examination, on production of certificate of fitness signed by three Fellows.	(2) Candidates who have studied in Scotland or in Ireland, or at recognised Foreign or Colonial Universities; members or licentiates of the other Colleges of Surgeons in the United Kingdom; and Graduates in Medicine or Surgery of a recognised University; admitted to professional examination on production of the necessary certificates or diplomas.	Graduates in Medicine of British Universities; licentiates and members of Colleges of Physicians and Surgeons in the United Kingdom or of Apothecaries' Hall in Ireland; candidates who have passed the first professional examination of other boards; candidates apprenticed before August 1st, 1858, or who commenced hospital attendance on or before October 1st, 1861.

ing lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* the candidates shall have passed an examination in the subjects of general education will not be recognised.

The courses of lectures and practical instruction required are the same as for the membership, as stated in the table at page 418, except: Clinical Medicine, two winter and two summer sessions; Medical and Surgical Hospital Practice, three winter and two summer sessions. The candidate must have performed the duties of clinical clerk for three months and of dresser for three months.

Every candidate for the Licence, before he is admitted to examination, must sign a declaration that he has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

Examinations.—Candidates must pass the following examinations. First Examination, on Anatomy and Physiology. First day, 7 to 10 P.M., written questions. Second day, 7 P.M., *vivâ voce*, on Dissections and Preparations. Second or Pass Examination. First day, 1 to 4 P.M., written questions on Materia Medica, and on Chemistry in its application to Pathology, Pharmacy, and Toxicology; 7 to 10 P.M., written questions on Medical Anatomy, and the Principles and Practice of Medicine, including the Principles of Public Health. Second day: *Morning*, Practical Examination at the College or in the medical wards of a hospital; 1 to 4 P.M., on Materia Medica, and on Chemistry in its application to Pathology, Pharmacy, and Toxicology. (This examination will be partly *vivâ voce* and partly practical.) 7 to 10 P.M., written questions on Midwifery and the Diseases peculiar to Women. Third day: 7 to 10 P.M., written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Fourth day: *Morning*, Practical examination at the College or in the surgical wards of a hospital; 7 P.M., *vivâ voce*, on Medicine, Surgery, and Midwifery.

Certificates required: First Examination.—Evidence of having passed an Arts examination; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school.

Second or Pass Examination.—Evidence of having completed four years of professional study; of having attained the age of twenty-one years; of proficiency in the practice of vaccination signed by a vaccinator appointed by the Local Government Board; of having attended not less than twenty labours; and of having discharged the duties of clinical clerk and of dresser for periods of not less than three months. A testimonial of moral character is required of every candidate.

Exemptions.—The following candidates are exempted to the extent mentioned, in addition to the cases numbered 1, 2, 3, and 4, in the Regulations for the membership. Any candidate who has obtained a Degree in Medicine at an University recognised by the College, after a course of study and an examination satisfactory to the College, is exempt from re-examination on the subjects of the Primary Examination. Any candidate who has obtained a qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, is, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, admissible to the Pass Examination, and is exempt from re-examination on such subjects as may in each case be considered by the Censors' Board to be unnecessary. Any "registered medical practitioner", whose qualification or qualifications have been obtained before the first day of January, 1861, having been with the consent of the College admitted a candidate for the Licence, is examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he is exempted from such other parts of the professional examinations as his qualifications may seem to the Examiners to render in his case unnecessary.

First Examinations for the Licence will be held on Monday, October 4th, and December 6th, 1880; and February 7th, April 4th, July 4th, October 3rd, and December 5th, 1881. The Second Examinations commence on the following Mondays.

The Fee for the College Licence is £15 15s., of which £5 5s. are paid on admission to the First Examination. This Fee will not be returned to any candidate rejected at this Examination, but will be allowed in the Fee for the Licence, and he will be admitted to one subsequent First Examination without the payment of an additional fee. A candidate rejected at the Second or Pass Examination has the Fee paid on admission to this Examination returned to him, less £3 3s.

Licentiates of the College may not compound or dispense medicines, except for patients under their own care.

NEW REGULATIONS. For synopsis, see pages 418-19.

Of the forty-five months of professional study, one winter and two summer sessions may be passed in either of the following ways: 1. Attending the practice of a hospital, infirmary, or other institution recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner, having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* registration, except in the cases of Chemistry, Materia Medica, Botany, and Pharmacy, will not be recognised.

Certificates required: First Examination.—Evidence of having been registered as a Medical Student by the General Medical Council; and of having received instruction in Chemistry, including Chemical Physics (*i.e.*, Heat, Light, and Electricity), in Practical Chemistry, in Materia Medica, in Botany, and in Practical Pharmacy.

Second Examination.—Evidence of having passed the first examination; of having completed, after registration as a student, eighteen months of professional study at a recognised school or schools; and of instruction in Anatomy and Physiology (*see* Table).

Third Examination.—Evidence of being twenty-one years of age; of moral character; of having passed the second examination; of having been engaged in professional study not less than forty-five months (*see* Table); and of instruction in the remaining subjects of study mentioned in the Tables.

The systematic practical instruction in Medicine, Surgery, and Obstetric Medicine comprises practical details; such as—1. The application of anatomical facts to the investigation of disease; 2. The methods of examining various organs in order to detect the evidence of disease or the effects of accidents; 3. The employment of instruments used in diagnosis and treatment; 4. The examination of normal and diseased structures, whether recent or in a museum; 5. The chemical examination of morbid products; 6. Operations on the dead body; 7. *Post mortem* examinations.

No metropolitan hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients.

A three months' course of clinical instruction in the wards of a recognised Lunatic Hospital or Asylum, may be substituted for the same period in the medical wards of a General Hospital.

Exemptions.—Any candidate who shall produce satisfactory evidence of having passed an examination in any of the subjects of the first examination; or an examination in Anatomy and Physiology as required for a degree in medicine or surgery, at an university in the United Kingdom, in India, or in a British Colony; or an examination in Anatomy and Physiology conducted by either of the Royal Colleges of Surgeons in the United Kingdom or by the Faculty of Physicians and Surgeons of Glasgow, will be exempt from re-examination in the respective subjects. Any candidate who shall have obtained a Degree in Surgery at an University in the United Kingdom, or who shall have passed the Examination on Surgery conducted by a Royal College of Surgeons of the United Kingdom, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and Pathology, including Morbid Anatomy, and on the Principles and Practice of Surgery. Any candidate who shall have obtained a Foreign Qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the Pass Examination, and shall be exempt from re-examination on such subjects as shall in each case be considered by the Censors' Board to be unnecessary.

The examinations will be held in February, April, July, October, and December, unless otherwise appointed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF MEMBER.

FOR synopsis of Regulations, *see* pages 418-19.

1. *Preliminary General Education and Examination.*—Candidates who commenced their professional education on and after the 1st of January 1861, will be required to produce one or other of the following certificates:—1. Of graduation in Arts at an University recognised for this purpose: viz., Oxford; Cambridge; Dublin; London; Durham; Queen's University in Ireland; Edinburgh; Glasgow; Aberdeen; St. Andrew's; Calcutta; Madras; Bombay; McGill College, Montreal; Queen's College, Kingston, Canada; and University of Adelaide, Australia: or of having passed one of the following examinations; 2. Matriculation, or such other examinations as shall from time to time be sanctioned by the Council of this College, at an University in the

United Kingdom, or at a Colonial or Foreign University recognised by the Council of the College; 3. The preliminary examination for the Fellowship of this College; or (4) that of the Royal College of Surgeons in Ireland or of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow; 5. The Examination in Arts of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland; 6. The first-class examination of the College of Preceptors; 7. Testamur of the Codrington College, Barbadoes; 8. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate of examination in Latin and Mathematics; 9. Of having passed the Voluntary examinations of Christ's College, Canterbury, New Zealand; the certificate to include all the subjects required in the Preliminary Examination of the College. Candidates who cannot produce any of the foregoing certificates must pass an examination, conducted by the Board of Examiners of the College of Preceptors, under the direction and supervision of this College.*

II. *Professional Education.*—Professional studies prior to the date of examination in general knowledge, are not recognised. The following will be considered as the commencement of professional education:—1. Attendance on the practice of a Hospital, or other public institution recognised by this College. 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

a. By the Practical Course, General Anatomy and Physiology, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not intended that the learners shall perform vivisections.

b. The certificates of attendance on Lectures must include evidence that the student has attended the practical instructions and examinations in each course.

c. The Course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to Surgery, on the living person or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases or accidents on the living person or on the dead body; the performance, where practicable, of the operations of Surgery on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

d. The course of lectures on Chemistry is not required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

e. The certificate of instruction in Vaccination must be such as will qualify its holder to contract as a Public Vaccinator under the Regulations at the time in force of the Local Government Board.

III. *Certificates, etc.*—Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital Attendance required by the Regulations of this College, and in such cases Clinical Lectures will not be necessary, but a Certificate of having acted as Dresser for a period of at least six months will be required.

IV. *Professional Examinations.*—The First or Primary Examination is partly written and partly demonstrative. The Second or Pass Examination is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. A candidate, having entered his name for either the primary or the pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, cannot present himself for examination within three months afterwards.

Candidates can claim exemption from examination in Medicine under the following conditions, viz.:

1. The production by the candidate of a Degree, Diploma, or Licence in Medicine, entitling him to register under the Medical Act of 1858, or a Degree, Diploma, or Licence in Medicine of a Colonial or Foreign University approved by the Council of the College.

2. A declaration by the candidate, prior to his admission to the Final Examination for Membership or Fellowship, that it is his intention to obtain either of the Medical Qualifications mentioned in the foregoing paragraph, in which case the Diploma of the College will not be issued to him until he shall produce either the said Medical Qualification or proof of having passed the several examinations entitling him to receive the same.

The candidates under the special regulations referred to in the table at page 419 must produce, *a.* the several certificates required for the degrees or diplomas in the respective countries; *b.* the diploma, licence, or degree of the College or University; together with, in each case, a Certificate of instruction and proficiency in Vaccination, and satisfactory evidence of having been occupied, after passing the Preliminary Examination, at least four years, or during four Winter and four Summer Sessions, in the acquirement of professional knowledge.

DIPLOMA OF FELLOW.

For synopsis of Regulations, see pages 418-19.

The paragraphs marked *a*, *b*, *c*, *d*, in the regulations for the Membership, are also applicable to the Fellowship.

Gentlemen who were members of the College on September 14th, 1843, are admissible to the Fellowship by election. Fellows of the Royal Colleges of Surgeons of Edinburgh or of Ireland, or of the Faculty of Physicians and Surgeons of Glasgow, are admitted to the Fellowship *ad eundem* under special regulations.

SOCIETY OF APOTHECARIES, LONDON.

FOR synopsis of Regulations, see pages 418-19.

Examination in Arts.—Examinations in the subject of preliminary education will be held at the Hall of the Society in January, April, and September, on days of which due notice will be given. Candidates will be examined in the following branches, and no candidate will be approved unless he show a competent knowledge of each branch:—1. The English Language; 2. The Latin Language; 3. Mathematics; 4. One of the following subjects, at the option of the candidate: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Natural Philosophy. The Examinations will take place in the following order: Friday, 10 to 11.30, English; 11.30 to 1, Latin; 2 and 4, Mathematics; Saturday, 10 and 12, Optional Subjects.* Candidates who pass are arranged in two classes; the first in order of merit, the second in alphabetical order. Candidates must pay the fee (One Guinea) at least one week before the examination.† If a candidate fail to pass the examination, the fee will not be returned to him; but he will be admissible to either or both of the two next following examinations in Arts without additional fee, upon giving at least one week's notice. Certificates in Arts granted by any of the bodies whose certificates are recognised by the Medical Council will be accepted as equivalent to having passed the above examination.

Professional Examinations.—The Court meets every Wednesday and Thursday; and candidates are required to attend at 4.30 P.M. Every candidate intending to offer himself for examination must give seven days' notice, and must at the same time deposit all the required testimonials, with the fee, at the office of the beadle, where attendance is given every day, except Sunday, from 10 to 4 o'clock; Saturdays, 10 to 2.

The following are the subjects of the examination, viz.—Part I. *Compulsory Subjects.* 1. Writing from dictation. 2. English Grammar. 3. Writing a short English composition, such as a description of a place, an account of some useful or natural product, or the like. 4. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple or compound, of Vulgar Fractions, and of Decimals. 5. Geography of Europe, and particularly of the British Isles. 6. Outlines of English History; that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics; Euclid, Books I and II, or the subjects thereof; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of Cæsar's *Commentarii De Bello Gallico.*—Part II. *Optional Subjects.* Papers will be set on the following seven subjects; and each candidate must offer himself for examination on one subject at least, at his option; but no candidate will be examined on more than four subjects:—Translations of passages from: 1. The first book of the *Anabasis* of Xenophon, 2. X. B. Saintine's *Picciola.* 3. Schiller's *Wilhelm Tell.* The candidate must also answer questions on the grammar of each subject, whether compulsory or optional. 4. Mechanics: chiefly elementary. 5. Chemistry: elementary facts. 6. Botany and Zoology: Classification of Plants and Animals. 7. Euclid, Books III, IV, V, and VI. The quality of the handwriting and the spelling will be taken into account. Failure in any one subject necessitates re-examination in all. N.B.—Each candidate (who has not, at a previous examination, paid the amount) pays a Fee of £2 prior to his admission to examination. Particulars respecting the examination are advertised in the Medical journals. Candidates are required to apply for the prescribed forms of application a month, and to send them in not less than three weeks, before each examination. A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I, to pass in not less than four, at his option, of the subjects in Part II.

* The examination in the English Language comprises: the leading features of the language; its structure and grammar, and English composition. The examinations in Latin, Greek, French, and German comprise, besides translations, questions in grammar; and in each, except Greek, translation from English into the foreign language.

† The following form of notice must be copied and written in full by the candidate. I (name in full), residing at (address), intend to present myself for the Preliminary Examination in Arts, at the Apothecaries' Hall, London, on the , and that I intend to take as my optional subject. Signature . The above has been written and signed in my presence, by the abovenamed candidate, with whom I am personally acquainted. Sign. A. B. Address, X. Date

Modified Examinations.—1. All Graduates in Medicine of British Universities will be admitted to a clinical and general examination in the practice of Medicine and Midwifery. 2. Licentiates of the Royal College of Physicians of London or of Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *viva voce* and clinical examination in the Practice of Medicine, Midwifery, Forensic Medicine, and Toxicology. 3. Any candidate who has passed his first examination for the Licence of the King and Queen's College of Physicians in Ireland, or for the joint Licence of the Colleges of Physicians and Surgeons of Edinburgh, the Licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the Degree of M.B., or Master in Surgery, in the Universities of Oxford, Cambridge, Durham, or London; or the second part of the professional examination for the Degree of M.B., or Master in Surgery, in the Universities of Edinburgh, Aberdeen, St. Andrew's and Glasgow; or the second examination for medical and surgical degrees in the Irish Universities; or the first examination for the Licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Materia Medica and Anatomy (to those candidates who have not undergone an examination in those subjects), Practice of Medicine (including Clinical Medicine), Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, which examination will be partly written and partly *viva voce*. 4. Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland; and all candidates who have passed the first Anatomical examination of the Royal College of Surgeons, London; the Royal College of Surgeons, Edinburgh; the Royal College of Surgeons, Ireland, will have to undergo the two examinations, but are only exempt from writing on Anatomy and Physiology in their first examinations. 5. The cases of Graduates of Foreign and Colonial Colleges and Universities will be considered on their respective merits. All qualified candidates, unless registered, will be required to produce their diplomas.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student must reside either in one of the Colleges or Halls, or in a Licensed Lodging-House, for three years. During these three years, he has to pass two examinations in Arts and one in either Mathematics, Natural Science, or Law and Modern History; when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honours, he has to pass a third examination *in Literis Humanioribus*. A student deciding to graduate in medicine, must, after passing the requisite examination for the degree of B.A., spend eight terms (two years) in study prior to a scientific examination for the degree of Bachelor of Medicine, unless he shall have taken a first or second class in the natural science school, when he may go in at the first opportunity for the first M.B. Examination. Two years after passing this Examination, and after four years of professional and scientific study, he may go in for the second or practical examination for the M.B. degree. These four years of medical study may be spent either in or out of Oxford, in an approved medical school. Each examination is conducted partly in writing and partly *viva voce*, and part of each is practical. The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine; those of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), Materia Medica, Therapeutics, Pathology, the principles of Surgery and Midwifery, Medical Jurisprudence and General Hygiene. Every candidate at the second examination is examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus; or in one of these and in some modern author approved by the Regius Professor (such as Morgagni, Sydenham, or Boerhaave).

For the Degree of Doctor in Medicine, a dissertation has to be publicly read three years after taking the M.B. Degree.

The medical examinations take place annually in Michaelmas Term.

Scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other Colleges, by competitive examination in natural science. Each year a Radcliffe Travelling Fellowship is competed for by any one who, having taken a first-class at any of the Public Examinations of the University, or having obtained some University Prize or Scholarship open to general competition, proposes to graduate in medicine. The Travelling Fellows receive £200 a year for three years, half this period being spent in study abroad.

UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE.

A STUDENT proceeding to this degree must—1. Reside in the University two-thirds of each of nine terms; 2. Pass the previous examination (both classical and mathematical); 3. Pursue medical study for five years, unless he have obtained honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, in which case four years only are required.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical, and include chemical analysis, the recognition and description of specimens (healthy, morbid, and microscopical), dissections, and the examination of patients. They take place twice annually, commencing on December 13th; and in the Easter Term, on the Thursday next but one preceding the general admission to the B.A. degree.

The subjects of the first examination are—1. Chemistry and other branches of Physics; 2. Botany. The student may present himself for this examination at any time after he has passed the previous examination. He is required to produce certificates of having diligently attended one course of lectures on Chemistry, including manipulations, and one course on Botany.

The subjects of the second examination are—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacy and Pharmaceutical Chemistry. Before presenting himself for this examination, the student must have completed two years of medical study; he must have attended hospital practice during one year, have practised dissection during one season, and must produce certificates of having diligently attended a course of lectures on each of the subjects of examination.

Each candidate pays three guineas to the registry of the University on giving notice of his intention to offer himself for his first examination. He pays two guineas before the second examination.

The third examination is divided into two parts. The subjects of Part I are—1. Principles of Surgery; 2. Midwifery. The subjects of Part II are—1. Pathology and the Practice of Physic (two papers); 2. Medical Jurisprudence; 3. Clinical Medicine. Candidates are allowed to enter the two parts at different times; but before presenting themselves for either part they must have completed the course of medical study, must have attended the medical practice of a recognised hospital during three years, and the surgical practice during one year at least, and must produce certificates of having attended one course of lectures on each of the following subjects: 1. Pathological Anatomy; 2. The Physiological and Therapeutical Action of Remedies; 3. Principles and Practice of Physic; 4. Clinical Medicine; 5. Clinical Surgery; 6. Medical Jurisprudence; 7. Midwifery; 8. Of having attended ten cases of Midwifery; 9. Of having acquired proficiency in Vaccination*; 10. And of having been Clinical Clerk for six months at least at a recognised hospital; or of having, subsequently to the completion of his attendance on hospital practice, attended to practical medicine, with special charge of patients, in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless he himself be duly qualified.

After these examinations have been passed, an Act must be kept in the Schools in the following manner. The Professor of Physic assigns the day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the professor: the professor brings forward arguments or objections for the candidate to answer, and examines him *viva voce* as well on questions connected with his thesis as on other subjects in the faculty of a more general nature.

DOCTOR OF MEDICINE.

This degree may be taken by a Bachelor of Medicine in the ninth term after his inauguration (this occurs on the commencement day next following the admission to the degree). He is required to produce certificates of having been engaged five years in medical study, to keep an Act similar to that for M.B., and to write a short extempore essay on some one (at his choice) of four topics relating severally to Physiology, Pathology, Practice of Medicine, and State Medicine.

A Master of Arts may proceed to the degree of M.D. in the twelfth term after his inauguration as M.A. without having taken the degree of M.B. He must pass the three examinations for M.B., and keep the Act and write the extempore essay for the M.D. degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice as are required of the candidate for the degree of M.B.

* The Certificate must be from one of the vaccinators authorised by the Local Government Board.

MASTER IN SURGERY.

The subjects of the examination for this degree are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery.

Before admission to this examination, the candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended the surgical practice of a hospital for three years, of having been house-surgeon or dresser for six months, and of having attended—1. A second course of lectures on Human Anatomy; 2. One course of lectures on the Principles and Practice of Surgery; 3. Lectures on Clinical Surgery during one year; 4. Of having practised Dissection during a second season.

The examination takes place at the same times as those for M.B., and in a similar manner. The candidate is required to perform operations on the dead body, and to examine patients in the hospital.

UNIVERSITY OF LONDON.

THE following examinations will be held in the University of London in 1880-81.

Preliminary Scientific Examination: Monday, July 19th.

Bachelor of Medicine (M.B.) First Examination: Monday, July 26th.

Bachelor of Medicine (M.B.) Second Examination: Monday, November 1st.

Bachelor of Surgery (B.S.): Tuesday, November 23rd.

Master in Surgery (M.S.) and Doctor of Medicine (M.D.): Monday, November 22nd.

Subjects relating to Public Health: Monday, December 13th.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

The fee for each examination is Five Pounds*. If a candidate withdraw, or fail to pass either of the examinations, the fee is not returned; but he is admitted without further payment to *two* subsequent preliminary scientific, first M.B., second M.B. or B.S. examinations, or to *one* subsequent M.S. or M.D. examination, provided that he give notice to the Registrar at least fourteen days before the commencement of the examination.

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination (unless he has taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras, and Latin was one of the subjects in which he passed); 2. To have passed the Preliminary Scientific Examination; 3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, in one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom; 4. To pass two examinations in Medicine.

Preliminary Scientific Examination.—Candidates are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies. For the Preliminary Scientific Examination, candidates are examined in Inorganic Chemistry; Experimental Physics; Botany and Vegetable Physiology; Zoology. They must show a competent knowledge in all the subjects.

First M.B. Examination.—The candidate must have passed the Preliminary Scientific Examination at least one year previously, and must produce certificates—1. Of having completed his nineteenth year; 2. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy, Physiology and Histology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine;† 3. Of having dissected during two winter sessions; 4. Of having attended a course of Practical Chemistry; 5. Of having attended to Practical Pharmacy, and having acquired a practical knowledge of the preparation of medicines. Candidates are examined in Anatomy, Physiology and Histology,‡ Materia Medica and Pharmaceutical Chemistry, Organic Chemistry. Candidates must show a competent knowledge in all the subjects. The examinations are conducted by printed papers and *viva voce* interrogation, by demonstration from preparations and specimens, and by dissections.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in—1. Anatomy; 2. Materia Medica and Pharmaceutical Chemistry; 3. Physiology and Histology; 4. Organic Chemistry. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself most in each of the first and third divisions receives an exhibition of £40 *per annum*, and in each of the others £30 *per annum*, for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting himself at the second M.B. examination within three years from the time of passing the first M.B. examination. Under the same circumstances, the first and second candidates in subjects 1 and 3, and the first candidate in subjects 2 and 4, receive each a gold medal of the value of five pounds.

*Second M.B. Examination.**—No candidate is admitted to this examination within two academical years of the time of his passing the first examination, nor without certificates:—1. Of having passed the first M.B. examination; 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the first examination; 3. Of having conducted at least twenty labours;† 4 and 5. Of having attended the Surgical and the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine;‡ 6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, and Midwifery, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months; 7. Of having acquired proficiency in vaccination.§ The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene, Surgery, Medicine, Obstetric Medicine, Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *viva voce* interrogations; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstrations from specimens and preparations. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in—1. Medicine; 2. Obstetric Medicine; and 3. Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Obstetric Medicine and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a gold meda of the value of five pounds.

BACHELOR OF SURGERY.

The candidates must produce certificates—1. Of having passed the second examination for the degree of Bachelor of Medicine in this Uni-

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For the degree of Doctor of Medicine the fee will continue to be Ten Pounds to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of Five Pounds at the Preliminary Scientific Examination.

† The subjects numbered 2, 3, and 4, must be attended after passing the Matriculation Examination, or taking a degree in Arts.

‡ Any candidate may postpone his examination in Physiology and Histology from the First M.B. Examination at which he presents himself for examination in the remaining subject until the First M.B. Examination in any subsequent year; but he cannot be twice rejected for honours on either occasion; and he cannot be admitted as a candidate at the Second M.B. Examination until at least twelve months after he has passed his examination in Physiology and Histology.

Any candidate for the Second M.B. Examination who has passed the First M.B. Examination, under the former regulations, is required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present regulations; at which examination he is not allowed to compete for honours.

† Certificates will be received from any legally qualified practitioner.

‡ The student's attendance on the Surgical and on the Medical Hospital Practice required by Regulation 4, page 5, may commence at any time after his passing the Preliminary Scientific Examination, and may be completed, within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B. Examination. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

§ Certificates of this subject will be received only from the authorised vaccinators appointed by the Privy Council.

versity; 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on Surgical Anatomy and Surgical Operations; by examination, and report on cases, of surgical patients; by performance of operations upon the dead subject; by application of surgical apparatus; and by *viva voce* interrogation.

Examination for Honours.—Any candidate who has been placed in the first division at the examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a gold medal of the value of five pounds.

MASTER IN SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Surgery* in this University; 2. Of having attended subsequently—*(a)* to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; *(b)* or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; *(c)* or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University.† 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *vivâ voce* interrogation; and the candidates are examined in Logic and Psychology,‡ and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of twenty pounds.

DOCTOR OF MEDICINE.

The candidate must produce certificates analogous to those required for candidates for the degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and *vivâ voce* interrogations; and candidates are examined in Logic and Psychology, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of twenty pounds.

UNIVERSITY OF DURHAM.

THERE are two Licences and three degrees conferred; viz., a Licence in Medicine and a Licence in Surgery, and the Degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. A certificate of proficiency in Sanitary Science is also awarded.

BACHELOR OF MEDICINE.

For the Degree of Bachelor of Medicine, there are two Professional Examinations, the first being held in October and April, the second in June and December. The first will commence on October 4th, 1880, and April 25th, 1881, and the second on December 6th, 1880, and June 13th, 1881. The subjects of the First examination are Anatomy, Physiology, Chemistry, and Botany. The candidates must produce the following certificates: 1. Of Registration as a Medical Student; 2. Of *(a)* Graduation in Arts at one of the following Universities, viz., Oxford, Cambridge, Durham, Dublin, London, Queen's (Ireland), Edinburgh, Glasgow, St. Andrew's, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), and Queen's College (Kingston); or *(b)* of having passed the Preliminary or Extra-Professional Examination for Graduation in Medicine at one of the following Universities, viz., London, Edinburgh, Glasgow, St. Andrew's, Aberdeen and Queen's (Ireland); or *(c)* the Preliminary Examination in Arts qualifying for the Membership of the Royal College of Physicians of London, or for the Fellowship of the Royal College of Surgeons of England. Candidates who, at the commencement of their professional education, passed the Arts Examination for registration only, may pass in the extra subjects required for the M.B. Durham either before or after presenting themselves for the first examination for the Degree, but must do so before presenting themselves for the Final Examination. 3. Of attendance on two courses of Anatomy, on one of Physiology, on one of Theoretical and one of Practical Chemistry, and on one of Botany; of twelve months' Dissection; and of attendance on a course of Practical Physiology of not less than thirty lessons.

The subjects of the Second Examination are Medicine, Surgery, Pathology, Midwifery, and Diseases of Women and Children, Medical Jurisprudence, Materia Medica and Therapeutics, and Public Health. Candidates must produce the following certificates: 1. Of being not less than twenty-one years of age; 2. Of good moral character; and 3. Of attendance on the remainder of the course of medical and surgical study as prescribed by the Royal College of Surgeons of England; together with the following additional subjects, viz., one course of lectures on Medicine, one on Therapeutics, and one on Public Health, and Medical Hospital Practice with Clinical Lectures during one Winter and one Summer Session. There must be proof that the whole course of professional study has occupied at least four years.

One of the four years of professional education must be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent, the candidate must attend at least two courses of lectures in the Winter Session and two in the Summer Session, together with the Class and Test Examinations held in connection with those classes; and must also attend Hospital Practice and Clinical Lectures at the Infirmary during the same period. Candidates may fulfil this portion of the curriculum at any period before they present themselves for the Final Examination for the Degree. They are not required to reside at Durham. The other three years of the curriculum may be spent either at Newcastle-upon-Tyne, or at one or more of the Schools recognised by the Licensing Bodies.

Candidates who have completed part of their curriculum elsewhere, may pass their First Examination previous to entering at Newcastle, and are recommended to commence their year of residence at Newcastle, at the beginning of the Winter Session.

DEGREE OF MASTER IN SURGERY.

Candidates must have passed the Examination for the Degree of Bachelor in Medicine, and must have attended one Course of Lectures on Operative Surgery. Each Candidate will have an additional Paper on Surgery, and will have to perform operations on the dead body, and to explain the use of instruments.

DEGREE OF DOCTOR OF MEDICINE.

Candidates must not be less than twenty-four years of age, must have obtained the Degree of Bachelor of Medicine at least two years previously, and have been subsequently engaged in medical and surgical practice. Each candidate must write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and to pass an examination thereon; and must be prepared to answer questions on the other subjects of his curriculum, so far as they are related to the subject of the essay.

Candidates for any of the above Degrees must give at least twenty-eight days' notice to the Registrar of the College, sending at the same time the fee and the necessary certificates.

THE DEGREE OF DOCTOR OF MEDICINE FOR MEDICAL PRACTITIONERS OF FIFTEEN YEARS' STANDING, WITHOUT RESIDENCE.

The Warden and Senate of the University of Durham, with the view of affording to Practitioners of fifteen years' standing an opportunity of obtaining the Degree of Doctor of Medicine, have instituted a Special Examination, under the following regulations. 1. The candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom. 2. He shall have been in the active practice of his profession for fifteen years as a qualified practitioner. 3. He shall not be under forty years of age. 4. He shall produce a certificate of moral character from three registered members of the medical profession. 5. If the candidate shall not have passed, previously to his Professional Examination (in virtue of which he has been placed on the *Register*), an Examination in Arts, he shall be required to pass an Examination in Classics and Mathematics.* 6. If the candidate shall have passed, previously to his Professional Examination (in virtue of which he has been placed on the *Register*), a Preliminary Examination,

* Candidates who have obtained the degree of Bachelor of Medicine previously to 1877, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and their attendance on surgical practice required by Regulation 2, may commence from the date of the M.B. Degree.

† One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

‡ Any candidate who has taken the degree either of B.A., B.Sc., or M.D., in this University, is exempted from this part of the examination; and any candidate who has passed the Second M.B. Examination may at any subsequent M.S. Examination present himself for Logic and Psychology alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.—An analogous exemption is allowed in the case of candidates for the degree of M.D.

* The subjects for this examination shall be as follows: 1. An English Essay. (A short essay on some subject to be specified at the time of the examination.) 2. Arithmetic. 3. Euclid, Books I and II. 4. Latin Translation from Virgil, *Æneid*, Books I and II, together with Grammatical Questions. 5. One of the following subjects:—i. Greek—Translation from Xenophon's *Memorabilia*, Books I and II, with Grammatical Questions; ii. French—Translation from Voltaire's *Charles XII*, with Grammatical Questions; iii. German—Translation from Gerstäcker's *Die Sklaven am Mississippi*, Book I, with Grammatical Questions; iv. Elements of Mechanics, Pneumatics, and Hydrostatics; v. Some Treatise on Moral, Political, or Metaphysical Philosophy.

he shall be required to translate into English passages in any of the parts specified below of any one of the Latin authors mentioned :—Cæsar —*De Bello Gallico*, first three books; Virgil—first three books of the *Æneid;* Celsus—first three books.* The candidate shall have an opportunity of showing proficiency in Greek, Moral Philosophy, or some Modern Language.† 7. The candidate shall be required to pass an Examination in the following subjects :—i. Principles and Practice of Medicine, including Psychological Medicine and Hygiene; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases peculiar to Women and Children; iv. Pathology—Medical and Surgical; v. Anatomy—Medical and Surgical; vi. Medical Jurisprudence and Toxicology; vii. Therapeutics. 8. The fee shall be Fifty Guineas. 9. If the candidate shall fail to satisfy the Examiners, the sum of Twenty Guineas shall be retained; but, if he shall again offer himself for the Examination, Forty Guineas only shall then be required.

Examinations, in accordance with the above regulations, will commence on December 6th, 1880, and June 13th, 1881; and will last four days on each occasion, in the College of Medicine, Newcastle-on-Tyne. Gentlemen intending to offer themselves as candidates are requested to forward their names to Dr. Luke Armstrong, Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, on or before November 1st, 1880, and May 1st, 1881, together with the fee and the before-mentioned certificates.

The Fees for the Examinations, Licences, Degrees, and Certificates, are as follows :—Registration Examination, £1; Extraordinary Registration Examination, £2; Registration, 5s.; Public Examination in Medicine or in Surgery, each £5; Licence in Medicine and Licence in Surgery, each £3; Degree of Master in Surgery, of Bachelor in Medicine, and of Doctor in Medicine, each £6; Degree of Doctor in Medicine for Practitioners of fifteen years' standing, £52 10s.; Certificate in Sanitary Science, £5 5s.; Certificate in Sanitary Science for Medical Officers of Health, £10 10s.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

No one can obtain the Licence of the College under the age of twenty-one years. Every applicant must produce satisfactory evidence of having been engaged in the study of Medicine during at least four years subsequently to registration as a student, including attendance during not less than four winter sessions or three winter and two summer sessions at a recognised medical school. He must produce certificates of having attended the following courses at an university or medical school: Anatomy, Practical Anatomy, Chemistry, Practice of Medicine, Clinical Medicine, and Principles and Practice of Surgery, each a six months' course; Practical Chemistry, Materia Medica and Pharmacy, Physiology, Clinical Surgery, Midwifery, Medical Jurisprudence, General Pathology or Pathological Anatomy, and Practical Pharmacy, each a three months' course. He must have attended the practice of a public hospital (containing not fewer than eighty beds), during not less than twenty-four months, twelve of which must have been spent in the medical wards. He must also have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital; or have been engaged during six months as a visiting assistant to a registered practitioner. He must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner, and have studied vaccination under a competent and recognised teacher. He must have passed the Preliminary Examination in Literature and Science,‡ and had his name inscribed in the General Medical Council's *Register* of Medical Students, previous to the commencement of his medical studies. Masters and Bachelors of Arts of any British or foreign university, whose course of study may be approved of by the College, will be exempted from the preliminary examination; also those who have passed the examination of the national educational bodies, or of any of the licensing boards recognised by the Medical Act.

The Professional Examination will be divided into two parts: 1. Anatomy, Physiology, Chemistry; 2. Materia Medica and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Surgery, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until the end of the second winter session, or to the second until he has completed four years of professional study. The preliminary examination will be held on October 16th and 18th, 1880; April 12th and 13th, and July 9th and 11th, 1881. The first professional examinations on October 6th, 1880; January 12th, April 20th, July 20th, and October 12th, 1881. The second professional examinations will be held on Thursdays and Fridays following the first professional examination.

Candidates who have passed the first professional examination before a qualifying body (provided it be as extensive as that required by this College) will be at once admitted to the second examination.

No candidate is admissible to examination who has been rejected by any other licensing board within the previous three months. Every candidate must sign a declaration that he has not been rejected within this period.

The Fee for the Licence is £15 15s. A candidate for the first professional examination pays £6 6s., and for the second or final £9 9s.; but, if exempted from the first professional examination, he must, before appearing for the final, pay the whole fee of £15 15s. If a candidate be unsuccessful at the first professional examination, £3 3s.; and at the second or final £4 4s. will be retained. This regulation will also apply to cases in which the candidate may have been previously rejected.

Candidates may be admitted to special examination by bringing forward satisfactory reasons and paying an extra fee of £5 5s. Should the candidate be unsuccessful, £11 11s. will be returned to him.

FELLOWSHIP AND MEMBERSHIP.

No one can be elected a Fellow of the College until he has been at least one year a Member, and has attained the age of twenty-five years.

Any Licentiate of a College of Physicians, or Graduate of a British or Irish University, with whose knowledge of Medical and General Science the College may be satisfied, may be admitted a Member of the College, provided he shall have attained the age of twenty-four years.

Every motion for the election of a Fellow or a Member shall be made at a quarterly meeting of Fellows by one of the Fellows present, and seconded by another; and this motion shall be determined by ballot at the next quarterly meeting—a majority of three-fourths being necessary to carry it in the affirmative.

Fees.—The fee to be paid by a Member shall be £31 10s. A Licentiate who has obtained the Licence prior to the 1st of August 1876, when raised to the rank of Member, pays £21; a Licentiate obtaining the Licence subsequent to that date, when raised to the rank of Member, pays £15 15s. When a Member is raised to the rank of Fellow, he pays £31 10s., exclusive of stamp-duty (£25). All candidates for Fellowship or Membership must lodge their fees and the amount of stamp-duty payable with the Treasurer previously to presenting their petitions.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA.

THE regulations regarding schools of medicine, preliminary examination, and professional study and examination, are similar to those for the double qualification (see below), except that the third course of Medicine is not required. The first professional examinations will be held on October 19th, 1880; January 25th, March 29th, April 19th, and July 19th, 1881. The second examination takes place immediately after the conclusion of the first.

At the second examination, the student, in furnishing the statement of his professional study, must, if he have been an apprentice, insert the name of his master, the date of his indenture, and the length of time for which he was bound. If he have been apprenticed to a Fellow of the College, he must also produce his discharged indenture.

Recent Dissections, Anatomical Specimens, and articles of the Materia Medica are employed in the examinations; and all candidates are required to write out formulæ of prescriptions, and are subjected to a practical examination in the Surgical Hospital.

The Fees are: for the first examination, £6 6s.; for the second, £9 9s. At the first examination, £3 3s.; and at the second £5 5s., will be returned to unsuccessful candidates.

Candidates who have passed the first examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second Professional Examination under the same conditions as are described in the regulations for the double qualification. The fee will be £15 15s.; and unsuccessful candidates will receive back £11 11s.

Candidates desirous of special examinations on other days than those fixed, must prepare a case to be submitted to the consideration of the authorities of the College. They must produce certificates of the whole of the prescribed course of study, and of having passed the preliminary

* The candidate may choose for himself any one of the three above-named authors on whose works to be examined.

† For these subjects no extra marks are awarded.

‡ For the subjects, see note to regulations for double qualification.

examination, and must state the earliest and the latest days within which they can present themselves. The fees are as follows: viz., £20 for first and second examinations, of which £12 will be returned to candidates remitted on the first examination; but no part of the money will be repaid to candidates who, having passed the first, are unsuccessful in the second examination; £17 for second examination. Of this, no part will be returned to the candidate, if unsuccessful.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

DOUBLE QUALIFICATION IN MEDICINE AND SURGERY.

THE examination for this qualification is conducted by a Board, in which each body is represented, for examination in the branches common to both Medicine and Surgery; but the College of Physicians takes exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. Students passing that examination are enabled to register two qualifications: Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

Every candidate must have followed his course of study in an University, or in an established School of Medicine, or in a Provincial School specially recognised by the Colleges of Physicians and of Surgeons of that division of the United Kingdom in which it is situate. Under the title of *Established School of Medicine* are comprehended the medical schools of those cities of Great Britain and Ireland in which Diplomas in Medicine or Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Preliminary Examination in General Education.—All candidates for the Diplomas of the Colleges must have passed the complete examination in General Education,* and have had their names inscribed in the General Medical Council's Register of Medical Students at the commencement of their professional studies. Certificates of having passed the examinations in General Education, conducted by other bodies (viz., those recognised by the General Medical Council), will be accepted. Each candidate who intends to undergo the preliminary examination must give in his name to the officer of either College not less than two days before the day of examination. He must pay a fee of Ten Shillings. If unsuccessful, he must pay Five Shillings for each subsequent examination.

Professional Examination.—1. Candidates must have been engaged during forty-five months after the preliminary examination, in not less than four winter sessions', or three winter and two summer sessions', attendance at a recognised medical school. 2. The candidate must have attended the following courses of lectures: Anatomy, two courses† of six months each, and Practical Anatomy, twelve months; or Anatomy, one course of six months, and Practical Anatomy, eighteen months; Physiology, not less than fifty lectures; Chemistry, Practice of Medicine, Clinical Medicine,‡ Medicine (a third course, either Practice or Clinical, at option),‡ Principles and Practice of Surgery, Clinical Surgery,‡ Surgery (a third course, either Principles and Practice or Clinical Surgery, at option),‡ each six months; Practical or Analytical Chemistry, Materia Medica, Midwifery, and Diseases of Women and Children, Medical Jurisprudence, and Pathological Anatomy,§ each three months. 3. He must also produce certificates:—*a*. Of having attended at least six cases of labour under the superintendence of a registered medical practitioner. *b*. Of having attended, for three months, instruction in Practical Pharmacy. The teacher signing the certificate must be a Member of the Pharmaceutical Society of Great Britain, or a chemist and druggist recognised by either College on special application, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicine to his own patients. *c*. Of having attended, for twenty-four months, a public general hospital containing, on an average, at least eighty patients. *d*. Of having attended, for six months, the practice of a public dispensary specially recognised by either College; or of having been engaged for six months as assistant to a registered practitioner. *e*. Of having been instructed in vaccination; the teacher signing the certificate must be a registered practitioner. It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.

Professional Examination.—1. Candidates for the double qualification are subjected to two professional examinations. 2. Opportunities for both examinations are presented six times in each year. On each occasion, the candidates write answers to questions; and are examined orally on the days immediately succeeding. 3. Unsuccessful candidates are remitted to their studies for not less than three months. 4. The first examination embraces Anatomy, Physiology, and Chemistry; and takes place not sooner than the end of the second winter season. 5. Candidates must apply to the Inspector of Certificates on or before the Friday preceding the day of examination; and must produce certificates of attendance on those courses of lectures which have reference to the subjects of the examination, and evidence of having passed the preliminary examination. 6. The sum of £8 8s. must be paid to the Inspector of Certificates for this examination not later than 9 A.M. of the Saturday preceding it. This sum will be considered as paid to account for the entire fee of £21 payable for the two Diplomas. 7. In the case of a candidate being unsuccessful at this examination, £5 5s. will be returned to him. 8. The second examination embraces Medicine, Surgery, and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and takes place after the termination of the winter session of the last year of study, at least forty-five months after the examination in general education. 9. Application for examination must be made to the Inspector of Certificates not later than the Monday previous to the day of examination. 10. Every candidate must produce—*a*. Satisfactory evidence of having attained the age of twenty-one years; *b*. A certificate of having passed the preliminary examination, unless this certificate have been already seen by the Inspector; *c*. A certificate of registration in the books of the General Medical Council; *d*. A certificate of having passed the first professional examination; *e*. The certificates mentioned under Professional Education, Section 3 (above); *f*. A tabular statement (for which a printed form will be furnished), exhibiting the whole of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session. 11. The fee for this examination is £12 12s., which must be lodged with the Inspector not later than 9 A.M. of the Tuesday preceding the examination. 12. On the production of the above documents, and after receiving the fees, the Inspector gives the candidate a letter authorising the examiners to take him on trial. 13. In case of a candidate being unsuccessful at this examination, £8 8s. will be returned to him. 14. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second professional examination on producing certificates of the whole course of study prescribed, of having passed their preliminary and first professional examinations, and of having being registered as students. If any of the three subjects of the first examination have been omitted, the candidate will have to undergo an examination on the omitted subjects; and none of the subjects set down in Section 8 will be omitted at the second examination. The fee payable by such candidates is £21, and unsuccessful candidates will receive back £10 16s. 15. In addition to the written and oral examinations, all candidates are subjected to practical Clinical Examinations in Medicine and Surgery. 16. No candidate is admissible to examination who has been rejected by any other Licensing Board within the preceding three months.

Communications from candidates to be addressed to Mr. Joseph Bell, 20, Melville Street, Edinburgh.

The following will be the periods of examinations for the Double Qualification for the year 1880-81. *Preliminary Examination in General Education*, October 16th, and 18th, 1880; April 12th and 13th, and July 9th and 11th, 1881. *First Professional Examinations.*—Tuesdays, October 26th, 1880; February 1st, April 5th and 26th, July 12th and 26th, 1881. *Second Professional Examinations.*—These will take place immediately after the conclusion of the first professional examinations. In no case will they be begun on an earlier day than the Thursday of any period.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS FOR THE DIPLOMA.

THE regulations respecting the Curriculum of Professional Study, and the Fees, are similar to those of the Royal College of Surgeons of Edinburgh.

Preliminary Examinations in General Literature will be held on April 10th, July 19th, September 19th, and October 22nd, 1881. The Fee is Ten Shillings. Candidates will be furnished, on application to the Secretary, with a form of application, which they must fill up and transmit to him at least four days before the examination.

The First Professional Examination take place on October 12th, 1880, and January 11th, April 5th, July 11th, and October 18th, 1881; *the Second Professional Examination* on October 14th, 1880, and January 13th, April 8th, July 21st, and October 25th, 1881. Applications for admission to the first examination must be made four days, and to the second examination a week, before the respective examinations.

Students are strongly recommended to avail themselves of opportunities of studying Ophthalmic and Mental Diseases, Natural History, Comparative Anatomy, and Practical Physiology, in addition to those required in the Curriculum.

The examinations are conducted partly in writing and partly orally. Recent Dissections, Anatomical Specimens, the Microscope, Chemical Tests, Surgical and Obstetrical Instruments and Apparatus, Articles of the Materia Medica, Pathological Specimens, and Toxicological Tests and Specimens, may be employed. Candidates are also subjected, at the second examination, to a Practical Clinical Examination at the Hospital, and may be examined practically in Operative Surgery.

Candidates who have passed the examination in Anatomy, Physiology, and Chemistry, before any of the Licensing Bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, are admitted to the second professional examination. Graduates and Licentiates in Medicine of other bodies are exempt from examination in Medicine and Materia Medica.

The Fee for the diploma is £15 15s.; £6 6s. is paid at the first examination, of which £3 3s. is retained in case of rejection; and £9 9s. for the second examination, of which £4 4s. is retained if the candidate be rejected.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee of £5 5s.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, conjointly grant their Diplomas after one series of examinations before a Board of Examiners in which each body is represented. The regulations as to the curriculum of study, and the fees, are similar to those for the conjoined examinations of the Royal Colleges of Physicians and Surgeons of Edinburgh. The first examinations will be held on October 12th, 1880, and January 11th, April 5th, July 19th, and October 18th, 1881: the second examinations on October 19th, 1880, and January 17th, April 11th, July 25th, and October 27th, 1881.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

Three Medical Degrees are conferred by each University; viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degree of C.M. is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.—The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass an examination in at least two of the following subjects: Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.* The examinations on both classes of subjects take place† before the commencement of medical study.‡

A Degree in Arts (not honorary) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Courts, exempts from

[illegible] Natural History.

[illegible] Writing; [illegible] Grammar, with analysis [illegible] March [illegible] Latin; [illegible] translated from a Latin Author [illegible] Latin words [illegible] Vulgar and Decimal [illegible] I. II. and III; [illegible] I. II. and III; [illegible] Elementary Rules of Arithmetic, including Simple [illegible] knowledge of Euclid above will not be sufficient. [illegible] Elementary Arithmetic, Statics, [illegible] At least [illegible] October 11th and March [illegible] Plato, [illegible] and March [illegible] Virgil, [illegible] *de Bello Gallico*, Book I. [illegible] October 12th and March [illegible] Cæsar, *de Bello Gallico*, Book IV. Section 1 and 2; Algebra, [illegible] Book V. [illegible] Natural [illegible] Balfour Stewart, *Elementary Lessons in Physics*, [illegible] Jevons's *Primer of Logic*, [illegible] Murphy's [illegible] October and March [illegible] March [illegible] and Calderwood's [illegible] and [illegible] Grammar [illegible] English. [illegible] Paper: English [illegible] Composition [illegible] Passage for Translation into Latin, [illegible] Paper: Translation into English [illegible] Grammar and Construction. Arithmetic: [illegible] Vulgar and Decimal Fractions. Elementary Rules of Algebra, I. II. and III. Simple Equations. Elements of Mechanics, [illegible] Statics, as far as Single Equation. Elements of Mechanics, [illegible] to Mixtures, [illegible] part may be omitted. [illegible] by the candidate [illegible] Gospel according to St. [illegible] Acts I. and the Gospel according to St. [illegible] passages from Greek authors not prescribed. [illegible] Greek, with [illegible] Paper: German: Schiller's [illegible] Books I. II. III. and VI; [illegible] Paper: French: [illegible] Mathematics, [illegible] Euclid, Books I. II. III. and IV. Algebra, [illegible] Natural [illegible] Natural [illegible] Natural

preliminary examination. The Universities also recognise examination in Arts by any corporate body whose examination has been recognised by the General Medical Council, and also approved by the University Court, so far as regards all subjects comprised in the examination of the said corporate body.

DEGREE OF BACHELOR IN MEDICINE AND MASTER IN SURGERY.

Candidates for the Degree of Bachelor in Medicine or Master in Surgery must have been engaged in medical and surgical study for four years—each *Annus Medicus* being constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than 50 lectures each; with the exception of the clinical course, in which lectures are to be given at least twice a week.

Every candidate for the Degree of M.B. and C.M. must give sufficient evidence by certificates—1. That he has studied Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine and of Surgery, Midwifery and the Diseases of Women and Children,* General Pathology,† during courses including not less than 100 lectures; Practical Anatomy, a course of the same duration as the preceding; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or attendance on six cases under a registered medical practitioner; Clinical Medicine and Clinical Surgery, each course of not less than 100 lectures, or two courses of three months; Medical Jurisprudence, Botany, Natural History, including Zoology, courses of not less than 50 lectures. 2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital with not fewer than 80 patients. 3. That he has been engaged for at least three months in compounding and dispensing drugs at the Laboratory of a Hospital or Dispensary, of a Member of a Surgical College or Faculty, Licentiate of the London or Dublin Societies of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.‡ 4. That he has attended, for at least six months, the out-practice of a hospital or the practice of a dispensary, or of a registered practitioner. Evidence of a practical knowledge of vaccination is also required.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entitled to give the Degree of Doctor of Medicine.§ [At St. Andrew's, no one can be received as a candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges; viz., the Universities of St. Andrew's, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Attendance during at least six winter months on the medical or surgical practice of a General Hospital which accommodates at least eighty patients, and during the same period, on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lectures of teachers of Medicine in the hospital schools of London,‖ or in the school of the College of Surgeons in Ireland, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the University Court, may be reckoned as one of the four years.¶ All candidates not students of the University attending the lectures of Extra-Academical Teachers, must, at the commencement of each year of attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee.

Every candidate must deliver, at such time of the year as may be fixed by the Senatus Academicus—1. A declaration, in his own handwriting, that he is twenty-one years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.**

In the University of Edinburgh, candidates are examined in writing and *viva voce*—1. On Chemistry, Botany, and Natural History; 2. On Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; 3. On Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4. Clinically on Medicine and on Surgery in a hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects. Students may be admitted to examination on the first division of these subjects at the end of their second year, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two divisions at the end of their third year, or to the four examinations at the end of the fourth year. If any candidate be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other school of medicine.

In the University of Glasgow, candidates for the Degree of Bachelor of Medicine and Master in Surgery are examined both in writing and *viva voce*—1. On Chemistry, Botany, and Natural History; 2. On Anatomy and Physiology; 3. On Regional Anatomy, Materia Medica and Pharmacy, and Pathology; 4. On Surgery, Clinical Surgery, Medicine, Clinical Medicine, Therapeutics, Midwifery, and Medical Jurisprudence. The examination in Chemistry includes Practical Chemistry; and the examinations in Anatomy and Physiology include Practical Anatomy, Histology, and Practical Physiology; and the examination in Surgery includes Operative Surgery. Students may be examined in the first division of subjects after attending the required courses during one winter and two summer sessions, or during one summer and two winter sessions. Students who have passed the first examination may be examined in the second division after attending the courses during two winter and three summer sessions, or three winter and two summer sessions, from the time of the commencement of their studies. Students who have passed the two previous examinations may be examined in the third division after the conclusion of the third winter's session of attendance upon medical classes (including those of the required subjects). Students who have passed the examinations in the subjects of the three previous divisions may be examined in the fourth division at the first term for the final examination after the conclusion of their curriculum of study. Candidates who are found unqualified cannot be again admitted to examination until they shall have completed another year of study, or such portion of a year as may be fixed by the examiners.

In the Universities of Aberdeen and St. Andrew's, every candidate for the Degree of Bachelor of Medicine or Master in Surgery must undergo three professional examinations, conducted in writing and *viva voce*. The first examination (not to be taken before the end of the second year of study) includes Chemistry, Botany, Elementary Anatomy, and Materia Medica. The second examination (not to be taken before the end of the third year) includes advanced Anatomy, Zoology with Comparative Anatomy, Physiology, and Surgery. The third examination (not to be taken before the end of the fourth year) includes General Pathology, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery. The examinations in Anatomy, Chemistry, Physiology, Botany, Zoology, and Materia Medica are conducted, as far as possible, by demonstrations of objects; and those on Medicine and Surgery, in part, by clinical demonstrations. Candidates may be admitted to examination on the first two divisions at the end of the third year, or to the three examinations at the end of the fourth year. A rejected candidate is not again admitted to examination unless he shall have completed another year of medical study, or such portion of a year as may be prescribed by the examiners.

The professional examinations will be held at the following times: *Aberdeen*—April and July, directly after the close of the session. *Edinburgh*—First Examination, October 14th and 15th, 1880, and April 1st and 2nd, 1881; Second Examination, April 8th and 9th, and in July, 1881; Clinical Examination, May 2nd, 1881; Final Examination, June 1881. *Glasgow*—First Examination, October 12th, 1880, and April 8th, 1881; Second Examination, October 13th, 1880, and April 9th, 1881; Third Examination, October 14th, 1880; Fourth Examination, June and July.

DEGREE OF DOCTOR OF MEDICINE.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to having

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* Two Sessions of Medical Study, of three months each, are reckoned equivalent to a [illegible] different department of Obstetric Medicine be taught [illegible]

† One [illegible] course of lectures on Morbid Anatomy, together with a [illegible] of Medicine or Clinical Medicine. The course of [illegible] at Aberdeen.

‡ [illegible] Hospital, or Dispensary of a Registered Medical [illegible] a Member of the Pharmaceutical Society of Great Britain.

§ [illegible] Degree in Medicine *(Glasgow.)*

‖ [illegible] by attendance upon courses in the great [illegible] Dublin, and, in default of such attendance, [illegible] by attendance on any general Hospital con[illegible] [illegible] attendance has been given at the same [illegible] Anatomy [illegible]

¶ [illegible] Clinical Dissertation to be presented previously to the final examination for M.B. In the other universities no Thesis is required until the candidate seeks the Degree of M.D.

received the Degree of Bachelor of Medicine, for at least two years in attendance on a Hospital, or in the Military or Naval Medical Service, or in Medical and Surgical Practice. The candidate must be a Graduate in Arts, or must, before or at the time of obtaining his Degree of Bachelor of Medicine,* have passed a satisfactory examination in Greek and in Logic or Moral Philosophy, and in one at least of the other optional subjects of the examination in general education (see page 427). At Aberdeen, Edinburgh, and Glasgow, he must submit to the Medical Faculty a thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.†

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, in Aberdeen before the first Tuesday in November 1861, and in Glasgow before October 1st, 1861, are entitled to be examined for the Degree of Doctor of Medicine, under the regulations then in force in each University respectively. At Edinburgh, candidates settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of forty years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiner of the sufficiency of his professional knowledge, provided always that such degrees shall not be conferred on more than ten in any one year. The candidate must produce a certificate of age, and three certificates from medical men of acknowledged reputation as to his professional position and experience. The examination is conducted in writing and *viva voce* on Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery and Diseases of Women and Children.

The Graduation Fees in each of the Universities are—for the Degree of M.B., three examinations, each £5 5s. = £15 15s.; for the Degree of C.M., £5 5s. additional; for the Degree of M.D., £5 5s. additional to that for M.B., together with Government stamp duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25. At St. Andrew's, the fee for the Degree of M.D. under the Section relative to Registered Medical Practitioners is 50 guineas; if the candidate fail to pass, £10 10s. (which is to be paid before the examination) is retained. Stamp duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

LICENCE IN MEDICINE.

Every candidate for the licence of the College to practise Medicine must produce satisfactory evidence—1. Of character, from a Fellow of the College, or from two registered practitioners. 2. Of having passed an examination in general education, held by some one of the examining bodies recognised by the General Medical Council. 3. Of having been engaged during a period of four years in the study of Medicine. 4. Of having attended courses of lectures on the following subjects, at schools recognised by the College: Practical Anatomy, two courses; Physiology or Institutes of Medicine, Chemistry, Practical Chemistry, Materia Medica, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery—each one course. 5. Of having attended for twenty-seven months a recognised Medico-Chirurgical Hospital, in which clinical lectures and clinical instruction in Medicine are given; the attendance not to be for more than nine months in any one year, viz., six winter and three summer months. 6. Of having attended during at least nine months on a clinical hospital which contains wards for the treatment of the infectious fevers, and of having taken daily observations of at least five cases of fever. 7. Of having attended Practical Midwifery and Diseases of Women for six months at a Lying-in Hospital or Maternity recognised by the College; or, where such hospital attendance cannot have been obtained during the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; in either case, not less than twenty labour-cases must have been actually attended. 8. Of having lodged the admission fee in the Royal Bank of Ireland to the credit of the College.

Examinations.—The professional examination is divided into two parts: 1. Anatomy, Physiology, Chemistry, and Materia Medica; 2. Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Candidates may be examined in the subjects of the first part at the termination of the second year of study, on producing the certificates in these subjects, or in all the subjects of their education, on the completion of their medical studies. No candidate can be examined in all the subjects of the first and second parts in the same month. The examinations are conducted by printed papers, orally, and at the bedside.

The examinations in the subjects of the first part are held quarterly, in January, April, July, and October. The final examinations are held monthly, except in August and September.

Exempted Cases.—Candidates qualified as follows are required to undergo the second part only of the professional examination, viz.: 1. Graduates in Medicine of any University in the United Kingdom, or of any Foreign University approved by the College; 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh; 3. Graduates or Licentiates in Surgery; 4. Candidates who, having completed the curriculum laid down above, shall have passed the previous professional examination or examinations of any of the licensing medical authorities in the United Kingdom. Candidates thus qualified, as specified in Sections 1, 2, and 3, must fill up a schedule and present their registration certificate (or their medical or surgical qualification), as well as certificates of character, of practical midwifery, and of attendance on a clinical hospital which receives cases of fever. Candidates whose case is met by Section 4 must produce, in addition to the certificates required from candidates for the licence, a certificate from the licensing medical authority to the effect that such previous professional examination has been successfully passed.

Any registered practitioner of *five* years' standing may be admitted to examination for the licence of the College, on producing his certificate of registration, with satisfactory reference, and is exempted from the examination by printed questions.

Unsuccessful candidates may be admitted to re-examination after not less than two months.

LICENCE IN MIDWIFERY.

Candidates for the licence in midwifery, who are not licentiates in medicine, may be admitted to examination on the following qualifications: 1. The degree or licence in medicine or surgery from any University or College of Physicians or Surgeons in the United Kingdom; 2. Testimonials as to character; 3. Certificates of having attended (*a*) a course of lectures on midwifery in a school recognised by the College; (*b*) practical midwifery and diseases of women, as in Section 6 of the regulations for the Licence in Medicine.

Candidates who are licentiates in medicine of the College, or who have passed the examination for such licence, may be admitted to examination for the licence in midwifery on lodging their fees and signifying their wish to the reigistrar a week at least before such examination.

The examination for the licence in midwifery is held monthly.

Registered practitioners of *five* years' standing are admitted to examination for the licence in midwifery on producing their certificate of registration with satisfactory reference, and are exempted from the examination by printed questions.

Fees.—The fees are—For the licence to practise medicine, £15 15s., which may be divided as follows, viz.: examination at the termination of the first period of study, £5 5s.; final examination, £10 10s. Examination for the licence to practise midwifery, £3 3s. Examination for the licences in medicine and midwifery, if obtained within a month, to be lodged in one sum, £16 16s. Special examination for the licence to practise medicine, £21; for the licence to practise midwifery, £5 5s. The admission fee, less the sum paid to the examiners, is returned to any candidate rejected at any of the College examinations.

MEMBERSHIP.

All persons who have been admitted Licentiates of the College before December 12th, 1878, shall be entitled to be admitted Members of the College without payment or examination, on giving six weeks' notice, in writing, to the Registrar, of their intention to avail themselves of the privilege conferred by the Supplemental Charter, and on complying with all or any other prescribed conditions, provided that they have, since their admission as Licentiates, obeyed the by-laws of the College.

Every candidate for the Membership of the College is required to

* Or within three years thereafter.—*Ed. Indep.*

† No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's Degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise reference to the publications quoted, so that due verification may be facilitated. *Aberdeen.* There is a similar regulation in the University of Glasgow.

produce satisfactory evidence—1. Of having attained the age of twenty-five years. 2. Of being a Licentiate of this College for three years at least, computed from the day on which he shall have subscribed his name on admission as a Licentiate; or a Licentiate of one year's standing, who shall be a Graduate of Arts of an University in the United Kingdom at the time of his obtaining the licence; or a Licentiate of one year's standing, who shall be a registered practitioner of seven years' standing at the time of his obtaining the licence.

Every candidate must pass an examination in Medical Anatomy; Pathology; Histology; Medical Chemistry; Forensic Medicine; Principles of Public Health, including Climatology and Meteorology; Psychology; and Clinical Medicine. He must also translate into English a passage from a Latin author, or show that he possesses a knowledge of Greek, or French, or German.

Candidates who were admitted Licentiates of the College before December 12th, 1878, may be admitted Members of the College, under the following conditions. 1. They shall comply with Clauses 1, 2, 3, and 4, as above stated. 2. They shall satisfy the College that they have, since their admission as Licentiates, obeyed the by-laws of the College. Should the College be satisfied that they have complied with the above regulations, they shall be admitted Members without fee or examination, on taking the declaration required of Members.* Should the candidate wish to obtain the parchment diploma of Member, he shall pay one guinea.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

LETTERS TESTIMONIAL.

EVERY person requiring to be registered as a pupil on the College books shall, if the Council think fit, be so registered on the payment of five guineas. Registered pupils are admitted to the Preliminary Examination of the College without further fee, and are permitted to study each weekday in the Museum, to read in the Library; also to attend the Lectures on Comparative Anatomy, and to obtain a certificate for such attendance, without payment of any fee. No student can be admitted as a candidate to any of the stated examinations, or to the special examinations for the Letters Testimonial, until he has been enrolled as a registered pupil, and also passed a preliminary examination.

Registered pupils may present themselves, without payment of any further fee, for the Preliminary Examination at any period previous to the commencement of professional studies. Non-registered pupils pay one guinea.† Students who have passed any of the Preliminary Examinations recognised by the General Medical Council, in which the Greek language is compulsory, are exempt from any further preliminary examination, and are entitled to become registered pupils.

Candidates for Letters Testimonial may present themselves either at a special or at a stated examination.

Special Examinations.—Every registered pupil shall be admitted, upon payment of a special fee of £5 5s. in addition to the ordinary fee of £21, to a special examination for Letters Testimonial, on producing evidence that he has passed a Preliminary Examination in which Greek is compulsory; that he has been engaged in the study of his profession for not less than four years; that he has attended during three years a recognised Hospital where Clinical Instruction is given; that he has attended three courses each of Lectures on Anatomy and Physiology, and on the Theory and Practice of Surgery and of Dissections, accompanied by demonstrations; two courses of Lectures on Chemistry, or one course of Lectures on General and one on Practical Chemistry; one course each of Lectures on Materia Medica, Practice of Medicine, Midwifery, Medical Jurisprudence, and Botany; and that he has received instruction in vaccination under a recognised vaccinator, and is practically acquainted therewith.

The subjects for examination are the same as for the Stated Examinations. A rejected candidate will only be entitled to receive back £13 13s.

Stated Examinations are held in April, July, and November. Candidates must be registered pupils, and are divided into two classes—Junior and Senior.

The Junior Class must produce certificates of having passed a Preliminary Examination in which the Greek language is compulsory, and of having attended three courses each of Lectures on Anatomy and Physiology, and on Practical Anatomy with Dissections; two courses of Lectures on Chemistry; one course each of Lectures on Materia Medica, Botany, and Forensic Medicine. This class is examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry.

The fee for this examination is £5 5s., in addition to the registration fee of £5 5s., if it is not returned in case of rejection, but is allowed the candidate in case he presents himself a second time for examination.

The Senior Class must produce certificates of having attended three courses of Lectures on the Theory and Practice of Surgery, one course each of Lectures on the Practice of Medicine, and on Midwifery; also of attendance on a recognised Hospital for three Winter and three Summer Sessions. This class is examined in Surgery, Operative Surgery and Surgical Appliances, Practice of Medicine, Medical Jurisprudence, and Prescriptions.

The fee for the Senior Class Examination is £15 15s., returnable to the candidate in case of rejection.

The examinations are partly written and partly oral.

In addition to the foregoing fees, a fee of £1 1s. is paid to the Registrar. Every candidate rejected at a Stated Examination, on applying for re-examination, must pay £2 2s., in addition to the regular fees.

FELLOWSHIP.

Every registered pupil or licentiate may be admitted to examination for the Fellowship on producing a certificate that he is twenty-five years of age, and that he is a Bachelor of Arts, or has been examined with a view to ascertain that he has obtained a liberal preliminary education; also a certificate, signed by two or more Fellows of the College, of general good conduct. He must have been engaged in the acquisition of professional knowledge not less than six years (five years being required in the case of Bachelor of Arts), during three of which he must have studied in one or more of the schools and hospitals recognised by the Council. The other three years may have been passed in any approved school. He must also have acted as House-Surgeon or Dresser in a recognised hospital; and must have attended the lectures required of candidates for Letters Testimonial, together with one course of lectures on Comparative Anatomy, and one on Natural Philosophy. He must present a thesis on some medical subject, or clinical reports, with observations of six or more medical or surgical cases taken by himself.

Licentiates of the College, who cannot show that they have followed the course of study specified, may, at the expiration of ten years from the date of their diploma, be admitted to the examination for the Fellowship, on producing satisfactory evidence that they have conducted themselves honourably in the practice of their profession.

Each candidate for the Fellowship is examined on two days. The subjects of the first examination are Anatomy and Physiology (Human and Comparative); those of the second—Pathology, Therapeutics, the Theory and Practice of Medicine and Surgery, and Clinical Surgery. The examinations are both oral and written. The candidates must perform Dissections and Operations on the dead bodies. Rejected candidates cannot present themselves a second time until after one year.

The fee payable is £21 if the candidate be a Licentiate, or £36 15s. if he be only a registered pupil; provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he pays, if a Licentiate, £31 10s.; if only a registered pupil, £47 5s. Fellows entering on the country list, who may subsequently settle as practitioners in Dublin, or within ten miles thereof, must pay £10 10s. to the College.

DIPLOMA IN MIDWIFERY.

Any Fellow or Licentiate of the College is admissible to the examination for a Diploma in Midwifery on producing certificates of having attended a course of Lectures on Midwifery and Diseases of Women and Children; the Practice (for six months) of a Lying-in Hospital, or of a Dispensary for Lying-in Women and Children; and that he has attended at least thirty labours.

Candidates are examined on the Organisation of the Female; the Growth and Peculiarities of the Foetus; the Practice of Midwifery, and the Diseases of Women and Children; and, if approved of, receive a licence or diploma.

A rejected candidate is not again admitted to examination within three months, nor unless he produces satisfactory evidence of having been engaged in the study of Midwifery subsequently to his rejection.

* In case the residence of any candidate be beyond a radius of twenty miles [illegible] Dublin, the candidate will be required to [illegible] the Professor of Midwifery [illegible] Lying-in Hospital, [illegible]

† The following subjects are [illegible]: The English Language [illegible]; Arithmetic, including Vulgar and Decimal Fractions; Algebra, [illegible] Simple Equations; Geometry, first two [illegible] Practical Geometry; [illegible] Dictation. The Compulsory [illegible] Euclid, Book I. [illegible] the Definitions of Book V. Latin: The First and Second [illegible] Book of Livy. The examinations [illegible] the first Wednesday in January, April, July, and October.

The fee is £1 6s. if the Midwifery Diploma be taken out within one month from the date of the Letters Testimonial; afterwards it is £2 2s.

APOTHECARIES' HALL OF IRELAND.

EVERY candidate for the Licence to Practise is required to undergo a Preliminary and a Professional Education and Examination.* The Arts Examination will be held at the Hall four times in the year, viz., the third Thursday in the months of January, April, July, and October. Unsuccessful candidates will be remitted to their studies for six months.

Professional Education and Examinations.—Every candidate for the Licence to Practise Medicine and Pharmacy must produce certificates: 1. Of having passed an examination in Arts previously to entering on professional study. 2. Of registration as a medical student. 3. Of being at least twenty-one years of age, and of good moral character. 4. Of pupilage to a qualified apothecary, or of having been otherwise engaged at Practical Pharmacy for twelve months subsequently to having passed the examination in Arts. 5. Of having spent four years in professional study. 6. Of having attended the following courses, viz.: Chemistry, Principles and Practice of Medicine and Surgery, each during one winter session; Anatomy and Physiology, Demonstrations and Dissections, each during two winter sessions; Botany and Natural History, and Forensic Medicine, each during one summer session; Practical Chemistry (in a recognised Laboratory) and Materia Medica, each during three months; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (twenty cases); instruction in Vaccination. 7. Of having attended, at a recognised Hospital or Hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. 8. Of Practical Study, with care of patients, as apprentice, pupil, assistant, clinical clerk, or dresser in Hospital, Dispensary, or with a registered Practitioner. 9. Of having performed the operation of Vaccination successfully under a recognised Vaccinator.

The examination for the Licence to Practise is divided into two parts.

The first part comprehends Chemistry, including Chemical Physics, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy; the second, Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

The first part may be undergone after the candidate has passed an examination in Arts and attended the requisite courses of Lectures; and the second after the completion of his studies at the termination of the fourth winter session.

Candidates at the examination on Anatomy are liable to be called on to perform Dissections; and at the examination on Surgery to perform one or more Operations on the dead subject.

The professional examinations will be held on the first and second Mondays in January, April, July, and October. The first two hours of each day will be devoted to writing answers to papers, and afterwards there will be an oral and practical examination on the subjects.

Candidates who fail to pass the first part of the professional examination will be remitted to their studies for three months; and, at the final examination, for six months.

Doctors of Medicine of any of the Universities of the United Kingdom, and Licentiates of a Royal College of Physicians, or Surgeons of any of the Royal Colleges of Surgeons, whose qualifications as such appear in the *Medical Register*, and who, having first passed an examination in Arts, have also spent twelve months at practical Pharmacy, may obtain the Licence of the Hall by undergoing an examination—the former two in Surgery and Pharmacy, and the latter in Medicine and Pharmacy.

Licentiates of the London Society of Apothecaries must undergo an examination in Surgery for the Licence.

Candidates must lodge their testimonials and the fees, and enrol their names and addresses with Mr. Charles Wright, at the Hall, in Dublin, a clear week prior to the day of examination.

* The following are the subjects of Preliminary Examination:—*Compulsory.* 1. English: Grammar, Composition, and the leading events of English History. 2. Arithmetic and Algebra: Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin: The First Two Books of Livy, or the First Two Books of the *Æneid* of Virgil, and Latin Prose Composition. *Two of the following optional subjects:* a. Greek: the First Book of the *Anabasis* of Xenophon, or the First Book of the *Iliad* of Homer. b. French: *Charles XII. Histoire de*, of Voltaire, or *Voyage en Orient* of Lamartine. c. German: *Wilhelm Tell* of Schiller. d. Elementary Mechanics of Solids and Fluids. e. Logic. f. Natural History: The Classification, Elementary Structure, and General Physiology of Vegetables and Animals.

UNIVERSITY OF DUBLIN.

THE degrees in Medicine and Surgery granted by the University are: 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Bachelor in Surgery; 4. Master in Surgery; 5. Master in Obstetric Science. It also grants Licences in Medicine, Surgery, and Obstetric Science.

BACHELOR IN MEDICINE.

A candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same commencement as that at which he receives his Degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Theoretical and Operative Surgery; Chemistry; Practical Course of Institutes of Medicine; Practice of Medicine; Midwifery. *Summer*—Botany; Institutes of Medicine; Comparative Anatomy; Materia Medica and Pharmacy; Medical Jurisprudence. *Term Courses*—Heat (Michaelmas); Electricity and Magnetism (Hilary). Six months' dissection, and three months' laboratory instruction in Chemistry. Three courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board.* A certificate of personal attendance on fever cases, with names and dates of cases. Six months' instruction in Practical Midwifery,† including clinical lectures. Practical instruction in Vaccination. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows.‡ Students who shall have diligently attended the practice of a recognised county infirmary for two years previous to the commencement of their metropolitan medical studies are allowed to count those two years as equivalent to one year spent in a recognised metropolitan hospital.

Candidates for the Degree of M.B. must pass the Previous Medical Examination and the Bachelor of Medicine Examination.

The *Previous Examination* comprises Botany and Materia Medica; Physics and Chemistry; Descriptive Anatomy and Institutes of Medicine (Practical Histology and Physiology). The Examination in Descriptive Anatomy includes examination on the dead subject. It is not necessary that the student should pass in all these subjects at the same examination.

There are three Previous (Half M.B.) Medical Examinations held each year, immediately before each M.B. examination, together with a Supplemental Examination in the same subjects, at the close of the summer session.

Bachelor of Medicine Examination.—The candidate for the M.B. Examination must have previously passed the Previous Medical Examination in all the subjects; and have lodged with the Medical Registrar, on a certain day to be duly advertised, Certificates of Attendance upon all the courses of study above prescribed.

Candidates must pass a final examination in the following subjects: Physiological Anatomy; Practice of Medicine; Surgery; Midwifery; Medical Jurisprudence; Institutes of Medicine (Pathology and Hygiene). The fee for the *Liber ad Examinandum* is £5; for the Degree of M.B., £11.

Members of the Royal College of Physicians or Surgeons of Dublin, London, or Edinburgh, who are Graduates in Arts of Oxford, Cambridge, or Dublin, are admissible to the Examination for M.B. They must first take the B.A. Degree *ad eundem*.

DOCTOR IN MEDICINE.

A Doctor in Medicine must be a Bachelor in Medicine of three years' standing, or have been qualified to take the Degree of Bachelor in Medicine for three years. He must also read a Thesis publicly before the Regius Professor of Physic, or must undergo an examination before the Regius Professor of Physic. The total amount of fees for this degree is £13.

The following Hospitals are recognised: Sir Patrick Dun's Hospital, Meath Hospital, House of Industry Hospitals, Dr. Steevens' Hospital, Jervis Street Infirmary, City of Dublin Hospital, Mercer's Hospital, St. Vincent's Hospital, Adelaide Hospital, Mater Misericordiæ Hospital, St. Mark's Ophthalmic Hospital, and the National Eye and Ear Infirmary.

† Certificates of Practical Midwifery are received from the Rotunda Hospital, the Coombe Hospital, Sir P. Dun's Hospital Maternity, Dr. Steevens' Hospital Maternity.

‡ The following schools, in addition to the School of Physic of Trinity College, are recognised: The School of the Royal College of Surgeons in Ireland, the Carmichael School, the Ledwich School of Medicine, the school of Dr. Steevens' Hospital, the School of the Catholic University. The recognition of schools and hospitals is conditional on the students being furnished with *bonâ fide* certificates of regular attendance equivalent to that required by the University; *i.e.*, three-fourths of the entire lectures in each course.

BACHELOR IN SURGERY.

A Bachelor in Surgery must be a Bachelor in Arts, and have spent four years in the study of Surgery and Anatomy. He must also pass a public examination. The Curriculum of study comprises the following, in addition to the complete Course for the Degree of Bachelor in Medicine: Theoretical and Operative Surgery and Ophthalmic Surgery, each one course; Dissections, two courses. Candidates are required to perform surgical operations on the dead subject, and are examined in Bandaging and Minor Surgery, and in Surgical Pathology. Candidates for the Degree of Bachelor in Surgery, who have already passed the examination for the Degree of Bachelor in Medicine are examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5; for the Degree of Bachelor in Surgery, £5.

MASTER IN SURGERY.

A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the Degree of Bachelor in Surgery for three years; and must read a Thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor. Fee for the Degree of Master in Surgery, £11.

MASTER IN OBSTETRIC SCIENCE.

A Master in Obstetric Science must have passed the M.B. and B.Ch. Examinations, and produce certificates of having attended; 1. One winter course in Midwifery; 2. Six months' practice in a recognised Lying-in Hospital or Maternity; 3. A summer course of Obstetric Medicine and Surgery; 4. Two months' practice in the Cowpock Institution. Existing Graduates in Medicine, of the standing of M.D., may present themselves for examination without producing certificates of attending 3. and 4. Fee for the Degree of Master in Obstetric Science, £5.

UNIVERSITY LICENCES.

Candidates for the Licences in Medicine, Surgery, or Obstetric Science, must be matriculated in Medicine, and must have completed two years in Arts and four years in Medical Studies.

Licentiate in Medicine.—The medical course and examination necessary for the Licence in Medicine are the same as for the Degree of M.B. A Licentiate in Medicine, on completing his Course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the degree fees, without further examination in Medicine.

Licentiate in Surgery.—The surgical course and examination are the same as for the Degree of Bachelor in Surgery.

Licentiate in Obstetric Science.—The course of study and examination are the same as for the Degree in Obstetric Science.

Fee for the *Liceat ad Examinandum* in Medicine or Surgery, £5; for the Licence in each of the three cases, £5.

QUEEN'S UNIVERSITY IN IRELAND.

DEGREES IN MEDICINE AND SURGERY.

THIS University grants the Degrees of Doctor in Medicine and Master in Surgery, and a Diploma in Midwifery. It includes three Colleges—the Queen's Colleges of Belfast, Cork, and Galway—each of which possesses a Faculty of Medicine. The curriculum of medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Botany, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above courses of lectures must be attended in one of the Queen's Colleges; the remainder may be taken, at the option of the candidate, in any University, College, or School, recognised by the Senate of the Queen's University. Candidates are required, before graduating, to have also attended, in one of the Colleges of the Queen's University, Lectures on Experimental Physics and one Modern Continental Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised Laboratory, and the practice during six months of a recognised Medico-Chirurgical Hospital containing at least sixty beds, together with clinical lectures delivered therein; and, during the second period, a recognised Midwifery Hospital, with clinical lectures therein delivered, for three months; or a Midwifery Dispensary for the same period; or ten cases of labour, under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated; and eighteen months' practice of a recognised Medico-Chirurgical Hospital containing at least sixty beds, with clinical instruction.

Candidates must pass three Examinations—the First University Examination, the Second University Examination, and the Degree Examination.

The First University Examination may be passed either in June or in September. It comprises a Modern Language, Experimental Physics, Zoology, and Botany. Students may present themselves for examination at any time after the close of the first Winter Session. Before being admitted to examination, each candidate must produce satisfactory evidence of having completed the prescribed course of study in the subjects of examination.

The Second University Examination may be passed either in June or September. It comprises Anatomy, Physiology, Materia Medica, and Chemistry; to which will be added Zoology and Botany in the examination of candidates who have not previously passed the First University Examination. Candidates who are in this position may either undergo their examination in Modern Languages and Experimental Physics as a part of the Second Examination, or may present themselves for examination in these subjects at any time between the Second University Examination and the Degree Examination. Students may present themselves for the Second University Examination at the termination of the first period of the curriculum, or at any subsequent period; but no student can postpone his Second University Examination until he presents himself for his Degree Examination. Before being admitted to examination, each candidate must produce satisfactory evidence of having completed the course recommended for study during the first period.

Examinations for the Degree of M.D., M.Ch., and the Diploma in Midwifery, will be held in June and September. The Fee for each Degree is £5, and the Fee for the Diploma in Midwifery is £2. Each Fee must be lodged with the Secretary before the corresponding examination begins.

Degrees in Surgery and Diplomas in Midwifery will only be conferred on candidates who hold the Degree of Doctor in Medicine of the University. The Examination for the Degree of M.D. comprises the subjects recommended for study during the second period of medical education. The examination for the Degree of M.Ch. comprises an examination in the Theory and Practice of Surgery, including Operative and Clinical Surgery.* The Examination for the Diploma in Midwifery comprises an examination in the Theory and Practice of Midwifery and the use of obstetrical instruments and appliances.†

Candidates who graduate with honours will be arranged in two classes. Candidates who take a First Class will receive a Medal and Prize; candidates who take a Second Class will receive a Prize. Both Honour and Pass Examinations are held in September. The Examination held in June is a Pass Examination.

Two Exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be awarded annually at the First University Examination in Medicine. The regulations concerning these Exhibitions, and all other information, will be found in the *Queen's University Calendar*, or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

IN addition to the Tables of the Classes, hours of attendance, and fees, given at pages 434-437, we subjoin the points of most interest in the Programmes issued by the several Medical Schools. At each hospital, clinical instruction in Medicine, Surgery, and Midwifery, is given in the wards and in the out-patient department; and also in various special departments, as stated in the table at pages 434-35 and in the subjoined notes. All hospital appointments, except where otherwise specified, are made without extra fee.

ST. BARTHOLOMEW'S HOSPITAL.—*The Hospital* contains 710 beds: viz., 227 for medical cases, 322 for surgical cases, 26 for diseases of the eye, 20 for diseases of women, and 81 for syphilitic cases; while 34 are at the Convalescent Hospital at Highgate. Children are admitted into both the medical and surgical wards.

Museums, etc.—The Anatomical Museum, and the Museums of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M.

* Candidates for the Degree of Master in Surgery, who obtained the Degree of M.D. in this University before January 1st, 1865, will be exempted from the examination in Surgery. Candidates for the Degree in Surgery, who graduated in Medicine at a later period, will be required to undergo a paper and oral examination in the Theory and Practice of Surgery, and an examination in Operative and Clinical Surgery.

† Candidates for the Diploma in Midwifery who obtained the Degree of M.D. in the University before January 1st, 1872, will be exempted from this further examination.

The Reading Room is open every day; during winter from 10 to 5: summer, 9 to 5; vacations, 10 to 2.30.

College.—Students are admitted to residence on the recommendation of a medical officer of the hospital, which may be obtained by adducing satisfactory evidence of good moral character. The entrance fee is £2 2s.; and a deposit of £3 3s. is required, which will be returned to the student on leaving the College, subject to deduction of whole or part for wilful damage to furniture.

Special Departments, etc.—Surgical consultations are held on Thursdays at 1.30. In addition to the courses mentioned at page 434, Dr. Matthews Duncan teaches Practical Gynæcology in the wards for Diseases of Women, on Tuesdays, Thursdays, and Saturdays. The Demonstrator of Morbid Anatomy gives a detailed demonstration at 11 on Fridays, winter and summer. The Ophthalmic Wards are visited at 1.30, on Tuesdays and Thursdays by Mr. Power, and on Thursdays and Saturdays by Mr. Vernon; the ophthalmic out-patients are seen at 2 o'clock, on Tuesdays and Thursdays by Mr. Power, and on Wednesdays and Saturdays by Mr. Vernon. Mr. Vernon gives Ophthalmic Demonstrations at 2 P.M. on Wednesdays in the winter session. Mr. Marsh sees orthopædic cases at 2 on Fridays, and Dr. Brunton patients with diseases of the larynx at 11.30 on Wednesdays.

Appointments.—Four House-Physicians and four House-Surgeons (who must be qualified to practise), and an Assistant Chloroformist, are appointed annually. A Resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers is provided with rooms, and receives a salary of £25 a year. The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheur, are chosen from the most diligent students. Sixteen dressers to the surgical in-patients and the surgical casualty department are selected each year from the students of the second year. Other in-patient dresserships may be obtained by payment of the usual fees (see p. 436). There are also clerks and dressers to the Assistant-Physicians and Assistant-Surgeons in the general and special departments.

Exhibitions, Scholarships, and Prizes.—Two Open Scholarships in Science, value of each £130, tenable for one year, to be competed for on September 27th. For one of the scholarships, candidates must be under twenty; for the other, under twenty-five years of age. The subjects are Physics, Chemistry (theoretical and practical), Botany, and Zoology. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £50; examination on September 27th; subjects, Latin, Mathematics, and any two of the following languages—Greek, French, German. Candidates for the Open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. Preliminary Scientific Exhibition, £50, for one year, on October 21st, for students of less than six months' standing; holder of Open Scholarship not eligible; subjects, Physics, Chemistry (theoretical and practical), Botany, and Zoology. Three Junior Scholarships, of the value of £50, £30, and £20, after the general examination in first year's subjects at the end of the winter and summer sessions. Treasurer's Prize for Practical Anatomy, junior. *Second Year.*—Foster Prize for Practical Anatomy, senior. Harvey Prize for Practical Physiology. *Second or Third Year.*—Senior Scholarship, value £50, in Anatomy, Physiology, and Chemistry. Wix Prize: subject, "The Works and Life of Harvey". Hichens Prize: subject, Bishop Butler's *Analogy*. *Third or Fourth Year.*—Lawrence Scholarship and Gold Medal, value £42: subjects, Medicine, Surgery, and Midwifery. Two Brackenbury Scholarships in Medicine and Surgery. Candidates for the Lawrence and Brackenbury Scholarships may not compete before the end of the third winter session, nor later than the beginning of the fifth winter session in the hospital. Bentley Prize, for the best report of not less than twelve medical cases occurring in the hospital during the previous year. The Kirkes Gold Medal for Clinical Medicine; open to students of not less than two or not more than four years' standing.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers, demonstrators, and the medical tutor. All students of the first year are examined at the close of the first winter and first summer sessions. Classes are held to prepare candidates for the examinations of the University of London.

The Abernethian Society, composed of the teachers and students of the hospital, meets every Thursday at 8 P.M. during the winter.

Communications regarding the Hospital and Medical College must be addressed to Dr. Norman Moore, the Warden of the College, St. Bartholomew's Hospital.

CHARING CROSS HOSPITAL.—The hospital contains 180 beds, of which some are set apart for Diseases of Women and of Children.

The Library is open daily from 9 A.M. to 4.30 P.M.

Special Courses.—Matriculated students are admitted to the practice of the Royal Westminster Ophthalmic Hospital (50 beds). Clinical instruction in the Diseases of Children is given twice a week by Dr. Houghton.—Dr. Irvine will give practical instruction in Auscultation in Health and Disease on Fridays, at 1.30, and, in February and March, a course of six demonstrations on the Use of the Laryngoscope.—Practical instruction in preparing and mounting morbid specimens for microscopical examination will be given by Mr. Cantlie during the summer.—Dr. Houghton will instruct in case-taking.—Mr. Amphlett will give instruction in the use of the Ophthalmoscope.—Mr. Woodhouse Braine and Mr. G. H. Bailey give instruction in the administration of Anæsthetics.

Appointments.—A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed. Resident Medical and Surgical Officers (who must be qualified to practise), and Obstetrical Officers, Assistant Medical and Surgical Officers, are appointed by competitive examination for six months. Clinical Clerks and Surgeons' Dressers are appointed for four months, and Pathological Assistants for three months. All Students must hold an In-Patient Clerkship and an In-Patient Dresserships, after the first professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistant to the Dental Surgeon for three months.

Scholarships, Medals, and Prizes.—Two Entrance Scholarships, value £30 and £20, tenable for one year, awarded in October, after examination in English, Latin, French or German, and Mathematics, with either Chemistry, Mechanics, German, or French. Intending candidates must give notice before September 18th. The Llewellyn Scholarship of £25, open to all matriculated students who have just completed their second year; examination in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery. The Golding Scholarship, £15 a year, open to all matriculated students who have just completed their first year; subjects of examination, Descriptive Anatomy, Physiology, Materia Medica, and Chemistry. The Pereira Prize of £5, to matriculated students who have completed their third year, for the best clinical reports of cases in the hospital (medical and surgical in alternate years). The Governors' Clinical Gold Medal; examination on subjects of clinical lectures during the session, and on medical and surgical cases in the hospital. Silver and Bronze Medals and Certificates of Honour in all the classes.

Residence.—Arrangements have been made with several members of the hospital staff to receive resident pupils.

Information may be had of the Dean, Mr. Francis Hird; or the Sub-Dean, Dr. J. P. Irvine.

ST. GEORGE'S HOSPITAL.—The *Hospital* contains 351 beds, of which 205 are devoted to surgical, and 146 to medical, cases. There are special wards for cases of diseases of the eye and diseases of women. Children are received into the women's wards.

The Library and Reading Room and the Museum are open daily.

Special Subjects.—Orthopædic out-patients are seen by Mr. J. W. Haward every Wednesday at 2.—Dr. Whipham sees patients with Diseases of the Throat on Thursdays at 2.—Dr. Ewart will give a course of demonstrations on Physiological Chemistry on Monday at 2, and on Wednesday and Friday at 10, during the winter session.—Mr. Turner will give demonstrations in Osteology daily (except Wednesday and Friday) at 10.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon, half-yearly, from among the perpetual pupils.* The House-Physicians and House-Surgeons are appointed on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit 50 guineas with the Treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties.—An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100.—A Curator of the Pathological Museum, a Medical and a Surgical Registrar, and a Demonstrator of Anatomy are appointed annually from among the senior pupils, each with a salary of £50.—A Microscopical Pathologist and an Ophthalmic Registrar are appointed annually, each with a salary of £25.—Two Assistant Medical Registrars are appointed every six months by compe-

[*Continued on page 438.*]

* The physicians' perpetual pupils are alone eligible for the office of House-Physician, and the surgeons' perpetual pupils for the office of House-Surgeon. All pupils of the hospital may become candidates for the offices of Medical and Surgical Registrar, Obstetric Assistant, Curator of the Museum, and Demonstrator of Anatomy. They are also entitled to attendance on the Maternity Department, and the practice of Ophthalmic, Aural, and Dental Surgery, without additional fee.

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1880-81.

For [illegible] particulars regarding each Hospital and Medical School, see pp. 432-33 and 438, et seq.

Lectures, &c.	St. [illegible]'s Hospital.	Charing Cross Hospital.	St. George's Hospital.	Guy's Hospital.	King's College and Hospital.
WINTER SESSION.					
Physiology	Mr. [illegible] M. Tu. Th., 2.30; Sectional, W., 10.30	Dr. Silver... M. Tu. W. F.	Mr. Stirling... Tu. W., 11	Dr. Pye-Smith... M. W. F., 4.15	Dr. G. T. Yeo... Daily, 12.15
Anatomy, Lectures and Demonstrations	[illegible] & Mr. Mason Sm. W. Th. F., 9	Mr. Bellamy... M. W. F., 1 to 4	Mr. Pick... M. W. F., 3	Mr. Howse & Mr. Davies-Colley... Tu. W. Th. F., 2	Dr. Curnow (sen.)... M. Tu. W. Th., 1 (Quiz) W. Th., 11.15; F. Sa., 9
Anatomy, Practical Dissections	Mr. [illegible]ath, Mr. [illegible] and Assistants, Daily, 10 to 4; Sa., 10 to 1	Mr. Cantle... daily... Sa., 1 to 2	Mr. Barclay and Assistant-Demonstrators	Dr. Carrington, Dr. Hewetts, and Assistant-Demonstrator, daily, 1 to 4	Dr. Curnow
Chemistry	Dr. Russell... M. W. F., 10	Mr. Heaton... M. W. Th., 11	Mr. Dupkin... Tu. Th. S., 11 to 12	Dr. Debus and Dr. Stevenson... Tu. Th. S., 11	Mr. Bloxam... M. W. Th., 10.15
Medicine	Dr. A[illegible] Dr. Gee M. Tu. Th., 3.30	Dr. Pollock... M. W. F., 4	Dr. Barclay and Dr. Johnson... Tu. Th. S., 1	Dr. Wilks and Dr. Pavy... M. W. F., 3	Dr. Beale... M. F., 4; W., 5
Surgery	Mr. Savory... W. F., 2.30; S., 12.45	Mr. Barwell... Tu. Th. S., 9	Mr. Holmes & Mr. Rouse M. W. F., 1	Mr. Bryant & Mr. Durham Tu. Th., 3.30; S., 2.45	Mr. H. Smith... Tu. W. Th., 4
Hospital Practice:					
Physicians	Dr. A[illegible] Th., 1.30 Dr. Southey... M. W. Th., S., 1.30 Dr. Church... daily, exc. W., 1. Dr. Gee... M. W. F. S., 1.	Dr. Pollock... M. Th. Dr. Silver... Tu. F. Dr. Green... W. S.	Dr. Barclay... M. F., 1 Dr. Wadham... M. F., 1 Dr. [illegible] Tu. S., 1 Dr. Wadham... Tu. S., 1	Dr. Habershon... M. Th. S., 1.30 Dr. Wilks... M. Th. S., 1. Dr. Pavy... M. W. F., 1.30 Dr. Moxon... M. Tu. Th. F., 1.30	Dr. Johnson... M. Th., 2 Dr. Beale... Tu. F., 2 Dr. Duffin... W. S., 2 Dr. I. E. Yeo... Tu. F., 1.30
Obstetric Physicians	Dr. M. Duncan... M. Th. S., 2	Dr. J. W. Black, Fri. F.	Dr. Barnes... Tu. S., 2; [illegible]... Th.,	Dr. Braxton Hicks... Tu. F.,	Dr. Playfair... Tu. Th. S., 2
Assistant-Physicians	Dr. [illegible]th... W. S., 11 Dr. Hensley... M. Th., 11 Dr. [illegible]... Tu. F., 11 Dr. [illegible] Dr. [illegible]... W. S., 1	Dr. Bate... Fri. F. Dr. Irvine... M. Th. Dr. Houghton... W. S.	Dr. Cavafy... M. F., 2 Dr. Wadham... Tu. S., 12	Dr. Fagge... M., 12.30 Dr. Pye-Smith Dr. E. Taylor... F., 12.30 Dr. Goodhart... W., 12. Dr. Gallois (obst.) M. F., 1.15; (o.-p.), Th. S., 12.30	Dr. Ferrier... M. Th., 1.30 Dr. Paster... W. S., 1.30 Dr. Curnow... W. S., 1.30 Dr. Hayes... M. W. F., 12.30
Surgeons	Mr. H[illegible] Tu. F. S., 1.30 Mr. Savory... M., 1; Tu. W. [illegible] S., 1. Mr. T. Smith, daily, exc. Tu., 1.30 Mr. [illegible] daily, 1.	Mr. Hird... M. Th. Mr. Barwell... Tu. F. Mr. Pollock... W. S.	Mr. Pollock... M. F., 1 Mr. Holmes... Th. F., 1 Mr. Rouse... Tu. S., 1 Mr. Pick... Tu. S., 1	Mr. C. Forster... M. Th., [illegible] Mr. Bryant... M. Th., 1. Mr. Durham... M. Th. F., 1.30	Mr. Wood... Tu. Th. S., 1.30 Mr. Lister... M. W. F., 1.30 Mr. H. Smith... M. W. F., 1.30
Assistants	Mr. [illegible] Tu. F., 12. Mr. [illegible] W. S., 12. Mr. Morris... M. Th., 12.	Mr. [illegible]... M. Th. Mr. Cantle... Tu. F.	Mr. Howard... Tu. S., 12 Mr. Bennett... M. F., 1	Mr. Howse... W. S., 1.30 Mr. Davies-Colley, W., 12.30 Mr. R. C. Lucas... Th., 12. Mr. Golding-Bird... M., 12.30 Mr. Lee... Sa., 12	Mr. R. Bell... M. Th., 1.30 Mr. Rose... Tu. F., 1.30 Mr. Cheyne... W. S., 1.30 [illegible]
Clinical Medicine	The Physicians... weekly	The Physicians	The Physicians... M., 2	The Physicians (Win.)... S., 1.30; the Assistant-Physicians (Sum.)... W., 1.30	Dr. Johnson... alt. M., 3 Dr. Beale... alt. Tu., 3 Dr. Duffin... alt. F. (Win.) 3 Dr. I. E. Yeo... alt. Tu. (Sum.) 3
Clinical Surgery	The Surgeons... weekly	The Surgeons	The Surgeons... Tu., 2	The Surgeons (Win.)... W., 1.30; the Assistant-Surgeons (Sum.)... F., 1	Mr. Wood... Tu. Th., 1.30 Mr. Lister... M. F., 1.30
Clinical Midwifery and Diseases of Women	[illegible] Dr. [illegible] (Dis. of Women) alt. Th., 10	Dr. J. W. Black... Tu. W.	Dr. Barnes... Fri. 2	Dr. Hicks (Winter) W., 1. Dr. Graily (Sum.)... Tu., 2	Dr. Playfair... alt. Th. in winter, 3
Ophthalmology	[illegible] Sat., 1.30; Tu. Th., 1.	Thursday... 2	Tuesday, 1.15	Tuesday and Friday, 1.; Eye, M. F., [illegible]	Wed., 1.30; Sat., 1
SUMMER SESSION.					
Materia Medica	Dr. Lauder Brunton... Tu. W. Th. S., 10	Dr. Bruce... Fri. Th. S., 9	Dr. Wadham... M. W. F., 3	Dr. Moxon... Tu. Th. F., 3	Dr. Baxter... Tu. W. Th. F., 9
Botany	R. [illegible] G. Henslow... M. F., 10; W., 11.30	Dr. Hogg and Fri. Th., S.	Dr. Owen... Tu. Th. F., 12	Mr. Bettany... Tu. Th. S., 11	Mr. Bentley... M. Tu. Th. F., 12.15
Midwifery	Dr. Matthews Duncan... daily.	Dr. J. W. Black... M., 4; Tu. W. F., 3	Dr. Barnes... M. W. F., 2	Dr. Braxton Hicks and Dr. Galabin... Tu. Th. S., 2	Dr. Playfair... Tu. W. Th. 1 to 9
Forensic Medicine	Dr. R. S[illegible] Tu. F., Th.,	Dr. Irvine,, M. W. F., 9	Dr. Wadham... Fri. Th. S.,	Dr. Stevenson... Tu. Th. S., 2	Dr. Ferrier... M. Tu. W. F., 4
Practical Chemistry	Dr. Russell... M. Tu. F., 11	Mr. Heaton... M. W., 12	Mr. Dupkin... daily, 12	Dr. Debus... M. W. F., 1 to 4	Mr. Bloxam and Demonstrators... M. W. Th., 10.15
Chemistry	Dr. N. Maskelyne (Winter) Tu. Th., 11.15	Mr. J. F. Blake (Sum.) M. F., 11	Dr. Bowman (Sum.), M. F., 11	Dr. Dupré (Sum.), Tu. Th., 11.15	Mr. F. J. Bell (Win.)... M. F., 4
Practical Physiology & Histology	Dr. Klein... Practical Phys.	Dr. Colquhoun and Dr. Smith (Win.) M. W. F., 12 Dr. Colquhoun (Sum.) Tu. F., 10	Dr. Bennett M. W. F., 12	Mr. Golding-Bird (Win.) M. S., 10; W., 1	Dr. G. F. Yeo and Demonstrators (Sum.)... Tu. F. S., 10.15
Pathology (Morbid Anatomy)	Dr. [illegible] M. F., 3; Medical, 12.	Dr. Green (Sum.)... M. Th., 3; W., 4	Dr. Whipham (Winter)... Fri., 10 Dr. Owen (Sum.) Th. S., W., 12	Dr. Fagge (Sect.) (Sum.) S., 2; Mr. Jacobson (Sum.)	Dr. Duffin (Sum.)... W. Th. F., 3
Psychological Medicine	Dr. [illegible] (Sum.)... [illegible]	Dr. L. L. Winslow (Sum.) [illegible] W., 11	Dr. [illegible]	Dr. Savage (Sum.)... Tu., 11., F., 1	Dr. Sheppard (Summer)
Public Health	Dr. Thorne Thorne, M., 10	Mr. Heaton, Dr. Irvine & Mr. Lassar	Will Medicine	Dr. J. Tyler (Sum.) M. Th., 11	Dr. Kelly (Win.)... F., 3
Forensic & Clinical Surgery	Mr. Butlin... M. W. F., [illegible]	Mr. Bloxam (Sum.)... Tu. Th. S., 9; Mr. Cantle (twice weekly)	Mr. Howard (Sum.) M. W. F., 1; Mr. [illegible] (Sum.), same hour	Mr. Callender (Win.) M., 1; Op. Sat., M. W. F., 4	
Ophthalmic Medicine & Surgery	Mr. [illegible] Tu. Th., [illegible] W., 12.45; Mr. Vernon (vis.), Th. S., M.	At the Royal Westminster Ophthalmic Hospital	Mr. R. B. Carter (vis.) W. S., 2; (Wardmaster) W., 4	Mr. Bader (vis.) Tu. F., 1.3; (lect.) (Sum.) Th., 2; Mr. Higgens (out-p.), Tu. F., 12.30; (lect.), Th., 3	Mr. McHardy (vis.)... Tu. Th., 1; (clin. lect.) (Win.), alt. M., 3
Dental Surgery	Mr. [illegible] F., 2; (lect.) Oct. Nov.	Mr. Fairbank... (vis.) M. W. F., 2.30; (lect.) in Sum.	Mr. Winterbottom (vis.)... Tu., 2; (lect.) (Sum.), Tu., 3	Mr. Moon... Tu., 1.30; Th.,	Mr. Cartwright... Tu. F., to; (clin.) (Win.)... alt. Tu.,
Aural Surgery	Mr. Langton... M., 2.30	Mr. Field (vis.) [illegible] demonstrator in Summer Dr. Sangster... (vis.) M. Th.; (lect.) F., 4, Sum.	Mr. [illegible] (vis.) [illegible] Oct. Nov. W. Dr. [illegible]	Mr. Reeves... Tu. F., 1	Dr. C. Pritchard (vis.)... Th., [illegible] W. Oct.-Dec.
Diseases of Skin	Dr. M. Baker... F., 2.30				Dr. Duffin... Tu.
Vaccination	—	Mr. F. W. Dunn	—	—	Mr. R. W. Dunn
Medical Jurisprudence	(See page 438.)	(See page 438.)	(See page 438.)	(See page 438.)	(See page 438.)

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1880-81.

For further particulars regarding each Hospital and Medical School, see pp. 432-33 and 438 et seq.

LONDON HOSPITAL	ST. MARY'S HOSPITAL	MIDDLESEX HOSPITAL	ST. THOMAS'S HOSPITAL	UNIVERSITY COLLEGE AND HOSPITAL	WESTMINSTER HOSPITAL
Mr. McCarthy..M. Th. S., 9	Mr. Pye..M. W. F., 12	Mr. Lowne..M. W. F., 9	Dr. J. Harley and Dr. Sharkey..Tu. W. F., 4	Dr. Sanderson and Mr. Schäfer..daily, exc. S., 10	Dr. Allchin..M. W. F., 4
Mr. Rivington..M., 3; Tu. W. F., 9	Mr. Owen..M. Tu. Th. F., 9	Mr. Morris..M. Th., 4.30; Tu. F., 4	Mr. Mason & Mr. Wagstaffe ..daily, exc. Sat., 2	Mr. Thane..daily, exc. S., 12	Mr. Gould..Tu. W. Th. F. S., 9
—— and Demonstrations 10 to 4, excepting Sat. aft.	Mr. Juler and Mr. Spicer.. Daily, 9 to 5, exc. S., 9 to 1	Mr. Hensman and Mr. Sutton..daily, 9 to 4	Mr. Wagstaffe, Dr. Reid, Mr. Taylor, Mr. Husband ..daily, 10	Mr. Godlee, Mr. Silcock, and Mr. Pollard	Mr. Black..M., 9.30 to 1; other days, 10 to 1
Dr. Tidy..M. W. F., 10	Dr. Wright..M. Th., 10; W. S., 9	Mr. Foster..M. Th., 3.30; W. F., 3	Dr. Bernays..Tu. Th. F., 1	Dr. Williamson...daily, exc. S., 11; (exerc.) Tu. W. Th. F. 9	Dr. Dupré..W. Th. F., 3
Dr. S. Mackenzie..M. W. F., 4	Dr. Broadbent..Tu. F., 4; W., 3	Dr. Cayley..Tu. Th. S., 9	Dr. Bristowe and Dr. Ord to Dec. 31, M. Th. F., 4; after Jan. 1, M. Th. S., 9	Dr. Ringer..Tu. W. Th. F., 9	Dr. Fincham & Dr. Sturges M. W. Th., 3
Mr. J. E. Adams..Tu. Th., 4; S., 10	Mr. J. R. Lane and Mr. Norton..M. W. Th., 4	Mr. Hulke and Mr. Lawson ..M. W. Th., 3.30	Mr. Jones & Mr. Mac Cormac..to Dec. 31, M. Th. F., 9; after Jan. 1, M. Th. F., 4	Mr. Marshall..Tu. W. F., 4	Mr. Cowell and Mr. Davy Tu. Th., 4; F., 3
Dr. A. Clark..M. Th., 2 Dr. Down..Tu. F., 2 Dr. H. Jackson..M. Th., 2 Dr. Sutton..M. Th., 2 Dr. Fenwick..Tu. F., 2	Dr. H. Jones..M. Th., 1.15 Dr. Sieveking..Tu. F., 1.15 Dr. Broadbent..W.S., 1.15	Dr. Cayley..M. W. F., 1.30 Dr. R. King..Tu. Th. S., 1.. Dr. Coupland..Tu. Th. S., 1.30	Dr. Bristowe..Tu. F., 2 Dr. Stone..M. Th., 2 Dr. Ord..M. Th., 2 Dr. J. Harley..Tu. F., 2	Dr. Wilson Fox Dr. Ringer Dr. C. Bastian Dr. J. J. Roberts (o.p.) } 1 and 2 daily.	Dr. Fincham..M. Th., 1.30 Dr. Sturges..W. S., 1.30 Dr. Allchin..Tu. F., 1.30
Dr. Palfrey..M. Th., 1.30	Dr. Meadows..Tu. F., 9.30	Dr. H. Davis..Tu. F., 1.30	Dr. Gervis....M. Th., 2; (o.p.) F., 12.30	Dr. Graily Hewitt..Twice weekly	Dr. Potter..Tu. F., 3
Dr. Mackenzie Dr. G. Smith } W. S., 1.30 Dr. Sansom Dr. Ralfe } M. Th., 1.30 Dr. Turner Dr. Warner } Tu. F., 1.30 Dr. Herman (*ob.*), W. S., 1.30 Mr. Hutchinson..M. Th., 2 Mr. Couper..W. S., 1.30 Mr. Rivington..Tu. F., 2 Mr. J. Adams..M. Th., 2 Mr. Tay:..M. Th., 1.30 Mr. McCarthy..Tu. F., 1.30 Mr. Reeves..Tu. S., 1.30 Mr. Treves..M. Th., 1.30	Dr. Cheadle, Tu. F., 1 Dr. Shepherd..M. Th., 1 Dr. Lees..W. S., 1 Dr. Wiltshire (*obst.*) .. Tu. F., 1.30 Mr. Walton..W. S., 1.15 Mr. J. R. Lane .. Tu. F., 1.15 Mr. A. T. Norton..M. Th., 1.15 Mr. E. Owen..Tu. F., 1 Mr. H. Page..M. Th., 1 Mr. Pye..W. S., 1	Dr. D. Powell..M. W., 8.30 Dr. Finlay..Tu., 3.30; F., 9 Dr. Fowler..Th., 9; S., 3.30 Dr. Edis (*obst.*)..W. S., 1.30 Mr. Hulke..M. Th., 1.30 Mr. Lawson..M. Th., 1.30 Mr. Morris..Tu. F., 1.30 Mr. A. Clark..M. Th., 1 Mr. Lyell..Tu. F., 1	Dr. Payne..Tu. F., 12.30 Dr. Greenfield....M. Th., 12.30 Dr. Sharkey..W. S., 12.30 Dr. Cory (*obst.*)..W., 1.30 Mr. S. Jones..Tu. F., 2 Mr. Croft..M. Th., 2 Mr. Mac Cormac..M. Th., 2 Mr. F. Mason..Tu. F., 2 (o.p.) M. Th., 12.30 Mr. Wagstaffe Mr. MacKellar, M. Th., 12.30 Mr. Clutton..Tu. F., 12.30 Mr. Anderson..W. S., 12.30	Dr. Gowers Dr. Poore Dr. T. Barlow Dr. J. Williams (*obst.*) Mr. Marshall Mr. Berkeley Hill Mr. C. Heath } 1 and 2 daily. Mr. Marcus Beck Mr. A. E. Barker Mr. R. J. Godlee	Dr. Donkin..W. S., 1.30 Dr. Hall..M. Th., 1.30 Dr. A. H. Bennett, Tu. F. 1.30 Dr. Grigg (*obst.*)..Tu. F., 2 Mr. Cowell..M. Th., 1.30 Mr. Davy..Tu. F., 1.30 Mr. Macnamara..W., 1.30; S., 1 Mr. T. Cooke..M. Th., 1.30 Mr. Bond..Tu. F., 1.30 Mr. A. P. Gould..W. S., 1.30
The Physicians	Dr. H. Jones..every 3rd Th. Dr. Sieveking..every 3rd F. Dr. Broadbent..every 3d W.	The Physicians..F., 3	The Physicians..weekly	Dr. W. Fox (Holme prof.), Dr. Ringer, and Dr. Bastian	Dr. Fincham..1st & 3rd Th. Mr. Sturges...2nd & 4th W. Dr. Allchin..2nd & 4th F.
The Surgeons	Mr. Walton..every 3rd S. Mr. J. B. Lane..every 3d Tu. Mr. Norton..every 3rd Th.	The Surgeons..Tu., 3	The Surgeons..weekly	Mr. Marshall, Mr. B. Hill, and Mr. Heath (Holme prof.)	Mr. Cowell..2nd & 4th Th. Mr. Davy..1st and 3rd F. Mr. Macnamara..1st & 3rd W.
Dr. Palfrey (Win.). 2nd F. in mon.; (Sum.) alt. Tu., 2.30	Dr. A. Meadows—alt. Tu.	Dr. Hall Davis..Tu., 10	Dr. Gervis	Dr. G. Hewitt.. fortnightly	Dr. Potter..2nd and last F.
Wednesday, Thursday, and Saturday, 2	Wednesday..1.30; on Eye, Mon. and Thurs., 1.30	Wednesday, 1	Wednesday and Saturday, 1.30; Eye, Friday, 2	Wednesday, 3	Tuesday and Saturday, 2
Dr. Prosser James..Tu. Th. F., 3	Dr. Farquharson..Tu. W. F. S., 12	Dr. Thorowgood..M. W. F., 4	Dr. Stone..M. W. F., 9	Dr. F. T. Roberts..M., 9; Tu. W. Th. F., 10	Dr. Phillips..Tu. Th. S., 9.
Dr. F. Warner..M. W. F., 11	Rev. J. M. Crombie..M. W. F., 11	Mr. Hensman..M. W. F., 11	Mr. A. W. Bennett....Tu. W. S., 10	Mr. Oliver..daily, exc. S., 9 A.M.	Mr. Worsley-Benison..M. W. Th. F., 10
Dr. Palfrey..daily, exc. S., 9 A.M.	Dr. A. Meadows and Dr. Wiltshire..Tu. W. Th. F., 9	Dr. Hall Davis..Tu. Th. S., 9	Dr. Gervis..M. Tu. Th. F., 1	Dr. Graily Hewitt and Dr. J. Williams..Tu. W. F. S., 9	Dr. Potter..Tu. W. Th., 9; F., 4
Mr. Rodgers and Dr. Tidy	Dr. Randall..M. Tu. Th., 10	Dr. R. King..M. W. F., 9	Dr. Payne and Dr. Cory.. Tu. Th. S., 9	Dr. Poore..Tu. W. Th. F., 10	Dr. Dupré and Mr. Bond.. M. Th. F., 3
Dr. Tidy..M. W. F., 9	Dr. Wright...Inorg., W. F. S., 9; Organ., W. F., 10	Mr. Foster..M. W. F., 3	Dr. Bernays..M. Th. F., 10	Dr. Williamson (jun.) Tu. W. Th. F., 11; (sen.) M. S., 10	Dr. Dupré..M. W. F., 10
Dr. E. B. Aveling..Tu. Th., 9	Mr. St. G. Mivart (Sum.) W. Th., 10	Mr. Hensman (Sum.)..Tu. Th., 4	Mr. Stewart (Sum.)....M. Th., 12	Mr. Lankester (Win. and Sum.)..Tu. W. Th. F., 1	Dr. Carter Blake
Mr. McCarthy (Win.) ..M. Th. S., 10; (Sum.) Tu. Th., 11	Dr. Pepper (Win.)..Tu. W. F., 10	Mr. Lowne (Sum.)..M. W. Th., 9	Dr. T. C. Charles (Sum.).. Tu. W. F., 12.30	Dr. Sanderson and Mr. Schäfer (Sum.)..daily, ex. S., 1.30; adv. (Sum.)	Dr. Murrell (Win.)..Tu. W. F., 1.30; Hist. (Sum.) Tu., 1.30; W., 3.30
Dr. Sutton (lect.) (Sum.) Th., 12.30; S., 10; Dr. Sutton or Mr. McCarthy (dem.) daily, 3.30	Dr. Cheadle and Dr. Shepherd, bef. Christmas..Tu. F., 12; after, M. Th., 2.30 With Forensic Medicine	Dr. Coupland (Win.)..M. Th., 4.30; S., 10	Dr. Payne and Dr. Greenfield, Tu. W., 4; S., 11.30	Dr. Bastian (Sum.)..M. 10; Th. F., 4; Mr. Barker (surg.) Jan. Feb. March, M. Th., 4	Dr. Allchin..M. Th., 4; W., 3; Mr. Murrell and Mr. Neale (dem.), 2
With Forensic Medicine	With Forensic Medicine	Mr. H. Case (Sum.)..Th., 12	Dr. H. Rayner (Sum.)..F., 12	Dr. A. Carpenter (Sum.).. W., 4	Dr. Sutherland (May)..M Th. F., 3
Mr. Reeves and Mr. J. E. Adams (Sum.)	Mr. Page..M. Th., 11	Dr. R. King (Sum.)..Tu. Th., 10 Mr. Morris and Mr. A. Clark (Win.)..M., 3.30; W., 3	Dr. A. Carpenter (Sum.).. W., 4 Mr. Croft and Mr. MacKellar (Win.)....Tu., 9; (Sum.) Tu. F., 4	Dr. Corfield (Sum.) .. Tu. Th., 4 Mr. Hill (Oct. Nov. Dec.) ..M. Th., 4; & in Sum., 3 to 5	With Forensic Medicine The Lecturers on Surgery
Mr. Couper (lect.) (Sum.), Mr. J. Adams and Mr. Tay..W. S., 9	Mr. Walton (vis.)..M. Th., 1.30; (lect.) (Sum.) M., 2	Mr. Critchett..W. S., 8.30 (o.p.); 9 (in-p.) clin. lect., (Sum.) W., 3	Mr. Nettleship (vis.) .. M. Th., 2; (o.p.) daily, exc. S., 1.30; (lect.) (Sum.) Tu.,	Mr. Beck—daily Mr. W. Jones & Mr. Streatfeild (vis.)..M. W. F., 2; (lect.) (Sum.), Tu., 3	Mr. Cowell (vis.)..M. Th., 2.30; (lect.) (Sum.)., M., 3
Mr. Barrett (vis.)..Tu., 9; (lect.)	Mr. H. Hayward..W. S., 9.30	Mr. Turner..daily, 9	Mr. Elliott and Mr. Ranger ..Tu. F., 12	Mr. Ibbetson (lect.)....M. Th., 4; (vis.) W., 10.30	Mr. J. Walker (vis.)..W. S., 9.15; (lect.) (Oct., Nov., Dec.), W., 9.30
Mr. A. G. Brown (lect.).. Th. 4; (vis.) S., 9.30	Mr. Field (lect.)..., F., 3; (vis.) W. S., 2	Mr. Hensman..Tu., 9	Mr. Clutton..M., 12.30	Mr. Barker..S., 1.30	Mr. Keene (vis.) .. Tu. F., 9; (lect.) in June, Tu., 10
Dr. S. Mackenzie..Th., 9	Dr. Cheadle and Mr. M. Morris..Th., 3; (lect.) Th., 3 (Sum.)	Dr. R. Liveing..F., 4	Dr. Payne (out-p.)... Th., 12.30	Dr. H. R. Crocker (vis.) .. Tu., 1.30; S., 9; (clin. lect. alt. weeks)	Mr. Bond (vis.)..Th., 1; (lect.) (Feb., Mar.), Th., 2.30
Assist. Obstet. Phys. & Resident Accoucheur	Mr. Sumner	Dr. W. Pearse and Mr. Sumner	Dr. Cory..W., 11.30	Mr. W. Pearse or Mr. Sumner	Mr. W. Pearse
(See page 439)	(See page 440)	(See page 440)	(See page 440)	(See page 441)	(See page 441)

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course: "p", perpetual or unlimited attendance.)

	St. Bartholomew's.	Charing Cross.	St. George's.	Guy's.	King's College.	London.	St. Mary's.	Middlesex.
Composition Fee for all Lectures and Hospital Practice required by Examining Bodies	£131 5s.; or 1st win. £42 1st sum. £42 2nd win. £42 6s.	1st win. (with matric. £2 2s.) £25 4s. 1st sum. £18 18s. 2nd win. £21 2nd sum. £15 15s. 3rd win. £10 10s.	1st year, £45 2nd year, £45 3rd year, £20 4th year, £20 (See note)	£131 5s.; or 1st win. and 1st sum., each £66; or 1st and 2nd year, each £50; 3rd yr. £37 10s.	£125; or On entr. £75 2nd win. £60 or on entr. £60 2nd win. £50 3rd win. £25	£94 10s. 1st year, £47 5s. 2nd yr. £42 3rd yr. £15 15s. (See note)	£106 1s.; or 1st yr. £52 10s. 2nd yr. £42 0s. 3rd yr. £17 17s.	£90; or 1st year, £40 2nd year, £35 3rd year, £20 4th year, £5
Hospital Practice	*Medical.* 3 mos. £10 10s. 6 mos. £15 15s. 3 yrs. £23 18s.6d. Unlim. £33 18s.6d. *Surgical.* 3 mos. £13 28.6d. 6 mos. £19 19s. 12 mos. £26 5s. Unlim. £33 18s.6d.	Total, full period, £31 10s. *Med. or Surg.* 3 mos. £9 9s. 6 mos. £10 10s. 12 mos. £15 15s. Full period, £21 *Med. and Surg.* 3 mos. £10 10s. 6 mos. £15 15s. 12 mos. £21 Full p. £31 10s.	*Med. or Surg.* 1 year, £10 10s. 2 years, £21 Perp. £31 10s.	*Med. or Surg.* 3 mos. £10 10s. 6 mos. £15 15s. 1 year, £24 3s. Perp. £31 10s. *Med. and Surg.* 3 mos. £15 15s. 6 mos. £24 3s. 1 year, £31 10s. Perp. £47 5s.	*Med. or Surg.* 1 sum. £5 5s. 1 win. £9 9s. 1 year, £12 12s. Perp. £31 10s. *Med. and Surg.* 1 sum. £8 8s. 1 win. £14 14s. 1 year, £18 18s. Perp. £42	Perp. £52 10s. *Medical.* 6 mos. £10 10s. 12 mos. £15 15s. *Surgical.* 6 mos. £10 10s. 12 mos. £15 15s. 18 mos. £21 Perp. £26 5s.	Full p. £46 14s.6d *Medical.* 3 mos. £6 16s.6d. 6 mos. £9 9s. 12 mos. £15 15s. 18 mos. £19 19s. Perp. £26 5s. *Surgical.* 3 mos. £7 17s.6d. 6 mos. £11 11s. 12 mos. £26 5s. Perp. £38 17s.	*Med. or Surg.* Perp. £15 15s. 1 year, £8 8s. 6 mos. £5 5s. *Med. and Surg.* Perp. £20 5s.; or 1st and 2nd yrs. each £10 10s.; 3rd and each ad. year, £5 5s. 1 year, £12 12s. 6 mos. £7 7s.
Fees for Students of Dental Surgery	£63; or 1st win. £31 10s. 1st sum. £31 10s.	1st Oct. £22 2nd Oct. £20 —	£55; or 1st year, £30 2nd year, £25	£63; or 1st year, £42 2nd yr. £24 3s.	— —	£40 Dent. pr. gen., £10 —	£05 12s. 6d. — —	£42; or 1st win. £30 2nd win. £15 —
Anatomy	s. £9 9s. p. £13 2s. 6d.	1st year, £4 4s. 2nd year, £2 2s.	s. £7 7s. p. £8 18s. 6d.	s. £7 7s. —	s. £9 9s. p. £10 10s.	s. £5 5s. 2 yrs.	s. £7 17s. 6d.	s. £8 8s. p. £12 12s.
Demonstrations and Dissections	s. £7 7s. —	1st year, £3 3s. 2nd year, £2 2s. —	s. £3 3s. —	s. £7 7s. —	s. £6 6s. p. £9 9s. —	s. £5 5s. 2 yrs. £8 8s. —	— — —	s. £6 6s. p. £8 8s. —
Physiology	s. £9 9s. p. £13 2s. 6d.	1st year, £4 4s. 2nd year, £2 2s.	s. £7 7s. p. £8 16s. 6d.	s. £7 7s. —	s. £8 8s. p. £11 11s.	s. £4 4s. 2 yrs. £7 7s.	s. £4 4s. —	s. £6 6s. p. £8 8s.
Practical Physiology and Histology	(P.P.) s. £7 7s.; (H.)s. £12s.6d.	s. £2 2s. —	— (H.) s. £3 3s.	s. £7 7s. —	s. £6 6s. p. £8 8s.	s. £3 3s. 2 yrs. £4 4s.	s. £4 4s. —	s. £4 4s. —
Comparative Anatomy	s. £2 12s. 6d. p. £4 4s.	s. £4 4s.	s. £4 4s. —	s. £5 5s. —	s. £4 4s. p. £6 6s.	s. £3 3s. 2 yrs. £4 4s.	s. £2 12s. 6d. —	s. £2 2s. —
Botany	s. £4 4s. p. £5 5s.	s. £3 3s. —	s. £3 13s. 6d. p. £4 14s. 6d.	s. £5 5s. —	s. £4 4s. p. £6 6s.	s. £3 3s. 2 yrs. £4 4s.	s. £4 4s. —	s. £4 4s. p. £5 5s.
Chemistry	s. £6 16s. 6d. p. £9 9s.	s. £5 5s. —	s. £6 6s. p. £7 17s. 6d.	s. £7 7s. —	s. £8 8s. p. £11 11s.	s. £7 7s. 2 yrs. £7 7s.	s. £6 16s. 6d. —	s. £6 6s. p. £8 8s.
Practical Chemistry	s. £3 3s. —	s. £4 4s. —	s. £4 4s. —	s. £7 7s. —	s. £6 6s. p. £8 8s.	s. to stud. £2 2s. to others, £7 7s.	s. £4 4s. —	s. £4 4s. —
Materia Medica	s. £6 16s. 6d. p. £7 17s. 6d.	s. £3 3s. —	s. £4 14s. 6d. p. £5 15s. 6d.	s. £5 5s. —	s. £5 5s. p. £6 6s.	s. £3 3s. 2 yrs. £4 4s.	s. £5 5s. —	s. £4 4s. p. £5 5s.
Practical Pharmacy	—	—	s. £3 3s. —	s. £3 3s. —	— —	s. £4 4s.	3 mos. £3 3s.; 6 mos. £6 6s.	£5 5s. —
Pathology and Morbid Anatomy	s. £2 12s. 6d. p. £4 4s.	s. £3 3s. (See note)	s. £3 3s. —	P. £3 3s. M.A. £7 7s.	s. £3 3s. p. £4 4s.	s. £3 3s. 2 yrs. £6 6s.	s. £4 4s. —	s. £4 4s. p. £5 5s.
Medicine	£7 16s. 6d. p. £9 9s.	1st c. £4 4s. 2nd c. £2 2s.	s. £7 7s. p. £8 18s. 6d.	s. £7 7s. —	s. £8 8s. p. £11 11s.	s. £5 5s. 2 yrs. £6 6s.	s. £5 5s. —	s. £6 6s. p. £8 8s.
Surgery	s. £6 16s. 6d. p. £9 9s.	1st c. £4 4s. 2nd c. £2 2s.	s. £7 7s. p. £8 18s. 6d.	£7 7s. —	s. £8 8s. p. £9 9s.	s. £5 5s. 2 yrs. £6 6s.	s. £5 5s. —	s. £6 6s. p. £8 8s.
Practice of Surgery	s. £9 16s. 6d. p. £9 9s.	— —	s. £4 4s. —	s. £4 4s. —	s. £5 5s. p. £5 5s.	s. £6 6s. —	s. £4 4s. —	s. £6 6s. —
Operative Surgery	s. £5 5s.	£2 2s.	s. £5 5s.	s. £7 7s.	—	—	—	s. £5 5s.
Ophthalmic Surgery	s. £2 12s. 6d. p. £4 4s.	— —	inc. in Surg. —	—	—	s. £2 2s. 2 yrs. £3 3s.	s. £2 12s. 6d. —	— —
Dental Surgery	s. £2 12s. 6d. p. £4 4s.	— —	— —	— —	— —	s. £2 2s. —	s. £2 12s. 6d. —	Occas. Stud., £5 5s.
Midwifery	£9 16s. 6d. p. £7 17s. 6d.	s. £3 3s. —	s. £4 14s. 6d. p. £5 15s. 6d.	£7 7s. —	s. £5 5s. p. £6 6s.	s. £4 4s. 2 yrs. £6 6s.	s. £5 5s. —	s. £4 4s. p. £5 5s.
Forensic Medicine	s. £4 4s. p. £5 5s.	s. £2 2s. —	s. £4 14s. 6d. p. £5 15s. 6d.	£7 7s. —	s. £5 5s. p. £6 6s.	s. £3 3s. 2 yrs. £4 4s.	s. £4 4s. —	s. £4 4s. p. £5 5s.
Psychology	s. £2 12s. 6d. p. £4 4s.	s. £1 1s. —	—	£3 3s. —	—	— —	— —	s. £2 2s. —
Public Health and Hygiene	—	s. £1 1s.	—	£1 1s.	s. £1 1s.	—	—	s. £3 3s.
Institutes of Vaccination		Not stated			Small fee	—	£1 1s.	£1 1s.
Library	1 year £1 1s.	£1 1s.	Each yr. £1 6d.	£1 1s.	£1 1s.	£1 1s.	£1 1s.	£1 1s.

ADDITIONAL NOTES.

St. Bartholomew's Hospital. The Composition Fee includes, besides the ordinary subjects, Ophthalmic Surgery, Dental Surgery, Mental Diseases, and Histology. Extra in patient dressers' hips: 3 months, £10 10s.; 6 months, £16 16s.

Charing Cross Hospital. Hospital Practice after third year, £5 5s. for each winter, and £3 3s. for each summer. Matriculated Students pay £3 3s. for Comparative Anatomy. The Lectures on Psychology and on Normal Histology and Operative Surgery are free to matriculated students.—Morbid Histology: matriculated, £1 1s.; not matriculated, £2 2s. Operative Surgery: private class, whole body, £8 8s.; half body, £5 5s. Students dissecting in the summer pay an extra fee of £1 1s. The Matriculation Fee is £5 5s.

St. George's Hospital. Perpetual pupils pay £125 at entrance; or 1st and 2nd years, each £14; 3rd year, £20. Gentlemen who have completed a year of professional study at an English University are allowed a reduction of £40 from the perpetual pupil's fee. A reduced fee is also paid by students who have attended a year in other schools. The payments for courses required by the examining boards do not confer the privileges of perpetual pupils. Practical Medicine, £4 4s.; Physiological Chemistry, £5 5s. Extra payment is required for Practical Pharmacy; Practical Chemistry; Subject for Dissection (£3 3s.); Operative Surgery; Dentistry; and Comparative Anatomy.

Guy's Hospital. Medicine; Histology and Natural Philosophy, each £5 5s. Extra for Practical Chemistry, £1 1s.; Operative Surgery, £2 2s. (both included in Composition Fee).

King's College. The Composition Fee includes perpetual attendance on Anatomy, Physiology, Chemistry, Medicine, Clinical Medicine, Surgery, Clinical Surgery (one Professor), Obstetric Medicine, Botany, Forensic Medicine, Materia Medica, Comparative Anatomy, Pathological Anatomy, and Hospital Practice; and one course each of Practical Surgery, Practical Chemistry, and Practical Physiology. Clinical Surgery (win.), one professor, s. £6 6s.; p. £8 8s.; both professors, s. £8 8s.; p. £11 11s.; (sum.) one professor, s. £4 4s.; p. £5 5s.; both, s. £6 5s.; p. £6 6s.—Anatomy and Practical Anatomy, together, s. £9 9s.; p. £12 12s. Tutor, £3 3s. Students of Practical Physiology pay £1 1s. for use of apparatus, etc. Practical Biology and Experimental Physics, 3 terms, each £3 8s.; second year, each £1 3s.; Analytical and Experimental Chemistry (exclusive of materials) 1 month, £4 4s.; 3 months, £10 10s.; 6 months, £18 18s. Medical Tutor, one year, £3 3s.

London Hospital. The General Fee for Lectures and Hospital Practice covers four years, and includes two years' Practical Anatomy. For students entering at or before beginning of second winter, £73 10s.; or two instalments of £42 5s. and £31 10s. This fee covers three years from the date of entry. Students in Arts of Universities who have attended Lectures in Anatomy, Physiology, Chemistry, Botany, or Comparative Anatomy, may become Pupils of the Hospital, eligible for all Hospital Appointments, on payment of £52 10s. Graduates of any Indian, Canadian, or other Colonial or American University or Medical College, may be admitted to three months' Dressership and Perpetual Hospital Practice for £10 10s.—The fees for Hospital Practice include Clerkships and Dresserships for one-half the term; not exceeding 6 months' Clerkship and 9 months' Dressership. Maternity Department, one year, £4 4s.; including midwifery Lectures, £6 6s. Perpetual Fee for Lectures or

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course; "p", perpetual or unlimited attendance.

St. Thomas's.	University College.	Westminster.	Queen's Coll., Birmingham.	Leeds.	Leeds.	Owens Coll., Manchester.	Newcastle.	Sheffield.
£125; or On entr. £70, 2nd win. £60; or 1st year, £60, 2nd year, £5, 3rd year, £50	£131 5s.; or 1st year, £70, 2nd yr. £52 10s. 3rd yr. £21	£92 10s.; or 1st year, £52, 2nd year, £42, or 5 instalments of £21 0s., £21, £21, £10 10s. and £10 10s.	Lect. £63; or 1st yr. £42, 2nd yr. £21	Lect. £63; or 1st yr. £42, 2nd yr. £21	Lec. £52 10s.; or 1st yr. £42, 2nd yr. £30 5s.	Lect. £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	Lec. £52 10s.; or 2 instalments ea. £26 7s., or 3 instalments ea. £21	Lectures, £45
Med. and Surg. 3 mos. £15 6 mos. £20 9 mos. £35 12 mos. £40 Perp. £55	*Med. and Surg.* Perp. £42 10s. 1 year. £15 15s. 6 mos. £11 10s.	*Med. and Surg.* 3 mos. £5 5s. 6 mos. £8 8s. Each subsequent 3 mos. £4 4s. 1 yrs. £21 *Med. and Surg.* 3 mos. £5 5s. Each subsequent 3 mos. £4 4s. Each subsequent yrs. £21 10s. Each subsequent 6 mos. £11 10s. Each subsequent yrs. £21 10s.	*General and Queen's Hospitals.* 4 years, £42; or in two equal sums. 1 year. £21 6 mos. £14	*Royal Infirm. Medical and Surg.* 3 mos. £7 7s. 1 year. £21 10s. Perp. £31 10s. *Med. and Surg.* 1 year. £21 Perp. £31 10s. *Gen. Hosp. Med. or Surg.* 6 mos. £6 1 year. £10 Perp. £20	*Infirmary. Med. and Surg.* 3 mos. £7 7s. 1 year. £21 12 mos. £12 12s. 18 mos. £15 15s. 3 years. £31 10s. Perp. £63	*Royal Infirm.* Perp. £31 10s. *Medical.* 3 mos. £6 6s. 6 mos. £8 8s. 12 mos. £15 15s. *Surgical.* 3 mos. £4 4s. 6 mos. £6 6s. 12 mos. £8 8s.	*Royal Infirm.* Full per. £42; or 3 instalments, £14 ea. *Medical.* 3 mos. £6 6s. 6 mos. £8 8s. 12 mos. £12 12s. Full per. £31 10s. *Surgical.* 3 mos. £5 5s. 6 mos. £10 10s. 12 mos. £15 15s. Full per. £21 10s.	*Infirmary.* 3 mos. £5 5s. 6 mos. £8 8s. 12 mos. £12 12s. Perp. £20 5s.; or 1st year, £12 12s.; 2nd yr. £10 10s.; 3rd yr. £6 6s.; or, 1st year, £14 14s.; 2nd year, £11 10s.	*Gen. Infirm., or Public Hospitl.* Perpetual Med. £18 18s.; perp. Sur., £21 *Med. and Surg.* 6 mos. £10 10s. 12 mos. £15 15s.
£55; or 1st year, £30, 2nd year, £30	—	£45	To be arranged	—	—	—	—	—
s. £7 7s. p. £10 10s. 3 mos. £4 4s. 6 mos. £6 6s. Perp. £10 10s.	s. £7 7s. p. £10 10s. Subsq. 3 mos. £3 3s. 1 yr. £6 6s. Ea. add. yr. £1 1s.	1 yr. £10 10s. Subsq. 3 mos. £4 4s. 6 mos. £6 6s. Each subsq. yr. £10 10s.	s. £5 5s. p. £10 10s.	s. £5 5s. p. £10 10s.	£5 5s. 3 mos. £3 3s. 6 mos. £5 5s. Subs. £2 2s.	£5 5s. 3 mos. £3 3s. 6 mos. £5 5s.	s. £4 4s.	1st c. £4 4s. 2nd c. £2 2s.
s. £7 7s. p. £10 10s. s. £6 6s. —	(See below.) Sec. c. £2 2s.	Subsq. 3 mos. £2 2s. £1 1s. Each subsq. yr. £2 2s.	s. £5 5s. s. £5 5s.	s. £5 5s. ea. £4 4s. 3rd c. £2 2s.	£5 5s. —	s. £6 6s. s. £5 5s.	— —	1st c. £4 4s. 2nd c. £2 2s. s. £5 5s.
s. £4 4s. p. £5 5s. s. £4 4s. p. £5 5s. s. £7 7s. p. £10 10s. s. £6 6s. —	(See note below) s. £3 13s. 6d. p. £5 5s. s. £7 7s. p. £10 10s. s. £5 5s. Sec. c. £3 3s.	1 c. £2 2s. 2 c. £3 3s. 3 c. £4 4s. 4 c. £5 5s. Subsq. 1 c. £2 2s. Each subsq. yr. £10 10s.	s. £3 3s. s. £4 4s. s. £5 5s. s. £4 4s.	s. £4 4s. s. £5 5s. s. £5 5s. s. £3 3s.	s. £2 2s. 1st c. £3 3s.; 2nd, £2 2s.; 3d. £1 1s. 1st c. £5 5s.; 2 & 3, £1 11s. 6d. 1st c. £5 5s.; 2 & 3 ea. £2 12s. 6d. s. £3 3s.	£4 4s. £3 10s. s. £2 12s. 6d. £4 14s. 6d. s. £4 4s.	— — s. £4 4s. s. £4 4s. —	s. £3 3s. — s. £4 4s. s. £2 3s. —
s. £4 4s. p. £5 5s. 3 mos. £5 5s. —	s. £6 6s. p. £7 7s. 3 mos. £5 5s.	1 c. £3 3s. 2 c. £4 4s. 3 mos. £3 3s. 4 mos. £4 4s.	s. £4 4s. —	s. £4 4s. —	1st c. £4 4s.; 2 & 3, each £2 2s. £3 3s.	£4 4s. 3 mos. £3 3s. 4 mos. £3 3s.	£4 4s. —	£3 3s. —
s. £4 4s. p. £5 5s. s. £7 7s. p. £10 10s. s. £6 6s. — —	s. £6 6s. p. £7 7s. 1 c. £5 5s. Subsq. 3 mos. £2 2s. Each subsq. yr. £10 10s. Sec. c. £4 4s. S. half £4 4s. Whole £7 7s.	1 c. £3 3s. 2 c. £4 4s. 3 c. £5 5s. Subsq. 1 c. £2 2s. Each subsq. yr. £10 10s. —	s. £3 3s. s. £6 6s. s. £5 5s. s. £6 6s. —	s. £3 3s. s. £5 5s. s. £5 5s. s. £4 4s. Each £2 2s.; both togeth. £5 5s.	1st c. £3 3s.; 2 & 3 ea. £1 11s. 6d. 1st & 2nd c. £5 5s.; 3rd, £2 2s. 1st c. £4 4s.; 2 & 3, each £1 1s. 1st c. £4 4s.; 2 & 3, each £2 2s. s. £2 2s. s. £1 1s. £2 2s. Mich. £2 2s. 1st c. £4 4s.; 2 & 3, each £2 2s. 1st c. £3 3s.; 2 & 3 ea. £1 11s.	£4 4s. £5 5s. £4 4s. £2 2s. £2 2s. — — — — £4 4s. £4 4s. £4 4s.	£4 4s. £4 4s. — — — — — — £4 4s. — £4 4s. £4 4s. £4 4s.	— 1st c. £4 4s. 2nd c. £2 2s. s. £4 4s. — s. £3 3s. — — — — s. £3 3s. — s. £3 3s. — —
s. £2 2s. p. £3 3s. s. £2 2s. p. £3 3s. s. £5 5s. p. £6 6s. s. £4 4s. p. £5 5s. s. £2 2s. p. £3 3s. s. £2 2s. £1 1s. £1 1s.	s. £1 1s. — £2 2s. — s. £3 3s. p. £7 7s. s. £5 5s. p. £6 6s. — — — s. £2 2s. £1 1s. —	s. £1 1s. — £2 2s. — s. £3 3s. p. £4 4s. s. £4 4s. p. £5 5s. — — — — £1 1s. £1 1s.	s. £3 3s. — — s. £5 5s. — s. £4 4s. — — — — — s. £2 2s. — £1 1s.	s. £2 2s. — — — s. £4 4s. — — — — — — — £1 1s. £1 1s.	s. £1 1s. — — — £2 2s. — £4 4s. — £4 4s. — — — — £1 1s. £1 1s.	s. £1 1s. — — — — — £4 4s. — £4 4s. — — — — A fee —	— — — — — — £4 4s. — £4 4s. — £4 4s. — £4 4s. £1 1s. 1 yr. 10s.; longer, 5s.	— — — — — — s. £3 3s. — s. £3 3s. — — — — £1 1s. —

Hospital Practice alone, £52 10s. Diseases of Throat and Aural Surgery, each, s. £2 2s.; two years, £3 3s. Extra for use of Apparatus, etc., in Practical Physiology, £1 1s. The Subscription to the Library, and the fees for Practical Pharmacy and Apparatus in Practical Physiology, are also extra.

St. Mary's Hospital.—Entrance Fees for unlimited attendance on Hospital Practice and Lectures (including one course of Practical Chemistry), £131 5s. in instalments, or £124 19s. in one sum: hospital alone, £46 14s. 6d.; lectures alone, £65 12s. 6d. Students who have kept a portion of the course of medical study at the Universities of Oxford, Cambridge, or elsewhere, are admitted as perpetual pupils. Subjects for dissection £1 11s. 6d. for two winter sessions. Use of Microscope, (unless possessing one), £1 1s. Inorganic Practical Chemistry is included in the General Fee. Aural Surgery, Diseases of Skin, each £2 12s. 6d. Practical Pharmacy, 12 months, £10 10s.

Middlesex Hospital.—The composition fee includes all the lectures required by the London licensing boards, one course of Practical Chemistry and two courses of Dissections, the use of the Library, and the instruction of the Tutor. Additional fees must be paid after the fourth year. Members of English Universities who have completed one year of medical study in University are admitted to all lectures and hospital practice required (except Practical Chemistry) for £55 on entrance, or instalments of £40, £20, and £5 at the beginning of each year; separate fees being required after the third year; in the latter case, £10 must be paid for each additional year. Occasional students entering for the Hospital Practice pay a registration fee of £1 6s. Anatomy, including Dissection, £10 10s.; p. £14 14s.

St. Thomas's Hospital.—Perpetual Fee; for students entering in second year, £63 in one sum; or 2nd year, £65; 3rd year, £65; for students entering in third year, £55 on entrance; or £45 and the next year £20. Qualified Medical Practitioners are admitted to Hospital Practice and Lectures on payment of £12 10s. for unlimited attendance. Students dissecting or attending Operative Surgery pay for the parts they use. Practical Physiology and Practical Chemistry, each £1 11s. 6d. (extra) for materials. Midwifery Practice, £5 5s.; Operative Surgery (voluntary class), £5 5s.; Operations on Eye (voluntary class), £2 2s., or with Operative Surgery, £1 1s. Pathological Anatomy, £6 6s., with 10s. 6d. (extra) for apparatus, etc. Experimental Physics, s. £4 4s.; p. £5 5s.

University College.—The Composition Fee admits to perpetual attendance on Hospital Practice and Lectures on Anatomy, Physiology, Chemistry, Surgery, Medicine, and Midwifery, and three years' Practical Anatomy; and to one course each of Botany, Materia Medica, Practical Chemistry, Practical Physiology, Medical Jurisprudence, Pathological Anatomy, Practical Surgery, and Pharmacy. Additional, for perpetual attendance on Botany, £1 11s. 6d.; on Materia Medica, Medical Jurisprudence, and Pathological Anatomy, £1 1s. each; Practical Anatomy, each additional year, £1 1s.; second courses, £2 2s.; of Practical Physiology and of Practical Chemistry, £3 3s.; of Practical Surgery, £4 4s.—*Physiology*: Elementary General Anatomy and Physiology, £3 3s.; Histology, £4 4s.; Physiology, £6 6s.; Embryology (Lectures), £3 3s.; Practical, £5 5s.; both, £5 5s.; Laboratory fees (winter), first month, £2 2s.; each succeeding month, £1 1s.; additional for Instruction. *Zoology and Comparative Anatomy*: General Course, s. £6 6s.; p. £8 8s.; advanced Practical Course (in summer), £3 3s. Shorter Practical Courses (three in

(Continued on next page.

tition. This office must be held before competing for that of Assistant House-Physician. An Assistant Surgical Registrar is also appointed; this office must be held, alternately with that of Ophthalmic Assistant, before competing for the office of Assistant House-Surgeon.—A Senior Assistant Demonstrator is appointed at a salary of £20. The pupils of the hospital are placed under the superintendence of the physicians and surgeons in rotation, and have charge of cases as Clerks and Dressers.

Exhibitions and Prizes.—The William Brown Exhibitions: 1. £100 *per annum* for two years, open to perpetual pupils of the hospital under the age of 25, who have become entitled to be registered under the Medical Act within two years previously; examinations in July; subjects, Medicine, Midwifery, and Surgery, including Ophthalmic Surgery. 2. £40 *per annum* for three years to perpetual pupils of the third and fourth winter sessions.—Brackenbury Prizes in Medicine and in Surgery, each, interest of £1,000 three per cent. consols, open to all pupils who have not completed the fourth year; examinations in May.—Sir Charles Clark's Prize, interest of £200 annually, for good conduct; awarded at end of summer session.—The Thompson Silver Medal, and the Treasurer's Prize, at close of winter session, for proficiency in the clinical examination of three Medical and three Surgical cases (including one case of Obstetric Medicine and one of Ophthalmic Surgery).—Sir Benjamin Brodie's Clinical Prize in Surgery, for the best report (with notes) of not more than twelve surgical cases in the hospital during the preceding twelve months.—(The Clinical Prizes are open to fourth year's students. Reports must be sent in on or before May 1st.)—The Henry Charles Johnson Memorial Prize, for Practical Anatomy.—General Proficiency Prizes, £10 10s., for students of each year: first year, Anatomy, Practical Physiology, Botany, and Physiological Chemistry; second year, Anatomy, Physiology, Chemistry, and Materia Medica; third year, Medicine, Surgery, Pathology, and Midwifery.

The Medical Society meets once a week at the hospital during the winter session. All former and present pupils of St. George's Hospital are eligible as members.

Further Information may be obtained from Dr. Barclay, the Treasurer of the School; from Dr. Wadham, the Dean; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

GUY'S HOSPITAL. The hospital contains 695 beds. There are 50 beds for ophthalmic and 26 for obstetric cases. Children are received into the female wards.

Museums, etc.—The Museums of Human Anatomy, Comparative Anatomy (above 2,000 specimens), Pathological Anatomy (above 5,000 specimens), and Materia Medica are open to the students. The Library is open to the students daily from 9.30 A.M. to 5.30 P.M., except on Saturdays, when it is closed at 4 P.M.

Special Courses.—The Dissecting-room is open at stated periods during the summer; and students who desire to dissect in September have facilities for doing so.—Students are allowed to visit Bethlem Hospital on fixed days in the summer; and gentlemen can enter as extern students for three months by arrangement with Dr. Savage.—A course of Lectures on Experimental Physics is given by Mr. Reinold at 11 on Mondays during the winter session.

Appointments.—All appointments are given according to the respective merits of the candidates. The numbers appointed annually are as follows: 6 House-Physicians, for six months; 6 House-Surgeons, six months; 12 Obstetric Residents, two months; 24 Surgeons' Dressers, six months; 18 Clinical Assistants, three months; 18 Dressers in the Eye Wards, four months; 24 *Post Mortem* Clerks, two months; 24 Obstetric Out-Patient Clerks, six weeks; 32 Assistant-Physicians' Clerks, three months; 12 Dental Surgeons' Dressers, two months; 12 Aural Surgeons' Dressers, two months; 64 Medical Clinical Clerks, three months; 72 or more Assistant-Surgeons' Dressers, and a similar number of Dressers in the Surgery, three months; 80 Surgical Clinical Clerks, three months; 32 Assistant-Surgeons' Clerks, three months; 60 Extern Obstetric Attendants, one month; also Clerks in the Room for applying Electricity. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

Scholarships and Prizes.—Two Entrance Scholarships, each 125 guineas, to be competed for on September 24th, 25th, and 27th: one in Arts,* and one in Science.† Candidates must be under twenty-five years of age, and must not compete for both Scholarships. Notice must be given before September 22nd. The successful candidates must enter into the Hospital in the October immediately following. *First Year:* At the end of summer session, two prizes of £50 and £25; subjects, Anatomy of Bones, Ligaments, and Muscles, Physiology, Materia Medica, Chemistry (including Practical Chemistry), and Botany or Comparative Anatomy. *Second Year:* At end of summer session, Prizes of £25 and £10; subjects, Anatomy and Physiology (including Practical Physiology). At end of winter session, the Michael Harris Prize of £10 for Human Anatomy (including Minute Anatomy); the Sands Cox Scholarship, valuble £15, tenable for three years; subjects, Physiology (including Physiological Physics), Histology, and Physiological Chemistry. *Third Year:* At end of summer session, two prizes of £35 and £20, in Medicine, Surgery (including Practical Surgery), Midwifery and Diseases of Women, and Medical Jurisprudence. *Third and Fourth Years:* Treasurer's Gold Medals in Medicine and Surgery. *Fourth and Fifth Years:* Gurney Hoare Prize of £25, for best reports of three Medical and three Surgical cases, with Commentaries; Beaney Prize of 30 guineas in Pathology. Honorary certificates are given to those candidates who pass creditable examinations. Special certificates are given to gentlemen who have attended 100 cases of Midwifery.

The Registrars and the Demonstrators of Anatomy and Chemistry

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* The subjects are: Greek: Homer (Iliad, Books XXII., Odyssey, Book IX.); Euripides (Alcestis); Xenophon, Memorabilia, Book I.; Plato, Crito; Latin: Virgil, Aeneid, Book II.; Horace, Odes, Book III.; Cicero, Pro Milone; Translation from English into Greek and Latin; Questions on these works and Grammar; Translation at sight into Greek and Latin prose; English History, two out of four Periods; Geography; Arithmetic; Algebra, to the end of Simple Equations; Euclid, Books I. and II.

† The subjects are: Elementary Chemistry; Physics, including Heat, Magnetism, Electricity, and Optics.

assist the pupils in their studies. Classes for the preparation of candidates for the Examinations of the University of London are held.

The Pupils' Physical Society meets on alternate Saturdays, at 7.30 P.M. Two prizes of £5 and £10 in books or instruments will be awarded for the best papers read during the session. Two prizes, value £5 each, will be given for the best essays on selected subjects. A prize of £5 is also given to the member who has most distinguished himself in the debates.

Several of the Lecturers have vacancies for Resident Private Pupils.

Information may be obtained from the Dean, Dr. F. Taylor, at the hospital.

KING'S COLLEGE AND HOSPITAL.—*The Hospital* contains 170 beds in use.

The Museums of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4. *The Medical Library* is open daily.

Special Courses.—Special clinical instruction is given on Tuesday, Thursday, and Friday, by the Assistant-Physicians. Instruction is given in the Diseases of Women and Children; and in Throat-Diseases (with Laryngoscopic Demonstrations, by Dr. Curnow, every Thursday at 3). —Demonstrations and Practical Instruction in Morbid Anatomy are given in the *Post Mortem* theatre.—Special Instruction is given in Medical Chemistry and the Microscope by the Physicians.

Appointments.—Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from matriculated students* who are pupils at the hospital.

Scholarships and Prizes.—Three Warneford Scholarships, for the encouragement of previous education,† each £25 *per annum*, two for three years, and one for two years; and one Warneford Scholarship of £25 *per annum* at the close of the winter session, for two years, for third year resident medical students.—Medical Scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, to students of the second and third year; three of £20 for one year, to students of the first year.—Daniell Scholarship, open to students who have worked in the laboratory six months, £20 *per annum* for two years.—Sambrooke Registrarships, two of the annual value of £50 each, open to matriculated students who have filled any of the higher appointments at the hospital.—Sambrooke Exhibitions, one £60 and one £40, for Proficiency in English, Mathematics, any two languages other than English, Elementary Physics, Inorganic Chemistry, Botany, and Zoology; open to all matriculated students at the commencement of their course of study.—Two Science Exhibitions, given by the Cloth-workers' Company, one of £50 and one of £25 *per annum*, each tenable two years, for proficiency in four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology; open to all candidates under 19 at time of sending in their names (September 30th).—Inglis Scholarships: two annually, £50 each, for proficiency in Modern History and English Literature.—Leathes' Prize: Interest of £300 applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated medical students.—Warneford Prizes: £40 in medals and books, to two matriculated medical students.—Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes.—Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and Two Surgical Clinical Prizes of £3 each for the winter session.—Todd Medical Clinical Prize: Bronze Medal and Books, value £4 4s.—Jelf Medal, to the candidate at the senior scholarship examination who is second in order of merit.—Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics.

The Medical Tutor assists, by instruction and examination, all students in the subjects of the first winter and summer sessions, as well as those preparing for the Preliminary Scientific Examination of the University of London. Classes are held for the latter examination.

Associates of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor. The cost of the academical year varies from £50 to £60.

The Medical Society meets on Thursdays, at 8.30 P.M.

The Dean of the Medical Department, or the Sub-dean, attends daily, Saturday excepted, at King's College, from 11 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

LONDON HOSPITAL.—*The Hospital* contains about 800 beds, thus allotted: Accidents and surgical cases, 334; medical cases, 300; diseases of women, 26; children under seven years of age, 68; ophthalmic cases, 12; out-door wards, 60.

Museums, etc.—The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library are open daily.

Special Courses.—Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice of Mr. Millar, at the Bethnal House Asylum, every Wednesday from 10 to 12.—Dr. Morell Mackenzie gives a course of lectures on Diseases of the Throat, at 4 A.M. on Wednesdays in February and March.

Appointments.—Five House-Physicians, who must be qualified for registration, are appointed every six months.—Clinical Clerks are appointed for six months. Every student must act as Clinical Clerk for six weeks in the Medical out-patient department, after passing the first College of Surgeons examination.—A Resident Accoucheur is appointed for six months, and Clinical Obstetric Clerks every three months. All students who have attended a course of instruction in Midwifery can place their name on the list of Maternity Pupils. Two reside in the hospital for a week. Each student must attend at least twenty cases of Midwifery; those who have attended one hundred are entitled to a special certificate.—Four House-Surgeons are elected for six months, renewable for two further periods of three months each. Any student who has passed the primary examination at the College of Surgeons, or some equivalent examination, may enter his name on the list as a Dresser. Four Dressers reside and board in the hospital every week. Every student must act as Dresser in the Surgical out-patient department for at least three months after the end of the first winter session.—Three Clinical Assistants are appointed every three months for the Medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 *per annum*.—An unpaid Clinical Assistant is appointed in the Ophthalmic department.—A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100.—A Dental Assistant, *Post Mortem* Clerks, Prosectors of Anatomy, and Dressers in the Ophthalmic and Aural departments are also appointed. —Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, at or before the beginning of the second winter, are eligible for appointments. The holders of resident appointments are provided with rooms and board.

Scholarships and Prizes.—Nine scholarships will be offered for competition. 1 and 2. Two Entrance scholarships, value £60 and £40; examination on September 22nd, 23rd, and 24th; subjects: Physics, Botany, Zoology, and Inorganic Chemistry. Successful candidates must forthwith become pupils of the hospital and school. 3 and 4. Two Buxton scholarships, value £30 and £20; examination on September 27th, 28th, and 29th.* These scholarships are open to full

* Matriculated students are those who receive their entire medical education at King's College, and those who, after having received a portion of their medical education at other Schools, come to King's College to complete their studies. They have the privilege of filling the various hospital offices; and of becoming candidates for the Scholarships, for the Sambrooke Registrarships, and for the endowed prizes. Occasional Students, who enter on particular classes, on payment of the prescribed fees, have the privilege of competing for Class Prizes and Certificates.

† Candidates for these three Scholarships must be matriculated students of the Medical Department, and perpetual pupils of the Hospital. Their first Winter Session must commence in October 1880. The examination will be in the following subjects. 1. Divinity: The First and Second Books of Samuel; The Gospel according to St. Matthew; The Church Catechism. 2. English Language and Literature: Shakespeare, *Macbeth*; English History—The Reign of Elizabeth. 3. Latin: Sallust, *De Bello Jugurthino*. 4. Mathematics, Arithmetic; the ordinary rules, with Vulgar and Decimal Fractions; Algebra, as far as and including Quadratic Equations; Euclid, Book I, Book II (except props. 2, 3, 10), Book III. 5. Greek: Homer, *Odyssey*, Book XI. 6. French: Guizot, *Corneille et son Temps*. 7. German: Schiller, *Wilhelm Tell* (Clarendon Series). 8. Chemistry: Miller's *Inorganic Chemistry* (in Longman's Series of Text-Books on Science). 9. Natural Philosophy: Deschanel's *Natural Philosophy*, translated by Professor Everett, Part I and Part IV. 10. Botany: Bentley's *Manual of Botany*, third edition, to page 203, together with chapters on the General Principles of Classification, and Diagnosis of Ranunculaceæ, Rosaceæ, Compositæ, Labiatæ, Scrofulariaceæ, and Liliaceæ. Subjects 1, 2, 3, 4, are compulsory; candidates may also select one subject out of 5, 6, and 7, and another either out of 5, 6, 7, or out of 8, 9, 10.—The examination will begin on September 28th, at 10 A.M.

‡ The following are the subjects of examination: *Compulsory*—1. An English essay. 2. Mathematics: Arithmetic; the ordinary rules, Vulgar and Decimal Fractions; Extraction of the Square Root; Algebra—Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion; Arithmetical and Geometrical Progression; Simple Equations; Geometry—the first four books of Euclid or the subjects thereof. 3. Any two languages other than English. If Latin, Greek, French, or German are taken, certain books will be selected for examination (they are the same as those for the Warneford Scholarship). *Optional*—1. Elementary Physics, as for Preliminary Science Examination of the University of London, omitting Optics and Acoustics. 2. Inorganic Chemistry, with practical qualitative analysis. 3. Botany, with practical examination. 4. Zoology, with practical examination. A Candidate may take up any one or more of these optional subjects, but he must gain half marks in each of those which he takes up, otherwise the marks in that subject will not count. The examination will begin at 10 A.M. on Tuesday, September 28th.

* The subjects are:—I. *Compulsory*. 1. Writing from Dictation. 2. English Grammar. 3. Writing a short English Composition; such as a description of a place, an account of some useful or natural product, or the like. 4. Arithmetic. No

students of less than six months' standing. 5. A Scholarship at the end of the winter session, value £20, to a first year's student; subject, Human Anatomy. 6. A Scholarship, value £25, to a first-or second year's student, at the end of the winter session; subjects: Anatomy: Physiology, and Chemistry. 7, 8, 9. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics. The Duckworth Nelson Prize, value £10, awarded biennially; open to all students who have not completed their education; subjects: Practical Medicine and Surgery.—Money Prizes to the aggregate value of £60 *per annum* to the most meritorious of the Dressers in the out-patient rooms. Special certificates to those gentlemen who have faithfully performed their duties in the hospital, and to those who have distinguished themselves at the examinations.

Special attention is paid to the preparation of students for the examinations of the Colleges of Physicians and Surgeons, the Apothecaries' Hall, and the University of London.

The Medical Society meets for the reading and discussion of papers at 7.30 P.M. on alternate Wednesdays during the winter session.

Information may be obtained from the Warden, Mr. Munro Scott, at the College.

ST. MARY'S HOSPITAL.—*The Hospital* contains 190 beds; 88 medical and 102 surgical. Two wards are appropriated to Diseases of Children and one to those of Women; there are also beds for ophthalmic cases.

The Reading Room and Library are open daily. The *Museum* is open daily to students. It contains about 3,000 specimens of healthy and morbid anatomy. There are also a Materia Medica Department and a collection of specimens illustrative of Comparative Anatomy. A Histological Room is open daily.

Clinical Demonstrations on Diseases of the Skin and of the Throat are given. The students are carefully trained to the use of the Microscope.

Appointments.—Three Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital.—A Demonstrator of Anatomy, a Medical Tutor, and a Resident Registrar, with salaries of £100, are appointed annually, and may be re-elected.—All students must act as clinical clerks and dressers for six months after passing the Primary Examination. Students of the third year are appointed to assist the Physicians and Surgeons in charge of the out-patients for four months each. Two Prosectors are appointed annually; each receives a certificate and £5.

Scholarships and Prizes.—Two Scholarships in Natural Science, tenable for three years; one of £75 the first year, £50 the second year, and £25 the third year; subjects, Inorganic Chemistry and Physics, with either Botany and Vegetable Physiology, or Zoology; and another, value £65 the first year, £40 the second year, and £20 the third year for special excellence in either of the above-named subjects. There will be a practical examination in each subject. The examinations will take place on October 4th, and following days. The successful candidates must enter as perpetual pupils of the hospital, and to matriculate at an university, and proceed to a degree in Medicine or in Surgery.—Scholarship in Anatomy, value £40, tenable for one year, to students who have completed the third winter session. The successful candidate will be styled Assistant-Demonstrator.—Scholarship in Pathological Anatomy, value £40, tenable for one year, open to students who have completed the third winter session. The holder of this scholarship will be styled Assistant-Curator.—*First Year:* Winter Session: Prize of £4 4s. in Anatomy and Histology; one of £2 2s. in Chemistry. Summer Session: Three Prizes, value £2 2s. each, in Materia Medica, Botany, and Inorganic Practical Chemistry.—*Second Year:* Winter: Prize of £4 4s. for Anatomy and General Physiology. Summer: Prizes, value £2 2s. each, for Midwifery and Medical Jurisprudence.—*Second and Third Year:* Winter: Prizes of £3 3s. each, for Medicine and Surgery, and of £2 2s. each, for Pathology and Operative Surgery. Summer: Prize of £2 2s. for Comparative Anatomy. *Third and Fourth Year:* At end of the winter session, Prizes of £3 3s. each to the Clinical Clerk, and to the In-patients' Dresser, who have discharged their duties in the most satisfactory manner, for the usual term, during the previous twelve months.

The Medical Tutor assists the students in preparing for their final examination, testing their knowledge by the preparations in the museum, specimens from the dead-house, and other means at his disposal.

The Medical Society meets on alternate Wednesday evenings, during the winter session, at 8 P.M.

Further information may be obtained from Dr. Shepherd, Dean of the School.

MIDDLESEX HOSPITAL.—*The Hospital* contains upwards of 300 beds, of which 185 are devoted to surgical, and 120 to medical, cases, There are 33 beds for cases of cancer; also wards for cases of uterine disease and of syphilis, and beds for cases of diseases of the eye.

The Museum is open to students daily from 9 to 5. It contains above 5,000 specimens.—*The Library and Reading Room* are open to all general students.

Special subjects.—Mr. Morris sees out-patient cancer cases at 1.30 on Thursdays.—Practical instruction in Mental Diseases is given at the Leavesden Asylum.

Appointments, etc.—Two House-Surgeons are appointed for six months, after competitive examination, in April and October. The Junior House-Surgeon succeeds to the office of Senior House-Surgeon if he have performed his duties satisfactorily. Each House-Surgeon pays £21 on appointment if he have been a surgical pupil of the hospital; if not, £31 10s. Three Resident Physicians'-Assistants are appointed from time to time for six months, after competitive examination. They must have a legal medical qualification. Each pays £10 10s. on appointment; and, if he have been a medical pupil of the hospital for a limited time, a sum sufficient to make him a perpetual student of the medical practice; if he have been neither a general nor an occasional pupil of the hospital, he pays £21.—A Resident Obstetric Assistant (qualified to practice) is appointed for six months. He pays £10 10s.—Clinical Clerks and Dressers are appointed for six months. An Obstetric Physician's Clerk and Ophthalmic Dresser are appointed. The appointments are so arranged that every student may take both a clerkship and a dressership. Each student must be an out-patient and clerk, an out-patient dresser, before being eligible to an in-patient clerkship or dressership.

Scholarships and Prizes.—Two Broderip Scholarships, value £30 and £20, tenable for two years, to students who have completed the third year, for reports or comments on selected medical and surgical cases.—Two Entrance Scholarships, value £25 and £20, tenable for two years,* open to all gentlemen commencing their medical studies at the hospital in October, 1880. Successful candidates must become general pupils of the school.—The John Murray Scholarship and Gold Medal will be awarded in May 1881; open to general students who have entered since April 30th, 1879; subjects, Written and Clinical Examinations in Medicine, Surgery, and Obstetrics.—The Governors' Prize, value £21, to the student who, at the end of the third winter session, shall have been most diligent in the wards, and have attained the highest proficiency.—A Clinical Prize of £10 10s. to the candidate who stands third in the competition for the Broderip Scholarship.—Prizes and Certificates of Honour are given in each class.

The Tutor assists all general students of the hospital, especially those who are preparing for primary examination before the licensing boards.

The Students' Medical Society meets in the Board Room of the Hospital once a fortnight during the winter session. A prize is given to the reader of the best paper during the session, and also to the student who has exhibited the best pathological specimens.

Information may be obtained from Mr. Andrew Clark, the Dean; from Dr. Cayley, Treasurer of the College; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

ST. THOMAS'S HOSPITAL.—*The Hospital* contains 572 beds, of which about 180 are appropriated to ordinary medical, and 230 to ordinary surgical, cases. There are also special wards for diseases of women,

Candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 3. The Geography of Europe, and particularly the British Isles. 4. The Outlines of English History, that is, the succession of the sovereigns and the leading events of each reign. 5. Mathematics: Euclid, Books I and II, or the subjects thereof; Algebra to Simple Equations inclusive. 6. Translation of a passage from the Second Book of Cæsar's Commentaries *De Bello Gallico*.—II. *Optional*. Each Candidate will be required to offer himself for examination in one subject at least, at his option; but no Candidate will be allowed to offer himself for examination on more than four: 1. The first Book of the Anabasis of Xenophon. 2. N. B. Santine's *Historia*. 3. Schiller's *Wilhelm Tell*. [illegible] English, the candidate will be required to [illegible] Grammar [illegible] subject, whether Compulsory or Optional) 4. Mechanics. 5. Chemistry [illegible] 6. Botany and Zoology (Descriptions of Plants and Animals). 7. Euclid, Books III, IV, V, and VI.

The Examination will take place on October 1st and following days. The following are the subjects for Examination. *Latin:* Passages for translation into English, short passages for translation from English into Latin, and questions in Grammar and Ancient Geography. *Greek:* Easy passages for translation into English; questions in Grammar and Ancient Geography. *French or German:* Passages for translation into English, short passages for translation from English into French or German, and questions in Grammar. *Mathematics:* Arithmetic, Algebra up to and including Quadratic Equations, and Euclid, Books I, II, III. *Natural Philosophy:* Elementary Statics and Hydrostatics. Huxley's *Classification of the Animal Kingdom*. Rudiments of Animal Physiology. Candidates will be examined in any three, and not more, of the above subjects which they may select; but only one Modern Language, and two out of the last three subjects, are permitted.

diseases of the eye, venereal affections, children under six years of age, and (in a separate block) infectious diseases.

Museum, etc.—Students have access to the Library and to the Museums of Human Anatomy, of Comparative Anatomy, of Materia Medica, of Botany, and of Chemistry and Mineralogy, and to the Laboratories of Practical Physiology and Practical Chemistry.

Special Subjects.—A course of Lectures on Physics and Natural Philosophy is given by Dr. Stone at 12 A.M. on Saturdays in the winter. Physiological Demonstrations are given at 1 on Mondays, Wednesdays, and Fridays in the winter session; and Demonstrations of Pathological Anatomy at 2 P.M. daily. Dr. Cory sees children's cases at 12.30 on Saturdays. Dr. Greenfield sees out-patients with diseases of throat at 12.30 on Tuesdays.

Appointments.—Two House-Physicians and two Assistant House-Physicians, two House-Surgeons and two Assistant House-Surgeons, and a Resident Accoucheur, are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. An Ophthalmic Clinical Assistant is appointed for six months, with a salary at the rate of £50 *per annum*. Four Surgical Ward Clerks, each holding office for six months, are appointed twice a year. Clinical Clerks and Dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Obstetric Clerks are from time to time appointed; also Assistants in the Physiological Laboratory in the Dissecting-room, Prosectors and Assistants to the Demonstrator of Pathological Anatomy. All students have the opportunity of being engaged in the performance of practical duties in connection with the Medical, Surgical, Obstetrical, Ophthalmic, and Pathological Departments of the Hospital. The House-Physicians, House-Surgeons, the Resident Accoucheur, and Dressers and Clinical Clerks, are provided with rooms and commons. Two Registrars are appointed at an annual salary of £100.

Scholarships and Prizes.—Two Open Scholarships in Natural Science, value £100 and £60, in first week in October; subjects, Physics, Chemistry, and either Botany or Zoology. Successful candidates must become students of the hospital.—The William Tite Scholarship, £30, to the student highest on the first-class list at the examination at the end of the first winter session.—The Musgrove Scholarship, value £42 *per annum* for two years biennially to the student highest in the first-class list at the end of the second winter session.—A College Scholarship of same value, alternately with the Musgrove Scholarship.—College Prizes each winter for first and second years' students, of £20 and £10 each winter; and for third year's students, of £20, £15, and £10; and £15, £10, and £5 each of two summers.—The Cheselden Medal, annually, to a fourth year's student, for Surgery and Surgical Anatomy.—The Mead Medal, annually, to a fourth year's student, for practical examination in Medicine, Pathology, and Hygiene.—The Treasurer's Gold Medal, annually, to a fourth year's student, for general proficiency and good conduct.—The Grainger Testimonial Prize, value £20 biennially, to students of from three to six years' standing, for a Physiological Essay.—The Solly Medal, with a Prize in money, every two years, for Reports of Surgical Cases, to a third, fourth, fifth, or sixth year's student.

University of London.—Classes in the subjects required for the Preliminary Scientific Examination of the University of London are held from October to July, and classes in the subjects of the First M.B. Examination are held from January to July.

The Medical and Physical Society meets on alternate Thursdays at 7.30 P.M. Three certificates are annually awarded to the authors of the best papers written by first, second, and third year's students respectively.

Further information may be obtained from Dr. Gillespie, the Medical Secretary, at the Hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—The General and Medical Libraries, the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, and the Parkes Museum of Hygiene, are open daily. There are also a Chemical, a Physiological, a Zoological, and a Hygienic Laboratory, where instruction is given under the superintendence of the Professors.

Clinical Instruction.—Dr. Wilson Fox, Holme Professor of Clinical Medicine, delivers Clinical Lectures every Tuesday and Thursday at 2, and trains the pupils in the practical study of disease. Lectures are also given by Dr. Ringer, Dr. Bastian, and Dr. Roberts. Dr. Gowers, Assistant Professor of Clinical Medicine, gives especial instruction in Physical Examination, on the Diagnosis of the Diseases of the Heart and Blood-vessels, and on the Modes of Investigation of Diseases of the Nervous System; and Dr. Barlow, Assistant Teacher of Clinical Medicine, instructs in the Examination of the Lungs and of the Urine. Lectures are given every Monday at 2 by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Marshall and Mr. Berkeley Hill. Mr. Erichsen and Sir Henry Thompson, Emeritus Professors of Clinical Surgery, will deliver short courses during the session. The Holme Professor will hold a Clinical Examination every Friday at 3. Mr. Marcus Beck and Mr. Barker, the Assistant-Professors of Clinical Surgery, will hold examinations, and instruct students in the observation and examination of patients. Dr. Poore attends on Thursdays at 2.30 to see patients with throat-diseases, and to give instruction in the use of the Laryngoscope. A class for the study of Practical Gynæcology, meets twice a week under the direction of Dr. John Williams. Mr. Clover gives instruction in the use of anæsthetics.

Offices.—Eight House-Physicians, six House-Surgeons, four Obstetric Assistants, Physicians' Clerks, Surgeons' Dressers, Surgical Ward Clerks, and Ophthalmic Surgeons' Assistants, are selected from among the pupils. The House-Physicians, the Obstetric Assistants, and the House-Surgeons, reside in the hospital, paying for their board.

Scholarships, etc.—Three Entrance Exhibitions, value £100, £60, and £40 *per annum*, to gentlemen who are about to commence their first winter's attendance: Subjects, Chemistry, Physics, Botany, and Zoology. The examination will take place on September 28th and 29th. Notice of intention to compete must be given on or before September 24th.—The Atkinson-Morley Surgical Scholarship, £45, tenable for three years, for proficiency in Surgery.—The Sharpey Physiological Scholarship, annual value about £105.—The Filliter Exhibition of £30, annually in July, for proficiency in Pathological Anatomy.—Dr. Fellowes' Clinical Medals, one Gold and one Silver, with Certificates of Honour at the end of each winter and each summer session.—The Liston Gold Medal, with Certificates of Honour, at the end of the winter session, for reports and observations on the surgical cases in the hospital.—The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery.—The Cluff Memorial Prize, every second year, to the most proficient in Anatomy, Physiology, and Chemistry: next award in 1881.—An Atchison Scholarship, value about £55, tenable for two years, annually after the winter session, for general proficiency.—Morris Bursary of £25 a year, in 1880; notice of application to be given on or before June 1st.—Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes.—Prizes to the value of £10 in the class of Hygiene.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

The Medical Society meets fortnightly to discuss subjects connected with the study of medicine, and for the exhibition of microscopical specimens.

Residence of Students.—Several gentlemen connected with the College receive students to reside with them; and, in the office of the College, there is kept a register of persons who receive boarders.

Information respecting the College may be obtained from the Dean, Dr. F. T. Roberts; the Vice-Dean, Mr. Thane; or the Secretary, Mr. Talfourd Ely.

WESTMINSTER HOSPITAL.—*The Hospital* contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, for Diseases of Women, and for Orthopædic Practice.

Museums, etc.—The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum. The Library is open daily from 9 to 5.

Special Subjects.—In addition to the practice of the Hospital, pupils who enter for the whole period of medical education may attend, without further fee, the practice of the Royal Westminster Ophthalmic Hospital and of the National Hospital for Paralysis. Instruction in the physical examination of the Chest is given by Dr. Donkin, and in the use of the Laryngoscope by Dr. De Havilland Hall. Mr. R. Davy gives demonstrations in Orthopædic subjects.

Appointments.—A Curator of the Museum and Pathologist is appointed annually, with a salary of £52 10s.; and a Medical and a Surgical Registrar, each with a salary of £40.—A House-Physician, a House-Surgeon, and a Resident Obstetric Assistant are appointed for six months after examination, and are provided with rooms and commons. They each pay a deposit of £20 on appointment; but receive £25 at the expiration of the term if their duties have been performed satisfactorily.—An Assistant House-Surgeon is appointed from among the senior students; he is provided with commons at the hospital table.—Clinical Assistants to the Physicians and Surgeons, and to the officers in charge of special departments, are appointed from students of the

fourth year. Every student must perform the duties of Clinical Clerk and Dresser.

Scholarships and Prizes.—The Fence and Houldsworth Entrance Scholarship, each £50 a year for two years; and two Entrance Scholarships, value £10, tenable for two years.—Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men.—A Prize of £2 2s. by Mr. A. P. Gould, to the first year's student who is most regular and diligent in the Dissecting-Room.—Scholarship in Anatomy and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator).—After end of fourth winter, Prizes of £5 each (books or instruments), in Clinical Medicine and Clinical Surgery.—Frederic Bird Medal and Prize, value £15, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth.—In most of the Classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each Class.

Two *Tutors* assist and guide the students in their work, and hold Senior and Junior Classes. Each student must attend at least three hours' tutorial instruction each week. Classes are held for the Preliminary Scientific Examination of the University of London.

Communications respecting the Medical School should be addressed to Dr. Allchin, the Dean of the School, from whom all particulars may be obtained. Information may also be obtained from any of the Lecturers, or from the Secretary at the hospital.

SCHOOL OF ANATOMY, PHYSIOLOGY, AND OPERATIVE SURGERY. The School meets the requirements of two distinct classes of students: *i. e.*, 1. Advanced students and qualified practitioners, who may wish either to extend their knowledge of the foregoing subjects, or to recall to mind what they once knew and have since forgotten; 2. Beginners entering upon their medical studies by a short term of apprenticeship with a general practitioner. For the former, rapid advanced classes, complete in three months, but still thoroughly practical, will be provided; and for the latter, more elementary classes of six months' duration, also thoroughly practical.

The Operations of Surgery are all performed on the dead body by the students.

The dissecting-room is open daily from 10 A.M. to 6 P.M. The Demonstrators attend four hours daily.

Fees.—Anatomy and Physiology, Lectures: For Primary Membership Examination of Royal College of Surgeons, 3 months, £3 3s.; 6 months, £4 4s. For Primary Fellowship Examination (with Comparative Anatomy), 6 months, £5 5s.; perpetual for either examination (4 years), £10 10s. Operative Surgery (one course), £5 5s. Anatomy and Physiology for Primary Fellowship, and Operative Surgery, £8 8s.

LONDON SCHOOL OF MEDICINE FOR WOMEN.—The following courses of lectures are delivered at this School; Anatomy and Practical Anatomy, by Mr. Reeves and Mr. Ottley; Physiology, by Mr. Schäfer; Chemistry, by Mr. Heaton; Botany, by Dr. P. H. Stokoe; Materia Medica, by Dr. T. J. Maclagan; Practice of Medicine, by Mrs. Garrett-Anderson, M.D., and Dr. H. Donkin; Clinical Medicine, by Dr. O'Connor and Dr. Cockle, at the Royal Free Hospital; Midwifery, by Dr. Ford Anderson; Diseases of Women, by Dr. Louisa Atkins; Forensic Medicine, by Dr. Dupré and Mr. T. Bond; Surgery, by Mr. Cowell; Clinical Surgery, by Mr. Gant and Mr. Rose, at the Royal Free Hospital; Ophthalmic Surgery, by Mr. Critchett and Mr. James Adams; Pathology, by Dr. W. A. Sturge; Hygiene, by Dr. Sophia Jex-Blake and Dr. Edith Pechey; Mental Pathology, by Dr. Sankey; Comparative Anatomy or Zoology, by Dr. Murie; Minor Surgery, by Mr. Shuter.

The Winter Session will commence on October 1st. Intending students are requested to apply to the Dean for a form of application for admission to the School. No student will be admitted to the study of Medicine who has not completed her eighteenth year.

Fees.—The fee for the ordinary curriculum of non-clinical Lectures is £80 in one sum, or in instalments, £40 for the first year, £30 for the second, and £15 for the third. The courses of Lectures included in this fee are two each of Anatomy, Practical Anatomy, Physiology, and Practice of Medicine; and one each of Chemistry, Practical Chemistry, Practical Physiology, Materia Medica, Surgery, Pathology, Midwifery, Diseases of Women, and Forensic Medicine. Any student having paid either of the compounding fees is, on a further payment of £6 6s., entitled to attend additional courses of the classes mentioned above. Materials for the practical classes are charged extra when additional courses are taken. The fee for separate courses is £8 8s. for each subject in winter, and £5 5s. in summer: for each course of lectures on Mental Pathology, Ophthalmic Surgery, and Hygiene, £2 2s. The fee for hospital instruction, including Clinical Lectures, is £20 for the first year, and £15 for each subsequent year. No student is admitted to the Hospital for less than one year.

Examinations are held in each Class; and attendance upon these is required from all students. A record of the attendance of all students is kept. Every student is required to attend not less than two-thirds of the lectures.

Clinical Clerks, Surgical Dressers, a Pathological Registrar, and a Prosector for the class of Anatomy, are chosen from among the senior students without further fee.

Besides the above, students and practitioners are admitted to attend the practice of several of the general and special hospitals and infirmaries; among which are the following. Information may be obtained on application to the secretaries of the respective institutions.

Great Northern Hospital, Caledonian Road.
Seamen's Hospital, Greenwich.
West London Hospital, Hammersmith Road.
City of London Hospital for Diseases of the Chest, Victoria Park.
Hospital for Consumption and Diseases of the Chest, Brompton; fees, three months, £3 3s.; six months, £5 5s.
Hospital for Sick Children, Great Ormond Street.
Belgrave Hospital for Children, Cumberland Street.
Evelina Hospital for Sick Children, Southwark Bridge Road.
Victoria Hospital for Children, Queen's Road, Chelsea.
East London Children's Hospital, Shadwell.
Royal Infirmary for Children and Women, Waterloo Bridge Road.
Samaritan Hospital for Women and Children, Lower Seymour Street.
Chelsea Hospital for Women, King's Road.
Hospital for Women, Soho Square.
British Lying-in Hospital, Endell Street.
Queen Charlotte's Lying-in Hospital, Marylebone Road; fees, six weeks, £10 10s.; three months, £15 15s., exclusive of board and lodging.
City of London Lying-in Hospital, City Road.
London Fever Hospital, Liverpool Road.
Royal London Ophthalmic Hospital, Moorfields; fees, six months, £3 3s.; per annum, £5 5s.
Royal Westminster Orthopædic Hospital, King William Street.
National Hospital for the Paralysed and Epileptic, Queen Square.
Central London Throat and Ear Hospital; fee, three months, £2 2s.; six months, £3 3s.

NOTES CONCERNING THE PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

UNIVERSITY OF OXFORD.—The instruction in Natural Science is carried on at the Museum, where there is practical instruction in Physics, Chemistry, and Anatomy and Physiology. The Professors are: Regius Professor of Medicine—H. W. Acland, M.D., D.C.L., F.R.S.; Geometry—H. J. S. Smith, M.A., F.R.S.; Natural Philosophy—Rev. B. Price, M.A., F.R.S.; Experimental Philosophy—R. B. Clifton, M.A., F.R.S.; Geology—J. Prestwich, F.R.S.; Chemistry—W. Odling, M.B., F.R.S.; Physiology—G. Rolleston, M.D., F.R.S.; Zoology—J. O. Westwood, M.A., F.L.S.; Botany—M. A. Lawson, M.A.; Mineralogy—M. H. N. Story-Maskelyne, M.A., F.R.S.; Lee's Reader in Anatomy—J. B. Thompson, M.A.

Large collections illustrate the several subjects; there is a pathological series, including the collection of Schroeder van der Kolk, in the medical department, and a medical laboratory. The Radcliffe Library in the University Museum, containing nearly 20,000 scientific volumes, is open to all students daily from ten to four, and on certain evenings

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The next Examination will be held at the Hospital on October 1st and [illegible]. The following are the subjects: [illegible]. The [illegible] will consist partly of [illegible] questions in Grammar, and easy English sentences for translation into [illegible]; [illegible] essays. The papers will contain passages for translation into English, and questions in Grammar, Mathematics, Arithmetic—including Vulgar and Decimal Fractions, and extraction of Square Root, Algebra—Algebraical Notation, Addition, [illegible] Division of Algebraical Quantities, Proportion, Simple Equations, Geography—The Four Books of Reading for the present year. Natural Philosophy and Chemistry. Two questions will be set in each elementary subject, and [illegible] Inorganic Chemistry. The examination is by written papers. Candidates must satisfy the examiners, with at least one of the languages in which the examination is conducted, as to their certificates of moral character, must be sent to the Dean not later than September 20th.

during term. There are also lectures and practical instruction in Botany at the Botanic Gardens; and Clinical instruction at the Infirmary.

UNIVERSITY OF CAMBRIDGE.—The following Courses of Lectures on Medicine and subjects connected with it will be delivered during the ensuing academical year.

Michaelmas Term, 1880.—Chemistry and Physics: Electricity and Electro-magnetism, by the Professor of Experimental Physics, M. W. F.; General Principles of Chemistry, by Professor Liveing, M. W. F., 12; Physical Chemistry, by Professor Dewar, T. Th. S., 11; Elementary Organic Chemistry, by Mr. Main (St. John's), T. Th. S., 10; Chemical Analysis (University Chemical Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily; ditto (Caius College Laboratory), daily, 11 to 4; ditto (Sidney College Laboratory), daily; The Metallic Elements, by Mr. Pattison Muir (Caius), M. W. F., 10; Spectroscopic Analysis, by Professor Liveing, M. W. F., 1.30 and following hours; Volumetric Analysis, by one of the Demonstrators of Chemistry, T. Th. S., 10: Chemistry, Catechetical Lectures, by Mr. Lewis (Downing), M. W. F., 9.—Botany: Elementary, chiefly Morphology, by Mr. Hicks (Sidney), T. Th. S., 11; Physiology of Plants, by Mr. Vines (Christ's), M. W. F., 12. Anatomy and Physiology: Zoology and Comparative Anatomy, *Invertebrata*, by Professor Newton, M. W. F., 1; Course, by the Demonstrator of Comparative Anatomy, to be hereafter notified; Practical Morphology, by Mr. Balfour (New Museums), Elementary Course (*Vertebrata*), M. W., 9; Advanced Course (*Invertebrata*), T. Th., 11; Human Anatomy; Demonstrations and Catechetical Lectures, by Professor Humphry and Demonstrator, daily, 11; Practical Anatomy in Dissecting Room, daily, 9 to 4; Anatomy and Physiology; The Osseous System and the Joints, by Professor Humphry, T. Th. S., 1; Anatomy and Physiology of the Organs of Digestion, Absorption, and Circulation, by Dr. Bradbury (Gonville and Caius College), T. Th., 12; Physiology, by the Trinity Prælector (Dr. Michael Foster), (New Museums), Elementary Course, T. Th. S., 9; Advanced Course, M. W. F., 11: Physiology, by Mr. Saunders (at Downing College), T. Th. S., 9.—Medicine: General Therapeutics, by Professor Latham, M. W. F., 9; Clinical Medicine, by Professor Paget, M. W. F., 10; Clinical Surgery, by Mr. Carver, T. Th., 10.

Lent Term, 1880.—Chemistry and Physics: Electricity and Magnetism, by Mr. Trotter (Trinity College), M. W. F., 10; General Course of Chemistry continued, by Professor Liveing, M. W. F., 12; Chemistry, General Course begun, by Mr. Main (St. John's), T. Th. S., 11; Non-metallic Elements, by Mr. Pattison Muir (Gonville and Caius), M. W. F., 10; Organic Chemistry, by Professor Dewar, T. Th. S., 12; by Mr. Walker (Sidney), M. W. F., 12; Chemical Analysis (University Chemical Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily; ditto (Caius College Laboratory), daily, 11 to 4; ditto (Sidney College Laboratory), daily; Chemistry, Catechetical Lectures, by Mr. Lewis, M. W. F., 9.—Botany: Histology and Physiology, by Mr. Hicks (Sidney), T. Th. S., 11; Elementary, chiefly Morphology, by Mr. Hicks (Sidney), T. Th. S., 12; Anatomy of Plants, with Practical Work, by Mr. Vines (Christ's), M. W. F., 12; Elementary Morphology, by Mr. Vines (Christ's), Tu. Th. S., 12.—Anatomy and Physiology: Zoology and Comparative Anatomy, *Vertebrata*, by Professor Newton, M. W. F., 1; Course, by the Demonstrator of Comparative Anatomy (to be hereafter notified); Practical Morphology, by Mr. Balfour (New Museums), Elementary Class continued (*Vertebrata*), M. W., 9; Advanced Class (*Invertebrata*), T. Th., 11; Human Anatomy: Demonstrations and Catechetical Lectures, by Professor Humphry and Demonstrator, daily, 11; Practical Anatomy in Dissecting Room, daily, 9 to 4; Anatomy and Physiology: The Nervous System and Organs of Special Sense, by Professor Humphry, T. Th. S., 1; Anatomy and Physiology, by Dr. Bradbury (Gonville and Caius College), course continued, T. Th. S., 12; Physiology, by the Trinity Prælector (Dr. Michael Foster), (New Museums), Elementary Course continued, T. Th. S., 9; Advanced Course, M. W. F., 11; Physiology, by Mr. Saunders (Downing College), T. Th. S., 9.—Medicine: Principles and Practice of Medicine, by Professor Paget, M. F., 9; Clinical Medicine, by Professor Latham, M. W. F., 10; Clinical Surgery, by Mr. Wherry, T. Th. S., 10.

Easter Term, 1880.—Chemistry and Physics: Electricity and Magnetism, by Professor Maxwell (Cavendish Laboratory), T. Th. S., 12; Electricity and Magnetism continued, by Mr. Trotter, M. W. F., 10; Chemistry, Elementary Course, by a Demonstrator of Chemistry, M. W. F., 3; General Course continued, by Mr. Main, T. Th. S., 12; Elementary Organic Chemistry, by Mr. Pattison Muir (Caius), M. W. F., 10; Some Special Department of Chemistry, by Professor Liveing, Tu. S., 12; Chemical Analysis (University Chemical Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily; ditto (Caius College Laboratory), daily, 11 to 4; ditto (Sidney College Laboratory), daily; Chemistry, Catechetical Lectures, by Mr. Lewis, M. W. F., 9; Inorganic Chemistry, Catechetical Lectures, by Mr. Walker, M. W. F., 12.—Botany: Taxonomy, Glossology, and Phytography, by Professor Babington, M. T. Th. F., 1; Morphology (chiefly Cryptogamic), with Practical Work, by Mr. Vines (Christ's College), T. Th. S., 12; Histology, by Mr. Saunders (Downing), M. W. F., 12.—Anatomy and Physiology: Course, by the Demonstrator of Comparative Anatomy (to be hereafter notified); Vertebrate Embryology, with Practical Work, by Mr. Balfour (New Museums), M. W. F., 11; Human Anatomy, Catechetical Lectures, by Professor Humphry and Demonstrator; Practical Anatomy, in the Dissecting Room; Elementary Biology, by the Trinity Prælector (Dr. Michael Foster), (New Museums), M. T. W. Th. F., 9; Physiology, advanced course, by Dr. M. Foster (times will be published at end of Lent Term); Physiology, by Mr. Saunders (Downing College), M. W. F., 9.—Medicine: Principles and Practice of Medicine, by Professor Paget, M. W. F., 9; Pharmacy and Pharmaceutical Chemistry, by Professor Latham, T. Th. S., 9; Pathological Anatomy, by the Linacre Lecturer (Dr. Bradbury), T. Th., 9; Clinical Medicine, by Dr. Bradbury, M. W. F., 10; Clinical Surgery, by Dr. Humphry, T. Th. S., 10.

Long Vacation (July and August), 1881.—Practical Physics, in the Cavendish Laboratory; Practical Chemistry, in the University Laboratory; Practical Anatomy; Human Osteology; Practical Histology; Clinical Instruction at the Hospital.

Medical Students requiring Certificates of attendance on lectures on Chemistry will be expected to attend one of the following: either the General Course of the Professor of Chemistry or the two courses of the Jacksonian Professor in Michaelmas and Lent Terms; or Mr. Main's course or Mr. Pattison Muir's in Lent and Easter terms; or the course of the Demonstrator of Chemistry in Easter term, together with Mr. Main's course on Organic Chemistry in Michaelmas term. Manipulations have to be practised besides, which may be done in any term.—The Chemical Laboratory of the University is open daily for the use of the students. A Demonstrator attends daily to give instruction. The Dissecting Rooms and Museums of Anatomy are open daily during the vacations as well as in the terms. Opportunities for clinical instruction in mental diseases are afforded at the County Asylum, Fulbourn, by Dr. Bacon. Notice will be given of the days and hours. Forms for registration, abstracts of regulations, schedules, and other papers, may be obtained from the attendant at the Anatomical Schools, Pembroke Street.

BIRMINGHAM.—QUEEN'S COLLEGE.—Mr. Berry and Dr. R. C. R. Jordan lecture on Diseases of Children in the summer. Clinical Lectures and Lectures in special departments are given in the General Hospital and the Queen's Hospital, which have a total of upwards of 400 beds. Special instruction is given in the use of the microscope, laryngoscope, and ophthalmoscope, and surgical appliances, also in case-taking and bandaging, with minor surgery and prescribing. Students must attend each hospital alternately for six months, as directed by the Clinical Board.

Appointments.—General Hospital: Resident Medical and Resident Surgical Assistant, two Resident Dressers, tenable for six months. *Queen's Hospital:* Resident Obstetric Assistant, tenable for six months; Resident Dresser, tenable for three months.

Prizes.—The Sands Cox Prize, value £20 annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery.—Two Ingleby Scholarships, after examination in Obstetric Medicine and Surgery and the Diseases of Women and Children; open to students who have completed the second year.—One or more Sydenham Scholarships, £31 10s. each, awarded annually; limited to orphan sons (not exceeding 23 years of age) of legally qualified medical men. One or more Queen's Scholarships, value £31 10s., awarded annually after examination.* Limited to sons (not more than 20 years of age) of legally qualified medical practitioners. The Sydenham and Queen's Scholarships are open to students entering at the College, and are each tenable for three years. Preference in each case is given to sons of former pupils of the College. Application must be made on or before 15th September in each year.—Medals and Certificates of Honour, annually, in each class after examination.

Clinical Prizes.—Two Senior Medical and two Senior Surgical Prizes (third and fourth years), value in each department £5 5s. and £3 3s.; two Junior Medical and two Junior Surgical Prizes (first and second year), value £3 3s.; Midwifery Prize (third and fourth years), £4 4s.

The Medical Tutor holds classes for junior students.

* The subjects of examination are: Latin: translation from Virgil or Cicero; Greek: translation from Xenophon's *Anabasis*, French or German translation; Elementary Mathematics; Chemistry of the Metalloids; Human Osteology.

Further particulars may be obtained by application to the Rev. the Warden, at the College, or 54, Islington Row, Edgbaston; to Dr. Rickards, 14, Newhall Street; to Dr. Carter, 51, Newhall Street; or to Dr. Hinds, 10, Easy Row.

BRISTOL MEDICAL SCHOOL.—This School is affiliated to University College, Bristol. Clinical instruction is given at the Royal Infirmary and the General Hospital. The Royal Infirmary contains 264 beds: it has a large children's ward, wards for eye cases and other special purposes, and two wards apart from the main building for cases requiring isolation. The General Hospital contains 154 beds: it has a children's ward, and private and isolated wards. The Infirmary and the Hospital each contain a Library and a Museum. Demonstrations and instruction in Diseases of the Eye and the use of the Ophthalmoscope are given at the Royal Infirmary by Mr. A. W. Pritchard and Mr. Cross; and in Diseases of the Throat and Ear, including the use of the laryngoscope, etc., by Mr. Harsant; instruction in the Diseases of Women is given at the Royal Infirmary by Mr. Greig Smith, and at the General Hospital by Dr. Lawrence. Mr. D. Davies gives a course of lectures on Hygiene in the Medical School.

Appointments.—Royal Infirmary: Students are appointed to Dresserships after the first year of study. Resident Dressers are appointed in weekly rotation. Clinical Clerks are appointed in the third and fourth years of study. A Pathological Clerk is appointed every four months. Obstetric Clerks are appointed from students who have attended lectures on Midwifery and entered to the Surgical practice. *General Hospital:* Clinical Clerks, Dressers, and Obstetric Clerks are appointed. The Dressers reside in the hospital in rotation, free of expense.—Resident pupils are received at the hospital.

Prizes.—Prizes and Certificates of Honour are awarded after examination in the subjects of each year. In awarding the prize for Practical and Operative Surgery, the marks obtained in the two courses are added together. Certificates alone are given for Practical Chemistry, Practical Surgery and Operative Surgery (separately), Comparative Anatomy, and Hygiene.—Prize and Certificates of Honour for Practical Anatomy. *Royal Infirmary:* Suple's Medical Prize, and Suple's Surgical Prize, each a gold medal value £5 5s. and about £7 7s. in money, awarded after examinations in Medicine and in Surgery respectively. Clark's Prize (interest of £500) to the most successful student, of the third year in the Medical School, if he have attended the Royal Infirmary. Tibbits Memorial Prize (interest of £315) annually, for proficiency in Practical Surgery. A prize of £3 3s. to the Pathological Clerk, if he have performed his duties satisfactorily.—*General Hospital:* Martyn Memorial Scholarship, £20, at beginning of winter session, after examination in subjects of general education. Clarke Surgical Scholarship, £15, annually. Sanders Scholarship (interest of £500); and Lady Haberfield's Prize (interest of £1,000) annually; each after examination in Medicine, Surgery, and Diseases of Women. The Martyn Memorial Scholarship and Lady Haberfield's Prize, when not awarded, are available for the remuneration of a Museum Curator, appointed from among the students after competitive examination.

The Medical Tutor assists students in their practical Anatomical and Physiological studies.

Further particulars respecting the Infirmary may be known on application to Mr. F. R. Cross; respecting the Hospital, on application to Dr. Harrison. Information regarding the Medical School will be afforded by the Honorary Secretary, Dr. E. Markham Skerritt.

LEEDS SCHOOL OF MEDICINE.—There are Anatomical, Pathological, Chemical, Botanical, and Materia Medica Museums. The Library is open to students.

Clinical Instruction, etc.—Clinical Lectures are delivered by the Physicians and Surgeons of the Infirmary, and classes meet in the wards for practical instruction. Courses of Practical Physiology and Practical Surgery are held.—Demonstrations of Eye and Ear Diseases, and instruction in the use of the Ophthalmoscope, are given. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures is given by Dr. Major during the summer.—Students can also attend the practice of the Leeds Public Dispensary and the Fever Hospital. There are several resident appointments at these institutions.—The lectures on Chemistry and Botany are delivered at the Yorkshire College of Science, and those on Comparative Anatomy and Zoology at the Philosophical Hall.

Hospital Appointments.—Every student must hold the offices of Clinical Clerk and Dresser. A House-Physician and a House-Surgeon are elected from time to time. There are also four Resident Assistants in the Infirmary; two are selected from the senior students every six months, and hold office for one year.

Prizes.—The Hey Clinical Scholarships, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prizes of £8, £5, and £3, for the best reports of surgical cases, during the winter session. These prizes are open to students who have completed the first year.—The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session.—At the close of each session, Silver and Bronze Medals, Books, and Certificates of Honour, are awarded according to merit.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—There are a Museum containing specimens of Morbid and Comparative Anatomy, a collection of Wax Models, and a collection of Materia Medica, a Library, and a Reading Room.

Instruction.—Clinical lectures are given weekly at the Royal Infirmary, which contains nearly 300 beds; the Lock Hospital adjoining contains 60 beds. Dr. Glynn gives practical instruction in Clinical Medicine and the Methods of Physical Diagnosis. Besides a winter course of Practical Surgery, a course of Operative Surgery is given in the summer for candidates for the Fellowship of the Royal College of Surgeons, and the degree of Bachelor of Surgery of the University of London. Dr. Gee lectures on Diseases of Children. Students of Midwifery attend the practice of the Ladies' Charity and Lying-in Hospital on payment of a fee of £2 2s.

Appointments.—Royal Infirmary: Two House-Physicians and three House-Surgeons are appointed for six months after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each Physician, three or more Dressers for each Surgeon, and two Clerks to the Thornton Wards for Diseases of Women, are appointed for three months in October, January, and May. *Post Mortem* Clerks are appointed for six weeks. All students must perform this duty before the final certificate is signed.

Exhibitions and Prizes.—The Roger Lyon Jones Scholarship: one half (£21 for two years) to the candidate who has taken the highest position in the Honours Division at a Matriculation Examination of the University of London in the same year, or (failing such candidate) at the Preliminary Scientific M.B. Examination, on condition that he becomes a composition ticket holder of the School; the other half (£21 for two years) to a student who has completed two years, after examination in Anatomy, Physiology, Chemistry, Botany, Materia Medica, and Practical Chemistry.—Gold Medal for Anatomy and Physiology, presented by Mr. Torr, M.P., for second year's students; and one also for Anatomy and Physiology, presented by Dr. J. Bligh, for students of the first year.—Medals and Certificates of Honour for groups of subjects in each year.—Two prizes, and certificates, for Midwifery, by the lecturer on that subject.—Two prizes for the best sets of Microscopical Preparations made in the Physiological Laboratory during the winter.

The *Debating Society* meets eight or ten times during the winter session on Saturday evenings, for the reading and discussion of papers. Prizes are given for the best papers, and for the best collection of clinical reports.

Communications should be addressed to the Registrar, Dr. Caton.

LIVERPOOL NORTHERN HOSPITAL.—*Physicians:* Dr. Dickinson, Dr. Caton. *Surgeons:* Mr. Manifold, Mr. Puzey, Dr. Campbell. The hospital contains 146 beds.

Fees. Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or the surgical practice separately on payment of half the above fees. The hospital receives one resident pupil, fee £63 *per annum*. Attendance on the practice of this hospital qualifies for all the examining boards.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—*Physicians:* Dr. Cameron, Dr. Carter, Dr. Williams. *Surgeons:* Mr. Hamilton, Dr. Little, Mr. Ransford. The hospital contains 200 beds. Clinical Lectures are given by the Physicians and Surgeons during the winter and summer sessions. Clinical Clerkships and Dresserships are open to all students. There are special wards for accidents and diseases of children. Fees for Hospital Practice and Clinical Lectures, perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. The practice of the hospital is recognised by all the examining bodies.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.—Museums of Human and Comparative Anatomy and of Materia Medica, and Psychological and Chemical Laboratories, are connected with the College.

In the College, the following courses (in addition to those mentioned in the table) are given in the summer: Morbid Histology, by Dr. Dreschfeld; Hygiene, by Dr. A. Ransome; and Embryology, by Dr. A. M. Marshall.

GUIDE TO HOSPITALS AND MEDICAL SCHOOLS IN THE PROVINCES: 1880-81.

For further particulars regarding each Hospital and Medical School, see pp. 442 and 443-46.

LECTURES, ETC.	BIRMINGHAM QUEEN'S COLLEGE.	BRISTOL MEDICAL SCHOOL.	LEEDS SCHOOL OF MEDICINE.	LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.	OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.	SHEFFIELD MEDICAL SCHOOL.	UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE.
WINTER SESSION.							
ANATOMY & PHYSIOLOGY.	Dr. Norris, Mr. Bartleet, & Dr. Carter.. M. Th., 3	Dr. R. S. Smith.. M. W. F., 10	Mr. Wright & Mr. Horsfall ..M. W. Th., 12	Dr. Caton .. Tu. Th. S., 9.15	Dr. A. Gamgee....daily, exc. S., 11.30	Dr. Dyson & Mr. James ..M. W., 12.30	Dr. Drummond .. M. Th. F.,
ANATOMY, DESCRIPTIVE & SURGICAL.	Mr. Thomas & Dr. Jolly ..M. Tu. Th. F., 11.30	Mr. F. R. Cross..Tu. Th. S., 9; F., 11	Mr. Nunneley and Mr. Robinson..Tu. Th. F. S., 10	Mr. W. M. Banks.. .M. Tu. W. Th. F., 11	Dr. M. Watson....daily, exc. S., 1	Mr. F. Skinner and Mr. Snell. M. W. F., 6; Tu. Th., 5 (before Xmas.)	Mr. Russell and Mr. Mears. M. W. F. S., 12
DEMONSTRATIONS & DISSECTIONS.	Mr. E. May and Mr. Eales..daily	Mr. Harsant	Mr. McGill & Mr. Robson..daily	Mr. Greves..daily, 9 to 5; ex. S., 9 to 2	Mr. Fraser and Mr. J. M. Brown daily, 2.30 to 4.30; S., 9.30 to 12	Mr. R. J. Pye-Smith and Dr. Davison	Mr. Mears
CHEMISTRY	Dr. A. B. Hill ..M. Tu. W. Th. F., 1	Mr. Coomber..M. W. F., 9 A.M.	Dr. Thorpe..M. Tu. W. Th., 4	Dr. J. C. Brown. M. Tu. Th. F., 9	Dr. Roscoe..daily, 9.30; and Mr. Schorlemmer	Mr. Allen..M. W. F., 11.30	Mr. Freire-Marreco .. M. W. F., 11
MEDICINE	Dr. Foster..Tu. W. F., 3	Dr. Spencer & Dr. Skerritt ..M. W. F., 9	Drs. Allbutt and Eddison ..M. Tu. W., 1	Dr. Waters .. M. W. F., 9.15	Dr. Morgan..M., 4; Tu. Th., 3	Drs. De Bartolomé, Banham, & Thomas, M. W. F., 5	Dr. Philipson. M. W. F., 2
SURGERY	Mr. Pemberton and Mr. F. Jordan.. Tu. W. F., 4	Mr. Dobson..Tu. Th. S., 9	Mr. Jessop & Mr. Atkinson..M. Th. S., 9	Mr. Rushton Parker..M. W. Th., 3	Mr. Lund..M. W. F., 3	Mr. Favell and Mr. A. Jackson..M. W. F., 8 A.M.	Dr. Heath & Dr. Armison M. W. F., 6
HOSPITAL PRACTICE	GENERAL HOSPITAL (*a*). QUEEN'S HOSPITAL (*b*).	ROYAL INFIRMARY (*c*). GENERAL HOSPITAL (*d*).	LEEDS GENERAL INFIRMARY (*e*).	LIVERPOOL ROYAL INFIRMARY (*f*).	MANCHESTER ROYAL INFIRMARY (*g*).	SHEFFIELD INFIRMARY (*h*) SHEFFIELD HOSPITAL (*i*)	NEWCASTLE INFIRMARY (*k*).
CLINICAL MEDICINE	Physicians of Hospitals (*b*), 10 A.M.; (*b*) daily	Royal Infirmary..S., 12 General Hospital .. three days weekly	Physicians of Infirmary.. F., 1	Physicians, Royal Infirmary..weekly	Dr. Roberts (Win.)..Tu. F., 9.30; and clin. lec. every W. at 9	Physicians of Infirmary.. Tu., 3 P.M.; Hospital, F., 7 P.M.	Physicians of Infirmary.. M. F., 12
CLINICAL SURGERY	Surgeons of Hospitals (*a*), 9 and 10 A.M.; (*b*) daily	Royal Infirmary..F., 12 General Hospital..W., 12	Surgeons of Infirmary.. Tu. F., 9	Surgeons, Royal Infirmary..weekly	Surgeons Royal Infirmary..M., 9	Surgeons of Infirmary.. Th., 5.30; Hospital, Tu. 7 P.M.	Surgeons of Infirmary.. Th., 10
SUMMER SESSION.							
MATERIA MEDICA	Dr. Sawyer..Tu. Th., 12; W., 1.30	Dr. Shaw..Tu. Th. S., 9	Dr. Churton.. M. W. Th., 9	Dr. Carter .. Tu. Th. S., 9 A.M.	Mr. Somers & Dr. Leech .. M. Tu. Th., 12; W., 1	Dr. Young .. M. W. F., 9 A.M.	Mr. M. Bean.. M. W., 4; F., 3; Dr. Barron, M. W., 3
MIDWIFERY, ETC.	Mr. Clay and Dr. Bassett ..M. Tu. Th. F., 1	Dr. Swayne & Dr. Aust Lawrence.. daily, exc. S., 8 A.M.	Mr. Price and Dr. J. Braithwaite.... M. Tu. Th. F., 4	Dr. Wallace.. M. W. Th. F., 11	Dr. Thorburn....M. Tu. Th. F., 1; clin., W. S., 10	Dr. Hime. .. M. W. F., 8 P.M.	Dr. Gibson & Dr. Nesham ..daily, 9 A.M.
BOTANY	Dr. W. Hinds..M. W. F., 3	Mr. Leipner..Tu. Th. S., 8 A.M.	Mr. Miall..M. W. Th., 3	Dr. Shearer .. M. W. F., 3	Mr. W. C. Williamson .. M. Tu. W. Th. F., 2.30	Mr Birks .... Tu. Th., 8 A.M.	Dr. J. Murphy . Tu. Th. F., 4
FORENSIC MEDICINE.....	Mr. Wilders..M. Tu. F., 12 and 3	Dr. Eager..M. Th. S., 10	Mr. Scattergood..M. Tu. Th. F., 5	Dr. E. Whittle..M. W. F., 3	Dr. Cullingworth. Tu. W. Th. F., 2	Mr. Harrison and Mr. Bell .Tu. Th., 5	Dr. F. Page Tu. Th. F., 3
PRACTICAL CHEMISTRY..	Dr. A. B. Hill.. M. Tu. W. Th. F., 2	Mr. Coomber.. M. W. F., 9 A.M.	Dr. Thorpe..T. Th., 10 to 12	Dr. J. C. Brown..M. Tu. Th., 10	Dr. Roscoe & Mr. Schorlemmer...M. W., 10 to 30	Mr. Allen ..M. W. F., 11	Mr. Freire Marreco..daily, 10 to 1 and 2 to 5
COMPARATIVE ANATOMY..	Dr. Saundby..Th., 3	Mr. Sollas..Tu. W. F., 10	Mr. Miall..M. Th., 4	Dr. Dickinson .... twice weekly	Dr. A. M. Marshall..M. Tu. W. Th. F., 2.30	——	
PRACTICAL PHYSIOLOGY..	——	Mr. Atchley..M. W. F., 8 A.M.	Mr. Walker..M. W. F. S., 12	Dr. Caton..W., 2; F., 9.15	Dr. A. Gamgee (Sum.) . five days weekly	Dr. Gwynne ..W. Th., 4	Dr. Oliver . Tu. W. Th., 2
PATHOLOGY	Dr Richards .... Th., 3 (Win.)	Dr. Spencer & Dr. Skerritt (Sum.) Tu. Th. S., 9	Mr. McGill..Tu., 3; F., 2	Dr. Davidson (Win.).... Tu., 4	Dr. Simpson & Dr. Dreschfeld (Win.). M., 1; Tu. Th. 4	House-Surgeon at Infirmary (Sum.)	Dr. Gibb (Sum.). W., 12
PRACTICAL SURGERY	Mr. Pemberton and Mr. Jordan	Mr. Keall and Mr. A. W. Prichard..Tu. Th. S., 9	Mr. Jessop and Mr. Atkinson	Mr. Parker (Win.)..M. Th., 4; oper. course in sum.	(Vacant)	House-Surg (Win.); Mr. Favell (Sum.)	Dr. L. Armstrong (Sum.)
OPHTHALMIC SURGERY....	Mr. Solomon (Summer)	——	Mr. Nunneley and Mr. Oglesby	Mr. T. S. Walker..W., 4	Dr. Little (Sum.)..W., 4; clin., M. Th., 10	Mr. Snell (Sum.). . W., 12.	——
VACCINATION	——	——	Mr. Holme	Mr. Roger Parker	Mr. E. Guest	Mr. Skinner	——

(*a*) *Physicians:* Dr. Russell, Dr. Wade, Dr. Foster, Dr. Rickards. *Assistant-Physicians:* Dr. Saundby, Dr. Simon. *Surgeons:* Mr. A. Baker, Mr. O. Pemberton, Mr. T. H. Bartleet, Mr. Goodall, Mr. R. Jolly. *Assistant-Surgeons:* Mr. Archer, Mr. T. F. Chavasse. *Obstetric Officer:* Dr. E. Malins.

(*b*) *Physicians:* Dr. Heslop, Dr. Sawyer, Dr. Carter, Dr. Hunt. *Surgeons:* Mr. West, Mr. Gamgee, Mr. F. Jordan, Mr. J. St. S. Wilders. *Obstetric Surgeon:* Mr. J. Clay. *Ophthalmic Surgeon:* Mr. P. Smith. *Dental Surgeon:* Mr. C. Sims.

(*c*) *Physicians:* Dr. Spencer, Dr. R. S. Smith, Dr. Waldo, Dr. Shaw. *Surgeons:* Mr. Board, Mr. Dowson, Mr. A. W. Prichard, Mr. Cross, Mr. J. G. Smith. *Assistant-Surgeon:* Mr. Harsant. *Operations:* Tu. F., 1.30.

(*d*) *Physicians:* Dr. Binder, Dr. Skerritt, Dr. Harrison. *Surgeons:* Mr. F. P. Lansdown, Mr. Atchley, Mr. Dobson, Mr. Keall. *Physician-Accoucheur:* Dr. Aust Lawrence. *Diseases of Skin:* Dr. Harrison, Dr. Skerritt. *Dental Surgeon:* Mr. Parson. *Operations:* Th., 1.30.

(*e*) *Physicians:* Dr. Clifford Allbutt, Dr. Eddison, Dr. Churton. *Surgeons:* Mr. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jessop, Mr. F. Atkinson. *Surgeons to the Eye and Ear Department:* Mr. J. A. Nunneley, Mr. Oglesby. *Operations:* Th., 1; Eye, Tu., 12.

(*f*) *Physicians:* Dr. Waters, Dr. Glynn, Dr. Davidson. *Surgeons:* Mr. Bickersteth, Mr. Harrison, Mr. Banks. *Assistant-Surgeons:* Mr. R. Parker. *Obstetric Physician:* Dr. Wallace. *Dental Surgeon:* Mr. Snape. *Pathologist:* Mr. Paul. *Surgeons to Lock Hospital:* Mr. McCheane, Mr. F. W. Lowndes. *Operations:* Tu. W., 1.

(*g*) *Physicians:* Dr. W. Roberts, Dr. H. Simpson, Dr. J. E. Morgan, Dr. D. J. Leech. *Surgeons:* Mr. F. A. Heath, Mr. Lund, Mr. W. Whitehead, Mr. T. Jones. *Assistant Physicians:* Dr. Dreschfeld, Dr. Ross. *Assistant-Surgeons:* Mr. Hardie, Mr. F. A. Southam. *Obstetric Physician:* Dr. Thorburn. *Ophthalmic Surgeon:* Dr. D. Little. *Dental Surgeon:* Mr. Smith. *Operations:* F. S., 11; Eye, M., 12.

(*h*) *Physicians:* Dr. De Bartolomé, Dr. Law, Dr. Banham. *Surgeons:* Mr. Barber, Mr. W. F. Favell, Mr. A. Jackson. *Ophthalmic Surgery:* Mr. Snell. *Operations:* Th., 12.30.

(*i*) *Physicians:* Dr. H. J. Branson, Dr. Dyson, Dr. Thomas. *Surgeons:* Dr. Keeling, Mr. Thorpe, Mr. Pye-Smith. *Operations:* F., 12.30.

(*k*) *Physicians:* Dr. Philipson, Dr. Drummond, Dr. Oliver. *Surgeons:* Dr. Heath, Dr. Armison, Dr. L. Armstrong, Dr. Hume. *Assistant-Surgeons:* Dr. Page, Mr. Dodd. *Dental Surgeon:* Mr. E. Fothergill

The *Royal Infirmary* contains 105 medical and 190 surgical beds. In addition to the Practice of the Infirmary, the Monsall Fever Hospital (130 beds), and the Barnes Convalescent Home (124 beds), and the Royal Lunatic Asylum at Cheadle, which accommodates 150 patients, are open for purposes of instruction.

Clinical Instruction is given by the Physicians and Surgeons of the Infirmary. Medical Demonstrations are given by Dr. Dreschfeld and Dr. Ross; Surgical Demonstrations by Mr. Hardie and Mr. Southam; Pathological Demonstrations by Dr. Ross. Dr. Simpson gives instructions in the use of the Laryngoscope; Dr. Leech in Skin-Diseases; Dr. Dreschfeld in Electro-Therapeutics; Mr. Whitehead in Aural Surgery; Mr. Hardie in Orthopædic Surgery; and Dr. Little in Ophthalmic Surgery. Clinical Classes are held in the Fever Hospital from time to time.

Appointments.—The following appointments are made: Non-resident, a Registrar and a Pathological Registrar, annually, at £100 *per annum;* two Assistant Medical Officers, for six months, receiving each £40; Resident Medical Officer, two years, £250 *per annum;* ditto, at Cheadle, one year, £150 *per annum;* ditto, at Monsall, one year, £200 *per annum;* Resident Surgical Officer, one year, £150 *per annum;* eight House-Surgeons (qualified) and four House-Physicians, a Resident Assistant at Monsall, and one at Cheadle, each for six months. Dressers and Clerks in the Royal Infirmary are appointed for periods of three months. Two or more Clinical Clerks are appointed for each Physician and Assistant-Physician, and two or more Dressers for each Surgeon and Assistant-Surgeon. A *Post Mortem* Clerk is appointed. Accident-room Dressers are appointed monthly, for two months.

Prizes.—*Fourth Year:* Turner Scholarship of £25, to students who have completed a full course. *Third Year:* Books or Instruments varying from £5 5s. to £3 3s., in the Classes of Medicine, Midwifery, Pathology and Morbid Anatomy, Medical Jurisprudence, Hygiene, Practical Surgery, and Ophthalmology. *Second Year:* Prizes of same value in Classes of Anatomy, Physiology and Histology, Surgery, and Materia Medica. *First Year:* Prizes of same value in Anatomy, Physiology, Practical Chemistry, and Botany. Two Platt Physiological Scholarships, value £50 each, tenable for two years, to students who have attended Physiology in the College Laboratory during one session, for best original investigation and the result of a written examination; and Platt Exhibitions in Physiology. Dumville Surgical Prize, value £20 (in books or instruments), at end of winter session, to students of two years who have attended four courses, including one at least in Surgery. Dauntesey Medical Scholarship, value about £100, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of Examination: General and Comparative Anatomy, with Dissections and Description of Preparations illustrating Typical Forms of Animals; Outlines of Physiological Botany; Chemistry; and either Mathematics or Latin. A Gilchrist Scholarship of £50 *per annum*, tenable for three years in the College, to the candidate standing highest in the Matriculation Examination of the University of London in June, if in the Honours Division; or two of £25 each to the first two candidates in the First Division. The successful candidate must prepare for graduation in the University of London. Grammar School Scholarship, value £17, tenable for three years, open to scholars of the Manchester Grammar School. The successful candidate must enter to one of the departments of Owens College. Medical and Surgical Clinical Prizes (books or instruments to the value of £6 6s. in each department) are given for reports of cases at the Infirmary.

Tutorial Classes in Medicine and Surgery are formed two months before each examination at the College of Surgeons.

Prospectuses may be obtained from the Registrar, Mr. J. H. Nicholson.

Sheffield School of Medicine.—The General Infirmary contains 180 beds, including two ophthalmic wards. The Public Hospital and Dispensary contains 110 beds. Students are also admitted to the practice of the Jessop Hospital for Diseases of Women.

Besides the lectures mentioned at page 445, a course of Public Medicine is given by Dr. Drew.

The Library of the Medical School is open to students under certain regulations.

Prizes and certificates of honour are given at the end of each session.

University of Durham College of Medicine, Newcastle-on-Tyne.—The Laboratories, Libraries, and Museums of Anatomy, Pathology, and Materia Medica, are open daily.

Appointments.—An Assistant-Curator of the Museum is annually appointed from among the senior students, and receives £12 as an honorarium. Assistant Demonstrators of Anatomy, Assistant Physiologists, and Pathological Assistants are also elected. Four Resident Dressers (who are also Clinical Clerks) are chosen every six months, on payment of a fee of £10 10s. for board and residence.

The Infirmary contains 230 beds. There are special wards for the treatment of children, and for ophthalmic and syphilitic diseases. Pathological Demonstrations are given as opportunity offers. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Opportunities for practical study are also afforded by the Dispensary, Fever Hospital, Eye Infirmary, Children's Hospital, and Coxlodge and Dunston Lunatic Asylums. Lectures are given on Psychological Medicine at the Coxlodge Lunatic Asylum, by Mr. R. H. B. Wickham, Medical Superintendent. Mr. H. E. Armstrong gives a course of lectures on Public Health.

Scholarships.—An University of Durham Scholarship, value £25 a year, for four years, for proficiency in Arts, awarded annually at beginning of winter session to perpetual students in their first year only.* The Dickinson Scholarship, value £15 annually, for Medicine, Surgery, Midwifery, and Pathology; open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, interest of £700 annually, for Medicine. The Gibb Scholarship, interest of £500 annually, for Pathology. At the end of each session, a Silver Medal and Certificates of Honour are awarded in each of the regular classes.

Further information may be obtained from the Registrar, Dr. Luke Armstrong, Newcastle-on-Tyne.

The following hospitals are also recognised by the Royal College of Surgeons for the purpose of professional education: Bath United Hospital; Bedford General Infirmary; Berkshire Royal Hospital, Reading; Bradford Infirmary; Addenbrooke's Hospital, Cambridge; Derbyshire General Infirmary; Devon and Exeter Hospital; Gloucester General Infirmary; Hants County Hospital; Hull Infirmary; Kent and Canterbury Hospital; Leicester Infirmary; Norfolk and Norwich Hospital; Northampton General Infirmary; Nottingham General Hospital; Radcliffe Infirmary, Oxford; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Sussex County Hospital; Worcester Infirmary.

NOTES ON THE MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

University of Aberdeen.—Practical Toxicology, Dr. F. Ogston, jun. (sum.). Fee to each class, £3 3s., except Anatomical Demonstrations, £2 2s.; Practical Midwifery and Practical Pharmacy, and Pathological Anatomy, with Demonstrations, each £2 2s.; Practical Ophthalmology and Practical Toxicology, each £1 1s. Matriculation fee, both sessions, £1; summer session alone, 10s.

Royal Infirmary, Aberdeen.—Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions are open daily. Clinical instruction is given in the Royal Lunatic Asylum for three months in the year.

University of Edinburgh.—Minimum expenses for Lectures and Hospital Practice (including also £21 for Degrees of M.B. and C.M.), £105 16s.; Sessional Fee for Materia Medica, Chemistry, Surgery, Institutes of Medicine, Midwifery, Clinical Surgery (winter), Clinical Medicine (winter), Anatomy, Practice of Physic, Pathology, Botany, Natural History, Medical Jurisprudence, each £4 4s.; Practical Anatomy, Practical Physiology, Practical Chemistry, Practical Pathology, Clinical Medicine (summer), Clinical Surgery (summer), Operative Surgery, Mental Diseases, Practical Materia Medica and Pharmacy, £3 3s.; Anatomical Demonstrations, Obstetric and Gynæcological Operations, Organic Chemistry (advanced), Practical Natural History, Vegetable Histology, each £2 2s.; Practical Midwifery, £1 4s.; Vaccination, £1 1s. The fee for a second course of any lectures is £3 3s.; any subsequent course is free. For a perpetual ticket at the beginning of the first course, the fee is £6 6s. Every student, before entering with any Professor, must produce a matriculation-ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session. Students first entering in the summer session pay a fee of 10s. —The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 P.M.

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* The [illegible], which will commence on October 14th, will be [illegible]. Latin Grammar; Cæsar, [illegible], Book IV; Virgil, [illegible] IV; Eutropius, Books I and II; English History (Richard I to end of Edward III).

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see pp. 446 and 448-49. The letters (W.) and (S.) in this Table denote respectively Winter and Summer Courses.

Lectures, etc.	Aberdeen University.	Edinburgh University.	Edinburgh Medical Schools.	Glasgow University.	Glasgow Anderson's College.	Glasgow Royal Infirmary School.
Anatomy (Lectures)	Dr. Struthers, 12 (W.)	Mr. Turner, 2 (W.)	Dr. Hon[illegible] Surgeons', (W.)	Dr. C[illegible] (W.)	Dr. A. M. [illegible] (W.)	Mr. H. L. [illegible], 12 (W.); [illegible] Week (S.)
Anatomical Demonstrations.	Dr. Struthers, 6 (W. and S.)	Mr. Turner, 4 (W.); 12 (S.)	Dr. Hon[illegible] Surgeons', 12 (S.).	Dr. Cleland, 12 (W.)	Dr. A. M. Buchanan, 4 (W.); 6 (S.)	Mr. Clark, 12 (W.)
Dissections	3 to 4 (W. and S.)	Daily (W. and S.)	3 to 4 (W. and S.)	12 (W.)	[illegible] (W.)	[illegible] (W.); 7 [illegible] P.M. (S.)
Physiology	Dr. Stirling, 12 (W.)	Dr. Rutherford, 12 (W.	Dr. James [illegible] M. J. Hunter, 12 (W.)	Dr. M. [illegible] (W.)	Dr. M[illegible] (W.)	Mr. W. J. Fleming, 12 (W.)
Practical Physiology	Dr. Stirling, 2 (S.)	Dr. Rutherford, (W. and S.)	Dr. James and Mr. J. Hunter (S.)	Dr. McKendrick and Dr. Munro, 12 S.	Dr. M'Kendrick, 12 (W.)	Mr. W. J. Fleming, Tu. Wed. [illegible] (S.)
Chemistry	Mr. Brazier, 12 (W.)	Dr. Crum-Brown, 12 (W.)	Dr. S. Macadam, Mr. [illegible], Mr. J. Mann, Dr. Dupré, Mr. J. W. Bell, 12 (W.)	Mr. Ferguson, 12 (W.)	Mr. [illegible] (W.)	Dr. J. [illegible], 4 (W.)
Practical Chemistry	Mr. Brazier, 36 (S.)	Dr. Crum-Brown, 2 (W.); 12 (S.)	Dr. S. Macadam, [illegible] (W.); [illegible] (S.)	Mr. Ferguson, Tu. W. [illegible] (S.)	Mr. [illegible], Tu. Wed. Fri., [illegible] (S.)	Dr. J. [illegible], Tu. Wed. Th., [illegible] (S.)
Materia Medica..	Dr. Davidson, 3 (W.)	Dr. Fraser, 12 (W.)	Dr. Noble, [illegible] (W. and S.); Dr. [illegible] (W.); [illegible] (S.)	Dr. Chatteris, 12 (W.)	Dr. Morton, 3 (W.)	Dr. Donnell, 2 (W.)
Pharmacy.....	Dr. David[illegible], 3 (S.)	Dr. Fraser, 12 (W. and S.)	Dr. Cr[illegible] (W. and S.)	Dr. Chatteris, 12 (S.)	—	—
Botany	Dr. Trail, [illegible] (S.)	Dr. Dickson, 3 (S.)	—	Dr. [illegible] (S.)	Mr. J. S. Wil[illegible], (S.)	—
Zoology & Comparative Anatomy.	Dr. J. C. Ewart, 2 (W.); 12 (S.)	Sir C. W. Thompson, Mon. Wed. Fri., 2 (W. and S.)	Dr. A. Wilson, [illegible] (W.); 2 (S.)	Dr. Young, 3 (S.)	—	—
Medicine	Dr. Smith-Shand, 3 (W.)	Dr. Grainger Stewart, 12 (W.)	Drs. C. Wyllie Veitch and B. Bramwell, (W.)	Dr. Gairdner, 12 (W.); Dr. [illegible] (S.)	Dr. Gemmell, 3 (W.)	Dr. Word Smith.. 12 to 1 (W.
Surgery	Dr. Pirrie, 12 (W.)	Mr. Spence, 12 (W.)	Dr. P. H. Watson, Mr. Cadenhead, Mr. J. Duncan, and Dr. A. G. Miller, 12 (W.)	Dr. Macleod, 12 (W.)	Dr. [illegible], 3 (W.)	Dr. H. C. Cameron, 3 (W.)
Practical & Operative Surgery.	—	Mr. Spence and Dr. Taylor, M. Tu. Th. F. (S.)	Dr. [illegible] (W.); Dr. Watson, etc. (S.)	Dr. M[illegible], M. W. Fri., 12 (S.)	Dr. Fowler, M., W. Fri., 12 (S.)	Dr. Cameron, 4 (S.)
Ophthalmic Surgery.	Dr. A. D. Davidson (S.)	—	Dr. A. Robertson, [illegible] (S.)	Dr. J. Reid, Tu. Th., [illegible] (S.)	Dr. Wilkinson, 12 (W.); Wed., 12 (S.)	Mr. H. L. Clark, Tu. Fr., 12 (S.)
Midwifery & Diseases of Women, etc.	Dr. Stephenson, 12 (W.); Practical, 12 (S.)	Dr. Simpson, 12 (W.); Practical, Tu. F., 2 (S.)	Dr. A. Macdonald, Dr. C. Bell, 12 (W.); Drs. Keiller, Underhill, Cullen, and Bell (S.)	Dr. Leishman, 3 (W.)	Dr. [illegible] Wilson, 2 (S.)	Dr. Stirton, 2 (S.)
Pathology.....	Dr. Ruddiger (W.)	Dr. Sanders, 9 (W.); 12 (S.)	Dr. Wallace and Dr. Pollock, 12 W.; 12 S.	— (W.)	—	Dr. Fowlis, 12 (S.)
Medical Jurisprudence.	Dr. Ogston, 3 (W.) (with Medical Logic).	Dr. Maclagan, 12 (S.)	Dr. Littlejohn, 12 (W.); H. A. Hodge, 12 (W.); 12 (S.)	Dr. J. A. Simpson, 12 (S.)	Dr. A. Lindsay, 4 (S.)	Dr. Macewen, 12 (S.)
Hospital	Royal Infirmary (W.). Daily, [illegible]	Royal Infirmary (W.)	Royal Infirmary (W.).	Western Infirm. (W.); Royal Infirmary (S.)	Royal Infirmary (W.), 9	Royal Infirmary (S.), 9.
Clinical Medicine.	Dr. Smith-Shand, Dr. Beveridge, & Dr. A. Fraser.	Drs. Maclagan, Sanderson, Simpson, Fraser, and Simson (Diseases of Women), [illegible], 12	Drs. Balfour, Moffat, Brakenridge & A. Macdonald (Women), Tu. F., 12.	Dr. M'Call Anderson, Physicians of Royal Infirmary.	Physicians of Royal Infirmary.	Physicians of Royal Infirmary.
Clinical Surgery.	Dr. Pirrie, Dr. A. Ogston, and Dr. Will.	Mr. Annandale, M. Tu. [illegible] (W. and S.)	Mr. J. Bell, M. Tu. [illegible] (W.)	Dr. T. [illegible] Surgeons of Royal Infirmary.	Surgeons of Royal Infirmary.	Surgeons of Royal Infirmary.

a. Aberdeen Royal Infirmary.—*Physicians:* Dr. J. W. [illegible] Smith-Shand, Dr. Beveridge, Dr. A. Fraser. *Surgeons:* Dr. Pirrie, Dr. A. Ogston, Dr. W[illegible], Dr. Garden. *Ophthalmic Surgeon:* Dr. Davidson. *Dental Surgeon:* Mr. Wa[illegible].

b. Edinburgh Royal Infirmary.—*Consulting Physicians:* Dr. D. R. Haldane and Dr. A. Keiller. *Physicians:* Dr. Maclagan, Dr. Sanders, Dr. A. R. Simpson, Dr. T. Chalmers Stewart. Dr. T. Fraser (Clinical Lectureship on Chronic Medicine), Dr. G. W. Balfour, Dr. C. Muirhead, Dr. Brakenridge, and Dr. A. Macdonald (Lecturers on Clinical Medicine). *Assistant-Physicians:* Dr. J. Wyllie and Dr. Affleck. *Consulting-Surgeons:* Dr. J. Duncanson and Dr. J. D. Gillespie. *Surgeons:* Mr. J. Spence, Mr. Annandale (Professor of Clinical Surgery), Dr. J. Bell, Dr. Duncan, and Mr. Chiene. *Assistant-Surgeons:* Dr. P. H. Watson. *Ophthalmic Surgeons:* Mr. Walker and Dr. D. A. Robertson. *Surgeon for Ear Diseases:* Dr. T. Keith. *Assistant-Surgeons:* Dr. A. G. Miller, Dr. P. H. Mac[illegible], and Dr. J. Fis[illegible]. *Dental Surgeon:* Dr. J. Smith. *Dispenser:* Mr. D. J. Hamilton.

c. Glasgow Royal Infirmary.—*Physicians:* Dr. Gairdner, Dr. M'Call Anderson, Dr. [illegible]. *Physicians for Diseases of Women:* Dr. Leishman and Dr. A. Patterson. *Surgeons:* Dr. [illegible], Dr. [illegible], Dr. [illegible]. *Assistant-Surgeons:* Dr. [illegible], Dr. [illegible], Dr. McVail. *Surgeon for Diseases of Women:* Dr. R[illegible]. *Surgeon for Diseases of the Eye:* Dr. J. J. Lyon, Dr. Knox, and Dr. Christie. *Dispensary Surgeon for Diseases of the Throat:* Dr. Barr. *Extra Dispensary Physicians:* Mr. J. C. Renton, [illegible]: Dr. Coats.

d. Glasgow Royal Infirmary.—*Physicians:* Dr. S[illegible]son, Dr. Scott Orr, Dr. Wood Smith, Dr. Perry, and Dr. Charteris. *Physician for Diseases of Women:* Dr. Stirton. *Surgeons:* Dr. Morton, Dr. E. Watson, Dr. Macewen, Dr. Dunlop, and Dr. Cameron. *Aural Surgeon:* Dr. J. Macfie. *Dental Surgeon:* Dr. J. C. Woodburn. [illegible]: Dr. Mainer, Dr. Lawrie, *Extra Dispensary Physicians:* Dr. [illegible], Dr. Wylie, Dr. [illegible]. [illegible]: Mr. Cadby, Dr. Lothian. [illegible]: Mr. W[illegible], Dr. Fowlis.

The following means are afforded for practical instruction, in addition to those mentioned in the table at page 447, in summer: Morbid Anatomy and Practical Pathology, by Mr. D. J. Hamilton, under the superintendence of Dr. Sanders; Tutorial Class of Clinical Medicine, in the Royal Infirmary, by the Clinical Tutor Dr. Murdoch Brown, under the superintendence of the Clinical Professor; Tutorial Class of Clinical Surgery, by the Clinical Tutor, Mr. Cotterill, under the superintendence of the Clinical Professor; Obstetric Operations, by Dr. Simpson; Chemistry (advanced class), by Dr. Crum Brown; Practical Instruction in Mental Diseases at Morningside Asylum, by Dr. Clouston, on Mondays, Wednesdays, and Fridays, at 3; and Practical Natural History, by Sir C. Wyville Thomson, on Mondays, Wednesdays, and Fridays, at 2. The Anatomical Museum, under the superintendence of Mr. Turner; Chemical Laboratories, under Dr. Crum Brown and Assistants; Physiological Laboratory, under Dr. Rutherford and Assistants; Physical Laboratory, under Mr. Tait; Natural History Museum, under the superintendence of Sir C. W. Thomson; Medical Jurisprudence Laboratory, under the superintendence of Dr. Maclagan; Royal Botanic Garden, Herbarium, and Museum, under the superintendence of Dr. Dickson; Materia Medica Museum and Laboratory, under the superintendence of Dr. Fraser, are open to students.

Fellowships, etc.—Falconer Memorial Fellowship, for the encouragement of the study of Palæontology and Geology, value £100, tenable for two years, open to Graduates in Science or Medicine of the University of not more than three years' standing. The next appointment may be made in October 1880. Syme Surgical Fellowship, value about £100, tenable for two years, open to Bachelors of Medicine of not more than three years' standing, who shall present the best Thesis on a Surgical subject, giving evidence of original research or practical talent. Leckie-Master Fellowship, annual proceeds of £2,000, tenable three years, open to Bachelors of Medicine of not more than three years' standing; next award in November 1882. Sibbald Scholarship, £40, tenable for four years. Hope Prize Scholarship, about £30. Thornton Scholarship, value £40, in October 1882. Abercromby Bursary of £20, for four years, to students who have been brought up in Heriot's Hospital. Two Sibbald Bursaries, value £30 each. Thomson Bursaries, value £25 each, in March and October, at Preliminary Examination in the subjects of General Education. Four Grierson Bursaries, each £20 *per annum:* in the absence of certain preferential candidates, open to competition—one to the student who shall pass the best examination in the subjects of Preliminary Education; one open to students commencing the second winter session, after examination in Chemistry, Botany, and Natural History; one to students commencing the third winter session, after examination in Anatomy and Physiology; one to students commencing the fourth winter session, after examination in Materia Medica and Pathology. Tyndall Bruce Bursary, £25, to students at end of third winter session; subjects of examination: Materia Medica and Pathology. Two Dr. John Aitken Carlyle's Medical Bursaries, £25 each, for one year, for proficiency in ordinary class-examinations; one to a first year's student, in Anatomy and Chemistry; one to a second year's student, in Anatomy and Physiology. Two Mackenzie Bursaries, proceeds of £1,000, annually to students in junior and senior classes of Practical Anatomy, for industry and skill. Competitors for the Bursaries must have studied the subjects of examination at the University of Edinburgh. Ettles Medical Prize, value about £40, to the most distinguished Graduate in Medicine of the year. Beaney Prize, value about £40, to the candidate for degrees of M.B. and C.M., who shall obtain most marks in Anatomy, Surgery, and Clinical Surgery. Hope Chemistry Prize, value £100, open to all students of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, about £40, to the candidate who, having been a medical student of the University during either a summer or a winter session, shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. The successful candidate must continue a medical student of this University during the winter session. Ellis Prize: accumulated proceeds of about £500, every three years, for an Essay or Treatise in some subject of Animal or Vegetable Physiology. Goodsir Memorial Prize, £60, awarded triennially. Wightman Prize, to student of class of Clinical Medicine for best report and commentary on cases treated in the wards. Cameron Prize, income of £2,000, yearly, to the member of the medical profession who shall have made the most valuable addition to Practical Therapeutics during the preceding year. Gold medals are given on graduation to Doctors of Medicine whose theses are deemed worthy.

EDINBURGH ROYAL INFIRMARY.—Fees: three months, £2 2s.; six months, £4 4s.; one, £6 6s.; perpetual, £12. Separate payments, amounting to £12 12s., entitle to a perpetual ticket. Clinical Medicine and Clinical Surgery, £4 4s. for the course in winter, and £3 3s. in summer. Four Resident Physicians and four Resident Surgeons are appointed; they live in the house for six months free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each surgeon appoints from four to nine Dressrs for six months. Assistants in the Pathological Department are appointed by the Pathologist.—Instruction is given in special departments.

SCHOOL OF MEDICINE, EDINBURGH.—The following courses of instruction are given in addition to those mentioned at p. 447; Tutorial Classes of Physical Diagnosis and of Practical Surgery at the Royal Infirmary; Diseases of the Ear, Dr. Kirk Duncanson, Tuesdays and Fridays, with clinical instruction at 4 (win.) and 11 (sum.); and Dr. P. McBride, with clinical instruction, Mondays and Thursdays, 11 (sum.); Vaccination, six weeks' courses in winter and summer, Dr. Husband; Diseases of Children, Dr. J. Andrew and Dr. J. Carmichael; clinical instruction through year at the Children's Hospital, lectures in summer by Dr. Andrew at 10 on Mondays and Thursdays, and by Dr. Carmichael on Mondays and Thursdays at 3—all in summer; Practical Medicine and Diagnosis, Dr. Byrom Bramwell, daily, 2 (sum.); Practical Gynæcology, Dr. Halliday Croom, at 5 (winter); Practical Midwifery, Dr. C. Bell, throughout year; Diseases of the Skin, Dr. A. Jamieson, Tuesday and Friday, 3 (winter); Insanity, with practical instruction, Dr. Batty Tuke, Mondays and Thursdays, at 3 (summer). Dr. Littlejohn and Dr. Husband lecture on Public Health in conjunction with Medical Jurisprudence.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Practical Anatomy (six months), £3 3s.; Anatomical Demonstrations, £2 2s.; perpetual, £4 4s.; Practical Anatomy with Demonstrations, £4 4s.; Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months; Practical Materia Medica (including Practical Pharmacy), Diseases of the Ear, each £2 2s.; Vaccination, Diseases of Children, and Diseases of the Skin, each £1 1s. Summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Demonstrations, Operative Surgery, and Insanity, each £2 2s. The minimum cost of education in this school for the double qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, including the examination fee, is £95, payable by yearly instalments; for the single diploma of either Physician or Surgeon, including the examination fee, £85.

Practical instruction in various subjects may also be obtained on payment of moderate fees at the Sick Children's Hospital, Royal Public Dispensary and New Town Dispensary, Royal Maternity Hospital, and the Edinburgh Eye Infirmary.

UNIVERSITY OF GLASGOW.—Fees, each course, £3 3s., except Operative Surgery, £2 2s., and Lectures on the Eye, £1 1s. In the courses for which £3 3s. is charged (except Chemistry and Practical Chemistry, and Practical Anatomy), the fee for a second session is £2 2s.; for a third session, £1 1s.

The Chemical Laboratory is open from 10 A.M. to 4 P.M. (fee £10 10s in winter and £5 5s. in summer); and the Physiological Laboratory from 9 A.M. to 4 P.M., winter and summer; the Zoological Laboratory from 12 noon to 4 P.M. in summer (fee £2 2s.). Demonstrations in the Botanical Garden are given at 6.30 P.M. in summer.

GLASGOW ROYAL INFIRMARY.—The number of beds is 570; 220 for medical and 330 for surgical cases. There are wards for the treatment of Venereal Diseases and the Diseases of Women; whilst Diseases of the Ear and Throat are specially treated at the out-door department. Courses of Clinical Medicine and Surgery are given by the Physicians and Surgeons, and *post mortem* examinations are conducted by the Pathologist, who also gives practical instruction in Pathological Anatomy and Histology.

Appointments.—There are five Physicians' and five Surgeons' Assistants. These appointments can be held for twelve months, and are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical clerks and dressers are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures: first year, £10 10s.; second year, £10 10s.; afterwards free: for six months, £6 6s.; three months, £4 4s. To perpetual students of other hospitals where the perpetual fee is equal to that at the Infirmary, £2 2s. for six months, £3 3s. for one year. Dispensary practice alone, six months, £1 1s.; one year, £2 2s. For Vaccination certificate, £1 1s.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—In addition

to the subjects mentioned in the table at page 447, lectures are given in the summer on Aural Surgery, by Dr. J. P. Cassells at 4 on Thursdays, and on Mental Diseases by Dr. A. Robertson. The City Parochial Asylum under his charge is free to students of this school.

Fees.—For each course, first session, £2 2s.; second session and perpetual, £1 1s. Students who have attended a first course elsewhere can enter on the second course on payment of £1 1s. Anatomy: first winter session, £4 4s.; summer session, £1 1s.; second winter session, £4 4s.; afterwards, for Lectures and Practical Anatomy, £1 1s. per session. Lectures on Diseases of the Ear, £1 1s.; with Clinique to those who are not students of the hospital, £2 2s. Clinique on Dental Surgery free to students of the hospital; to others, £1 1s. Lectures on Diseases of the Eye, £1 1s.

Glasgow Western Infirmary.—Fees, first year, £10 10s., giving privilege of admission and three courses of Clinical Instruction. A second year's payment of £10 10s. in addition, or the payment of fees to the amount of £21, confers a life privilege of admission to the Infirmary and clinical instruction. Hospital attendance and clinical instruction for six months, £7 7s.; three months, £4 4s.

There is an out-door Obstetrical Department in connection with the Infirmary; fee, £1 1s.

Glasgow Eye Infirmary.—Fee, six months, £2 2s.; to students who are attending, or have attended, the Lectures on the Eye in the University, £1 1s.

Instruction may also be obtained at the Glasgow Lying-in Hospital; and at the Dispensaries for Diseases of the Skin and Ear; and the Royal Lunatic Asylum, Gartnavel, is open to students on payment of a small fee.

Glasgow.—Anderson's College.—The following courses are given in addition to those at p. 447: In winter, Senior Anatomy, Dr. Buchanan, 4 P.M.; in summer, Osteology, Dr. Buchanan, as may be arranged; Public Health, Dr. Christie, 1 P.M.; Aural Surgery, Dr. Barr, Thursday, 1; Practical Medical Chemistry, Mr. Dittmar, Tuesday, Wednesday, and Thursday, 11. The Chemical Laboratory is open daily from 10 to 5. Students of the College are admitted to the practice of the Ophthalmic Institution on payment of a matriculation fee of 5s.

Fees.—Each course of lectures (except Anatomy), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy (including Dissecting-room), first session, £4 4s.; second session, £4 4s.; third session and perpetual, £1 1s.; summer (including Practical Anatomy), £1 1s.; Osteology, £1 1s. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees. Fees for all the Lectures and Hospital Practice required of candidates for the diplomas of Physician and Surgeon, £48.

Scholarships, etc.—Medical Scholarships of £12 and £10 for students entering on their second winter; subjects, Anatomy (bones, joints, muscles, alimentary canal, and heart); Chemistry (general principles; non-metallic elements; cyanides, cyanates, urea, etc.; carbo-hydrates; alcohols, aldehides, and acids of the fatty series). Prizes of £5 in classes of Senior Anatomy, Physiology, and Chemistry; and prizes of £10 in class of Junior Anatomy.

A Dispensary is connected with Anderson's College. Students have the privilege of visiting and treating patients at their own homes, being assisted by a specially appointed qualified practitioner.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR ADMISSION INTO THE ARMY, INDIAN, AND NAVAL MEDICAL SERVICES.

ARMY MEDICAL DEPARTMENT.

1. Every candidate for a commission in the Army Medical Department must be twenty-one years of age and not over twenty-eight years at the date of the commencement of the competitive examination. He must produce an extract from the register of his birth, or in default, a declaration made before a magistrate by one of his parents or guardians, giving his exact age. He must also produce a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits and likely in every respect to prove creditable to the Department if a commission be granted; and also a certificate of moral character from the parochial clergyman, if possible. 2. The candidate must sign a declaration upon honour that both his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor has any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of a medical officer in any climate; also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a board of medical officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. The board must also certify that he is free from organic or other disease, and from constitutional weakness or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate. 3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned. 4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a.* Anatomy and Physiology, 1000 marks; *b.* Surgery, 1000 marks; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1000 marks; *d.* Chemistry and Pharmacy, and a practical knowledge of Drugs, 100 marks. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The eligibility of each candidate for the Army Medical Service will be determined by the result of examination in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximum number of marks will be—French and German (150 each), 300 marks; Natural Sciences, 300 marks. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences. 5. After passing this examination, every qualified candidate will be required to attend one course of practical instruction at the Army Medical School as a Probationer on—1. Hygiene; 2. Clinical and Military Medicine; 3. Clinical and Military Surgery; 4. Pathology of Diseases and Injuries incident to Military Service. 6. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact, and they will be required to provide themselves with uniform, viz., the regulation undress uniform of a surgeon, but without sword. 7. They will be required to attend the Army Medical Department Mess at Netley, and to conform to the rules and regulations thereof.

Every candidate for appointment in the Army Medical Department must possess two diplomas or licences recognised by the General Medical Council, one to practise medicine and the other surgery; and shall be registered under the Medical Act in force in the United Kingdom at the time of his appointment. A public and open competition shall be held twice in the year for the admission of qualified candidates as probationers. The number of appointments so competed for shall be not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on the 30th June or 31st December. Not less than half the number of vacancies shall be filled up by competition; and it shall be competent for the Secretary of State to fill up the remaining number from such qualified candidates as may be proposed by the governing bodies of Public Schools of Medicine in our United Kingdom or in our Colonies, as he may think proper. Every candidate so proposed shall be certified by the governing body proposing him, to be duly qualified according to a standard to be laid down by the Secretary of State, and shall be approved by the Director-General.

The Secretary of State shall from time to time fix the order of precedence and the proportion in which the several Schools of Medicine shall be offered the nomination of candidates.

A Surgeon on probation shall, on appointment, be sent to some large station for instruction in Ambulance and Hospital Corps duties, until the commencement of the next course of study at the Army Medical School. After passing through such course at the Army Medical School as the Secretary of State shall decide, the Surgeon on probation, after passing a qualifying examination in the military medical subjects taught there, and satisfying the Director-General that he is a person of proper skill, knowledge, and character for permanent appointment in the Army Medical Department, shall be commissioned as Surgeon. The Surgeons on probation who pass out of the Army Medical School at one qualifying examination shall take precedence among each other as Surgeons as follows. *a.* Those appointed on nomination

according to their date of joining on probation. 6. Those appointed on competition according to the last day of the competitive examination, and in the order of merit at such examination, with priority over any joining under sub-section (2) on the last day of the competitive examination. A Surgeon's commission shall bear the date of the day of his passing out of the Army Medical School. A candidate for appointment as Surgeon in the Royal Malta Fencible Artillery shall be required to pass such a professional examination as the Secretary of State may from time to time determine.

INDIAN MEDICAL SERVICE.

1. All natural-born subjects of Her Majesty between twenty-two and twenty-eight years of age at the date of the examination and of sound bodily health may be candidates. They may be married or unmarried. They must possess a diploma in surgery or a licence to practise it, as well as a degree in medicine or a licence to practise it, in Great Britain or Ireland. 2. They must subscribe and send in to the Military Secretary, India Office, Westminster, so as to reach that address at least a fortnight before the date fixed for the examination, a declaration according to the annexed form. 3. This declaration must be accompanied by the following documents: *a*. Proof of age, either by the candidate's own declaration, forms of which can be obtained at the India Office, pursuant to the Act 5 and 6 William IV, c. 62, or by extract from the register of the parish in which he was born (a certificate of baptism which does not afford proof of age will be useless); *b*. A certificate of moral character from a magistrate, or a minister of the religious denomination to which the candidate belongs, who has personally known him for at least the two years preceding the date of his application; *c*. A certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licences possessed by the candidate. 4. The physical fitness of candidates will be determined previous to examination by a board of medical officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed. Every candidate must also be free from organic disease of other organs, and from constitutional weakness, or other disability likely to unfit him for military service in India. 5. On producing the foregoing qualifications, the candidate will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a*. Anatomy and Physiology, 1,000 marks; *b*. Surgery, 1,000; *c*. Medicine, including Therapeutics, the Diseases of Women and Children, 1,000; *d*. Chemistry and Pharmacy, and a practical knowledge of drugs, 500. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. 6. The eligibility of each candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only. 7. Candidates who desire it will be examined in French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. 8. The number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences. 9. The maximum number of marks allotted to the voluntary subjects will be as follows: French, German, and Hindustani, 1,500 marks; 450 marks; Natural Science, 500 marks. 10. The subjects for this part of the examination will be taken from the following books: *Manual of Zoology*, by W. S. Dallas, F.L.S. [illegible] *Text-book of the Physical Geography* [illegible] Lyell's *Principles of Geology*, Lindley's *Natural System of Botany*, Henfrey's *Botanical Text-book*, Lindley and Moore's *Treasury of Botany*, Bentley's *Manual of Botany*, Balfour's *Class-book of Botany*, Brandis' *Forest Flora of North-West and Central India*, Hooker's *Himalayan Journals*, Lindley's *Natural System of Botany*, Henfrey's *Botanical Text-book*, Lindley and Moore's *Treasury of Botany*, Bentley's *Manual of Botany*, Balfour's *Class-book of Botany*, Brandis' *Forest Flora of North-West and Central India*, Hooker's *Himalayan Journals*, by Sir J. Hooker. 11. The Examinations in London will begin on the [illegible] of March, in the years when it is held in the [illegible] of August, and the Director-General and examiners of the Department of the Army Medical Staff. If any candidate [illegible] Council of the particular [illegible] this shall be stated, and he must [illegible] examination at the [illegible] Netley. 12. After passing the preliminary examination, candidates will be required to attend [illegible] Course of Practical Instruction at the Army Medical School, Netley, being subject to examination for [illegible]

(1) Hygiene; (2) Clinical and Military Medicine: (3) Clinical and Military Surgery; (4) Pathology of diseases and injuries incident to military service. These courses are to be of not less than four months' duration; but candidates who have already gone through a course at Netley as candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the School a second time. 13. During the period of his residence at the Army Medical School, each candidate will receive an allowance of five shillings *per diem* with quarters, or seven shillings *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a surgeon of the British Service, but without the sword). 14. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact. 15. At the conclusion of the course, candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any medical officer deputed by him, may be present and take part in the examination. If the candidate give satisfactory evidence of being qualified for the practical duties of an army medical officer, he will be eligible for a commission as surgeon. 16. The position of the candidates on the list of surgeons will be determined by the combined results of the preliminary and of the final examinations, and, so far as the requirements of the Service will permit, they will have the choice of Presidency in India, according to their position on that list. The examinations for admission to the Indian Medical Service will usually take place twice a year, viz., in February and in August.

NAVAL MEDICAL SERVICE.

1. Every candidate desirous of presenting himself for admission to the Naval Medical Service must be not under twenty-one nor over twenty-eight years of age. He must produce a certificate from the district registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character, signed by a clergyman or a magistrate, to whom he has been for some years personally known, or by the President or Senior Professor at the College at which he was educated.

2. He must be free from organic disease, and will be required to make a declaration that he labours under no mental or constitutional disease or weakness, nor any other imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate. His physical fitness will be determined by a board of medical officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test-types. He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.—3. He must be registered under the Medical Act in force at the time of his appointment, as licensed to practise Medicine and Surgery in Great Britain or Ireland.—4. Certificates of registration, character, and age, must accompany the Schedule when filled up and returned.—5. Candidates will be examined by the examining board in the following subjects: Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Naval Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica, also in French and German; and the number of marks obtained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science. 6. After passing this examination, every candidate will be required to attend a Practical Course of Practical Instruction at the Medical School at Netley, on (1) Hygiene; (2) Clinical and Naval and Military Medicine; (3) Clinical and Naval and Military Surgery; (4) Pathology of Diseases and Injuries incident to Naval and Military service. 7. At its conclusion, the candidate will be required to pass an examination on the subjects taught in the School. If he give satisfactory evidence of being qualified for the practical duties of a naval medical officer, he will be eligible for a commission as surgeon. 8. During the period of his residence at the Netley Medical School, each candidate will receive

an allowance of 5s. *per diem* with quarters, or 7s. *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of a surgeon, but without the sword).—9. All candidates will be required while at Netley to conform to such rules of discipline as the Senate may from time to time enact.—10. After completing three years' full-pay service, surgeons will be allowed to be examined for the rank of staff-surgeon; but no surgeon can be promoted to the rank of staff-surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.

PUBLIC HEALTH OR STATE MEDICINE.

SUBJOINED are the regulations of the Examining Bodies which grant degrees or certificates in Public Health or State Medicine.

UNIVERSITY OF CAMBRIDGE.—Any person whose name is on the *Medical Register* of the United Kingdom may present himself for examination, provided he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part.

Part I comprises Physics and Chemistry; the principles of Chemistry, and methods of analysis, with especial reference to analyses of air and water; application of the microscope; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage; construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general.

Part II will comprise—laws of the realm relating to public health; sanitary statistics; origin, propagation, pathology, and prevention of epidemic and infectious diseases; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The examinations in both parts will be oral and practical as well as in writing. Candidates may present themselves for either part separately, or for both together.

Every candidate must pay a fee of £4 4s. before admission to *each part* of the examination.

Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

The next examination in Sanitary Science by the University of Cambridge will begin on October 5th. Candidates (whose names must be on the *Medical Register* of the United Kingdom) should send their names to Professor Liveing, Cambridge, before September 25th.

UNIVERSITY OF LONDON.—A special examination is held once in every year in subjects relating to Public Health, and commences on the second Monday in December. No candidate is admitted to this examination unless he have passed the second examination for the degree of Bachelor of Medicine in this university at least one year previously, nor unless he have given notice of his intention to the registrar at least two calendar months before the commencement of the examination. The fee for the examination is £5, which must be previously paid to the registrar. If, after payment of his fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any *one* subsequent examination without the payment of any additional fee, provided that he give notice to the registrar at least one calendar month before the commencement of the examination. Candidates are examined in the following subjects: 1. *Chemistry and Microscopy*, as regards the examination of air, water, and food; 2. *Meteorology*, as regards general knowledge of meteorological conditions, and the reading and correction of instruments; 3. *Geology*, as regards general knowledge of rocks, their conformation and chemical composition, and their relation to underground water, and to drainage and sources of water-supply; 4. *Physics and Sanitary Apparatus*; the laws of heat, mechanics, pneumatics, hydrostatics, and hydraulics, in relation to the construction of dwellings, and to warming, ventilation, drainage, and water-supply, and to apparatus for these and other sanitary uses; the reading of plans, sections, scales, etc., in regard of sanitary constructions and appliances; 5. *Vital Statistics*, as regards the methods employed for determining the health of a community; birth-rate; death-rate; disease-rate; life-tables; duration and expectancy of life; present amount of mortality at the various ages, and its causes, in different classes and communities; practical statistics of armies, navies, civil professions, asylums, hospitals, dispensaries, lying-in establishments, prisons, in-door and out-door paupers, friendly societies, sick-clubs, medical and surgical practice, towns; 6. *Hygiene*, including the causation and prevention of disease. Reference shall be had to such matters as the following: parentage; temperament; morbid diatheses; congenital diseases and malformations; effects of close interbreeding; special liabilities at particular periods of life; physical regimen of different ages; earth and climate, and changes of season; dampness of soil; malaria; conditions of healthy nourishment; conditions of healthy lodgment; conditions of healthy activity; hygiene of particular establishments and particular classes of population; disease as distributed in England; particular diseases, as regards their intimate nature, causation, and preventability; processes of contagion in different diseases; incubation; particular dangers of infection, etc.; disinfectants, and establishments for disinfection; quarantine; hospitals for infectious disease; conveyance of the sick; vaccination; prostitution; diseases of domestic animals in relation to the health of man; rabies; diseases of the vegetable kingdom, and failures of vegetable crops, in relation to the health of man: famine-diseases; poisons in manufacture, and commercial and domestic use; 7. *Sanitary Law*, as regards the Public Health Act, 1875; the Vaccination Acts; the Rivers Pollution Prevention Act; the Sale of Food and Drugs Act; the Artisans' and Labourers' Dwellings Improvement Act, 1875; the Acts regulating the Medical Profession and the Practice of Pharmacy; the Acts relating to Factories and Workplaces, and to the Detention and Care of Lunatics. The examination is written and practical, and extends over four days. Candidates are not approved by the examiners unless they have shown a competent knowledge in all the principal subjects. In the week following the examination, the examiners publish the names of the candidates who have passed, arranged in alphabetical order. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of £5. A certificate under the seal of the University, and signed by the Chancellor, is delivered at the public presentation for degrees to each candidate who has passed.

UNIVERSITY OF DURHAM.—Certificates of proficiency in Sanitary Science are granted under the following regulations.

Candidates must give at least twenty-eight days' notice to the Registrar, and send the fee and the necessary certificates.

A. *Certificate of Proficiency in Sanitary Science.*—1. The candidate must be a registered medical practitioner. 2. He must have attended one course of Lectures on Public Health at the University of Durham College of Medicine, Newcastle-upon-Tyne, during one winter session. 3. He must pass an examination on the following subjects: *a. Physics*—Laws of light, heat, hydrodynamics, and pneumatics; *b. Chemistry*—As applied to the detection of noxious gases and atmospheric impurities, analysis of air and water; *c. Sanitary Legislation*—Knowledge of the Acts of Parliament in force for the preservation and protection of health; *d. Vital Statistics*—Rates of births, deaths, and marriages; the methods of calculation, classification, and tabulation of returns of sickness and mortality; data and conclusions deducible therefrom; *e. Meteorology, Climatology, and Geographical Distribution of Diseases in the United Kingdom*; *f. Sanitary Medicine*, more especially epidemic, endemic, epizootic, and communicable diseases; diseases attributable to heat, cold, or damp; insufficiency or impurity of air, food, or drink; habitation, occupation, over exertion, intemperance, heredity; preventive measures, vaccination, isolation, disinfection; the regulation of noxious and offensive manufactures and trades; the removal of nuisances; *g. Practical Hygiene*, in reference to site, materials, construction, lighting, ventilation, warmth, dryness, water-supply, and refuse disposal of dwellings, schools, hospitals, and other buildings of public and private resort; action with respect to nuisances and outbreaks of disease; other duties of a medical officer of health.—The examination is by written papers, practical, and *viva voce*. In the practical examination, the candidate is required: 1. To report upon the condition of some actual locality; 2. To analyse liquids and gases; 3. To explain the construction and the uses of instruments employed in meteorology; 4. To make microscopic examinations. The fee is £5 5s. The next examinations will commence on October 4th, 1880, and April 25th, 1881.

B. *Certificate of Proficiency in Sanitary Science for Medical Officers of Health.*—The candidate must have obtained a registrable qualification before January 1st, 1878, and must have acted as a medical officer of health for five years. He must not be under thirty years of age. He must pass the same examination as particularised under the heading A, and must write an essay upon some practical sanitary subject, and be examined upon the essay and upon other sanitary questions. The fee is £10 10s.

UNIVERSITY OF EDINBURGH.—This University gives the degrees of Bachelor and Doctor of Science in Public Health, under the following conditions.

Bachelor of Science.—1. The candidate must be a Graduate in Medicine of a British University, or of such Colonial, Indian, or Foreign University as may be specially recognised by the University Court. 2. He must be matriculated for the year in which he appears for examination. 3. If the candidate have not passed an *annus medicus* in the University of Edinburgh, he must, before presenting himself for examination, have attended in the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations. 4. There are two examinations for the degree of Bachelor of Science in the department of Public Health. A candidate who has passed the first examination may proceed to the second at the next period fixed for this, or at any subsequent examination. 5. The candidate must produce evidence that, either during his medical studies or subsequently, he has attended a course of lectures in which instruction was given on Public Health; and that he has studied Analytical Chemistry practically for three months with a recognised teacher. 6. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court. 7. The subjects of the examination for the degree of Bachelor of Science in the department of Public Health are as follows.

First Examination.—1. *Chemistry*—Analysis of air, detection of gaseous emanations and other impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and amount of their mineral and organic constituents; detection, chemical and microscopical, of adulteration in articles of food and drink, and in drugs; practical examination, including at least two analytical researches. 2. *Physics*—Hydraulics and hydrostatics, in reference to water-supply, drainage, and sewerage; pneumatics, in relation to warming and ventilation; meteorology, and methods of making meteorological observations; mensuration, in reference to the plans and sections of public and private buildings, mines, waterworks, and sewers. The candidate must make figured sketches for models, and have a knowledge of mechanical drawing. 3. *Sanitary Law*—Knowledge of the leading Sanitary Acts of Parliament. 4. *Vital Statistics*—Knowledge of statistical methods and data in reference to population, births, marriages, and deaths. An oral examination, and an examination in practical chemistry in the laboratory, will take place a few days after the written examination.

Second Examination.—1. *Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of disease; insalubrious trades; overcrowding; epizootics, including pathological changes. 2. *Practical Sanitation*—Duties of a health-officer in reference to water-supply; insalubrious dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries, nuisances from manufactories, etc.; bad or insufficient supplies of food; outbreaks of zymotic diseases; quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals.

The written examinations will take place on October 14th and 15th, 1880, and April 1st and 2nd, 1881, and thereafter only in the April of each year. Candidates must give notice and pay the fee on or before October 1st and March 1st.

Doctor of Science.—A Bachelor of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department, on producing evidence that he has been engaged in practical sanitation since he received the degree of Bachelor of Science, and on producing a thesis on some subject embraced in the department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the Examiners. The candidate for the degree of D.Sc. must lodge his thesis with the Dean of the Medical Faculty on or before January 31st in the year in which he proposes to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The fees for the degrees in Science in the Department of Public Health are: for each examination for B.Sc. in Public Health, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s. The degrees in Science are conferred at the graduation ceremonial in April. The following are recommended as books to be studied in preparation for the above examinations:—Parkes, E., *Practical Hygiene;* Wilson, George, *Handbook of Hygiene;* Smith, Edw., *Manual for Public Officers of Health*, and *Handbook for Inspectors of Nuisances;* Michael, Corfield, and Wanklyn, *Manual of Public Health*, edited by E. Hart; Eassie, *Healthy Homes;* Latham, Baldwin, *Sanitary Engineering;* Law, Henry, *Rudiments of Civil Engineering;* Monro, Geo., *The Public Health (Scotland) Act;* Buchan, Alex., *Introductory Text-Book of Meteorology.*

UNIVERSITY OF GLASGOW.—A special examination will be held once in every year in subjects relating to Public Health, and will commence on the second Tuesday in April. This examination will consist of two divisions; and candidates may enter to one or both of these, provided that no candidate shall be admitted to examination in the second division who has not already passed the first. All candidates must be registered medical practitioners. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which special instruction was given on Public Health; and that they have attended a course of Analytical Chemistry specially bearing upon the subjects of examination, given by recognised teachers. Candidates who have not passed an *annus medicus* in the University of Glasgow must, before presenting themselves for examination, have attended as matriculated students in this University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations. The examinations are written, oral, and practical.

The fee for each division of this examination is £4 4s. The candidates must give notice to the Assistant-Clerk of Senate, and pay the required fee, at least one calendar month previous to the examination. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any *one* subsequent examination without the payment of an additional fee.

The examination embraces the following subjects:—*1st Division.*—*Physics*—Pneumatics, hydrostatics, hydraulics. *Chemistry*—Analysis of air, water, and food. *Meteorology*—Climate, topographical and seasonal: its influence in relation to health and disease. *Geographical Distribution of Diseases.*—*2nd Division—State Medicine*—Duties of health-officer; ventilation; food and its adulterations; water and water-supply; sewage and drainage; construction of hospitals, public buildings, and dwellings; overcrowding; manufactories; insalubrious trades; cemeteries; nuisances; quarantine; disinfectants and deodorisers; outbreaks of zymotic diseases. *Sanitary Law*—Knowledge of leading Sanitary Acts of Parliament. *Vital Statistics.*

The following are recommended as books for study:—E. Parkes, *Practical Hygiene;* George Wilson, *Handbook of Hygiene;* A. H. Hassall, *Food and its Adulterations;* Lardner and Loewy, *Hydrostatics and Pneumatics.*

A course of lectures on Public Health is delivered in the University during the winter session.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—The Royal College of Physicians of Edinburgh grants a certificate of qualification in Public Health under the following regulations.

Candidates must be already on the *Medical Register*, and possess a qualification in Medicine. They are not required to attend any special course of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. There are two examinations which may be taken simultaneously or with an interval not exceeding twelve months. The examinations are written, oral, and practical. Rejected candidates are not admitted for re-examination till after the expiry of six months.

Examinations.—The first examination embraces.—*a. Physics:* especially pneumatics, hydrostatics, hydraulics, and engineering in relation to sanitary operations, including a knowledge of architectural and other plans, sections, etc.; *b. Chemistry:* especially analysis of air, water, food, including the biology of putrefaction and allied processes; *c. Meteorology:* including climate, topographical and seasonal influences in relation to health and disease.

2. The second examination embraces—*a, Epidemiology and Endemiology:* including the corresponding departments in the diseases of animals and plants—contagious diseases—diseases of periods of life, professions, trades, seasons, and climates; *b. Practical Hygiene:* duties of a health-officer; food; water-supply; sewerage and drainage; construction of hospitals, public buildings, dwellings; manufactories; cemeteries; nuisances; *c. Sanitary Law and Vital Statistics.*

3. Meetings for both examinations are held annually in April and October. The first examination is held on the second Tuesday of the month; the second examination on the immediately succeeding Thursday. Each occupies two days. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear

for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination may come up again after a further period of six months; but, if he then fail to pass, he must undergo the first as well as the second examination before obtaining the certificate.

The fees must be paid at least a week before the day of examination. The fee for the first examination is £3 3s.; for the second examination, £3 3s.; and for receiving the certificate, £4 4s. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has presented himself for both examinations fail to pass the first, he is not allowed to present himself for the second, and his fee for the second is returned to him.

UNIVERSITY OF DUBLIN.—Doctors of Medicine of Dublin, Oxford, or Cambridge, who wish to obtain from this University a certificate of qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects: 1, Law; 2, Engineering; 3, Pathology; 4, Vital and Sanitary Statistics; 5, Chemistry; 6, Meteorology; 7, Medical Jurisprudence.

DENTAL SURGERY.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND grants a diploma in Dental Surgery under the following regulations.

Candidates must produce Certificates: 1. Of being twenty-one years of age. 2. Of having been engaged during four years in the acquirement of professional knowledge. 3. Of having attended not less than one of each of the following Courses of Lectures: Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica. 4. Of having attended a second Winter Course of Lectures on Anatomy, or a course of not less than twenty Lectures on the Anatomy of the Head and Neck. 5. Of having performed Dissections during not less than nine months. 6. Of having completed a Course of Chemical Manipulation. 7. Of having attended, at a Hospital or Hospitals in the United Kingdom, Surgery and Clinical Lectures on Surgery during two Winter Sessions. 8. Of having attended two Courses of Lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one Course on Metallurgy. 9. Of having been engaged, during not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent Practitioner. 10. Of having attended at a Dental Hospital, or in the dental department of a General Hospital, the Practice of Dental Surgery during two years. The courses of instruction and hospital practice must be by lecturers or in institutions recognised by the College.

All candidates who commence their Professional Education on or after July 22nd, 1878, must, in addition to the Certificates enumerated above, produce a certificate of having, prior to such commencement, passed the Preliminary Examination in General Knowledge for the Diploma of Member of the College, or an equivalent examination.

Candidates who were in Practice as Dentists, or who had commenced their Education as Dentists prior to September, 1859, and who are unable to produce the Certificates required by the foregoing regulations, must furnish the Board of Examiners with a Certificate of Moral and Professional character, signed by two Members of the College, together with answers to certain inquiries.

The Examination is partly written and partly oral. The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with especial reference to Dental Practice. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, have to answer only those questions set by the Section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination are examined only by that Section. A rejected candidate is not admitted to re-examination within six months, unless the Board otherwise determine. Examinations are held in January and June. The fee for the Diploma is £10 10s., over and above any stamp duty.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The Examinations are written and oral, and consist of two separate sittings. Candidates must apply to the Secretary of the College on or before the Saturday preceding the ordinary examination, and must produce all the required certificates. Examinations for the Dental Diploma will be held as follows: first examinations, October 19th, 1880; January 25th, March 29th, April 19th, July 19th, 1881; and the second immediately after the conclusion of the first examination.

Candidates must produce evidence of having attained the age of twenty-one years, and of having passed the Preliminary Examination in General Education required for the ordinary Licence in Surgery, or an equivalent examination. They must also produce certificates of having been engaged during four years in the acquirement of professional knowledge, and of having been during that period, or at some time previous to their examination, engaged for not less than three years in the acquirement of a practical knowledge of Mechanical Dentistry with a registered dental practitioner.

The following Lectures and other courses of instruction must have been attended at a recognised medical school or schools: Anatomy, one winter course; Dissection and Demonstration, nine months; or Dissection, nine months, and Anatomy of Head and Neck, one course of twenty lectures; Physiology, one course of not less than fifty lectures; Chemistry, Surgery, Medicine, each one winter course; Materia Medica and Practical Chemistry and Metallurgy, each one course of three months; Clinical Instruction in Surgery at a recognised Hospital, one course of six months, or two courses of three months; also the following special courses by recognised teachers: Dental Anatomy and Physiology, Dental Surgery and Pathology, Dental Mechanics, one course of each (not fewer than twelve lectures); two years' attendance at a Dental Hospital, or the Dental department of a General Hospital.

Licentiates of the College, or registered medical practitioners, must produce certificates of attendance on the special subjects only, and are examined in these only.

Anatomy, Chemistry (with Metallurgy), and Physiology, will form the subjects of the first Examination; Surgery, Medicine, Materia Medica, and Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, those of the second.

The fee is £10 10s. Each candidate, for the first Examination, must pay to the Secretary of the College £4 4s. not later than 9 A.M. of the Saturday preceding the Examinations; and if the candidate be unsuccessful £2 2s. are returned to him. Each candidate for the second Examination must pay £6 6s. not later than 9 A.M. of the Tuesday preceding the Examination; and if he be unsuccessful £3 3s. will be returned to him. No unsuccessful candidate will be remitted for less than three months.

Examination sine Curriculo.—Candidates who were in practice before the first day of August 1878, or those not in practice but who had commenced their apprenticeship as Dentists before the first day of August 1875, and who are unable to furnish the Board of Examiners with the certificates of lectures and hospital attendance required by the foregoing regulations, must produce: 1. A certificate of moral and professional character, signed by two registered medical practitioners, together with the full name, age, and address of the candidate. 2. The date of commencing practice or apprenticeship as a Dentist, and whether, if in practice, such practice has been carried on in conjunction with any other business, and if so, with what business. 3. Whether he has any degree or diploma in Medicine or Surgery, and if so, from what College or University, or other body, and at what time it was obtained. 4. The particulars of professional education. The President's Council shall determine whether the candidate is entitled to be admitted to Examination; and such Examination shall, with the exception of the Preliminary Examination, and the exemptions in favour of registered medical practitioners, as before explained, be passed on the same subjects and in the same manner as is required for other candidates, and will confer the same privileges.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The regulation as to certificates, curriculum, number of examinations, fees and examinations *sine curriculo*, are in effect similar to those of the Royal College of Surgeons of Edinburgh.

Metallurgy is added to Dental Mechanics as well as to Chemistry.

Every candidate, before being admitted as a Licentiate, must subscribe a declaration engaging not to advertise or pursue any other unprofessional mode of attracting practice.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Dental Board of Examiners consists of three Fellows of the College, three Registered Dentists, and the President, Vice-President, or other Member of the Council of the College (summoned in rotation).

Examinations shall be held at such times as the Council shall direct. The Examinations, up to the first day of August 1881, shall be practical, embracing the Anatomy, Physiology, Surgery, and Pathology of the Teeth, Jaws, and surrounding parts, and Mechanical Dentistry; and shall be partly written and partly oral.

All candidates shall lodge with the Registrar of the College, at least one fortnight previous to each Examination, the following certificates: 1. Of having attained the age of twenty-one years; 2. From two Fellows or Licentiates of any College of Surgeons in the United Kingdom, and from two Dentists of repute, testifying that the candidate is of good

character, has been engaged in the practice of Dentistry for at least five years, and has refrained from advertising or other unbecoming modes of attracting business for at least two years previously; 3. Of having lodged in the Bank of Ireland, to the credit of the College, the fee of £10 10s., half of which shall be returned to any candidate who fails to satisfy the Examiners.

After August 1st, 1881, every candidate must lodge with the Registrar of the College, at least a fortnight previous to Examination, the following certificates: 1. Of having attained the age of twenty-one years; 2. Of having been engaged during four years in the acquirement of professional knowledge; 3. From two Fellows or Licentiates of any College of Surgeons in the United Kingdom, and from two Dentists of repute, testifying that the candidate is of good character; 4. Of having passed the Examination in Preliminary Education of one of the Examining Bodies recognised by the General Medical Council; 5. Of having lodged in the Bank of Ireland, to the credit of the College, the fee of £10 10s., half of which shall be returned to any candidate, if rejected; and no candidate can present himself for re-examination for six months; 6. Of having attended in a recognised school one course each of lectures on Anatomy and Physiology, Surgery, Chemistry, Practical Chemistry and Metallurgy, and Materia Medica; and two courses each of Dissections with Demonstrations, and of Dental Surgery, including Dental Mechanics; 7. Of having attended General Hospital Practice for two winter sessions, and the dental department of a General Hospital, or a Special Dental Hospital, for a further period of nine months; 8. Of having been engaged during, at least, three years in acquiring a practical knowledge of Dentistry, under the instruction of a Registered Licentiate in Dentistry.

The Examinations are partly written and partly oral; preparations, microscopes, and other appliances being used.

Licentiates in Surgery, or Fellows of any College in the United Kingdom, and Graduates in Surgery of any University recognised by this College, are examined only in subjects special to Dentistry.

Every successful candidate, previous to receiving the Licence, shall declare that he will not advertise, or pursue any other unbecoming mode of attracting business, so long as he holds the Licence in Dentistry of the College.

The following provision is made for instruction in Dental Surgery.

National Dental Hospital and College.—*Consulting Physicians:* Dr. B. W. Richardson and Dr. W. H. Broadbent. *Consulting Surgeons:* Mr. Erichsen, Mr. Spencer Wells, and Mr. Christopher Heath. *Consulting Dental Surgeon:* Mr. J. Merryweather. *Dental Surgeons:* Mr. F. H. Weiss, Mr. Oakley Coles, Mr. G. J. Williams, Mr. A. F. Canton, Mr. H. T. K. Kempton, Mr. H. Rose. *Assistant Dental Surgeons:* Mr. W. G. Weiss, Mr. C. J. Noble, Mr. G. A. Williams, Mr. T. Gaddes, Mr. W. R. Humby. *Lecturers:* Dental Anatomy and Physiology: Mr. T. Gaddes; Dental Surgery and Pathology: Mr. Oakley Coles; Dental Mechanics: Mr. G. J. Williams; Dental Metallurgy: Mr. A. Tribe; Operative Dental Surgery: Dr. W. F. Thompson; Elements of Histology: Mr. T. Gaddes; Demonstrator of Dental Mechanics: Mr. H. Rose; Deformities of the Mouth: Mr. Oakley Coles; Arts and Literature: Rev. H. R. Belcher, M.A.

Clinical Demonstrations are given from time to time.

Dresserships in the extraction-room are held for three months by six senior and six junior students of the hospital.

Prizes.—Four Prizes in Medals are open for competition at the end of each course of lectures required. Certificates of Honour are given in each class.—The Rymer Medal for General Proficiency, value £5, with books or instruments, is awarded annually to the most meritorious student.—Mr. Oakley Coles gives a prize for the best prepared notes of his Lectures on Dental Surgery. Dr. Thompson will also give a prize.

Fees.—General fee for Special Lectures required by the curriculum of the Royal College of Surgeons of England: Two Courses each on Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, with one course on Dental Metallurgy, £12 12s. Single Courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, each, one course, £2 12s. 6d.; two courses, £4 4s.; Dental Metallurgy, one course, £3 3s.; two courses, £5 5s. For lectures on subjects not required by the curriculum (these Lectures, with the exception of the Arts and Literature Class, are free to students who have entered for the Special Lectures), Elements of Histology and Demonstrations on Dental Mechanics, each £1 1s.; Operative Dental Surgery, Deformities of the Mouth, each £2 2s.; Arts and Literature Class (three months), £3 3s. Hospital Practice, to registered practitioners, six months, £7 7s.; twelve months, £9 9s. For the Two Years' Hospital Practice required, £12 12s. Total fee for the Special Lectures and Hospital Practice required, £25 4s.

Information respecting the Hospital Practice and the College may be obtained from the Dean, Mr. Oakley Coles, at the Hospital, Great Portland Street.

Dental Hospital of London Medical School.—Lectures are given at this School on Mechanical Dentistry, by Dr. Walker; on Metallurgy in its Application to Dental Purposes, by Dr. Louis; on Dental Surgery and Pathology, by Mr. A. Coleman; on Dental Anatomy and Physiology (Human and Comparative), by Mr. C. S. Tomes.

The staff of the Dental Hospital of London consists of *Consulting Physician:* Sir Thomas Watson, Bart., M.D. *Consulting Surgeon:* Mr. Christopher Heath. *Consulting Dental Surgeons:* Mr. S. Cartwright; Mr. John Tomes. *Dental Surgeons:* Mr. Fox; Dr. Medwin; Mr. Gregson; Mr. Coleman; Mr. Moon; Mr. A. Hill. *Assistant Dental Surgeons:* Mr. F. Canton; Mr. A. Gibbings; Mr. D. Hepburn; Mr. R. Woodhouse; Mr. Bartlett; Mr. S. J. Hutchinson.

The Saunders Scholarship of £20 *per annum*, and Prizes, are open for competition.

Fee for two years' hospital practice or lectures, each £15 15s. Fees for lectures and practice, £31 10s. Additional fees for a General Hospital for the two years to fulfil the requirements of the curriculum vary from £40 to £50.

Further particulars may be obtained on application to the Dean, Mr. T. F. K. Underwood, at his residence, 11, Bedford Square, W.C.; or at the Hospital.

Instruction in Dentistry is also given at the Medical Schools. For particulars and fees, see the table and notes in previous pages.

Birmingham.—Dr. Hill has a very satisfactory rate of mortality to record for the year 1879, the deaths numbering 8,650 as against 9,662 in 1878. The death-rate was 21.82 per 1,000, against 25.2, 23.9, 22.4, 26.3, 26.8, and 24.8 per 1,000 in the preceding six years. The contributory causes of this gratifying improvement are to be found in several circumstances: a low summer temperature, with the consequent smaller mortality from diarrhœa; an immunity from fatal small-pox; and a diminution of the severity of scarlatina and whooping-cough; to say nothing of the many sanitary works effected by the health department. The mortality under one year of age was considerably smaller than in 1878, this reduction being principally owing to the unusually slight fatality of diarrhœa in the summer and autumn months. On the other hand, the mortality in the periods of life between forty and eighty years was increased by the great prevalence of bronchial and other chest-affections at the beginning and end of the year. The zymotic death-rate for 1879 was only 3.2 per 1,000, as compared with 6.3, 4.2, 3.6, 5.9, 7.3, and 5.6 in the preceding years. Whooping-cough was the most fatal disease of this class, causing in all 384 deaths. Scarlatina, which in 1878 occasioned no fewer than 995 deaths, was last year fatal in 309 instances. Diarrhœa also, which in 1878 caused 680 deaths, was last year fatal in 234 cases; a number considerably lower than any on record. Measles caused 169 deaths, and was widely spread over the borough at the end of the year. Fevers caused 87 deaths, and diphtheria 71 deaths, both numbers showing a decrease. Dr. Hill devotes some space to a consideration of the circumstances of the cases of these diseases occurring in the borough last year, and states that, "70 per cent. of the diphtheria, and 50 per cent. of the typhoid cases were associated with drainage defects and excrementitious animal filth on the surface, caused by the keeping of fowls, ducks, and pigeons in courts and houses." Amongst constitutional diseases, the deaths from phthisis, dropsy, and tabes mesenterica were somewhat less, while those from cancer had increased. Of diseases of the nervous system, the number of deaths from convulsions, brain-disease, and epilepsy, show a material decline on the figures for 1878; while, on the other hand, the deaths from both apoplexy and paralysis were more numerous. Deaths from diseases of the organs of circulation and of the respiratory organs show an increase, and developmental diseases a decrease, on the figures for 1878.

Whitechapel.—Mr. Liddle records for this district a somewhat increased mortality for the year 1879—the death-rate being 26.0, as against 25.6 in 1878. Deducting the 615 deaths in the London Hospital, the actual rate of mortality is reduced to 23.6 per 1,000. Of the total deaths, 318 were due to zymotic diseases—7 to small-pox, 49 to measles, 89 to scarlet fever and diphtheria (for some inscrutable reason bracketed together), 73 to whooping-cough, 67 to diarrhœa, and 33 to "fever". The zymotic deaths constituted 13.1 per cent. of the total mortality. The number of sanitary improvements in individual houses was very large; and the report shows great activity in the supervision of the district.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 11TH, 1880.

THE CURRICULA FOR 1880-81.

ANOTHER educational number of the BRITISH MEDICAL JOURNAL appears, containing, as before, the regulations of nineteen examining bodies conferring numerous titles and a place on the *Medical Register*, authorising the holders to practise medicine and surgery. The carrying out of the conjoint scheme is still among the things which repose in the obscurity of the future.

The changes in the curricula required have been few, and will be found recorded in their proper places.

The Medical Council has revised the list of subjects required at the preliminary examination; but its recommendations on the subject will not take effect until January 1st, 1882.

The Royal College of Physicians of London has issued a new code of regulations for the Licence, to which all students commencing professional study after March 25th, 1880, will be subjected. Those who entered before that date can be examined under the old regulations. The new curriculum is closely assimilated to that for the membership of the Royal College of Surgeons.

The King and Queen's College of Physicians in Ireland has, under the powers given to it by charter, instituted a new grade—that of member. The regulations under which the diploma can be obtained are summarised in a previous page.

In other respects, the regulations of the examining bodies contain nothing demanding special notice.

CHANGES IN THE MEDICAL SCHOOLS.

THE following changes have been made in the staff of the medical schools since the publication of the last educational number.

At St. Bartholomew's Hospital, the vacancy in the surgical staff caused by the lamented death of Mr. Callender has been filled by the promotion of Mr. Willett from the office of Assistant-Surgeon to that of Surgeon.

At the Charing Cross Hospital, Dr. D. B. Lees has retired from the office of Assistant-Physician. Dr. Houghton lectures on Botany in the room of the Rev. J. C. Saunders.

At St. George's Hospital, Mr. Stirling has retired from the office of Assistant-Surgeon, and has been succeeded by Mr. Bennett. He takes Dr. Cavafy's place as lecturer on Physiology. Mr. Donkin succeeds Mr. Wanklyn as lecturer on Chemistry and teacher of Practical Chemistry. Mr. Bennett teaches Practical Physiology, and also, in conjunction with Mr. Haward, Operative Surgery. Dr. I. Owen gives Pathological Demonstrations in place of Dr. W. Ewart.

At Guy's Hospital, Mr. Salter has retired from the office of Dental Surgeon. Mr. Moon now alone holds the office.

At King's College Hospital, Dr. G. F. Yeo has retired from the office of Assistant-Surgeon, and has been succeeded by Mr. W. W. Cheyne; and Mr. M. M. McHardy has succeeded the late Mr. Soelberg Wells as Professor of Ophthalmology.

At the London Hospital, Dr. Stephen Mackenzie succeeds Dr. Sutton as lecturer on Medicine, and Mr. J. E. Adams takes the place of Mr. Couper as lecturer on Surgery. Dr. F. Warner lectures on Botany, and Mr. J. E. Adams (with Mr. Reeves) teaches Operative Surgery. Dr. Ramskill has retired from the office of Physician, and Dr. Barlow from that of Assistant-Physician. Dr. F. Warner and Dr. Ralfe have been appointed Assistant-Physicians, and Mr. Treves Assistant-Surgeon.

At St. Mary's Hospital, Dr. D. B. Lees has succeeded Dr. R. Farquharson, M.P., as Assistant-Physician; and Mr. Pepper teaches Practical Physiology in place of Dr. Shepherd, who became Dr. Cheadle's colleague in teaching Pathology. Mr. Spicer has succeeded Mr. Griffin as Demonstrator of Anatomy.

At the Middlesex Hospital, Dr. Greenhow has retired from the office of Physician. Dr. Coupland has been promoted to the vacant physicianship, and Dr. Fowler has been appointed Assistant-Physician. Mr. Hensman teaches Aural Surgery in place of Mr. A. Clark.

At St. Thomas's Hospital, Dr. Sharkey is associated with Dr. J. Harley in the lectureship on Physiology, and has been appointed an Assistant-Physician. Mr. Anderson has been appointed an Assistant-Surgeon.

At University College Hospital, Dr. T. Barlow has been appointed an Assistant-Physician; and Mr. Silcock and Mr. Pollard have become Demonstrators of Anatomy in the College. Dr. Poore has succeeded Dr. Maudsley as Professor of Medical Jurisprudence.

At the Queen's College, Birmingham, Dr. Carter has been associated with Dr. Norris and Mr. Bartleet in the professorship of Physiology. Dr. R. Simon has been appointed Assistant-Physician to the General Hospital, in place of Dr. Gibson.

In the Bristol Medical School, Mr. Atchley teaches Practical Physiology in place of Dr. Shingleton Smith, and Mr. D. Davies has been appointed Lecturer on Hygiene. In the Bristol Royal Infirmary, Dr. Harrison has been appointed Physician in the room of Dr. Siddall.

In the Leeds School of Medicine there are no changes. In the General Infirmary, the vacancy in the office of Physician caused by the death of Dr. Heaton has been filled by the appointment of Dr. Churton.

In the Liverpool Royal Infirmary School of Medicine, Mr. E. H. Greves has been appointed Demonstrator of Anatomy in place of Mr. H. Briggs.

In Owens College, Manchester, Mr. J. M. Brown is Demonstrator of Anatomy in place of Mr. Branfoot. The office of teacher of Practical Surgery is at present vacant, in consequence of the death of Mr. S. M. Bradley. In the Royal Infirmary, two vacancies in the surgical staff caused by the retirement of Mr. Bowring (who has been appointed Consulting Surgeon) and the death of Mr. Bradley, have been filled by the promotion of Mr. Walter Whitehead and the appointment of Mr. T. Jones; and Mr. F. A. Southam has been appointed an Assistant-Surgeon.

There are no changes in the Sheffield Medical School.

In the University of Durham College of Medicine, Dr. Oliver succeeds Dr. Drummond as teacher of Practical Physiology; and Mr. Mears is associated with Mr. Russell in the lectureship on Anatomy.

There are no changes in the Universities of Aberdeen and of Edinburgh.

In the Extra-Academical School of Medicine in Edinburgh, Mr. J. Hunter has become a lecturer on Physiology and Practical Physiology. Dr. C. Muirhead ceases to lecture on Medicine; and Dr. Affleck and Dr. Byrom Bramwell have been appointed to lectureships on that subject. Dr. C. Underhill has been appointed a lecturer on Midwifery; and Dr. Burst on Pathology.

In the University of Glasgow, Dr. M. Charteris has succeeded Dr. Cowen as Professor of Materia Medica; and has been succeeded by Dr. Samson Gemmell as lecturer on Medicine in Anderson's College.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and a statement of the ceremony, if any, which will take place on the occasion.

St. Bartholomew's Hospital—October 1st; annual dinner of old students.
Charing Cross Hospital—October 1st, 4 P.M.; address by Mr. Hird.
St. George's Hospital——October 1st, 4 P.M.; address by Dr. Cavafy; dinner at Willis's Rooms, Mr. Henry Lee in the chair.
Guy's Hospital—October 1st; *conversazione* at 8.30 P.M.; distribution of medals and prizes.
King's College—October 1st, 4 P.M.; address by Dr. G. Johnson, F.R.S.
London Hospital—October 1st.
St. Mary's Hospital—October 1st, 3 P.M.; address by Mr. Pye; annual dinner in hospital board-room at 6 P.M., Mr. J. R. Lane in the chair.
Middlesex Hospital—October 4th, 3 P.M.; distribution of prizes, probably by H.R.H. the Duke of Cambridge. Dinner at St. James's Hall at 6.30, Dr. A. P. Stewart in the chair.
St. Thomas's Hospital—October 1st, 3 P.M.; address by Dr. Ord; annual dinner in Governors' Hall at 6.30.
University College—October 4th, 8 P.M.; address by Dr. Burdon Sanderson, F.R.S.; *conversazione* after address.
Westminster Hospital—October 1st, 3 P.M.; address by Dr. Donkin; distribution of prizes; annual dinner at 7 P.M.
Birmingham (Queen's College)—October 4th; address by Mr. Bartleet at 3.30 P.M.; presentation of prizes.
Bristol Medical School—October 1st.
Leeds School of Medicine—October 1st, 4.30; address by Mr. C. J. Wright; distribution of prizes.
Liverpool Royal Infirmary School of Medicine—October 2nd, 3 P.M., the Bishop of Liverpool in the chair; address by Dr. A. T. H. Waters; distribution of prizes.
Owens College (Manchester Royal) School of Medicine—October 1st.
Sheffield School of Medicine—October 1st, 4 P.M.; address by Dr. Gwynne.
University of Durham College of Medicine, Newcastle-on-Tyne—October 1st, 2 P.M.; presentation of scholarship and prizes by the Duke of Northumberland; address by Dr. Barron.
Aberdeen University—October 27th.
Edinburgh University—October 25th.
Edinburgh School of Medicine—October 25th, 11 A.M.; address by Dr. F. W. Moinet.
Glasgow University—October 26th; address by Dr. Cleland.
Glasgow, Anderson's College.—October 27th, 2 P.M.; address by Dr. Dittmar.
Glasgow, Royal Infirmary School of Medicine—October 27th, 3 P.M.; address by Dr. John Clark.

DR. SPENCER COBBOLD's paper on Trichinosis and the Dangers arising from the Consumption of Flesh-food, published in the *Sanitary Record*, has been translated into Italian and republished in the *Osservatore, Gazetta delle Cliniche di Torino*.

M. RICORD is suffering from a wound in the foot, caused by the awkwardness of a chiropodist, whose instrument penetrated the joint. At one time, there was an idea of amputating one of the toe-joints, but, happily, this is not found to be necessary.

WE regret to see that outbreaks of cholera at Saratoff on the Volga, and in the summer camp at Orel in Russia, are reported. The *Novoe Vremya* asserts that upwards of seven hundred soldiers are ill with the disease. The intense heat now prevailing in Russia, and the bad water-supply of the camp, are assigned as the causes of the outbreak.

ANOTHER death amongst the medical staff is reported from the Paris Hôpital des Enfants. Like many of his colleagues, the victim in this case, M. Angulo, the house-surgeon, died from diphtheria, caught in performing an operation for tracheotomy. M. Angulo was but twenty-five years of age.

OUR correspondent in Paris writes, under date of September 6th:—The death of Dr. Delpech is announced. It took place from congestion of the brain while out shooting at Bobourg in the department of the Seine and Marne. By this melancholy event, the Conservative portion of the Municipal Council of Paris and the Academy of Medicine have lost one of their most zealous members. Dr. Delpech took his degree in 1816, and has been for a long time Physician to the Necker Hospital.

THROUGH the accidental omission of two words, it was stated in last week's JOURNAL that Miss Pyne had been elected lady-superintendent of the Westminster Hospital; it should have been the "Westminster Hospital Nursing Home". The election of a matron to the hospital will not take place before the beginning of October. We are informed that considerable dissatisfaction is felt by members of the medical staff of the hospital, in consequence of no member of that body having been placed on the committee appointed to select candidates for the office in the Nursing Home.

VITAL STATISTICS.

A PARLIAMENTARY return just published gives particulars as to the mortality in England and Wales during certain periods from 1838 to 1877. From these statistics it appears that from 1838 to 1853 the average annual death-rate (all ages and causes) per million of population was 22,386; from 1838 to 1853, excluding 1846 to 1849, the cholera period, 21,840; from 1854, to 1877, 22,141; and from 1868 to 1877, 21,847. In 1847 the number of deaths of children under one year was from all causes, 164,425 per million, and of children from one to five years of age 166,354; while in 1877, the total under one year was 136,025, and between one and five, 151,364. From 1847 to 1853, inclusive, the proportion of deaths of all ages from small-pox was 305 per million; and from 1868 to 1877, inclusive, it was only 261. A note appended to the latter returns explains that during the twelve years, 1838-42 and 1847-53 (the only years prior to compulsory vaccination for which these mortality statistics are available), the average annual death-rate from small-pox was equal to 420 per million persons living; whereas in the twenty-five years (1834-78) of compulsory vaccination, the annual death-rate from this disease has not averaged more than 216 per million, notwithstanding the exceptionally fatal epidemic of 1871-72.

MEN WITH TAILS.

PROFESSOR VIRCHOW has recalled attention to this subject. One of the longest tails on record is that reported by Greve in 1878 (Virchow's *Archiv*, Band lxxii, p. 129). This occurred in the case of a new-born infant, was 7.5 *centimètres* in length, and moved about when pricked with a needle. It was removed by an operation. Virchow has recently dissected this tail (*Archiv*, Band lxxix), and found it not to contain any bone, cartilage, or muscle: nevertheless, it was a good substitute for a tail. Michel has pointed out that in the human embryo a rudimentary tail is distinctly made; and the discovery of men with tails seems to lend support to Lord Monboddo's theory, that all mankind originally wore them. Virchow remarks upon the frequent occurrence of a considerable quantity of hair upon the sacral region of new-born children. The custom among certain savage nations of attaching artificial tails to the person has been regarded by some anthropologists as a reminiscence of the happier times of tailed ancestors. Virchow, however, throws some doubt on this. He refers to several cases of tails in men reported by recent or older writers. Dr. Ornstein of Athens, surgeon-in-chief of the Greek army, has recently reported several instances of abnormal growth of hair in the sacral region, which Virchow designates as "sacral trichosis". Ornstein's view was, that these growths were atavic in character, and were analogous to the hairy tails of inferior animals. Virchow, having met with a case of partial lumbar trichosis, investigated the matter, and came to the conclusion that two similar but distinct conditions may exist—either a simple growth of hair or a hairless prolongation from the coccyx of a cutaneous nature. Vir-

chow's case appeared, on examination, to be an unusual form of nævus pilosus, situated over the closed spina bifida of an adult woman, and evidently to be explained by the supposition of early local irritation. But, on the other hand, medical literature affords a certain number of examples of true tail-formation in man, this appendage apparently resulting from elongation of the vertebral column. None of these cases, however, were complicated by the abnormal growth of hair. One of Ornstein's cases showed a distinct elongation five *centimètres* in length. It appeared to originate in the attachment between the first and second false vertebræ of the coccyx. The process itself was hairless, but a decided collection of hair appeared over the sacral region.

DEATH FROM CHLORAL.

We learn with the deepest regret that Mr. Amphlett, Assistant-Surgeon to Charing Cross Hospital, who, as is well known to most of his friends, had suffered for some years past from severe and painful attacks of asthma, died on Thursday morning from the effects of an overdose of hydrate of chloral. He had been in the habit of taking this drug to obtain relief from the severe sufferings caused by the frequent attacks of dyspnœa to which he was subject. Like other medical men who accustom themselves to the use of this dangerous drug without due advice, he had grown incautious.

DIARRHŒA IN LONDON.

The deaths in London referred to diarrhœa, which had been 265 and 270 in the two preceding weeks, declined to 232 last week, but exceeded the corrected weekly average by 29. The 232 fatal cases included 171 of infants under one year of age, 42 of children aged between one and five years, and 12 of persons aged upwards of sixty years. The deaths of eleven infants and young children, and of one adult, were referred to simple cholera or choleraic diarrhœa.

SCOTLAND.

SCARLET FEVER AT POLLOCKSHAWS AND BLAIRGOWRIE.

There is at present a considerable outbreak of scarlet fever at Pollockshaws, and also at Blairgowrie. In the former, no fatal cases have been registered, and some have been sent to the hospital; in the latter, a number of fatal cases have occurred.

HYDROPHOBIA AND ITS PREVENTION.

At a meeting of the Scottish Metropolitan Veterinary Association, held in Edinburgh last week, a valuable paper was read by Professor Walley, Principal of the Dick College, "On Hydrophobia in the Dog and the difficulties of its recognition". In the course of the paper, he mentioned that the disease had been very prevalent among dogs in Edinburgh since the beginning of this year, and that it had been imported chiefly from the south and west. He also pointed out that it had not been nearly so much among outcast dogs as among domestic pets and valuable dogs. In his own practice, about thirty cases had been brought to him; and from other practitioners he had learned of about forty other cases. He strongly supported the authorities in their raid on uncared-for dogs, and in putting proper restraints on all dogs. In connection with this, and with the persistence of the disease, the magistrates have caused the order regarding the muzzling or caretaking of dogs to be extended till the end of October.

REGISTRAR-GENERAL'S RETURNS.

From the Registrar-General's returns for the week ending August 28th, it appears that the death-rate in the eight principal towns was at the rate of 18.4 per 1000 of estimated population. This rate is 0.2 under that for the previous week of the present year. The lowest mortality was recorded in Greenock, viz., 13.1 per 1000; and the highest in Leith, viz., 28.4 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.0 per 1000—nearly the same as for the previous week. Acute diseases of the chest caused 55 deaths, being 16 more than the number for last week. The mean temperature was 59.2°, being 0.2° above that of the preceding week.

DEATH OF DR. HIRSCHFELD OF BANFF.

It is with great regret we have to make the announcement of the death of the above-mentioned gentleman, which was caused by the sudden swamping of a pleasure-boat in which he was cruising along with some friends. The sad event took place on the evening of August 31st, and was rendered more distressing by his being accompanied by his son, in attempting to save whom he lost his life. Dr. Hirschfeld served with distinction in the British Ambulance during the Franco-Prussian war, and was a medical man of great promise. His death has cast a gloom over the town where he practised.

INJURY FROM LIGHTNING.

On the morning of the 5th instant, during a severe thunderstorm, a boy was struck by lightning at Cambuslang. He was in bed at the time, and the lightning, finding an entrance, apparently, by the door, struck him about the face, rendering him insensible. On medical assistance being obtained, restoratives were applied, and, towards mid-day, consciousness returned.

HEALTH OF EDINBURGH.

The mortality in Edinburgh last week was 20 per 1,000. There were thirteen deaths from zymotic diseases; nine of these were from scarlet fever, and five of them occurred in the Old Town. In Glasgow, the death-rate was also 20 per 1,000.

IRELAND.

During the June quarter, there were registered 9 deaths at 100 years of age; two at 105 years; one at 106; and one at the alleged age of 111 years. The latter is stated by the registrar of the Kilshannig District Mallow Union, where the death took place, to be well authenticated.

NURSING IN WORKHOUSE HOSPITALS.

A committee appointed by the Guardians of the South Dublin Union, to report upon the subject of having the nursing in the union hospital performed by ladies of religious orders, have reported in favour of such a system. The committee, in order to obtain reliable information as to how the system works in other unions, visited some of the principal workhouses in Ireland in which it exists. They found that in all these unions, although at first, in some cases, objections had been made, there is now but one opinion as to the advantages, both to the paupers and ratepayers, of the system of nursing by religious ladies. The uniform report made to the committee was that, since their introduction, the comforts of the paupers had been better attended to, the food and stimulants had been faithfully administered, waste and abuses prevented, and the whole tone of the hospitals improved. There had been no instance of interference in any way with the religious views of the inmates; and it had been found in Cork Workhouse, where Protestant sisters attended the Protestant wards and nuns the Roman Catholic wards, that the ladies of each church worked together in perfect harmony.

HEALTH OF BELFAST.

During the month of August, the number of cases of zymotic diseases reported by the medical officers of the several dispensary districts has again been extremely few; viz., twenty, which included seventeen of enteric fever and one of small-pox. Twelve cases of fever and one of small-pox were removed to hospital, every precaution being taken to cleanse and fumigate the houses, the clothing and bedding being destroyed by fire. The average death-rate for the four weeks ending August 21st was 25.7 per 1,000; but, calculated on the corrected population, it was 20.8. Zymotic diseases produced a rate of 4 per 1,000 out of the total deaths registered. Were it not for a very considerable mortality from diarrhœa, the deaths from zymotic diseases would have been remarkably few; but the returns nevertheless show that the health of Belfast is in an extremely satisfactory condition, as compared with other manufacturing towns; and that the death-rate has been steadily declining since the month of May.

ASSOCIATION INTELLIGENCE.

EAST ANGLIAN BRANCH.

THE annual meeting of this Branch will be held at Lowestoft, on Friday, October 8th.

It is requested that notice of intention to read a paper or other communication may be forwarded to Dr. Elliston by September 14th.

J. B. PITT, M.D., Norwich,
W. A. ELLISTON, M.D., Ipswich, } *Honorary Secretaries.*

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held at Barnard Castle, on Tuesday, October 5th.

Members intending to read papers are requested to communicate at once with the Secretary.

Durham, September 9th. T. W. BARRON, *Honorary Secretary.*

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this District will take place at Folkestone, on Thursday, September 23rd.

Members intending to read papers are requested to give immediate notice.

W. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, September 6th, 1880.

CORRESPONDENCE.

THE DENTAL ACT.

SIR,—Will you kindly allow me to correct several errors of recorded facts into which the author of the article, "Mr. Tomes and the Dental Profession", has unconsciously fallen? There were and are no means of knowing the precise number of qualified surgeons who practise dental surgery; but there is no reason to suppose that the number materially falls above or below one hundred. Of these, seventy petitioned Parliament in favour of the Dentists' Bill, and sixty-eight subsequently memorialised members of Parliament, individually, to support the Bill as it then stood. Hence, instead of acting against, as stated in the article, I acted with the majority of surgeons practising dental surgery.

When the dental section of the Lord President's Medical Bill was, clause by clause, under the consideration of the Medical Council, a motion was made which aimed at depriving the Licentiates in Dental Surgery of the right to use the title of dental surgeon. The question was then fully considered. Sir James Paget, Professor Rolleston, Mr. Simon, and Dr. Storrar, took an active part in the discussion against the motion, which was rejected by a vote of twelve to five. Hence the right was, contrary to the allegation in the article, approved and preserved by leading members of Council in their place at the Council board.*

In the minutes of the Medical Council, July 1878, will be found a letter from the Government counsel, Mr. Jenkyns, stating that the Dentists' Bill, under the direction of the Government, had been amended, so that the dentists under the amended Bill would be placed in the same position as they would have been in had the dental section, as approved by the Council of the Lord Presidents' Bill, become law. More than one-half of the letterpress of the Dentists' Act consists of clauses transferred from the Medical Bill cited; and hence it cannot be justly said that the Act is "essentially different from the Bill which they (the General Medical Council) had approved in Council".

The evidence of the Council's minutes, and the very extensive changes the Bill underwent in the House of Lords at the instance of the Council, prove that the provisions of the Act were made to accord with the decisions of the Medical Council; notwithstanding the off-hand allegations to the contrary made (even by two or three members of Council) in after-dinner speeches, to the guests at the quoted banquet given by the few dentists who were acknowledged opponents of the Dentists' Act.—Yours, etc., JOHN TOMES.

Penzance, September 7th, 1880.

* Statements of Medical Council [illegible] and reports of discussions in the medical and [illegible] daily [illegible]

THE death of Dr. William Armstrong Burges, A.M.D., is reported as having taken place at Meerut, India, on August 23rd, in consequence of a fall from his horse.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 2nd, 1880.

Harral, Charles Henry, Kirkgate, Leeds.
Head, Philip Alexander Dewar, Clapton.
Hepburn, William Alexander, Coxhoe, Durham.
Morgan, William Pierce, Dowlais, Glamorganshire.
Stutt, John, Commercial Road, E.
Watson, Archibald, Paris.

The following gentlemen also on the same day passed their Primary Professional Examination.

Cowan, Richard Hamilton, London Hospital.
Faraker, John Joseph, Guy's Hospital.
Hudson, Ernest, University College.

In the list published on August 21st, the name "Oswold" should have been "Oswald".

MEDICAL VACANCIES.

For [illegible] which are not fully [illegible] in the advertisement [illegible]

THE following vacancies are announced :—

ABINGDON UNION—Medical Officer and Public Vaccinator to No. 3 District. Salary, £15 per annum. Applications, with testimonials, on or before September 11th.

BETHLEM HOSPITAL—Two Resident Medical Students. Applications, with testimonials, before October 9th.

CAMBRIDGE COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and attendance. Applications, etc., on or before September 27th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £50 per annum, with board and lodging. Applications, with testimonials, before October 10th.

*EVELINA HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with board, washing, and residence. Applications, with testimonials, [illegible] before September 21st.

EXETER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION—Junior Medical Officer. Salary, £120 per annum. Applications, etc., to the Secretary at once.

ISLINGTON PARISH—Medical Officer for the Barnsbury District. Salary, £80 per annum. Applications, etc., on or before September 15th.

RIPON DISPENSARY—Resident House Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, etc. Applications, with testimonials, to the Honorary Secretaries.

WESTERN GENERAL DISPENSARY, Marylebone Road—Honorary Surgeon-Dentist. Applications, with testimonials, to the Secretary on or before September 11th.

WESTERN OPHTHALMIC HOSPITAL—Clinical Assistant.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, [illegible] Welbeck Street, W.—Assistant Physician. For particulars, apply to the Honorary Secretary.

WIMBORNE AND CRANBORNE UNION RURAL SANITARY AUTHORITY—Medical Officer of Health. Applications, with testimonials, on or before September 16th.

YORK FRIENDLY MEDICAL ASSOCIATION—Assistant Medical Officer. Salary, £[illegible] per annum. Applications, with testimonials, to the Secretary, before September 14th.

MEDICAL APPOINTMENTS.

Notices of [illegible] appointments of Members of the Association.

ARCHER, Robert S., A.B., M.B., appointed Honorary Physician to the Fever Hospital, Netherfield Road, Liverpool.

[illegible], C. A., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

BUTLER, H. P., L.R.C.P., appointed House-Physician to St. Thomas's Hospital.

[illegible], Alexander, M.D., appointed Honorary Physician to the Fever Hospital, Netherfield Road, Liverpool.

[illegible], H. H., M.B., appointed Demonstrator of Anatomy in the Liverpool Royal Infirmary School of Medicine. H. Phillips, M.B., resigned.

HATTON, G. S., M.B., appointed House-Physician to St. Thomas's Hospital.

[illegible], J. B., M.D., appointed Assistant House-Physician to St. Thomas's Hospital.

RICHARDSON, C. B., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

ROBINSON, James, M.D., appointed Certifying Surgeon for the Turton District, *vice* John Robinson, M.R.C.S.E., deceased.

[illegible], H. R., M.R.C.S., appointed Assistant House-Physician to St. Thomas's Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for [illegible] Marriages and Deaths, [illegible] and [illegible] stamps with the documents.

BIRTHS.

HORSLEY.—On the 1st inst. at Bromsgrove, the wife of Geo. H. Horsley, M.R.C.S., of a daughter.

TYLECOTE.—On Sept. 8th, at Sandon, Staffordshire, the wife of J. H. Tylecote, M.D., of a still-born son.

MARRIAGES.

BLUMER—GRIFFITHS.—On the 7th instant, at St. John's, Hackney, by the Rev. J. C. Buckley, M.A., W. Percy Blumer, Surgeon, of Keyworth, Nottingham, eldest son of L. Blumer, M.D., Sunderland, to Jessie Perks (Deaconess Jessie), fifth daughter of Samuel Griffiths, of Claremont Lodge, Stoke Newington, and 84, Cannon Street, London.

JOHNSTON—MOORE.—On the 31st August, at the Abbey Church, Tewkesbury, by the Rev. Hemming Robson, assisted by the Rev. Thurston Rivington, E. Cocks Johnston, M.R.C.S., Bristol Street, Birmingham, to Edith Mary Moore, eldest daughter of B. T. Moore, J.P., Tewkesbury.

REID—MUNNS.—On the 2nd instant, at St. Martin's Church, Canterbury, by the Very Rev. the Dean of Canterbury, assisted by the Rev. William Newman and the Rev. T. H. Maitland, Thomas Whitehead Reid, M.R.C.P.Ed., M.R.C.S.Eng., L.R.C.P.Lond., to Emily Eliza, third daughter of Colonel Munns, of St. Martin's Priory, Canterbury.

SAUNDBY—SPENCER.—On the 19th August, at Bishops Wood, by the Rev. R. Ford Heath, M.A.Oxon., Vicar of the Parish, assisted by the Rev. R. Wilson Jones, M.A.Oxon., brother-in-law of the bridegroom, Robert Saundby, M.D.Edin., to Mary Edith, third daughter of Thomas Spencer, Esq., of Blackladies, Staffordshire.

DEATHS.

BURROWS.—On Sept. 8th, at Ivy House, Aigburth Road, Liverpool, in her 82nd year, Elizabeth, wife of Dr. John B. Burrows, of the above city. No cards. The funeral will leave Ivy House for the Necropolis at 11 A.M. on Saturday, the 11th instant.

HUGHES.—On September 1st, suddenly, Robert Hughes, Esq., M.R.C.S., L.S.A., The Red House, Woodbridge, Suffolk, aged 40.

MOORE.—On the 4th instant, at 2, Osborne Terrace, South Circular Road, Dublin, Malcolm Henry Moore, M.B., aged 23.

PUBLIC HEALTH.—During last week, being the thirty-fifth week of this year, 4,061 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 20 in Edinburgh, 20 in Glasgow, and 36 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Oldham, 19; Plymouth, 19; London, 21; Bristol, 22; Portsmouth, 22; Brighton, 23; Birmingham, 23; Bradford, 24; Newcastle-upon-Tyne, 26; Hull, 27; Manchester, 27; Sheffield, 27; Leeds, 27; Wolverhampton, 27; Liverpool, 34; Nottingham, 35; Salford, 35; Norwich, 35; and the highest rate, 38, in Sunderland and Leicester. The annual death-rate from the seven principal zymotic diseases averaged 7.8 per 1,000 in the twenty towns, and ranged from 4.2 and 4.9 in Plymouth and Brighton, to 17.0 in Norwich, 17.4 in Salford, and 19.3 in Leicester. Scarlet fever showed fatal prevalence in Norwich and Sunderland. The deaths from enteric fever were proportionally excessive in Portsmouth and Plymouth. The deaths referred to diarrhœa in the twenty towns, which had steadily increased in the eleven preceding weeks from 51 to 958, declined last week to 853, and were equal to an annual rate of 5.9 per 1,000. The death-rate from diarrhœa was equal to 3.3 in London, and to 8.5 in the nineteen provincial towns, among which the rate ranged from 2.1 and 2.9 in Plymouth and Brighton, to 14.1 in Salford, and 18.1 in Leicester. In London, 1,460 deaths were registered, exceeding the average by 10. The annual death-rate from all causes was 20.8 per 1,000. The 1,460 deaths included 5 from small-pox, 15 from measles, 47 from scarlet fever, 10 from diphtheria, 25 from whooping-cough, 23 from different forms of fever, and 232 from diarrhœa—being altogether 357 zymotic deaths, which were 11 below the corrected average, and were equal to an annual rate of 5.1 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 167 and 124 in the two preceding weeks, rose again to 152 last week, and exceeded the corrected average by 6; 79 were attributed to bronchitis, and 43 to pneumonia. Different forms of violence caused 42 deaths; 29 were the result of negligence or accident, including 13 from fractures and contusions, 4 from drowning, and 7 of infants under one year of age from suffocation. The deaths include 54 of persons aged upwards of eighty years, of whom no fewer than eleven were stated to be nonagenarians.—At Greenwich, the mean temperature of the air was 67·3°. The warmest day was Saturday, when the mean was 73.2°, and exceeded the average by 13.5°. The lowest night temperature was 53.6° on Wednesday, and the highest day temperature in the shade 87.2° on Saturday; the extreme range in the week was, therefore, 33.6°. The highest temperature in the sun was 143.2° on Saturday. The general direction of the wind was easterly, and the horizontal movement of the air averaged 7.2 miles per hour. No rain was measured during the week. The duration of registered bright sunshine in the week was 55.5 hours, equal to 59 per cent. of its possible duration. The recorded amount of ozone was above the average.

MEDICAL MAGISTRATE.—Mr. J. J. B. Popjoy, L.R.C.P.Lond., has been placed on the Commission of the Peace for the Borough of Accrington.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY .... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE name of Dr. J. Kirk Duncanson (Edinburgh) was accidentally omitted from the list of members of the British Medical Association present at the annual meeting at Cambridge.

INQUIRENS.—Either the circular or the card would be admissible; it being distinctly understood, however, that it was sent exclusively to the private patients of "Inquirens".

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, **not later than *Thursday*, Twelve o'clock.**

THE REV. B.P. CURE FOR DRUNKENNESS.

SIR,—Several inquiries regarding the "red bark cure" for drunkenness, as if this alleged specific were really of value, having appeared in your columns recently, may I be permitted once more to expose the uselessness and danger of this veritable quack nostrum? For particulars, I beg to refer to my article "The Bark Cure" in the [illegible] for July 1879. Suffice it here to state that the directions given by Mr. D'Unger for the preparation of his panacea show that, at its best, it is a strong alcoholic mixture. On examination, I found it to be very strong indeed in spirit. All experienced in the treatment of dipsomania know how dangerous it is to allow the patient to drink any alcoholic liquor; and if for nothing else than its spirituous strength, this Chicago nostrum ought never to be prescribed by the enlightened and honourable practitioner.

Ample confirmation of my exposure is to be found in an interesting article by Professor Earle, M.D., Physician to the Washingtonian Inebriate Home at Chicago, in the current number of the *Chicago Medical Journal*. The Professor has traced the after-history of a number of drunkards whom D'Unger publicly claimed to have cured, most of these subsequently coming under Dr. Earle's treatment. Not one was improved in the slightest by the Cinchona cure. On minute analysis, Professor Earle found that D'Unger's "concentrations", "sold to physicians, ten dollars per pint, six concentrations", were simply prepared by adding the muddy water of Lake Michigan. Dr. Earle further found that D'Unger's specific contained about one grain of bitter principle to the teaspoonful of water and alcohol, alcohol in varying proportions reaching, in some samples, as high as 15 per cent. In other words, these latter specimens were as intoxicating as well-brandied port and sherry! Professor Earle declares his belief (and as he is engaged in hospital practice where he prescribes for nearly four hundred cases of alcoholism annually, his opinion ought to have weight), not only that the Chicago "humbug" is useless as a cure for dipsomania, but that it has made more drunkards in that city during the past year than any one saloon.—Your obedient servant,

NORMAN KERR, M.D.

42, Grove Road, Regent's Park, N.W., August 30th, 1880.

SICK CLUB CERTIFICATES.

SIR,—I am anxious to call the attention of members of the medical profession and of the public to what I consider a great existing abuse. In my own limited practice, as house-surgeon to a provincial hospital, I have noticed among patients a very great anxiety to get certificates of inability to work filled up. On inquiry, I have over and over again found that these patients are members of two or three different clubs, and so are enabled to draw in the aggregate more money per week than they can earn when in full health. Only a few days since, a man with a crushed finger told me that he belonged to two accident clubs, from one of which he was getting 19s. per week, from the other 15s., while the most he could earn when in full health was £1. I admire thoroughly the man who is prudent and self-dependent enough to lay by for a rainy day by joining and paying a yearly sum to one of the numerous accident societies, but I protest that he should belong to one only, and in no case should he be able to obtain more from his club than he earns when at work; otherwise he has a direct and often an overwhelming temptation to malinger, etc., and to live on his clubs when he knows and feels himself to be fully capable of working. The result of this system is obvious. Our clubs, as many if not most of them are, are kept in a perpetual state of insolvency by a few worthless fellows who make a very good living out of them. I would strongly urge all medical men to take the greatest care in filling up certificates of ill-health, and would ask these societies to pass a rule preventing their members belonging to other clubs.

Yours truly, DELTOID.

POISONING IN LEAD-FACTORIES.

SIR,—In connection with the subject of poisoning in lead-factories, to which reference is made in the JOURNAL for August 28th, the following case, which came under my notice about a year ago, when House-Physician at the Royal Free Hospital, may be of interest.

The patient, a powerfully built woman aged about twenty, had worked for about five weeks at a white lead factory near the New North Road. For a few days previously to admission, she had suffered from colic and constipation; and on the morning of admission, had fallen down in a fit at the works. While in hospital, she suffered from symptoms of irritant poisoning, pain in the throat and stomach, constant vomiting, and diarrhœa, the vomited matter coloured with bile. In addition, there was constipation; on one occasion, profuse hæmatemesis and great prostration. She had two violent epileptiform seizures. "Dropped wrist" came on while she was in the hospital. Contrary to expectation, she recovered, going out only with a slight degree of "dropped wrist".

At the same time, two or three of her fellow-workers were attending as out-patients for chronic plumbism, from whom I learned: 1, that it was not uncommon for the lead-workers to fall down in fits while engaged in their employment; 2, that while both men and women were employed at the factory, it was only the women who suffered; 3, that the women had to carry about trays of the heated carbonate, this the men did not have to do; 4, that they never worked more than three, or at the most four, weeks consecutively, then staying away for a week. This precaution my patient neglected to take, and suffered for her neglect. I am, sir, your obedient servant,

ALFRED HAWLEY.

[illegible] Wardley's Road, Birmingham, August 30th, 1880.

CHLOROFORM AND TYPHOID FEVER IN INDIA.

SIR,—In a paragraph under this head in the BRITISH MEDICAL JOURNAL of August 21st, page 324, be serious and intended to induce earnest inquirers to consider all the [illegible] there be meaning in the English language, that the ultimate effect must be the exact reverse of that indicated by him, viz.: "The experience of the last two years is not likely to gain adherents for the new method of [illegible] which Dr. Cunningham has marked out for himself and persistently followed for fifteen years." For, supposing Dr. Cunningham's method to be in every [illegible] [illegible] to the above another line of [illegible] would try to lead us; because, if the usual method of inquiry produced nothing but unsatisfactory results, the greater reason arises for seeking out a more efficient mode of procedure with regard to problems requiring solution; especially if there be reason to [illegible] Dr. Cunningham's [illegible] method of [illegible]

Yours, etc., X. Y. Z.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

NOCTURNAL INCONTINENCE OF URINE.

SIR,—In answer to your correspondent "A. K.", with reference to his patient suffering from "Nocturnal Incontinence of Urine", I beg to state that I have had under my care a large number of such cases. The treatment I have usually adopted is sponging with cold water night and morning, especially the loins, and the following mixture. R Tincturæ belladonnæ *B.P.* 3ss; liquoris potassæ (Brand) 3ss; glycerini 3ij; aquam ad 3viij; ft. mist. Sumat 3j mane et nocte. I have found the above treatment marked with great success.—Yours very truly,

ROBERT ARTHUR JONES.

Maen Hir, Llanfairpwllgwyngyll, Anglesea, August 16th, 1880.

A COUNTRY PARSON.—Continued boiling does not improve the nutritive properties of oatmeal.

NÆVI.

SIR,—Some time ago, I tied a mixed nævus, of the size of a bean, upon the shoulder of a female child eight or nine months old. Four hours afterwards, I removed both needles and ligature, with the view of preventing a scar—a plan recommended by Mr. Cooper Forster. Much inflammation was caused by exposure to cold; and the nævus, at the end of two months, was unaffected. The operation was repeated (under chloroform as before); but, at the end of eight hours, an attempt to remove the thread failed; it therefore remained in its place. It had been tied tightly enough to cause fluid to exude from the tumour. Next day, there was inflammation around the base. I now drew the surrounding skin of the back, chest, and shoulder towards the tumour by means of long strips of plaster, so as to throw it into loose folds (thus relieving tension), leaving the tumour visible in the centre. The redness and swelling quickly disappeared; there was not a drop of pus or other fluid seen; the tumour dried up, and in a few days fell off with the ligature: not thrown off by ulceration, but simply falling like a dead leaf. Since ulceration causes a large scar, and as it probably depends chiefly, as in many other cases, upon the tension of the surrounding skin, this expedient may save marks in situations where it is important to avoid them. The scar in this case was not so visible as even a mild vaccination-mark.—I am, yours faithfully, C.

A THIRTY-THREE DAYS' FAST.

SIR,—In reply to Dr. Charles Aldridge's query—whether the stomach-pump was used to feed Miss L.—Dr. Cross wishes me to say that he did not consider his patient of unsound mind, and that the treatment suggested was uncalled for. Old people, like this fasting patient (aged 80), are proverbially wrong-headed on more points than one; and he would fall into many fatal errors who would class all such of unsound mind. But here is a person refusing food, even to death, and therefore, some would think, of unsound mind. By parity of reasoning, why not relegate to that unfortunate class every person who is afflicted with any moral perversity? The patient was delirious. Now, it is scarcely necessary for me to explain the cause of a slight and transient delirium, after seven or eight days' total deprivation of food. Neither does the fact of a patient remaining in bed perfectly motionless, apathetic, and indifferent to surrounding persons and objects justify, at all events, an ordinary medical practitioner in rushing to the conclusion that he has to deal with an insane patient.—I am, etc.,

M. COLLINS, M.D.

P.S.—In the original report, "acceleration of the second heart-sound at the base" should be "accentuation of the second sound at the base".

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Crichton Browne, London; Mr. James W. Reid, Canterbury; Mr. B. Lane, Ulceby; Dr. L. Holland, Newcastle-upon-Tyne; Mr. Nixon, Epsom; A Country Parson; Dr. James Russell, Birmingham; Dr. Gillespie, London; Dr. Mackey, Brighton; Our Dublin Correspondent; Mr. T. Robinson, London; Mr. B. Baker, Brentwood; Mr. Watson Cheyne, London; Dr. J. B. Gill, Canterbury; Dr. Kirk Duncanson, Edinburgh; Dr. J. H. Gramshaw, Gravesend; Dr. W. J. Mackie, Turvey; Mr. Oliver, Manchester; Mr. J. Prendergast, London; Mr. J. Robinson, Bolton; Dr. J. Murray, Newcastle-on-Tyne; Mr. R. Bligh, Droxford; Mr. Alder Smith, London; Dr. Fourness-Brice, Oxton; Dr. Foulis, Glasgow; Mr. R. B. Cater, Bath; Mr. T. W. Bagshaw, Birkenhead; Dr. Rabagliati, Bradford; Mr. W. J. Hamilton, Edinburgh; Dr. Ashburton Thompson, Toowoomba, Queensland; Dr F. Armstrong, Newcastle-on-Tyne; Mr. F. F. Moore, Burnham; Mr. H. Culliford Hopkins, Bath; Mr. H. Ewart, Manchester; Mr. J. V. Solomon, Birmingham; Dr. Sutherland, London; Dr. E. S. Gaillard, New York; Our Glasgow Correspondent; Dr. Anningson, Cambridge; Mr. C. B. Kelsey, New York; Our Paris Correspondent; Mr. Walter Lattey, Rugby; Dr. W. Stainthorpe, Wareham; Mr. W. Knight Treves, Margate; Mr. John Tomes, Penzance; Dr. O'Connell, Iowa; Our Edinburgh Correspondent; etc.

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,, 52 ,, ,,	30 ,,

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Post Office Orders should be made payable to Mr. Francis Fowke, at the West Central Post Office, High Holborn. Small amounts may be sent in postage stamps.

Agent for the Advertising Department in France: J. ASTIER, 67 Rue Caumartin, Paris.

REMARKS
ON
CREMATION OR BURIAL?*

By T. SPENCER WELLS,
Vice-President of the Royal College of Surgeons; Surgeon to the Queen's Household.

THERE are, no doubt, many members of the British Medical Association who have not thought very much about the evils of the present mode of burying the dead in this and many other parts of the world. There are many more who have not heard at all, or have thought very little, of recent proposals to reform the present system, or to substitute for it one which can be proved to be far better. It is scarcely forty years since the causes of the high rate of mortality, and the means of preventing disease, attracted much attention in our profession; and the necessity for sanitary regulations was impressed upon public opinion. The influence of light and air, of a supply of pure water, of good drainage, ventilation, and cleanliness, as means of preventing disease and prolonging life in large towns, populous districts, and the country generally; the influence of employments upon health; the habits of different classes of the people; the condition of their dwellings; the injurious effects of many nuisances, and the inadequacy of power for preventing them, are all subjects of recent study, and do not yet form a sufficiently defined part of medical education.

It is quite unnecessary here to remind you of the beneficial influence upon the public health and the longevity of the nation, exercised by our profession during the last forty years; but it does appear to me to be necessary to call for the earnest attention of the Association to one source of danger which is increasing every year—the burial of the dead. It is about forty years since a member of our body, Mr. Walker, wrote the remarkable work on graveyards which led to the special inquiry into the practice of interment in towns, and the admirable report of Mr. Edwin Chadwick, which was presented to Parliament in 1843. The evidence he adduced as to the propagation of disease from decaying or putrefying human bodies, was amply sufficient to prove the dangerous tendency of all interments in churches or in towns; and led to the removal of many burial-places from towns or crowded districts into suburban cemeteries. The effects have been admirable. But, with a rapid increase of population, we are now beginning to suffer from the evils which Mr. Chadwick foretold, namely, "shifting the evil from the centre of the populous districts to the suburbs, and deteriorating them"; "increasing the duration and sum of the existing evils". Many of our suburban cemeteries are now very much in the condition of town graveyards forty years ago; and the attention of thoughtful men outside the bounds of our profession has already been directed to a growing evil. Only last year, at the opening of the Social Science Congress at Manchester, the respected and beloved bishop of the diocese, in opening the congress, thus referred to the recent consecration of a new cemetery. "Here", he said, "is another hundred acres of land withdrawn from the food-producing area of the country for ever." And he added, "I feel convinced that, before long, we shall have to face this problem: How to bury our dead out of our sight, more practically and more seriously than we have hitherto done. In the same sense in which the 'Sabbath was made for man, and not man for the Sabbath', I hold that the earth was made, not for the dead, but for the living. No intelligent faith can suppose that any Christian doctrine is affected by the manner in which, or the time in which, this mortal body of ours crumbles into dust and sees corruption." And he concludes: "This is a subject that will have to be seriously considered before long. Cemeteries are becoming not only a difficulty, an expense, and an inconvenience, but an actual danger."

In the debate on the Burials Bill in the House of Lords on June 24th, the Earl of Beaconsfield said that what is called "God's acre" is "really not adapted to the country which we inhabit, the times in which we live, and the spirit of the age. What I should like to see would be a settlement of this question by the shutting up of all God's acres throughout the country. I think the churchyard of the ordained minister, and the graveyard of the dissenting minister, alike, are institutions which are very prejudicial to the health of the people of this country; and their health ought to be, if not the first, at any rate one of the first considerations of a statesman. Now we have been moving gradually in the direction of these views, and there has been for some years a notion, soon about to amount, I believe, to a conviction, that the institution of churchyards is one which is highly prejudicial to the public health. I think it would be a much wiser step if we were to say that the time has arrived, seeing the vast increase of population in this country and the increase which we may contemplate, when we should close all these churchyards, and when we should take steps for furnishing every community with a capacious and ample cemetery, placed in a situation in which, while it would meet all the requirements of the society for which it was intended, would exercise no prejudicial influence on the public health." And he concluded his speech in these terms: I think the direction in which we ought to have moved would have been to shut all these churchyards and graveyards, and to have assisted the Government in some adequate proposal which would have furnished the country with cemeteries in which none of these painful controversies could have occurred, and which would have conduced to the preservation of the health and welfare of the country."

The impressive exhortation of the Bishop of Manchester, from which I have just quoted, was the result, as he tells us, of the perusal of two very able papers written by one of the most distinguished members of our own body, Sir H. Thompson, and published in the *Contemporary Review* in 1874. The first paper, on the Treatment of the Body after Death, led to a reply from Mr. Holland, then medical inspector of burials in England, which contains a summary of all that can be said in defence of cemeteries. But the rejoinder of Sir H. Thompson is a masterly exposition of the evils of our present mode of interment, with an answer to many of the objections to cremation as a substitute for burial, and some account of modern improved apparatus for burning dead bodies at a moderate expense, without any nuisance, and with due regard to the sentiments of surviving relatives. I trust that Sir Henry may be induced to reprint his papers in a form easily accessible to the people. One of the first effects of the perusal of Sir H. Thompson's papers was the association together of a small number of men, and the formation of the Cremation Society of England, numbering, among members of this Association, notably Mr. Ernest Hart and Mr. Lord. I have here the first part of the *Transactions* of this Society. It forms a pamphlet of only sixty-six pages, but it contains a great deal of information as to cremation at home and abroad, up to the date of the sixth anniversary of the Society last January. It may surprise many to learn that cremation is already legalised in parts of Germany and in Italy; that crematoria have been erected and used in Gotha and in Milan and Lodi, and a society established in Rome. A phrase in the sanitary laws of Switzerland which forbade cremation has been removed, and a piece of ground in the new cemetery at Zürich has been set apart for the erection of a crematorium.

On June 16th last, Professor Polli (whose researches on the antiseptic action of the sulphites and hyposulphites I brought before the Association in this town sixteen years ago, in an address on the causes of excessive mortality after surgical operations) who, in late years, had been one of the most ardent supporters of cremation, who had himself proposed a method which was the first tried in Italy, had his body, by his own express desire, cremated, and his ashes were consigned to their resting-place with all due solemnity, in the presence of mourning relatives. This cremation was the sixty-eighth which has taken place in Milan since January 1876.

Several large cremation societies have been formed in Switzerland. One large society in Holland has several branches. In France, the Paris Municipality has called for designs for the best form of furnace. In Belgium, one society in Brussels has more than four hundred members, and M. Creteur has been thanked by the Government for the successful cremation of the bodies of soldiers killed near Sedan. In America, cremation has already been practised at Washington, and several societies have been formed; and the Brazilian Government are about to erect a crematorium at Rio de Janeiro.

While all this has been going on in the European continent and in America, the Cremation Society of England has been working on quietly but earnestly; has purchased an acre of freehold land near Woking, and has erected a crematorium on the model of the *Gorini* furnace, which is the most approved in Italy; and has experimentally proved that the body of an animal may be reduced to a clean innocuous ash, weighing about a twentieth of the unburnt body, at a very small cost, and without any appreciable odour or visible smoke.

The Society has obtained the very highest legal authority, and the admission of the late Home Secretary, that cremation is not illegal, provided it be practised without nuisance, or leading to a breach of the peace. But Sir R. Cross obtained from the Council a promise that, be-

* Read in the Section of Public Health at the Annual Meeting of the British Medical Association in Cambridge, August 12th, 1880.

fore burning a human body, they would endeavour to carry a short Bill through Parliament, or to obtain the insertion of a clause in some Burial Bill, affirming that cremation might be legally practised, and under proper regulations. Hitherto, the Council have been unable to obtain this Parliamentary sanction, and it remains to be seen how far Sir William Harcourt will consider the Council bound to the present Government by their promise to his predecessor in the Home Office. After any discussion which may follow this paper, I trust many of you will sign an address to him, which I will read after I have asked you whether the time has not arrived when cremation should be supported by the British Medical Association, collectively, and by each of its Branches. The sanitary advantages over burial in coffins, or in wicker baskets, are undeniable and very great. Most of them are so well known to you all, that I may pass them by without further mention; but I must allude to one most remarkable argument in favour of cremation which has just been advanced by Pasteur, after his examination of the soil of fields where cattle had been buried, whose death had been caused by that fatal disease known as "charbon", or splenic fever. The observations of our own Darwin "on the formation of mould", made more than forty years ago, when he was a young man, are curiously confirmatory of the recent conclusions of Pasteur. In Darwin's paper, read at the Geological Society of London in 1837, he proved that, in old pasture-land, every particle of the superficial layer of earth, overlying different kinds of subsoil, has passed through the intestines of earth-worms. The worms swallow earthy matter, and, after separating the digestible or serviceable portion, they eject the remainder in little coils or heaps at the mouth of their burrows. In dry weather, the worm descends to a considerable depth, and brings up to the surface the particles which it ejects. This agency of earth-worms is not so trivial as it might appear. By observation in different fields, Mr. Darwin proved, in one case, that a depth of more than three inches of this worm-mould had been accumulated in fifteen years; and in another, that the earth-worms had covered a bed of marl with their mould, in eighty years, to an average depth of thirteen inches.

Pasteur's recent researches on the etiology of "charbon" show that this earth-mould positively contains the specific germs which propagate the disease; and that the same specific germs are found within the intestines of the worms. The parasitic organism, or *bacteridium*, which, inoculated from a diseased to a healthy animal, propagates the specific disease, may be destroyed by putrefaction after burial. But, before this process has been completed, germs or spores may have been formed which will resist the putrefactive process for many years, and lie in a condition of latent life, like a grain of corn or any flower-seed, ready to germinate, and communicate the specific disease. In a field in the Jura, where a diseased cow had been buried two years before, at a depth of nearly seven feet, the surface-earth not having been disturbed in the interval, Pasteur found that the mould contained germs which, introduced by inoculation into a guinea-pig, produced charbon and death. And, further, if a worm be taken from an infected spot, the earth in the alimentary canal of the worm contains these spores or germs of charbon, which, inoculated, propagate the disease. And the mould deposited on the surface by the worms, when dried into dust, is blown over the grass and plants on which the cattle feed, and may thus spread the disease. After various farming operations of tilling and harvest, Pasteur has found the germs just over the graves of the diseased cattle, but not to any great distance. After rains, or morning dews, the germs of charbon, with a quantity of other germs, were found about the neighbouring plants; and Pasteur suggests that, in cemeteries, it is very possible that germs capable of propagating specific diseases of different kinds, quite harmless to the earth-worm, may be carried to the surface of the soil ready to cause disease in the proper animals. The practical inferences in favour of cremation are so strong that, in Pasteur's words, they "need not be enforced".

And now a word as to the sentimental objections to cremation. The Bishop of Manchester, in the address to which I before alluded, admits that his sentiments are "somewhat revolted by the idea of cremation"; but he adds, "they are, perhaps, illogical and unreasonable sentiments". We all know how difficult it is to convince illogical and unreasonable people; they must be left to the influence of time and example. But it is of importance to show to all that reason and true sentiment, and good feeling of reverence for the dead, of affectionate regard for their memory, are more logically and reasonably associated with a purifying fire than with decay, putrefaction, and danger to the living; and, on this important part of the subject, I am glad to bring before you the book of my friend Mr. Robinson, who has done so much of late years to improve our gardens, parks, and open spaces, and who is one of the Council of the Cremation Society. He calls this book *God's Acre Beautiful, or the Cemeteries of the Future*. He argues that the resting-places of the dead should be "permanent, unpolluted, inviolate"; that permanent beautiful cemeteries could be easily maintained if urn-burial were practised; that existing graveyards and cemeteries can only be of temporary use; that their monuments and memorial stones soon decay or crumble away; and that urn-burial might lead in the future, as it has done in the past, to more noble and enduring monuments. Let me read to you a page from Mr. Robinson's book.

"By the adoption of urn-burial, all that relates to the artistic embellishment of a cemetery would be at once placed on a very different footing. One of the larger burial-grounds now closed, perforce, in a less time than that of an ordinary life, would accommodate a like number of burials on an improved system for many ages. The neglect and desecration of the resting-places of the dead, inherent to the present system, would give place to unremitting and loving care, for the simple reason that each living generation would be as much interested in the preservation of the cemetery as those that had gone before were at any previous time in its history. We should at once have what is so much to be desired from artistic and other points of view—a permanent resting-place for our dead. With this would come the certainty that any memorials erected to their memory would be carefully preserved in the coming years, and free from the sacrilege and neglect so often seen. Hence an incentive to art which might be not unworthy of such places. The knowledge that our cemeteries would be sacred—would be sacred to all, and jealously preserved by all, through the coming generations—would effect much in this new field for artistic effort. In days when careful attention is bestowed upon the designs of trifling details of our houses, it is to be hoped that we shall soon be ashamed of the present state of what should be the beautiful and unpolluted rest-garden of all that remains of those whom we have known, or loved, or honoured in life, or heard of in death as having lived not unworthy of their kind. Such a revolution in our burial arrangements will not come suddenly; but perhaps a little reflection may serve to convince those who have feelings of repulsion to urn-burial that, as a matter of fact, less dishonour is done to the remains of those whom one loves in subjecting them to a fire which reduces them to ashes which can be carefully preserved, than in allowing them to become the subjects of the loathsome process of corruption first, and then subjecting them to the chance of being ultimately carted away to make room for some metropolitan or local improvement." The preservation of inscriptions and memorials, whether in or around churches and public buildings, the erection of beautiful tombs with urns as family burying-places, would be worthy objects for the best efforts of artistic design.

As to the ceremony of burial and performance of any religious service, distinguished members of the clergy of the Church of England have shown that scarcely any alteration would be called for in our burial service; and it is felt that, as urn-burial might be practised to any extent and for any length of time in or around churches and public buildings, in towns as well as in distant cemeteries, and without the expensive transport and ugly expensive forms of our present system of burial, men might again, as of old, rest in death near the scene of their work in life; and the restoration of the family tomb to the chapel or crypt would renew and add to the tie between the family and the church. Our places of worship and the spaces which surround them, if urn-burial became general, would be amply sufficient for the preservation of the remains of our dead for generations to come, and would enable us to convert existing cemeteries, which are rapidly becoming sources of danger to the public health, into permanently beautiful gardens. Instead of filling up large spaces with decaying dead bodies, we should have natural gardens, open lawns, pure air, fine trees, lovely flowers, and receptacles for vases, which, as well as the cinerary urns and chests themselves, might be made important helps in the culture of art. In country houses, urn-burial would lead to family burial places within the grounds, and encourage monumental work of high artistic merit; and, in the country church, the ashes of the people might repose in the place where they worshipped, instead of polluting the earth of the surrounding churchyard and the water drunk by the surviving population, or being carried to a distant cemetery, which overcrowding must in time make only a very temporary resting-place.

The "earth to earth" system, as it is called, so ably advocated by my friend Mr. Haden—the burial in porous wicker baskets, instead of wooden or leaden coffins—has some advantages. It is somewhat cheaper, and decay is more rapid; but the ground is for a long time occupied by what pollutes earth, air, and water. Mr. Haden's argument that, as a body, after coffinless burial, decays away in about six years, we may "bury again in the same ground with no other effect than to increase its substance and to raise its surface", surely strikes at the root of all sentiment of reverence or affection for the dead—and with what hazard to the living, the recent researches of Pasteur are amply sufficient to prove. In addition to the dangers from simple putrefaction polluting earth, air, and water, we have to consider

the dissemination of the germs of specific contagious diseases. Liquid animal matter oozing from putrefying corpses in a churchyard may possibly be so purified by the oxidising power of a few feet of earth as to be bright, clear, and inoffensive to any of our senses; but water which is neither cloudy nor stinking, but rather enticing and popular, like the water of the Broad Street pump in 1874, has carried cholera to those who drank it. How often typhoid fever has been caused in the same manner, who can tell?

But I must not detain you longer. Here is the address to the Home Secretary, and I hope it may be signed by many who are convinced that the present custom of burying the dead is associated with evils which ought to be remedied.

"We, the undersigned members of the British Medical Association assembled at Cambridge, disapprove the present custom of burying the dead; and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and may render the remains absolutely innocuous. Until some better mode is devised, we desire to promote that usually known as cremation. As this process can now be carried out without anything approaching to nuisance, and as it is not illegal, we trust the Government will not oppose the practice when convinced that proper regulations are observed, and that ampler guarantees of death having occurred from natural causes are obtained than are now required for burial."

In conclusion, let me ask you to think on the following propositions.

Decomposing human remains so pollute earth, air, and water, as to diminish the general health and average duration of the life of our people.

Existing churchyards and cemeteries are not well fitted as safe, secure, permanent, innocuous places of repose for the remains of our dead.

The expense of funerals and interment in graves presses unduly upon the means of the middle and labouring classes.

The present system of registration of death is so imperfect that common causes of preventable disease are not detected; and life is also rendered insecure by the omission of efficient arrangements for the due verification of the fact and causes of death.

These evils might be mitigated or prevented — (1) if national cemeteries were provided and maintained, under the direction of duly qualified officers of public health, and not left, as now, to be sources of private gain to commercial companies; (2) if no interment were allowed without a certificate of the fact and the cause of death by an officer of public health.

All this should be urged by those who are content to improve on our present mode of burial. Those who would go further, who will assist in the attempt to arrest the evils inseparable from even the very best mode of burial, who would add to our reverence for the remains of the dead, ensure an impressive religious service, and at a reduced expenditure provide for permanent monuments in beautiful open public spaces, may assert and prove the influence which our Association can exert, and ought to exert, upon the health and morals of the nation.

ON THE CAUSE OF THE BAD ODOUR SOMETIMES ASSOCIATED WITH EXCESSIVE SWEATING OF THE FEET, WITH DIRECTIONS FOR TREATMENT.

By GEORGE THIN, M.D.

THERE are few persons of experience, medical or lay, who have not had the misfortune to discover that certain individuals smell so offensively, that it is almost impossible to approach them. In many instances, the evil smell is connected with the feet, although there is reason to believe that this source is only suspected for the most part by those who have learned to recognise the odour, and who know that it is associated with perspiring feet. In some cases, the smell is so strong and penetrating, that it pervades a room long after the person from whom it emanates (and who may have remained in it only a few minutes) has left it. The entry of such an individual into the compartment of a railway carriage or an omnibus immediately fills it with a sickening effluvium, which, to the initiated, is unmistakable. These unhappy persons, if they belong to the wealthier classes, become exiled to a great extent from society; if they belong to the poorer classes, they may find it difficult to follow the calling by which they earn their living. Female domestic servants, from a cause to be presently explained, frequently suffer from this evil, and cannot in consequence find a household in which their presence is long tolerated.

It is difficult to describe a smell, and I will not attempt to describe this one, but it is of interest to remark that there is something in it suggestive of putrefying cheese. Some friends of mine found a country farmhouse which they had taken for a short period, almost uninhabitable, on account of a peculiar disagreeable odour which pervaded every part of it. The odour was at first attributed to a supposed want of cleanliness in the dairy, or to the presence of new cheeses which were being dried in one of the rooms of the house; but it was soon found that the smell proceeded from a young woman who had been engaged to do temporary service.

I have several times met with extreme instances of this kind, and, until recently, have not been able to give the sufferers much permanent relief. Hebra's treatment, which consists in keeping the skin of the soles enveloped in diachylon ointment, and necessitates the recumbent posture for eight to twelve days, I have not tried. Professor Hebra writes confidently of its success, but there are evident practical objections to its use in many cases.

The odour regarding which I am writing is so distinctive, that I have long thought it probable that it was associated with a special ferment; and a well marked instance of it having recently come under my notice, I have taken advantage of means placed at my disposal by the Scientific Grants Committee of the British Medical Association to investigate its nature. Before giving an account of the case, and what I have learned from it, a few preliminary remarks will be useful.

Profuse sweating of the palms and soles is not uncommon, but, in order to produce the specific odour to which I refer, something more than mere profuse sweating is required. The excessive perspiration, when confined by stockings and boots, macerates the epidermis, and, if the person stand or walk much, the skin of the heels becomes tender. This tenderness is accompanied by redness, slight blistering, or more decided localised eczema. In damp, relaxing weather, perspiration is increased; and we have thus two causes of aggravation, each potent, but both together very powerful—moist warm weather and prolonged pressure by walking or standing.

It has been pointed out by Hebra that the evil smell is not in the sweat itself, but in the coverings of the feet; a fact which it is easy to verify.

The patient who has afforded me the opportunity of investigating the cause of the smell is a young woman, aged 22, who has suffered from evil-smelling feet, with soreness of the heels, for several years. Her hands are usually moist, or even wet, but are always odourless. The smell from the feet is not constant, disappearing in dry bracing weather, and reappearing when the weather is moist and depressing.

The first experiment I made was to subject the soles of the stockings and boots to the action of an antiseptic solution. The success was complete, the odour being entirely banished. The antiseptic precautions having been soon neglected, the smell returned, and I took the opportunity of investigating its cause more minutely.

The sole of the stocking, a few hours after it was put on, was found to be quite wet; and a stocking, if worn for a whole day, was so extremely offensive that, when held close to the nostrils, its overpowering fœtor was comparable to that of putrid blood. The inside of the boot was equally wet and offensive; but, at the very time that the stocking and boot smelt so strongly, the heel itself, exuding moisture profusely, had no disagreeable odour. The sole of the heel was reddened and tender, and macerated around the edge, like a washerwoman's palm.

The reaction of the moisture in the stocking and in the sole of the boot was alkaline, that of the moisture exuding from the skin of the sole of the heel faintly alkaline, whilst that of the perspiration of other parts of the body was acid.

The fluid from the sole of the heel was thus shown to be not pure sweat, the faintly alkaline reaction being doubtless due to the serous discharge accompanying the eczema set up by the local hyperidrosis.

The fluid in the sole of the stocking was found to be teeming with bacteria forms, the nature and development of which I have carefully investigated. These investigations have produced results of some scientific interest, which I have communicated to the Royal Society.* The rapid development of bacteria in the fluid which exudes from the soles is doubtless favoured by the alkaline reaction produced by the mixture of serous exudation with the sweat.

The treatment instituted in this case is as simple as it has been effective. The stockings are changed twice daily, and the stocking-feet are placed for some hours in a jar containing a saturated solution of boracic acid. They are then dried, and are fit for wear again if it be desired. The boracic acid effectually destroys the smell. But to kill the bacteria in the stocking is not enough. The leather in the bottom of the boot is wet and sodden, and smells as vilely as the

* On *Bacteria found in a pathological condition associated with profuse sweating from the soles of the feet*. (*Proceedings of the Royal Society*, No. 205, 1880.)

stocking. This difficulty is got over by the use of cork soles. I directed my patient to get half a dozen, which she finds sufficient. A pair must only be worn one day unchanged: at night, they are placed in the boracic jar, and are put aside the next day to dry. If these directions be accurately carried out, the evil smell is perfectly destroyed.

The boracic acid solution is an excellent application to the painful skin in these cases. When the tender skin of the soles is washed with it, a sensation of coolness succeeds the feeling of heat and tension which are the usual accompaniments of the eczematous condition associated with the smell, and the skin becomes harder and loses its abnormal redness.

The bacteric fluid would seem to act as a direct irritant to the skin. My patient assures me that, if she wears stockings which have been dried without being disinfected, irritation is speedily felt; and that the cork soles, if worn a second day without having been purified, act in a similar way.

TRACHEOTOMY IN CROUP.*

By W. J. TYSON, M.B., F.R.C.S.,
Medical Officer to the Pendlebury Infirmary.

HAVING had the opportunity of performing tracheotomy three times in October and November of last year, and also of assisting my friend Dr. Thomas Eastes in two other cases about the same time, I thought that a short paper thereon, mentioning some of the difficulties that were met with, as well as other points connected with the operation, might be of interest, or at any rate give rise to some discussion. The following are notes of my three cases.

CASE 1. *Catarrhal Croup: Tracheotomy: Recovery.*—E. B., aged 5 years, a delicate child, was first seen on Thursday, October 2nd, of last year, suffering with a well-marked attack of measles, the rash being fully out. At seven the next evening the breathing became troublesome, and several convulsions took place. At half-past nine I saw him for the second time; the child was then in great distress, rolling from one side of the bed to the other, exhibiting great sinking of the chest-wall at each inspiration, lividity of lips, and making a loud croupy noise. Tracheotomy was done at half-past ten the same evening, Dr. Eastes kindly assisting me. The difficulties met with in the operation were the opening of the trachea before it was sufficiently bared, and the not hooking back of all veins as they appeared in the wound; consequently much hæmorrhage took place, but this was ultimately stopped by changing the tube for a larger one, and by applying external pressure. The child was left at 11.30, breathing comfortably at 44 respirations per minute, and with a pulse of 128. The next morning, October 4th, the patient was doing well: he had passed a quiet night. The urine contained no albumen. A piece of flannel, soaked in a warm weak carbolic acid lotion, was ordered to be placed over the mouth of the tube every quarter of an hour. The tube was taken out the next day at eight in the evening, forty-six hours after the operation. He now breathed partially through the mouth and nose, and partly through the tracheal wound; but the latter rapidly closed. I may say that, for ten hours previously to the withdrawal of the tube, some air was passing through the nostrils. On November 9th, he spoke audibly for the first time, and on November 25th the skin-wound was entirely healed. He is at this present time perfectly well.

CASE 2. *Membranous Croup: Tracheotomy: Death.*—R. K., aged 4½ years, a strong, healthy boy, was taken ill on Friday evening, October 24th; he continued so Saturday and Sunday, when I saw him for the first time, at 11 A.M. He had now all the symptoms of severe laryngeal obstruction. Four hours later, the symptoms not having abated, tracheotomy was done. Drs. Bowles and Eastes were present, and kindly assisted during the operation. Here, as in the former case, great hæmorrhage occurred, and before the tube was introduced the child was nearly moribund; but, with artificial respiration, the breathing became, compared with what it had been before the operation, natural. The bleeding was stopped by keeping up external manipulation; and the tracheotomy-tube was changed for one of a larger size. No membrane was seen before, but several pieces were coughed through the tube during the operation. The warm moist flannel was used here as before over the mouth of the tube. The child passed a good night. On the morning of the 27th, two little white patches, of the size of a pea, were seen on each tonsil. At noon the same day the child began to be restless, and the symptoms were rapidly downhill; at 10.30 P.M. some retraction of the chest-wall was noticed at each inspiration. He died the next morning at 4.30, 36 hours after the operation. The father told me that the boy had passed a most struggling night, but he did not think it necessary to send for me! When I saw him, the inner tube was completely choked with the mucus, and the tape of the outer tube unfastened. Throughout the case, I was quite unable to make the parents realise the vital importance of constant attendance to the tracheotomy-tube. The *post mortem* inspection made in the afternoon of the same day, showed that the epiglottidean folds were œdematous, and that pieces of false membrane extended from just above the true cords down the trachea into the smallest bronchi. There was considerable injection of the trachea where the extremity of the tube came in contact with its anterior walls. The lungs were not consolidated.

CASE 3. *Chronic Laryngitis: Tracheotomy: Death.*—C. B., aged 4 years, was stated by his mother to have had a cough for some months; at times his breathing had been very short. A fortnight previous to my seeing him, he caught measles. On Sunday evening, November 23rd, I was sent for, and then found him with severe laryngeal obstructive symptoms. The next morning I saw him at 9.15 A.M. His countenance was now of a dull leaden hue, he was cold and semi-conscious, his pulse was 160, and the laryngeal symptoms had become intensified since the previous evening. Tracheotomy was done an hour later. The trachea was not cut until quite cleared; and the veins, which were most turgid, were carefully held aside by small hair-pin retractors. Practically no blood was lost, and the operation, compared with the previous two, was most agreeably easy. The child soon regained its natural colour. The urine contained albumen. The next morning, the 25th, pulse was 150; respirations 40. No membrane could be seen through the throat; the tonsils were enlarged. At 10.45 the same evening I was suddenly called down, but before my arrival the boy was dead. The nurse, on account of the restlessness of the child, had taken out the inner tube, and in so doing must have slipped the outer one from the trachea, for I found it lying outside and upon the trachea. The tape was not unfastened. The *post mortem* examination was made the next day at noon. No false membrane was seen anywhere. The rima glottidis was closed, and its edges were much thickened. At the posterior aspect of the upper lobe of the right lung there was consolidation of liver consistence and colour. The bronchial tubes were red and contained a frothy reddish fluid.

REMARKS.—The first case, I think, was doubtless one of catarrhal croup, associated with a considerable amount of spasm, for the symptoms developed most rapidly and as quickly disappeared. No membrane was seen at any stage of the case. The second was a typical case of membranous croup of the asthenic type; and the third was probably of a chronic nature, in which an acute attack had supervened. The immediate cause of death must be considered to have been the accident of the outer tube being expelled, either during a severe fit of coughing or whilst the inner tube was being changed. Too much "play" had been allowed to the tube. There are two points in this last case to which I wish to draw attention, for they are of some practical import. It is generally believed that, at the end of twenty-four hours, the parts external to the trachea, and the lips of the tracheal wound, are so glued together that there is no difficulty in getting in a tube at any time after this date. I believe this not to be universally true; for, on examining carefully the condition of the trachea soon after death in this last case, I found the edges of the wound in the trachea almost in contact, and an ordinary round tube could only be introduced with some amount of difficulty. There is another fact which is more important than this, viz., the swelling which takes place in the tissues between the windpipe and the skin, thus augmenting considerably the distance of the trachea from the surface. This swelling is partly due to inflammatory material thrown out, as well as to emphysema. The practical outcome of this is that, although one may allow a fair amount of play to the tube immediately after the operation, very soon the tube becomes more or less tight, and, unless the shield of the tube is kept in close contact with the skin-wound, the risk is run either during a severe coughing fit, or in the careless changing of the inner tube, of permitting the outer tube to escape from its proper seat. This fact applies with still greater force to the infrathyroid operation. In the case referred to, the tracheal wound was quite an inch and a half from the surface, and when the shield of the tube was pressed firmly against the wound, the inferior extremity of the tube only just entered the windpipe. As regards any subsequent introduction of the tube, Hilton's pilot overcomes both these difficulties, for the extremity of it is more or less conical; and, as it also possesses a handle, there is no need of virtually shortening the tube, as one really does when introducing an ordinary Fuller bivalve tube by applying two fingers to the shield end in order to render the inferior extremity small for introduction. As regards the operation itself, one reads continually that it should be done slowly and carefully, and the trachea not be opened until its rings are clearly visible. Yet this is not usually done. I have seen the operation performed several times, certainly by young operators, and in the large

* Read at a meeting of the Manchester and West Riding Districts of the Scottish Branch of the British Medical Association.

majority the windpipe was hurriedly opened, or its opening attempted before it was well cleared. I have to thank Dr. Bowles for urgently recommending me to adopt a slower method, and, judging from the last case, and Dr. Eastes's two cases, tracheotomy ought to be comparatively easy if this dissecting method be adopted. The blade of the knife should not be freely used after the skin incision has been made, and all veins should carefully be held aside by small retractors. The constant placing of warm moist flannel over the mouth of the tracheotomy-tube, recommended by Trousseau, and suggested to me by Dr. Bowles, is far preferable to the steam kettle. It not only provides an equable warm breathing atmosphere, but also keeps the inner tube from becoming clogged with mucus, and, as the latter is thrown up, it is lodged upon the flannel and is taken away every time the flannel is changed. It cannot be too often repeated that tracheotomy is done simply to relieve a symptom which, if left alone, ends inevitably in death. Of course this obstructive symptom must be situated in the larynx, and not in the bronchi. Then it matters little, providing this laryngeal obstruction exists, whether the child has so-called diphtheria, membranous croup, catarrhal croup, or a foreign body in the larynx. The two best distinguishable signs between laryngeal and bronchial obstructions are those given by Dr. Buchanan. The first is the degree of loudness of the stridor; this is always great in proportion to the patency of the small tube and obstruction in the larynx. The second and better one is the condition of the chest-wall during respiration; in laryngeal obstruction, the bronchial tubes being free, the chest is sucked in with each inspiration—the greater the obstruction, the greater the retraction; but when the small bronchial tubes are blocked, the reverse condition happens, although not to the same extent, viz., that during inspiration the chest is slightly bulged out. Finally, it is interesting to note the connection of measles with two of the cases; the first had the attack at the time of the operation, the laryngeal inflammation being simply an extension downwards. The third a short time previous to the operation. Dr. Cheadle, in a short paper in the BRITISH MEDICAL JOURNAL for December 20th of last year, noticed the severe laryngeal symptoms accompanying the then prevailing epidemic of measles.

EPILEPSY.

OF late years, medical literature has been enriched by many, and in their way undoubtedly excellent, treatises on epilepsy; but, while every possible circumstance which might prove an exciting cause has been weighed and scrutinised, and while the scalpel and microscope have done excellent service in the field of practical pathology, no therapeutical course promising a permanent cure has been, to my knowledge at least, prescribed. Many remedial agents have been proposed, but with dubious prospective advantages, or merely palliative in their operation. In submitting the following remarks, I desire to indicate a method by which, I have good reason to believe, we can not only check the disease for a time, but entirely prevent it from recurring. It is, briefly, to continue the administration of bromide of potassium for a period of at least three months after the subsidence of the paroxysmal symptoms, and a brisk purgative occasionally. I append the leading facts of one case, which I believe to be in point.

E. D., aged 26, an intelligent young woman, who had been subject to epileptic seizures from her infancy, entered my service in the quality of general servant. One day, about a fortnight after her arrival, and on her return from shopping, she informed me that she had had an epileptic fit, and had fallen in the street: a fact to which the condition of her attire bore corroborative testimony. The same evening, she paid a visit to her father, returning about 10 P.M. A little later, she had a slight seizure in the kitchen. She was conveyed, partially unconscious, to bed, when a more violent and unmistakably epileptic fit supervened. I ordered sinapisms to the inside of the ankles and the back of the neck, and gave her, directly that she could swallow, two ounces of mistura alba. Next morning, all traces of the nervous derangement had disappeared. I then prescribed five grains of bromide of potassium with one ounce of infusion of gentian, to be taken thrice daily, with a brisk purgative occasionally at night. This treatment was persevered in for a period of nine months, the dose of bromide being gradually increased to half a drachm. It is now eighteen months since she has had a fit.

I cite but this one case, not because others are wanting, but that I fear to trespass too much on the valuable space of the JOURNAL, and because it is the best marked of its kind which has come under my notice. Did circumstances permit, I could multiply instances and adduce important collateral arguments tending to establish the truth of the doctrine I have advanced.

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FORTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CAMBRIDGE, Aug. 10th, 11th, 12th, and 13th, 1880.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of the papers presented to the several Sections at the annual meeting, and of the discussions thereon.

SECTION D.—PUBLIC MEDICINE.

Wednesday, August 11th.

The Chair was taken at 2 P.M. by the President of the Section, H. W. ACLAND, M.D., F.R.S., Regius Professor of Physic in the University of Oxford, who delivered an address, which was published at page 290 of the JOURNAL for August 21st.

DISCUSSION ON THE GENERAL WORKING OF THE PUBLIC HEALTH ADMINISTRATION IN GREAT BRITAIN AND IRELAND.

DR. ALFRED CARPENTER (Croydon) opened the discussion by reading a paper upon the general working of public health administration in Great Britain. The subject was considered from the point of efficiency in connection with centralisation on the one hand, and local self-government on the other. The author argued strongly against compulsion, and thought that it was more important to educate the public on the first principles of sanitary work than to call upon Parliament to pass compulsory clauses; and pointed out that the authorities in Downing Street only held office by the will of the people. He thought it requisite that there should be a controlling, but urged that it should also be an advising, authority. However beneficial to the people it might be to have an autocrat at headquarters, it would be rather awkward if, on the principle of *lucus a non lucendo*, a man of the Peter Taylor stamp should happen to become Minister of Health. The author did not think that present arrangements were satisfactory, and pointed out how much useless work was being performed, and how little was really made of present advantages from the jealousies of individuals as well as of authorities; and that the latter too often showed how not to do the work they had to perform. Dr. Carpenter then argued in favour of authorities being obliged to elect only those men to offices in sanitary work, who had proved their competency to perform the duties they proposed to undertake; that surveyors and inspectors of nuisances should have certificates of competency from some examining body; and that medical officers of health should be called upon to pass an examination in State Medicine; that the latter should restrict themselves to prevention of disease, and not engage in private practice; that the areas supervised by them should be bounded by natural boundaries, and that small areas with artificial boundaries were opposed to the effectual working of disease-prevention; that all matters connected with public health, both of men and of animals, should be entrusted to the medical officer of health, who should have control over the inspectors of nuisances, and have the reports of the medical officers attending upon the poor habitually submitted to him; that he should condense those reports and send them to a county superior, who would be in direct communication with the Minister of Health; that there should be a condensation in one office of all matters bearing upon the health of the people from the Privy Council Office, the Local Government Board, and the Home Office, under one chief, who should be a distinct member of the Government of the day. The author supported his views by some details, which proved that the general working of the public health administration in Great Britain was very defective.

Dr. F. T. BOND (Gloucester) was convinced that, in the two addresses which had just been delivered to the Section—those of the President and of Dr. Carpenter—valuable material for discussion would be found. The points which had been suggested in these addresses were numerous as they were interesting. Both the President and Dr. Carpenter had laid considerable stress upon the importance of educating the people on this subject, as such education was an indispensable preliminary to further legislation. There could be no difference of opinion on that; but, when the question came to be asked, how that education was to be bestowed, he was afraid they should find themselves in a practical difficulty. It had been very justly pointed out that a great deal of the work of education must be done by those officials who were engaged in carrying out the work of public health, and very largely by the medical officers of health. The annual reports of these gentlemen, he apprehended, would be a very important educational agency. It was by means of the publication of these reports that per-

sons, resident in localities reported upon, would become acquainted with the nature of the work that had been done in their midst, and which yet remained to be done. Apart from this, however, there was an educational work to be done which would require some central authority. The President pointed to the circulation of information which it was now difficult to obtain. A great many documents were published, apparently in order that they might have a limited circulation; but the contents of these documents were of great value. This was an illustration of the shortsightedness of the Local Government Board in carrying out the educational part of their functions. But there was no part of the educational work in which the central authority was very distinguished. And here they came upon the subject which had been referred to by the President and Dr. Carpenter—namely, with respect to the provisions for the election of sanitary officials. Whilst he endorsed a great deal of what Dr. Carpenter had said as to the desirableness of encouraging in these elections, both of medical officers of health and of inspectors, the choice of gentlemen who had given unmistakable indications of theoretical knowledge, acquired in passing certain examinations, it seemed to him, on the other hand, in the present state of matters, that it would not be desirable to lay down any stringent or compulsory provisions on that point. If these elections were to be carried out properly, they would be by competition; but it seemed to him that the present provisions for such events rendered them nugatory. Take, as an example, the election of a sanitary inspector. In many cases, an active canvas was made by the friends of a particular candidate, and the office was virtually promised before the election could take place. If the officers thus elected were paid entirely by the local authorities, he did not know that there would be much ground for objecting to the election; but as in many cases they paid only one-half of the salary, while the other half was paid by the central administration, it seemed to him wrong that the Government should subsidise officers without the slightest guarantee as to their competency. It was within his own knowledge that such elections had taken place in the most perfunctory manner; and, if the best man had been elected, it must have been a matter of chance. Further: the public had a right to require that, where the appointment of an officer was thus subsidised by the Local Government Board, care should be taken by that Board to secure the return of the best man; and that, in the case of the election of a medical officer of health, it was not unreasonable that the Local Government Board should insist, as a condition of the payment of half of the salary, that there should be something like a report upon the qualifications of the candidates who were to be selected. In such an election, as in every other popular election, as much daylight as possible should be let into the proceedings. It was a great misfortune that, in many cases, rural authorities conducted their business in absence of the press; and this was, perhaps, a reason why a report should first be made as to the qualifications of candidates for office.' With reference to the question of area, it seemed to him that the first point to be determined before settling the area was—what was the medical officer of health to do? He agreed with Dr. Carpenter that a great deal of the work done by other officials could be done more conveniently and economically by the medical officer of health. In fact, there was a great deal of work which was not done at all. Could anything more properly come under the cognisance of the medical officers of health than the medical inspection of factories, of schools, and of vaccination? Another important question arose as to the coroner's office. At the present time, this office was filled, and, he apprehended, would in future be filled, by lawyers; for whom, it was admitted, a certain amount of trained medical assistance must be provided. He could not see by whom this work could be more properly conducted than by the medical officer of health. When the work was determined, however, it would be time to determine the action; because there were many questions—such as the accessibility of a district—which would require consideration. One district might be easier to work than another; but the principle which ought always to be kept in sight in fixing the area was, to give a man as much as he could do consistently with occupying his whole time. That point having been fixed, the other question arose—whether a medical officer should retain the privilege of private practice. If a man was provided with plenty of work, the privilege of private practice must be left out of the question. Dr. Carpenter gave excellent illustrations, from his own experience, of the want of continuity in the Public Health Act; but they were hardly so apposite as they might have been. As to the question of building, he would draw Dr. Carpenter's attention to the fact, which he must have forgotten, that the rural authorities had not all those powers over building which urban authorities possessed. If the rural authorities desired to supervise the erection of buildings, they would have no difficulty in doing so; but the difficulty which had probably been experienced by medical officers of health was the strange unwillingness of the Local Government Board to confer urban powers upon rural authorities—an unwillingness, however, which he thought was now giving way. As to the want of concord between the authorities, it seemed to him that a good deal might be said for the other side of the question; but, in any event, it illustrated a serious defect in the Public Health Act. He did not know whether the President misunderstood the Act, or whether he had misunderstood the President, when he (the President) said there was no power, on the part of the Local Government Board, to compel the sanitary authorities to do various things which they ought to be compelled to do, or that the central authority ought to have the power to compel them to do, and one of these was combination. The compulsory powers of the Public Health Act, so far as the central authority was concerned, were very limited; but he thought it should have power to compel sanitary authorities to unite to do the work which, it could be shown, could be done more economically and efficiently by combination than separately. He thought the President wanted to show that there was adequate power, but he was certain there was no such thing. Then, as to drainage, there was no power, on the part of the Local Government Board, to compel one authority to give the right of drainage into its sewers to a neighbouring authority, although it might be shown to be very advantageous that this should be so. With reference to the Contagious Diseases Act, he was in some doubt as to Dr. Carpenter's views. So far as he could make out, he understood him to say that the whole work of sanitary legislation, whether as to man or to animal, should be concentrated in one man. But it must be remembered that we were in a transitional state—that there was difficulty in such combination until the sanitary combination became more complete than it was. He thought a great deal might be said in favour of the provisions of the Animal Contagious Diseases Act being administered by the county magistrates. It seemed to him that, after eight years' working and experience of the Public Health Act, they had reached such a stage that it was desirable to find out how much had been done, and whether what had been done had been done as efficiently and economically as possible; and, if not, what was the best arrangement for arriving at that result. The best way of taking stock was to institute a comprehensive inquiry—say, by the Public Health Commissioners, of which body the President was a member. It was not for him to say how that work ought to be done; but information might be collected from all sources, and, when properly sifted and arranged, it would soon show what had been done and what was doing, and then many of their present difficulties would disappear. If they could persuade the Government—or, still better, the Local Government Board—to institute such an inquiry, that would be the most practical outcome of their discussion.

The Rev. Dr. HAUGHTON (Dublin) remarked that the present system of ventilating sewers was very inefficient. The fact was that what they called sewers or drains were, in many instances, nothing but elongated cesspools, ingeniously contrived to collect, under high pressure, sewer gases, and to discharge these gases into private houses by way of the water-closet. The result was the prevalence of diphtheria, typhoid fever, and, more especially, scarlet fever. He condemned the mode in which many of the sewers of the present day were constructed, and said that sewer authorities ought to realise the grave responsibilities of their position, and, in sanctioning works, proceed with great caution. He argued strongly in favour of the introduction of ventilating shafts, because a sewer system without these was worse than no system at all. It was worse than going back to the days of Moses, as described in Leviticus—in fact, they were fifty years behind Moses.

Mr. JOSEPH CLEGG (Epping) said he had a strong opinion on the question of sanitary administration. He believed he was one of the first medical men examined before the Royal Sanitary Commission; and at that time he endeavoured to point out that it would be best to make the sanitary laws binding upon all local authorities, but these should be subject to supervision by a central authority. It appeared now that the opinion of the medical profession was verging towards that idea. From what he had seen of the appointment of medical officers, it appeared that some were appointed because they were the most efficient men, but others were appointed simply because they would do nothing at all. He knew of instances where most excellent reports from the medical officers were thrown aside, and no action whatever taken by the local authority. Although the Local Government Board thought they were doing a great sanitary work, they really were not doing so—because they got their information through Poor-law inspectors, who did not like sanitary work. He did not think that sanitary laws would ever be properly administered until power was given to take up the question in the counties. If they could send the reports of the sanitary inspectors to the medical officer of health, and through him to the Government, the Government would be kept informed of what was going on, and they would be fully alive to the sanitary condition of the country. At present, the legislation was like a rope of sand; there was no continuity in the

means of knowing what was going on. Dr. Buchanan was quite right in saying that there should be some inquiry. That, however, should not be by the Local Government Board, but rather by a Commission appointed to take into consideration what was the present state of the sanitary administration of the country, and how far the laws were effective; and in this way great good might result.

Dr. STRANGE (Worcester) said the idea of mapping the country, and dividing it into so many unions, was as old as the hills. Since the introduction of sanitary measures, however, a great array of facts had been quietly amassed which should, when made public, have great practical effect. The President, as a member of the Committee of Council, might be able to get the Council to urge upon Government the necessity of inquiring into the working of the sanitary laws, and this inquiry might do good. If the large sums which were now being spent for sanitary matters were gathered into one fund, and distributed in a proper manner, he would have little doubt as to the result. He argued for fixity of tenure for the officer of health. He should not be subject to the whims and humours of local boards. Unless men were properly rewarded and secured in their positions, men of talent would not devote themselves to the work in hand. Then the law ought to be more stringent on the point as to the relations between the medical officer and the inspector of nuisances. A medical officer of health, with a sufficiently qualified and instructed staff of inspectors, ought to be able to supervise a district properly; but the officer could not do that work efficiently unless he had a thoroughly trained staff of sub-officials. He would make it an instruction to the Committee of Council to take into consideration what kind of pressure they should bring to bear upon Government to inquire further into this matter.

Mr. MEAD (Newmarket) said the question was one of importance. If sanitary science had done one thing more than another, it had tended largely to increase the national debt, for, within the last ten or fifteen years, upwards of a hundred millions had been borrowed from the Government and expended on such works; and those who had taken a prominent part in this matter must feel that the agitation had had some effect upon the public purse, if not upon the public health. He commented upon the extravagant manner in which the funds obtained from Government had been expended upon sanitary arrangements, and said that only the other day a contractor told him he was putting down works at a cost of £100,000, and he was certain that in a few years he would get £50,000 to remove them. In the town in which he lived (Newmarket), the poor people had been almost frightened out of their wits at a proposal to introduce sanitary works, and, but for a vigorous agitation, they would have been saddled with a rate of from 10d. to 12d. in the pound. In point of fact, the people would rather die of fever than pay the rates. But there was no fever in the town to warrant the works. It seemed to him that sanitary reformers took a great deal too much upon themselves. He condemned the importation of young men fresh from hospitals into districts where medical officers already were located. These youngsters, he said, pretended to teach men, their seniors by thirty or forty years, all about sanitary science. In this way, local prejudices were disturbed, and in doing this nothing was more necessary than the exercise of caution. He would prefer to work with the means they had at their disposal—say, in the great medical schools—until medical men were thoroughly educated in sanitary science, so that, when that question came before the country, they would be able to speak with a certain amount of authority. He further pointed out that the majority of small towns in England were situated in agricultural districts, and that, if there were a stupid man in the district, he was made a guardian. If the sanitary officer said anything adverse to the opinion of that gentleman, the place was soon made too hot for him. Therefore, he thought it would be an evil day for England when these small towns were united, and such men as he had referred to appointed as guardians.

Dr. J. ROGERS (London) replied to some of the points raised by the previous speaker. Mr. Mead had commented upon the folly of certain sanitary arrangements. Now, there could be no doubt that a great deal of the success of sanitary men had been shipwrecked more or less by the extreme propositions brought forward to meet the evils. Then, as to the contractor to whom Mr. Mead had referred, he said it was unfortunate that they should have such persons putting down works at such a large cost, with the certain conviction that, at the end of a certain period, the work would require to be done over again. In the course of his progress through life, he had had to do with a large proportion of his medical brethren, and he had come to the conclusion that they had not exhibited too much zeal. It might have been better if they had exhibited a little more public spirit and a little more unanimity. Had they shown a little more fire, they would not, as a profession, have been compelled to go, with bated breath and with much humbleness, to the authorities of the day, to beg of them to do this or that, but they would have marked out for themselves, and before the nation and the world, a distinctive position, which was, that they ought to be the teachers on all matters relating to public health, and not the humble servants of miserable boards. The indifference of the good men of the community, and the ignorance of the rest, should not be allowed to control the actions of medical men. Now, it was all very well to be cautious and quiet, as recommended by Mr. Mead, but he did not believe that quietness ever attained anything in this world, and he thought it never would. If, forty-four years ago, when Dr. Southwood Smith and Mr. E. Chadwick first advocated sanitary reform, the profession had adopted a quiet tone, they would have been in the same position to-day as then, and there would have been no reform in the health administration of the country. He remembered having taken up a particular section of the health subject. It had been forced upon him, and he had advocated it in all directions. He remembered the people then praying Dr. Southwood Smith not to moot the question of burials in towns; but he maintained his point, and burials in towns had been abolished. He assumed that he had been looked upon as having too much zeal; but, if any point were wanted to be carried, they must make every effort and go straight to the point, and advocate it without any selfish motive.

Mr. T. P. TEALE (Leeds) said that, in his professional capacity, he was brought into contact with a large number of practitioners in the North of England, many of whom were medical officers of health in their districts; and, owing to the interest which he had taken in sanitary matters he heard a great deal of their difficulties, and he was persuaded of the importance of the point which had been urged that day, of having a series of inspectors of districts. What these men said was this: They were generally in private practice. Their difficulty was that if zealous, they would injure their private practice; and, if they made recommendations, there was no one at their back to support them. He thought the Association should use its endeavours to get the country divided into districts, to which skilled inspectors should be appointed, who should act in conjunction with the medical officers of health in such districts. There could be no doubt that in many districts men of education and skill were appointed, but in other districts the appointments were made in the most perfunctory manner. By this means, however, a great number of young men were qualifying themselves to be sanitary officers of the future, and the country was likely before long to have a sufficient number of efficient persons, who could be used as an intermediate body between the central authority and the local persons appointed in the various districts.

Dr. CAMERON (Dublin) gave a description of the working of the Public Health Act in Ireland, and more particularly in the city of which he is superintending medical officer. The Act in force in Ireland was, to a great extent, moulded on the Public Health Act of England. It differed in some important particulars, which probably might not be uninteresting to the members of the Association. In the first place, it differed from the English Act in creating every Poor-law officer a medical officer of health. There were about eleven hundred dispensary physicians in Ireland, each of whom was a medical officer of health. In addition to these, there were consulting sanitary officers and superintendent medical officers of health. He was superintendent officer of health for Dublin. The appointment of these various officers rested with the local authorities, who were the rural and urban authorities. The urban authorities were the town councils, and the local board was in power in every town having 6,000 inhabitants. The boards of guardians were the local authorities in rural districts. What they complained of in Ireland was that, although every dispensary physician was, in virtue of his office, medical officer of health, his salary was absurdly small, ranging from £10 to £20 in rural, and from £150 upwards in urban districts. In Dublin, there were fourteen medical officers of districts. Every dispensary district was a health-district, and the district physician received £25 a year. These gentlemen to some extent acted under his directions. Dublin was, he thought, the best city in the world with respect to medical officers of health. In some other remarks, he commented on the statements of Mr. Mead. That gentleman's observations reminded him of the father's advice, while on his death-bed, to his son—"Wherever, my boy, you see a head, hit it." This gentleman had hit all round. He had hit young officers, who got superficial education, and he wound up by hitting every intermediate person, down to the guardians. If the public health authorities in England were the same as in Ireland, their desires would be admirably carried out. The public health authorities in Dublin gave him the most absolute power. Whenever he considered that houses were not in a proper sanitary condition, he issued a certificate, and the houses had to be altered or taken down, and that too without awarding any compensation to the owners of these houses. Within the last two years, three areas had

been cleared out in Dublin, at a cost to the municipality of about £42,000. It was one noticeable feature of the magistracy, that they would not listen to anything against their officers. In fact, everything was in their favour, except that they were, like the country at large, in an impecunious condition. If the Town Council of Dublin had money, or were as wealthy as one half of the English towns, Dublin would soon be like Hygeia, the happy town described by Dr. Richardson.

Dr. AXFORD (Southsea) strongly urged that inquiries should be conducted by some commission or other, and that inspectors should be appointed to see that works were properly executed. Too frequently the representations of medical officers were unattended to, and, unless there was some central authority to compel Councils to act upon the reports which they obtained from their officers, nothing of importance would be done.

Dr. A. CARPENTER replied. He said that the proposition which he had ventured to lay down, namely, that sanitary science was very much impeded by the ignorance and incapacity of those called upon to carry out sanitary works, had not been disputed. He knew that works were being executed, ostensibly for improving the sanitary condition of neighbourhoods, which would not effect the object in view. Then the principle had been endorsed that it was very important that the public should be educated in the first principles of sanitary work, and that officers should only be appointed who were specially fitted to carry out the work.

Dr. BOND thought the Section should come to some practical resolution on the subject, and he would propose:

"That, in the opinion of this Section, the time has now arrived when it is expedient that a comprehensive inquiry should be made into the working of the Public Health Act, with the view of ascertaining whether the work which has been done under the Act is done as efficiently and economically as is practicable, and what enlargements and additions are desirable in it, with the view of providing more effectually for the protection of the public health."

Mr. CLEGG seconded the resolution, which was carried unanimously.

Dr. HARRIS (Redruth) pointed out that the local authorities, from their desire to keep free from any connection with the Local Government Board, would, in many instances, appoint a man at a nominal salary to do nothing, and that consequently the sanitary work was utterly neglected.

Mr. ATKINSON (Pontefract) advocated the appointment of inspectors.

The PRESIDENT admitted that a good deal of the administration of Ireland was remarkably good, and he could only wish that all were as zealous in this country for sanitary advancement as Dr. Cameron and his department were. There was much that required to be done before they could hope to attain perfection in sanitation; but the process was so costly, that they should not be in a hurry or be unreasonable. What had been done during the past ten years was truly remarkable, and he thought they had no reason to feel disappointed. He referred to the statements of Mr. Teale as to the work done by medical men in the north of England. That gentleman spoke of the excellent and intelligent members of the profession who were in practice, and who were doing useful work for the county. He referred to that, because, in the little criticism in which he indulged when reading his paper, he mentioned that some persons said that a Poor-law medical officer was unfit to be a sanitary adviser. He expressed no opinion on that statement, and, while he made allusion to it, he should be sorry to take any step by which the Government or influential persons in the country should come to such a conclusion. How they were to fix the areas without the advice and assistance of local practitioners, he did not know. He did not wish to see practitioners separated absolutely from this work. Dr. Strange had remarked that for nearly forty years this question had been under discussion; he (the President) did not think it would last for forty years more. It was an extremely difficult subject. Of the 620 unions in England, one-third overlapped counties, and they could not destroy legal rights by a stroke of the pen. As further showing the difficulty of the situation, he mentioned that he knew of a parish which had twenty outlying districts.

Dr. CAMERON said that, as a medical officer, he could perhaps with more propriety than any one else move a vote of thanks to Professor Acland for his valuable paper. To have such a gentleman at the head of the Sanitary [illegible] was a great strength.

Dr. A. CARPENTER seconded the motion. They ought to congratulate themselves [illegible] Professor Acland as their President. [illegible] not fail to impress their minds.

Dr. A[illegible] for the [illegible] which the vote had been proposed, and said that any little assistance he could give in the future he would gladly render.

The following papers were taken as read.

The Impairment of the Efficiency of the Medical Officer of Health as a Public Official by his Want of Independence as a Public Official. By CORNELIUS B. FOX, M.D. (Ilfracombe).—This paper assumed at its commencement that the work of the health-officer, for the performance of which the public paid very heavily in a direct and indirect manner, should be efficient, and managed with a due regard to economy. The author was prepared to prove: 1. That the public health administration of the country, so far as the medical officer of health was concerned, could not possibly, as at present conducted, be carried on in an efficient manner; and 2. That an enormous waste of public money was involved in the present multiplicity of inadequately paid public health appointments. The enforced brevity of his paper only allowed him to deal in it with the first—the most important question; and he therefore proposed to discuss the second question on a future occasion. Medical officers of health were divided into two classes, namely, those in practice and those not in practice; the former vastly preponderating in numbers over the latter. Dr. Fox answered the question, "How is the efficiency of medical officers of health who are in practice impaired as public officials?" by giving examples or proofs. The first was a case where a poor surgeon with a large family, who was a medical officer of health, condemned a large quantity of meat exposed for sale in the public market, and, to his alarm, subsequently discovered that it belonged to butchers whose families he had been in the habit of attending professionally, but who, of course, from that time, he never again attended. The second was the case of a general practitioner, who ridiculed the idea of doing his duty as a medical officer of health with respect to cottages unfit for human habitation, on the plea that all of the cottages in his district belonged to his best patient, the squire of the parish, whom he could not afford to offend. The third was the case of a medical officer of health, with the usual nominal salary, who expressed the opinion that the public could not expect him, for such a paltry sum, to do his best to prevent the spread of so remunerative a disease as small-pox, every case of which, taking the average of rich and poor patients, was worth a five-pound note to him. Reference was then made to medical officers of health of combined districts debarred from practice. To obtain able men, at a small cost to the public, by having large districts and good salaries, was the original object in establishing these appointments. Some of them had recently broken up, whilst most of the remainder survived more or less mutilated as to area of district and salary, in consequence of the late Government fearing to displease the agricultural interest by exerting the compulsory powers possessed to prevent such catastrophes. The medical officer of health had been wrongly regarded by some as a public official who was to quietly wait until his advice was sought for before he gave any. Everyone who attentively read through the list of his duties, prescribed by law, could not fail to see that the health-officer was bound to frequently take the initiative, and to warn against dangers to the public health respecting which the members of most sanitary authorities knew nothing. Then came the query, "How is the efficiency of the medical officer of health of a combined district, who is debarred from practice, impaired, through his want of independence as a public official?" The answer was, one would imagine, obvious. If, in the performance of his duties (one of which was to send a copy of every special report to the Local Government Board, which sometimes brought upon his sanitary authorities a severe remonstrance as to the neglect of their districts), he happened to offend the prejudices of his masters, whose own property was often in a deplorable state, the threat of disruption of his district and reduction of his salary, although not openly expressed, was secretly felt to be the punishment in store for the unfortunate medical officer of health at the expiration of his term of office. The cases given in proof were those of the Lancashire Combination, the Hertfordshire Combination, and the Essex Combination, in each of which the Local Government Board permitted the perpetration of grave public scandals, in one of them leading to the withdrawal altogether from the public health branch of the profession of the medical officer of health, rather than work in so corrupt a service. How could the medical officer of health of a combined district be expected to act with independence and impartiality, or with a sole regard to the interests of the public, with this danger of the disruption of his [illegible] always [illegible] In both classes of [illegible], namely, medical officers of health in practice dependent on the goodwill of their patients and of their sanitary authorities, and medical officers of health of combined districts, debarred from practice, dependent on the goodwill of the members of sanitary authorities (with the condition of whose private property they were often compelled, if they did their duty, to interfere), the evil which impaired their efficiency

was the same. *A man [illegible] placed in such a position that his own private interests must inevitably clash with the public interests.* It was probable that everyone would acknowledge the wisdom of this assertion, and yet the sanitary affairs of this country were administered so as to ignore it, and in most cases in direct opposition to its truth. The remedy had been repeatedly pointed out by the medical profession through its organs.

The influence of Excess in Alcohol on the Death-rate. By NORMAN KERR, M.D., F.L.S. (London).—The author said he had been engaged for some years in collating the records of the mortality from alcohol in his own and several medical friends' practices, and had presented the result of his inquiries to various learned bodies, without, unhappily, any attempt to impugn the accuracy of his estimate. He could not, after every effort to arrive at an approximation to the truth, and after making deductions far beyond what the circumstances seemed to warrant, compute the total annual mortality from alcoholic excess at less than 120,000. Of this startling tale of preventable mortality, 79,500 persons met their fate from starvation, disease, accident, or violence, arising from the indulgence of others; while the remaining 40,500 fell a prey to personal excess. It was of the latter direct mortality from personal drinking habits that, in a purely medical society, the present paper treated. Other inquirers, since Dr. Kerr's estimate had been propounded, had ventured into the field; and these had computed the alcoholic fatality to be higher than he had felt warranted in doing. Dr. Morton, from the counterfoils of his own certificates and those of nineteen friends, held that the annual deaths from personal intemperance in England and Wales were 39,287. This was equal to nearly 53,000 for the whole kingdom, though these returns included little more than half their due proportion of deaths in workhouses, and no deaths at all in hospitals and asylums. Dr. G. B. Longstaff, from an analysis of the Registrar-General's returns, could not put the alcoholic deaths lower than 30,000, or higher than 60,000. Dr. B. W. Richardson believed that the mortality from personal intemperance in England and Wales was 50,000 yearly, equivalent to more than 68,000 over Great Britain and Ireland. Dr. Lankester's estimate was a tenth of the whole, or 62,000. Dr. Hardwicke thought the loss greater still. Dr. Kerr's estimate of 40,500, which had been pronounced most moderate by coroners, medical officers of health, and experienced practitioners, was thus below that of others; and it was also considerably less than the results indicated by the returns thus far of the Harveian Society in their full investigation. The marked influence of alcohol on the death-rate was strikingly exemplified in the mortality of Glasgow, consequent on the reduction of the duties on ardent spirits. The reduction of these duties increased the deaths there from 3,690 in 1822 to 4,627 in 1823, and to 4,670 in 1824. The Registrar-General's returns showed that, in every class of disease save one, there had been a steady decrease in the number of deaths; but, in local diseases (Class III), there had been a steady increase up till 1876, when the consumption of alcohol began to fall off. Precisely in those diseases (such as of the brain, heart, lungs, liver, and kidneys) in which alcoholic excess told so heavily, did this increase take place. It was a significant fact, pointed out by Dr. Farr in 1877, that gout was then twice as fatal as it had been fifteen years previously. In Italy, a sober country, the deaths from violence were only 240 per 1,000,000, while in England, where insobriety abounded, they were 775 per 1,000,000. All medical men knew that the present death-certificates were no index of the influence of alcohol on the death-rate; and Dr. Kerr urged on the Association the propriety of asking returns, from 500 to 600 medical practitioners in various localities, of the particulars of death from alcohol in their practices. The ratio thus obtained might be applied both to the whole number of medical men in practice, and to the total deaths in the kingdom. By this means alone could a trustworthy approximation to the truth be arrived at.

The Section then adjourned.

Thursday, August 12th.

Dr. ACLAND, President, took the Chair at 2.45 P.M. The meeting of the Section had been delayed, in order to allow members to attend the address of Sir James Paget in the Section of Pathology.

Sewer-gas and Fire-damp Indicator. Mr. JAMES HOGG (London) showed and demonstrated in action an ingenious little instrument for the ready detection of sewer-gas, also a fire-damp and choke-damp indicator. These acted on the law of diffusion, and in form they resembled the small aneroid barometer. The back of the aneroid was removed, and replaced by a porous piece of tile. When the gas-indicator was taken into an atmosphere charged with sewer-gas or fire-damp, or other kind of gas, it instantly diffused itself through the closed inner chamber with much greater rapidity than the common air pent up in it found its way out. The increased volume of gas caused pressure to be made upon a spring which regulated the action of the dial-hand, and moved it over the graduated face. But, should the instrument be brought into an atmosphere charged by heavy gas, choke-damp, a gas heavier than common air, it produced another effect: it caused the vacuum-chamber to expand in an outward direction, and the dial-hand consequently moved in an opposite direction. Hydrogen expanded rather less than atmospheric air; whilst carbonic acid gas expanded rather more, and the heavy atoms of the latter acted possibly as the thin end of a wedge upon the other atoms. To restore the index-hand to zero, it was necessary to let in a large supply of air by opening a stop-cock; this restored the equilibrium; but, before doing this, the percentage of saturation was read off. The instrument was applied in a similar way to the detection of an escape of sewer-gas; and the exact point of escape could be readily determined and made visible. That could thus be done by a ready method, which had only hitherto been accomplished by resorting to difficult and expensive processes; and it was impossible to conceive a more refined application of science than this sewer-gas and fire-damp indicator and detector. The instruments were the invention of Mr. F. Ansell, formerly chemist to the Mint.

Dr. HAUGHTON said that the instrument seemed to be very delicate in its action, and he thought that, by its introduction to coal-mines, much evil might be averted.

Some Questions connected with the Management of Fever-Hospitals. By EDWARD T. WILSON, M.B., F.R.C.P. (Cheltenham).—The recent appointment of an officer by the Local Government Board to inquire as to the accommodation provided by sanitary authorities for isolating cases of infectious disease, gave a special interest to this subject at the present time. The benefits of a well managed fever-hospital would seem beyond dispute. Dr. Wilson, therefore, confined himself to the following questions: 1. The diseases to be admitted, and the amount of separation which must be made between them; 2. The class of patients; 3. The arrangements for medical attendance; 4. The nursing staff; 5. The charges; 6. How patients were to be induced to enter. The remarks offered were based on a return from 124 distinct hospitals in England and Wales into which non-pauper infectious cases were received; and they formed a sequel to a paper read in 1878 before the Social Science Association, on Isolation as a means of Arresting Epidemic Disease (see *Practitioner* for February 1879). In that paper, the very inadequate provision made for isolation was clearly shown, as well as the great success achieved with imperfect materials when these were intelligently used. The points now dealt with arose whenever a fever hospital was erected. 1. As to the diseases, much would depend upon local circumstances; but cholera, typhus, small-pox, and relapsing fever, would always be isolated wherever they occurred; and provision should in all cases be made for small-pox in a building apart, as cases caught in hospital might cause panic, and render the hospital useless. Scarlet fever and diphtheria should also have special provision; and in most cases typhoid fever, when no accommodation was specially provided for it at the hospital of the district. In country districts, means should be at hand for isolating at one time two infectious diseases. 2. Paupers, if admitted, should be on equal terms with the other poor. Objections to their reception were thus generally overcome. Accommodation should, however, be provided suitable to all classes, and superior in furniture and elevation to the iron or wooden tenements at present in fashion. 3. The medical officer of health would probably be the responsible head, though it was not advisable that he should personally attend on the patients. Some practitioners in the neighbourhood would probably be willing to undertake the work at fair remuneration. At the same time, if isolation was to work smoothly, the convenience of medical men as well as of the public must be consulted. 4. The choice of a matron was important, as her popularity or otherwise would determine, to a large extent, the applications for admission to the hospital. Nurses could now be easily obtained on emergency from some neighbouring institution, and thus the necessity for a large permanent staff would be avoided. 5. The charges should be as low as possible for the well-to-do, and free to the artisan and the poor man, who isolated himself, his wife, or his child, for the public good. The cost should be borne by the rates, supplemented, it might be, by voluntary contributions, such as were given to the support of a general hospital; in return for which, certain advantages might be given. 6. Owing to the ambiguity of the expressions used, the powers of compelling isolation were almost a dead letter, and were seldom used. It was better, however, to endeavour to make isolation more tolerable, and, if possible, popular with the public. Non-paupers should not become pauperised by gratuitous treatment in Poor-law infectious hospitals. The management of fever hospitals must be carried out in a liberal and kindly spirit. The support of the medical profession should be secured; and the public should

be instructed as to the dangers of epidemic disease, and the benefits to be derived from isolation. Health-authorities, the medical profession, and the public, must work harmoniously and intelligently together for a common end; otherwise, hospitals might be provided at large expense, but they would remain empty, and the plague of infection would not be stayed.

Some Suggestions for the better Controlling of Infectious Cases among [illegible]. Mr. [illegible] W[illegible], M.B. (Doncaster). Dr. Wilson said that the operation of the Educational Acts chiefly concerned medical officers of health during epidemics of scarlet fever, measles, or whooping-cough. During the prevalence of either of these complaints, there were no adequate means taken to prevent the attendance of children at school from houses where the infectious cases existed. The general opinion among medical officers of health was that, without some more efficient control of these outbreaks at the school itself, there was little hope of lessening their excessive prevalence and mortality among young persons. The Education Department only recognised the danger to the children by allowing a reduction in the number of attendances, when the school was closed on account of the prevalence of a local epidemic. It was suggested that the same reduction ought to be allowed in every case where a child was certified as absent on account of illness of any infectious nature personally, or at its home. This would lessen the anxiety of the teachers as to the child being able to make up its required attendances. At present, the sanitary authorities had no power to insist upon the closing of any school during the prevalence of a local epidemic; and, although it was frequently done when this course was strongly recommended, yet there were repeated cases where, from competition with other schools, from the nearness of the annual examination, or from the managers failing to appreciate the danger to the scholars, they had declined to close the schools. It was suggested that this power ought to be placed in the hands of the sanitary authorities; they being satisfied, on the report of the medical officer, that this step was desirable in order more effectually to prevent the spread of infection. Where it had been found necessary to close a school, or when a large number of children had been absent, within a short time of the annual examination, the preparation of the children was much hindered from irregular attendances; and the result was a considerable lessening of the grant, and therefore a pecuniary loss to the school. The medical officer could assist the school-managers in this case by applying to have the examination put off for such time as would allow the complete recovery of the scholars, and more reasonable preparation of their work. The Public Health (Ireland) Act (1878) provided that "any one sending a child to school within three months after suffering from any dangerous infectious disorder, or who has resided in a house where any such case has existed within six weeks, without a certificate that the child is free from disease and infection, and that his or her clothing has been properly disinfected, shall be liable to a penalty not exceeding 40s." The adoption of any similar clause in this country would necessarily prevent much of the infection now originating at schools; and, in anticipation of its being introduced, the Education Department would probably be prepared to receive suggestions, which could in the meantime be enforced by the department by means of the code, printed from year to year.

Enteric Fever in India. By CHARLES R. FRANCIS, M.B. (Clapham).—A fever, with a death-rate varying from 18 to 80 per cent. of those attacked, prevailed amongst European soldiers in India during the hot and rainy season. It attacked chiefly the young soldiers in the first years of their residence. All classes of the community, mostly among the younger members, and under every variety of climate, in the hills and in the plains, also suffered from the disease. During the past ten years it had been recognised, by the symptoms during life and by the pathological appearances after death, as genuine enteric or intestinal fever, though it might not always run the same course—in the plains especially—that characterised it in temperate climates. With reference, speaking generally, to the tendency to bowel-complication in the course of disease in India, there might be a greater extent of mucous membrane and more glands involved than in a case of enteric fever in England. In view of this tendency, Peyer's patches—the especial seat of ulceration in enteric fever—might be involved in a case of remittent fever with ulcerated intestine, or of dysentery, malarious or otherwise. In a case of genuine enteric fever in India, ulceration of Peyer's patches, with or without more extended complication, was always, where the patches existed, met with. Hybrid cases might be sometimes seen, in which the poison of enteric fever and of malaria were acting together: a typho-malarial fever, in which the characteristics of the case would depend upon the ascendancy of the one poison or the other. [illegible] fever in India was generated by a [illegible], fostered by, if not actually born of, decomposing nitrogenous matters, [illegible]. The [illegible] ... [illegible] out of importation from without was very small; but its occurrence in connection with unsanitary conditions was frequent. The nature of the unsanitary conditions might vary. The soil, rivers, tanks, wells, and atmosphere of India were more or less laden with poison, animal or vegetable. Enteric fever in India was contagious, as shown by its clinging to regiments. It was not caused by malaria, as the disease usually occurred before the commencement of the malarial season. However much climate (under which head were included heat, moisture, and vicissitudes of temperature, *but not malaria*) might modify an attack of enteric fever, and however much fatigue, exposure, depressing influences generally, or a rapid transfer from England to India, might predispose to an attack, they none of them caused it. In view of the constant, if not universal, probable connection between unsanitary conditions and enteric fever in India, it was necessary, by careful and patient research in every case, to endeavour to reduce this probability to a certainty, as had been done in England and elsewhere. If the authorities were sceptical on the point, they would naturally hesitate to spend money on sanitary reform. Surgeon-General C. A. Gordon had, with the sanction of the Government of India, offered a prize of 500 rupees for the best essay on Indian fevers affecting European troops in India. A suitable prize, offered by the Government itself, for the best record of a certain number of *cases*, with the history (present and previous) of each, might lead to even more practical results.

Dr. DRYSDALE (London) was much pleased with the paper of Dr. J. Mitchell Wilson, who spoke of the hygiene of schools. Everyone in practice knew the excessive danger of contagion arising in schools. In his own recollection, he could remember many families being laid down with scarlet fever got in this way. The suggestions thrown out by Dr. Wilson were most valuable. Even at the present moment, he ventured to say that any person who had children ran a great risk in sending them to a public school. It would be far safer to educate them at home.

Dr. CAMERON (Dublin) said that quite recently he had read an interesting account, in a New York paper, in reference to the mode adopted there of dealing with such emergencies as an outbreak of fever. It appeared that, as soon as the central authorities at Brooklyn were aware that any child attending school was suffering from scarlatina or measles, or any other disease, intelligence was sent in the form of a circular to the managers of all the schools in the place. So expeditiously was this accomplished, that on the day such an event reached the ears of the central authority, all the managers of schools were in the possession of the information. This was a remarkable fact, and was evidence of a great advance in the organisation of dealing with one of the most difficult problems in reference to public medicine. As to the powers of local sanitary authorities to deal with cases of infection, he might state that in Ireland, under the Public Health Act, they had ample powers. Just a fortnight ago he signed a circular, and one of the large schools in Dublin had been closed. The Act to which he referred was so comprehensive in its terms that it enabled the authorities to deal with a nuisance of any kind.

Mr. GEORGE P. ATKINSON (Pontefract) had long been of opinion that it was the duty of a medical man to give a certificate where he thought fever prevailed, and, having given such a certificate, he ought to be rewarded for his trouble.

Mr. VACHER (Birkenhead) said, with reference to the paper of Dr. E. T. Wilson, that, in opening an hospital for infectious diseases under the Public Health Act, two questions presented themselves for solution—first, What diseases were to be taken into the hospital? and, second, what money charge was to be made? Perhaps the best way of dealing with these questions was to leave them unanswered, or partially answered. In the first instance, in sending round a circular to medical men and those interested in the locality, in reference to the opening of such a hospital, it was well to indicate the diseases for which the hospital was primarily intended—say, small-pox, measles, scarlatina, diphtheria, and typhus; and then, having made this rule—a rule which could be relaxed to any extent—the hospital might be subsequently used also for enteric fever or erysipelas, acute rheumatism, cholera, or relapsing fever. That had been his practice, and it would be found to answer very well. Then, as to the charge, it was best to fix it as low as possible—one shilling, one shilling and sixpence, or two shillings at the most. Doubts as to the value of the guarantee for payment should never be allowed to interfere with the removal of the patient to the hospital. Afterwards, it was for the treasurer to see whether or not he could get the money. If it was not got, he did not think the medical adviser would grieve over the matter.

Mr. BERNARD KENDALL (Bristol) said that, in the early part of 1857, he had charge of a gaol in India, and in May of that year he remembered a very typical case of typhoid fever occurring in that place. One of the [illegible] died; and the second was going on well, and pro-

bably would have recovered, but the mutiny broke out, and he had to leave the station. In the after-course of his career in India, he had met with enteric fever on many occasions.

The PRESIDENT said that, in drawing this discussion to a close, in his paper he had made no allusion to the special case of New York to which Dr. Cameron had referred. The admirable arrangements which were being carried on there were well worthy of the attention of the serious sanitarian in England who desired to see how practical people carried out their schemes. When in New York last year, he had been invited to spend a day at the central office, and he was really astonished at the celerity with which business was despatched; and all this was done, too, in a country where the people were more jealous of their liberty than in England. What was done, however, was for the good of the people, and for the diminution of the centres of infection, by those methods which were being seriously considered in this Section.

Milk Pathology. By JOHN HARKER, M.D. (Lancaster). — The author of this paper said that no distinct line of demarcation could be drawn between contaminated and morbid milk. Besides the changes in milk from alterations in the mammary glands, the instances of substances taken into the alimentary canal—such as madder, colchicum, onion plants, etc.—passed readily into the secretion. Probably, no better menstruum than milk could be found for sustaining and propagating zymotic germs. It was readily contaminated from without; mostly by the addition of impure water; also by the contact of soiled utensils and dirty hands. Other modes of contamination referred to were the falling into it of particles of dust from the air, of the spores of tinea from cats affected with the disease, and the drinking of impure water by cows. The conveyance by milk of enteric fever, dirt fever, whooping-cough, infectious catarrh, etc., was referred to. Reference was also made to the occurrence of bacteria in milk. Dr. Harker was of opinion that consumption might be given by milk from a tuberculous animal, and related a case in proof. The transmissibility of syphilis by milk was uncertain, as sores often formed in the neighbourhood of the nipple, and might infect the infant. In conclusion, the influence of nervous shock and emotion on the secretion of the mammary gland was briefly referred to.

Dr. CAMERON (Dublin) referred to the susceptibility of milk to take up contagious matter. In a recent case of outbreak of typhoid fever in Dublin, the belief prevailed that it was communicated by contaminated water. He investigated the case. The persons supplying the milk had the reputation of supplying a good article, for which indeed they charged a little more than other dealers. On making inquiries, he found that the milk-man himself had had typhoid fever, and that his children, one after the other, had suffered from what the medical man attending called gastric fever. There was no water-closet in the house and there was no privy, and the ejections of this man were conveyed through the yard, where the cows were stationed, and thrown upon a dung-heap. The arrangements here were of the most primitive description. The milk-cans were exposed on shelves. The wind scattered the dust from the dung-heap, and this dust must often have been charged with the ejections. At all events, sixty or seventy persons who used the milk from this byre suffered from typhus, and seven of them died. This showed that milk, without having been adulterated with water, was capable of taking in the virus of a disease.

Dr. BOND (Gloucester) remarked that, whilst there was abundant evidence that milk was liable to contamination by specific infective matters, such as that of enteric fever, there is some reason for believing that such infection could be destroyed by a very simple process, viz., that of boiling. He mentioned, in support of this assumption, a fact recorded by Mr. Davies, the medical officer of health for Bristol, to the effect that, in a family who were attacked in a recent epidemic of enteric fever in that city, all the members who had been in the habit of consuming the milk in its ordinary condition were attacked, whilst all of those who had been in the habit of boiling the milk escaped. Dr. Bond observed that it was just within the limits of possibility that this demarcation might be a coincidence, but it was at any rate extremely suggestive.

Dr. HARKER said he believed that boiling was a safeguard.

The PRESIDENT said that, before closing the discussion on this very suggestive paper, he would ask the writer whether he had ever read Professor Lister's observations on the curdling of milk. As this paper touched closely upon the subject, it was desirable that its author should see it. On this point, Professor Lister had made the most careful and singular observations. Perhaps the Section would enable him to say that he thought this paper illustrated and justified the recommendation which had been made some time ago at Oxford, that there should be a well endowed professorship of Comparative Pathology, whose business should be to watch and collect all sound progress in pathology, as pathology, neither human, animal, or vegetable, but altogether. Such a chair might be founded at the present time with singular opportuneness. The paper was also an illustration of what Sir James Paget had been showing them that day, that these subjects were becoming so vast, that they wanted persons whose special business it should be to connect together all the valuable knowledge which others had worked out.

On Sewage in Oysters. By C. A. CAMERON, M.D., F.R.C.S.I. (Dublin).—The oysters transplanted from the coast of the county of Wexford to the northern shores of Dublin Bay had, in recent years, been much subject to disease, and had died in large numbers. On examining the oysters, they were found to contain sewage, often in large quantity. The extension of a quay, or rather a pier, and docks from the city into the bay had apparently caused the sewage from the city to be brought much nearer to the north (Clontarf) side of the bay. The extension of the water-closet and main-sewer systems had also of late years contributed largely to the amount discharged upon the shores of the bay. It would seem as if the oysters were injured by these strong doses of sewage. Analyses of the sea-water at the oyster-beds, taken at highest and lowest condition of the tide, showed that, during the latter condition, the oysters were literally bathed in sewage. Sewage was found within the shells of living oysters, taken into the city for sale. If typhoid could be transmitted through the media of potable water and milk, was it not at least as likely that oysters taken raw might (when taken from the shore close to a sewer) also be the vehicle of the *materies morbi* of typhoid fever or other disease. It was clear that oyster-beds should not be laid down at any point on or close to the mouth of a sewer.

Mr. MEAD (Newmarket) thought the Section should pass a resolution recommending the people of Dublin not to eat oysters. He was not sure whether the author of the paper was prepared to say that the inhabitants of Dublin had suffered from eating these oysters, but perhaps they had become quite inured to them.

The PRESIDENT said that if there was to be no further discussion, they had sufficient evidence from Dr. Cameron that he had power, and he would take care that the inhabitants of Dublin would not suffer from oyster-eating. The value of the paper, however, was, that they in England should look to their own oyster-beds.

Cremation v. Burial. By T. SPENCER WELLS, F.R.C.S. (London).—After some allusion to the evils, on sanitary grounds, of burying dead bodies in the earth, the author replied to some of the sentimental objections to cremation, and gave some account of the furnace which has been erected near Woking. He concluded by insisting that it was the duty of the whole Association, of each of its Branches, and of individual members, to study the subject, and instruct the community generally upon what was becoming a pressing question of public health. [The paper is published in full at page 461.]

Dr. BOND (Gloucester), whilst warmly supporting the proposal of giving cremation a fair opportunity for trial, as suggested by Mr. Spencer Wells, reminded the Section that the substitution of cremation for earth-burial was only one of the points in which our funeral customs urgently required reform. He strongly commended to the support of the Section that most modest but useful body the Funeral Reform Association, and trusted that those present would not only give it their personal support, but would do their best to establish branches in every town and village of the country.

Friday, August 13th.

THE Section met at 11 A.M., under the Presidency of Dr. ACLAND.

On the Different Methods of Collecting, Preserving, and Employing Animal Vaccine. By E. WARLOMONT, M.D. (Brussels).—[This paper will be published in an early number.]

True and False Cow-pox.—Mr. CEELY (Aylesbury) showed and explained drawings illustrating: 1. *a.* The casual vaccinia on the cow at the acme; *b.* The same on the decline, with the two forms of the secondary eruption, or after pock on the animal; *c.* The secondary eruption, or "after-pock", on the dog and on children; 2. The casual vaccinia on the hands and persons of the milkers in differents stages; 3. The so-called "false cow-pox" on the cow, as distinguished from the true; 4. The effects of the casual transfer of the same to the milkers, as contrasted with that of the true vaccine; 5. The appearance of the false disease when inoculated artificially on man; 6. The appearance on the cow resulting from the inoculation of the animal with human variolous matter, and the vaccination of the animal on the tenth day after the previous variolation, depicting all stages of both; 7. The variolation only of the cow, depicting the result in all its stages; 8. Several drawings of the effects of the transfer to children of the vaccine lymph (variola vaccine) so generated, showing the identity of both stocks of that lymph with the genuine vaccine casually or spontaneously developed on the cow; 9. Drawings of variola ovina as casually developed on the sheep, exhibited in its different stages; 10. Drawings

of variola ovina, as indeed by the artificial transfer of the virus to those animals. As to the non-communicability to man of the rinderpest, Mr. Ceely stated that he had seen a typical case of local and constitutional effects produced by the accidental inoculation of the hand of a veterinary surgeon while dissecting the carcase of a dead ox. The case was detailed and depicted by him in the Report of the Cattle-plague Commission. He had also heard of another like case. He also stated that he and Mr. Lepper, late veterinary surgeon of Aylesbury, had dined off a joint of a cow which had been killed when in the active stage of rinderpest. In answer to a member, Mr. Ceely said he had made repeated experiments upon dogs with vaccine matter, in order to prevent distemper; but, after vaccination, he had known dogs to take that disease.

The PRESIDENT said he was sure that the Section was highly privileged in having present amongst them a veteran whose name was known over the whole world for his accurate scientific investigations. Forty years ago, when no Vaccination Act had been passed, Mr. Ceely commenced, in a thoroughly scientific sense, to study the great question of comparative pathology, and they still saw him pursuing that study, although over four-score years of age. (Mr. CEELY: I am only eighty-three.) The PRESIDENT: And yet he was in possession of those qualities, at once calm and strong, and in that full vigour in which the Section delighted to see him.

DISCUSSION ON THE QUESTION WHAT DISEASES ARE COMMUNICABLE TO MAN FROM DISEASED ANIMALS USED AS FOOD?

Mr. VACHER (Birkenhead), in opening this discussion, desired to draw attention to the exact words in which the subject was stated—What diseases were communicable (able to be communicated) to man from diseased animals when used as food. This, it was pointed out, was altogether a different topic from that which occupied the attention of the Health Section of the Association two years ago—viz., "the diseases of animals rendering them unfit for food". The one was a question of judgment, of expediency, of relative fitness or unfitness; the other, a question of fact, pure and simple. It was well to bear this in mind, as it would tend to hold speakers to the matter before the Section. If exception were made in respect of diseases known by the presence of cestoid or nematoid parasites, it was surprising how few animal diseases, ordinarily met with or likely to occur, were even suspected of being communicable to man. The case against meat infected with encysted parasites was so clearly proved, there was no object to be gained in debating it. With this exception, the only animal diseases there was at present, or had been, ground for regarding as transmissible to man through ingested meat were:—1. Cattle-plague; 2. Swine-typhoid; 3. Epizootic pleuro-pneumonia; 4. Foot-and-mouth disease; 5. Anthrax and anthracoid diseases; 6. Erysipelas; and 7. Tuberculosis. 1. Cattle-plague was suspected of being transmissible, because of the supposed resemblance between it and enteric fever. In both diseases one of the more prominent symptoms was diarrhœa, and in both, conspicuous pathological lesions were found in the small intestine, especially in Peyer's patches. When, however, Murchison, Gamgee, and others showed that the resemblance was only in appearance, the transmission of the disease to man was discredited. Nor was enteric fever the only human malady to which cattle plague was thought to be related. So recently as 1865, Dr. Murchison published a paper arguing in favour of the ancient theory that cattle-plague was small-pox; and it had been also compared to human typhus, scarlet fever, erysipelas, influenza, and dysentery. All these theories as to kinship between the epizootic and specific human diseases were now abandoned, and those who still maintained the communicability of the disease, held that it communicated itself. A few instances were on record where a human being, after accidental inoculation with fluids from a diseased carcase, had shown a vesicle or other symptoms different from those of ordinary pyæmia. Still the possibility of conveying even this mild form of the disease to the eaters of infected meat was not supported by a single recorded instance; yet experiments, whether such food would convey infection, must have been tried millions of times, as was obvious from the accounts of great epizootics which had appeared from time to time since the days of Charlemagne. 2. Swine-typhoid, like the disease last referred to, was also at one time considered variolous; like it, it was confounded with scarlatina, and like it was also pronounced to be the exact counterpart of enteric fever in man. Dr. W. Budd, Professor Simonds, and more recently Mr. J. Wortley Axe, had written in support of this theory; and, as a result, for years precautions for preventing the spread of the disease to man were thought necessary, and taken. Finally, by way of closing the door to the many misleading doctrines already current with reference to this disease, Fleming had given sanction to the old views of Reynal and Roll, and classed pig-typhoid with anthracoid diseases. The various views that [illegible] pig-typhoid being the precise pathological equivalent of certain specific human diseases had one by one been abandoned; and in surrendering the theory that pig-typhoid was kin to human disease, the dread of being specifically infected by infected swine had been also surrendered. Now, if the sale of such meat was stopped, it was because it was altered in quality, and diminished in nutritive value, etc., and not from any fear of typhoid fever being communicated to man. 3. Epizootic pleuro-pneumonia, inasmuch as it was a distinctly contagious febrile disease, had been generally regarded as tainting the whole carcase of the animal affected, and warranting its exclusion from the meat market. Probably this flesh was rightly condemned, but the statement that it could communicate disease to the consumer rested on very slender testimony. Slaughtermen and knackers had suffered from a kind of pyæmia after preparing carcases affected with this disease, but such cases were examples of blood-poisoning (not necessarily specific) by inoculation. The only direct evidence of disease being communicated by the ingestion of meat thus tainted was from Livingstone, Letheby, and Gamgee. And in these records of transmission of disease it was not pleuro-pneumonia or its analogue which was set up, but anthrax in two instances, and a sort of toxic colic in the other. On the side of the harmlessness of flesh thus tainted, there was the testimony of Reynal and Loiset, beside the Alfort experiments conducted in 1868-9, when cattle were fed on portions of diseased lung, and made to drink the fluid from diseased pleuræ, and yet remained perfectly healthy. 4. Foot-and-mouth disease had been defined as "a contagious eruptive fever, affecting all warm-blooded animals and attacking man"; and the whole history of the disease during the long period it had been prevalent on the Continent, and during the last forty years in which this country had suffered so much from it, showed that this was indeed a disease upon man and beasts. "The communication of the disease to man", said Gamgee, "admits of no doubt". Raw milk from infected animals used as food had frequently transmitted the malady; and it had been conveyed also by inoculation. Wherever else the contagion rested, it was undoubtedly contained in the lymph from the vesicles; and if imperfectly cooked meat from an infected animal were eaten, it would, undoubtedly, place the consumers within reach of infection. 5. Under the term anthrax so many diseases had been included, that the word no longer conveyed a definite idea. There appeared to be three tolerably distinct diseases coming under this head—they were splenic fever (*Milzbrand, Sang de rate*), malignant pustule (*Karbunkelkrankheit*), and carbuncular erysipelas (*Milzbrand-Emphysem*). The two first of these diseases were undoubtedly charbon. The other appeared to be the disease lately investigated by MM. Arloing, Cornevin, and Thomas, and said to be due to an organism peculiar to the disease and different from that found in *sang de rate*. The only way of ascertaining definitely if a carcase was the subject of anthrax or splenic fever, was by instituting a search for the bacillus anthracis. As it was ordinarily of the length of the diameter of a blood-corpuscle, and often much longer, it did not require a high power to discover it. It was unnecessary to say much on the facility with which the disease could be communicated. Experiment showed that it could be as readily conveyed by food as in any other way. If any food contained live bacilli or their spores, the consumer was in peril; and the tenacity of life of these spores was so great, that it was impossible to assign a limit to it. 6. In respect of erysipelas, the communicability of this disease to man from infected food, though exceedingly probable, was scarcely capable of direct proof. In the first place, the malady was quite as common in man as in animals; and secondly, it occupied such an unique position between general and local diseases, specific and simple diseases, that when it occurred it was impossible to say whether a contagion had been inserted or otherwise come into existence. However, erysipelas, sthenic or asthenic in type, was so often met with, in sheep and pigs especially, that the possibility of its conveying a specific infection should not be overlooked. Flesh scarcely showing physical signs of disease might be actively infective, research having shown that the visible line of extension in erysipelas was always pioneered by bacteria in the lymphatics, the organisms being identical with those found in the sensibly affected parts. Tuberculosis of animals, better known as *perlsucht* from the generally rounded shape of the deposits found, must not be too readily assumed to be the same as human tuberculosis. Animals affected with it did not, as a rule, show signs of wasting, and the morbid appearances had no great resemblance to those noticed in phthisis as it occurred in the human subject; however, the microscopic characters distinguishing true tubercle were present. [illegible] had been long ago supposed to be syphilis and to transmit this disease, and the sale of the flesh of affected animals was not permitted in consequence. More recently, Virchow had classed it with [illegible] owing to the similarity between the giant-cells and myeloid multinuclear cells. It was only of late years that the disease had been charged with conveying tubercle to the consumers of milk or flesh

from tainted animals. A well-marked distinction between the human and bovine disease was, that the matter of the first was deposited in the glands and in the alveoli of the lungs, while the matter of the second was deposited in the subserous and interlobular connective tissue. Even supposing that the unity of the bovine and human diseases were proved, the communicability of the disease from dead oxen to man would not follow. Feeding animals with deposits and glands from diseased animals resulted in setting up various lesions more or less resembling tubercle in the herbivora, while the carnivora remained uninjured. Such indirect evidence had really little bearing upon the point at issue, and direct evidence of the bovine disease having been communicated was wanting. Dr. Creighton had lately published some notes of eight cases of a variety of tubercular disease in man which very closely resembled the *perlsucht;* but there was no evidence that any of the subjects affected had consumed infected flesh. Of the seven diseases referred to, Mr. Vacher thus held but two, foot-and-mouth disease, and anthrax, can as yet be pronounced communicable to man by ingested flesh. The remaining five he did not regard as innocuous, but merely submitted that at present their communicability remained unproved.

Bovine Tuberculosis in Relation to the Public Health. By GEORGE FLEMING, Esq.—For many years Mr. Fleming's attention had been directed to bovine tuberculosis, and he had suspected its contagiousness a long time before Villemin experimentally demonstrated its inoculability. The results of his experiments were verified by others; and Gerlach, Chauveau, Colin, and many more, showed, in addition, that it could be transmitted by the ingestion of the flesh and milk, as well as tuberculous matter, from diseased cattle. In 1874, Mr. Fleming published a paper on the malady in the *British and Foreign Medico-Chirurgical Review*, pointing out the evidence in favour of its transmissibility, and the serious nature of the disorder from a sanitary point of view. In *Veterinary Sanitary Science and Police*, published in 1875, it was included as a malady which should be brought under legislative control; and on several recent occasions he had urged the necessity for its being recognised as a most dangerous disease, so far as the public health was concerned. No disease of animals more deserved attention than this, because of the grave danger the public incurred through consuming the flesh and milk of tuberculous cattle. There were no means of arriving at any conclusions as to the extent to which the disease prevailed among bovines in this country, as there was no sanitary inspection of cowsheds or slaughter-houses; but it appeared to be largely on the increase, especially among the higher-bred stock, and was well known to all who had to do with cattle. On the Continent, it was estimated that from one to five per cent. of all cattle were tuberculous. The inoculability of tuberculosis could not be a matter for dispute; and that the malady could be produced by feeding with tubercular matter, or the flesh or milk of diseased cattle, was equally proved by experiment. Those experiments which demonstrated that milk was viruliferous were very striking, and particularly the experiments of Bollinger, Toussaint, and Puech; generalised tuberculosis being surely and easily produced in pigs, rabbits, and guinea-pigs, by the ingestion of raw milk. There was also evidence to show that cooked milk might also be infective. The juice of flesh from a tuberculous cow had produced the disease in a pig when injected subcutaneously; and a few drops of blood from a man affected with tuberculosis, when injected beneath the skin of a young pig, caused local and general tuberculosis. The last experiment was most important when considering the question of animal vaccination, in which calves were used for the cultivation of the vaccine virus. Accidental infection of calves and pigs was far from rare; indeed, Mr. Fleming attributed the existence and spread of the malady to calves being suckled by phthisical cows. The accidental infection of people might be frequent. A disorder which caused one-fifth of the general mortality demanded earnest investigation, and the adoption of every possible precaution. It was not improbable that infantile diarrhœa, scrofula, and tuberculosis might to some, if not to a large extent, be attributed to the existence of this bovine disorder. The existence of tuberculosis among cattle should lead to prompt measures for its suppression. Diseased cattle should not be bred from, and ought to be treated as dangerous to other animals. The milk of tuberculous cows should invariably be condemned, as it was not only very poor in quality, but was highly dangerous. All cattle yielding milk should be carefully inspected, and the early symptoms of the malady thoroughly studied, as its detection in the early stages was often difficult. Town-dairies ought to be specially watched, as in them the disease was most common. The flesh of all animals affected with tuberculosis should be condemned and destroyed. Public *abattoirs* ought to be instituted everywhere; and all animals sent to them, as well as all carcases about to be issued from them for food, should be certified by a competent inspector as innocuous.

The PRESIDENT said he should be compelled to leave in a few minutes, and he hoped, therefore, that the Section would now permit him to say a few words on the subject which had been engaging attention. It was not without intention that Mr. Fleming was requested to follow Mr. Vacher. It was of great importance that it should be clearly understood by the public, as it was by scientific men, that the study of the pathology of domestic animals could not be wholly or properly separated from that of man, and *vice versâ*. Anyone who heard, or who would read, Mr. Vacher's and Mr. Fleming's remarks on this subject, as well as those contained in various of Mr. Simon's Reports, in the American National Health Reports, and in numerous original works, would be entirely convinced of this. It was for this reason that he (Dr. Acland) had long urged the formation of a well endowed Chair in Oxford of General and Comparative Pathology, one that should systematically treat of all that was established, and new, in regard to animal diseases; and should carry on researches therein. Oxford, being in the centre of an agricultural district, would be in some respects a very suitable locality. He dared say that some members of the Section had been present at the address which had been delivered that morning by Dr. Michael Foster, on the inseparable relations of physiology to general pathology. Dr. Foster did not get over the whole ground, for, in addition to those points which had been alluded to, there was the general question of comparative pathology. He would now venture to say that nothing more remarkable than the discussion which had taken place that day had occurred in any of the Sections, because the scientific subjects which had been discussed affected the whole human race. In the paper by Dr. Foster, they heard that physiology and pathology were one, and his remarks confirmed what he (the President) had repeatedly pointed out for many years past, that the anatomical and physiological teaching at Oxford would be incomplete without the elements of general pathological science, in the sense just now explained; and for this plain reason, that the tendencies to decay and death were just as much an integral part of the living economy as were development, growth, and maturity. The Chairs of Physiology, Comparative National Health, and General Comparative Pathology, with proper laboratories and appliances, were all needed in the present day for the biological series, and even then were inadequate to the vastness of subjects involved. Pathology was merely a disturbance of the healthy functions, and the proposition concerning disease amongst human beings applied to animals. He would not presume to discuss the questions which had been raised as to the possible spread of tuberculosis. About this, they were only in their infancy; they were just learning to talk about it, and to mark, and to observe, by means of the wonderful progress in the field of research; and, in this connection, he would say that they had many opportunities, through their medical officers of health, of founding a great sanitary science for the human species. He cordially endorsed the remarks of Mr. Fleming as to the importance of Government understanding this subject. And Government would come to understand it if they went on steadily working together in their several departments, harmoniously and without exaggeration, for nothing repelled the public man so much or so quickly as exaggeration. In his concluding remarks, the President suggested that, as it would be idle for them to come to a conclusion on the subject, they should continue the discussion at the meeting of the International Congress in London next year. If the subject of comparative pathology were not already entered on the programme, he would do his utmost to bring that end about.

Dr. VACHER, Mr. FLEMING, and others, cordially concurred in these opinions.

Dr. BOND moved that the Section tender a hearty vote of thanks to Dr. Acland for the able manner in which he had presided over their deliberations.

The motion was agreed to, and Dr. Acland returned thanks.

On the proposal of Dr. ARMISTEAD, the Chair was taken by Dr. FRANCIS BOND of Gloucester.

Mr. E. J. SYSON (Huntingdon) continued the discussion.

Dr. CAMERON (Dublin) said he did not suppose that any medical officer of health had had more opportunities of observing the contagious form of pleuropneumonia in cows than he. For twelve or fourteen years, there had been an admirable system of slaughter-house inspection in Dublin. Four constables were expressly engaged in that duty. He had examined from four hundred to five hundred carcases each year for many years past, and he had been the means of sending many persons to prison. He did not agree with the observations of Mr. Fleming in reference to the danger to man from eating the food of cattle known to have been afflicted with rinderpest. Because they had no knowledge that dangerous results ensued, they should not allow the meat to enter the market. A well of water was known to be in an unsanitary condition, or the air in certain tenements was known to be unhealthy, and yet the people in the neighbourhood were quite healthy.

Were the authorities, therefore, to allow the unhealthy conditions to continue? He should certainly say, No. If, therefore, an animal were known to be in an advanced stage of pleuropneumonia, its lungs increased in weight sometimes four or five times, and if these were charged with pus, how could the mass of that animal's body be in a healthy state? He had abundance of evidence that bad results ensued from the consumption of this food. The poorer classes in Dublin read the papers, and as soon as they saw that a person had been prosecuted for having the carcase of a diseased animal in his possession, they came to him and complained that they had bought meat from this particular person, and that they had afterwards been unwell. He had had so many opportunities of observing animals affected with that disease, that he could diagnose it almost at once. He would like to know the medical man who would use such diseased flesh although he declared it to be wholesome. At the present moment, the guardians of the poor in Dublin, notwithstanding that they could buy this flesh cheap, would not give it to the paupers. If they did, and the paupers knew of it, an insurrection would be the result. If these carcases were sold for what they really were, and if they were not really bad, he would not interpose; but it was not right that they should be sold as presumably good.

Mr. JABEZ HOGG (London) said that so long as they knew that there was a predisposition on the part of some members of the population to take disease from eating the food of these animals, it was the duty of the officers of health to prevent the sale of that food. That, he thought, was the best way of dealing with the question. Then as to the examination of milk, he had to state that the dairy officer in London had power to condemn the sale of milk.

Dr. E. HAUGHTON (Upper Norwood) asked whether, in the event of the new "calf-lymph" being supplied by the Government for public vaccination, the flesh of calves used for this purpose would be sold as food? His reason for asking the question was, that Sir Thomas Watson, in an article in the *Nineteenth Century*, had publicly stated his opinion that a calf after having been variolated in sixty places on its shaven abdomen, "might be returned to the butcher none the worse for what it had undergone". He was sure that the public would form their own opinion about this, as they had already done when the same thing was first tried by Dr. Blanc on his return from Abyssinia. His experiments were brought to a close by the unprofitableness of the transaction, as the butchers, after a while, found that they could not sell the calves as food—for the people had found out that variolous matter had been used in order to obtain the vaccine lymph, which he was daily sending all over the country. It might be a question how much or how little injury would be done by the public sale of the flesh of these animals; but the public had a right to know the facts; and it is possible that the experiment of introducing "vaccine lymph" from this source would be brought to an abrupt close by the public entirely declining to buy meat which had been previously used in this manner.

Mr. CEELY (Aylesbury) said that cows used for the transmission of vaccine were constantly sold, and he believed them to be perfectly good. He could corroborate Mr. Fleming's remark about the flesh of animals killed for rinderpest. He had eaten such flesh.

Dr. DRYSDALE (London) said, with respect to the communication of tuberculosis from the lower animals to man, that he would very much question the fact. From his own observation in a consumption hospital in London, he did not think it was very probable, because, if it were the case, how many of their children might they expect to find afflicted with tuberculosis if the statement were true that the disease could be communicated through the milk? He wished that this point might be thoroughly cleared up, because it was frightening everybody.

Dr. STEWART thought a Committee of the Association should be appointed to take up this matter and follow it out.

Mr. FLEMING remarked that it was far from his intention or wish that the public should be fed on diseased flesh, and the remarks that had been made proved that he was rather in the wrong than otherwise about tuberculosis. He, however, had given his opinion on the facts which had been brought under his own observation. He did not say that the flesh of animals which had suffered from pleuropneumonia should be given to the public without the knowledge of the public that it was diseased; but they had no direct evidence that disease was the result of its consumption. However, the flesh of such an animal could not have such nutritive properties as the flesh of a healthy animal. This he would say, that thousands and hundreds of thousands of animals had been slaughtered and sold which were in this condition. One thing he had omitted to mention in his paper, and that was, there was disease in the brain which was not dangerous; but what was called septicæmia was highly dangerous.

The CHAIRMAN then proposed the following resolution: "That, in the opinion of this Section, the subject of the communicability of disease to man by animals used by him as food urgently demands careful inquiry, both in regard to the actual state of our knowledge thereon, and to the legislation which is desirable in connection therewith; and that the Committee of Council of the Association be invited to appoint a Committee for the purpose of reporting on this matter."

Dr. CAMERON seconded the motion, which was agreed to.

The following papers were taken as read.

On Anthrax and Anthracæmia from Mohair in Woolsorters and in Heifers. By J. H. BELL, M.D. (Bradford).—For nearly forty years it had been known that sorters of alpaca and mohair in the neighbourhood of Bradford not unfrequently died, after a few days' illness, from a disease the cause and nature of which was not understood. Dr. Bell stated that sorters of camel's-hair, Persian and other dry wools, were also subject to this disease. It might be fatal in from fifteen to twenty-four hours from collapse, more frequently reaction came on, followed by decreasing temperature and death in three or four days, without much distress or apprehension of danger till within a few hours of death. Blood taken during life from persons afflicted with this disease and injected under the skin of small animals produced illness and death in two to three days. The fluids and blood of these animals after death sometimes swarmed with the bacillus anthracis. It was supposed that the poison was derived from the fleeces of animals which had died from anthrax. Dr. Bell related several cases of local anthrax in persons from contact with mohair. Fluid from the vesicle contained bacilli, and produced anthracæmia in animals. Blood from the margin of the sore did not produce the disease. Woolsorters more frequently suffered from pulmonary anthracæmia, the poison being introduced through the lungs. Dr. Bell also related cases of enteric anthracæmia in heifers and sheep which were pastured on lands irrigated by sud-water after having been used in washing "Van" mohair. The disease as it affected the woolsorter might be prevented by passing the materials through water and sorting them whilst damp.

A Steam Method of Diffusing in the Atmosphere Carbolic Acid, Essential Oils, etc., for the purposes of Disinfection. By ROBERT LEE, M.D., F.R.C.P. (London).—The method proposed was suggested by certain experiments on the properties of the steam-jet as a motive agent in producing a current of air. It was found that carbolic acid, thymol, creasote oil, benzoic acid, and other substances, which had a boiling point considerably higher than that of water, might be diffused in an exact and constant quantity by combining them with water in a small boiler, and producing a jet of steam at a temperature of from 220° to 225° Fahr. In ordinary circumstances, when carbolic acid and water were heated in an open vessel, there was a want of regularity in the diffusion of the acid, and the range of its influence was very limited. When a jet of steam was employed, more extended and more perfect diffusion was obtained: and, so far as benefit from disinfection of the atmosphere could be expected, this method would be found superior to any other. In using the spray-producer, the natural tendency of the vapour was to subside more or less rapidly, and not, as in the case of the steam-jet, to rise by the difference of temperature in the air of an apartment. It was probable that this method of diffusing volatile agents, such as the essential oils, some of the turpentines, etc., whose medicinal action in the form of vapour might be useful for certain pulmonary disorders, would suggest itself as suitable. In order to provide a convenient and simple apparatus, Messrs. Maw, Son, and Thompson of Aldersgate Street, London, had prepared one which would answer every purpose required. It would appear that the action of the water within the boiler, under conditions of pressure, and where the vapour escapes by a small orifice, was mechanical; and that the substances referred to were carried along with the steam in minute particles. On comparing a solution of carbolic acid, which had been simply boiled in an open vessel, with one of similar strength which had been heated for a short time in the boiler, the difference of the action in the two cases was observed; and the probability of the explanation suggested would appear evident.

On Prophylaxis of Rabies and Hydrophobia. By T. M. DOLAN, L.R.C.P.Ed. (Halifax).— Mr. Dolan commenced by remarking that, from 1870 to 1877, 395 deaths were registered in England and Wales as having been due to hydrophobia. He gave tables of the distribution in the several registration districts, which showed a high death-rate in the North-western and Yorkshire divisions. He noticed the opinions of authors as to the period of incubation and the spontaneous origin of rabies in the dog; and considered the question of prevention by individual and by general action, both being set in motion by some central machinery. The author referred to several points in regard to the management of dogs in which strict legislative action would be beneficial, and concluded the paper with the draft of a short Act of Parliament for carrying out the measures which he advocated.

Tuberculosis in Lower Animals. By C. R. DRYSDALE, M.D. (London).—The author said that one of the most salient features

in modern hygiene was the excessive death-rate which still went on among children in the first year of life in various centres of civilisation both in this country and abroad. It was difficult to say what ought to be the normal death-rate of infants if public health were further advanced; but, in some rural districts in France (Rhone), there was as low a death-rate in the first year of life as 50 per 1000 births; while in Seine Inferieure, the death-rate was 800 per 1000 among the foundlings under State supervision. In England and Wales (Ansell), the death-rate of infants in the first year of life among the richer classes was about 80 per 1000. In Liverpool, this rose to 240 per 1000; and in the purlieus of cities, from 300 to 400 infants per 1000 died annually in the first year of life. The death-rate of adults among the richer classes in this country was now not much more than 12 per 1000 annually; this low figure had recently been attained by New Zealand; but the death-rate in poor neighbourhoods often rose, as in Dublin, to nearly 50 per 1000 annually. In Germany, there was often a very high infantile death-rate. Thus, in the Grand Duchy of Baden, the death-rate under one year was 337 per 1000 born. In Bavaria, it rose to 600 per 1000; in Würtemberg, it was 340 per 1000. In Austro-Hungary, the infantile death-rate was 262 per 1000 born. The number of illegitimate births in Bavaria was very large, as a certain amount of fortune was required of all couples who enter wedlock; and in Austria, where former statesmen put similar obstacles on marriage, there was, in several of the large cities, a considerable majority of illegitimate births. In Belgium, the infantile death-rate was 171 per 1000. In France, it was 170 per 1000, according to Bertillon. The birth-rate of France was at present the lowest in Europe—26 per 1000 per annum; the death-rate, 22.5 per 1000, or about the same as that of England and Wales. France had the most married women between the ages of fifteen and fifty of any European country—140 per 1000; England, 133; Holland, 112; and Belgium, only 105. The mortality of male legitimate children in France (181 per 1000 under one year) was higher than that of female legitimate children (152 per 1000). The mortality of male illegitimate infants was 343 per 1000. In Paris, the number of illegitimate births to legitimate was 261 per 1000 births; whilst in the Basses Alpes, it was as low as 17 per 1000. In Sweden, there was a very low death-rate of infants, namely, 149 per 1000 for males, and 128 for females. The infantile death-rate rose in years of scarcity in Sweden. In Denmark, the death-rate of infants was 156 per 1000. In Iceland, there was a death-rate of infants as high as 330 per 1000. The population was very poor and hardships were great in that inclement climate. The Russian infantile death-rate was given by Bertillon as 243 per 1000; but there were far higher death-rates than that in the Eastern Provinces of Russia, where the mean age of life was often not twenty years. There seemed to be very little illegitimacy in Russia; but the poverty was very great indeed. Thus, whilst the illegitimate were to the legitimate as 1 in 14 in England, they are only as 1 to 32 in Russia. Neither legitimacy or illegitimacy *per se* would account for high death-rates in various European states. Some other factor was required to explain the differences. In Italy, the infantile death-rate was 370 per 1000. The ordinary death-rate was 30.6 per 1000, and the number of children to a family was large, nearly 6.88 in 1861. The garrison towns of all Continental cities were noted for the high death-rates among infants. Syphilis was a cause of infantile mortality. Poverty was by far the greatest factor in the causation of infantile mortality. In Lyons, in 1867, Devilliers found that the infantile mortality among the working classes was 269 per 1000; amongst Government officials, 190 per 1000; whilst among the comfortable peasantry in the neighbourhood of Lyons, it was only 97 per 1000. The most satisfactory statistics yet published were probably those of Mr. Ansell, in 1874, which showed a death-rate among the comfortable classes in England and Wales of 80 per 1000 among infants. In the general population of England and Wales the infantile death-rate was 150 per 1000; and in the poor streets of many towns it was as high as 400 per 1000. Ansell showed that the mean age at death amongst the comfortable classes in England was fifty-five; amongst the artisans, Chadwick gave it at only twenty-two in Whitechapel in 1843, and it was certainly far below thirty-five in 1880. This was mainly due to the death-rate of children in the first year of life. Ansell calculated that, in the year 1873, the general mortality of England and Wales was 142,000 more than it would have been had the population been in as comfortable circumstances as those in the richer classes contained in his tables. In Europe, as a general rule, when other things were equal, a high birth-rate was followed, as in Russia, by a high death-rate of infants and adults. Norway avoided a high birth-rate by late marriage; the marriage age of women there was twenty-eight years. In certain backward districts in France (Brittany), families were very large, and the people wretchedly poor. In some of the richer districts, such as Calvados, Eure, Orne, Manche, the families were so small that, in 1860, the deaths exceeded the births by 2,375 in a population of 1,894,424 (Lagneau). The professional classes of France, according to the census of 1866, had, in one hundred families, only 174 to 180 children. Dr. Drysdale found that sixty of the most eminent members of the Parisian Faculty of Medicine had only one hundred and nine children (100 to 180); whilst Ansell found that one hundred members of the medical faculty in England and Wales had four hundred and ninety-six children. In England, emigration took off many persons; but the French stayed in France; and, if the infantile mortality were so low in some French provinces, it must be due to the small families and general comfort of the peasantry. Summing up, it might be said that illegitimacy, ignorance, syphilis, and bad climates, were frequent causes of infantile mortality. To these causes must be added, in some Continental cities, the neglect of maternal lactation. Poverty caused by large families, however, was by far the most important cause of infantile and early adult death. If hygiene was ever to become a true science, it must look this point calmly in the face. The ultimate consequence, Dr. Drysdale said, would be that statesmen would have to discourage rapid birth-rates, not by postponing marriage—for this caused illegitimacy, as in Bavaria—but by punishing, perhaps by some small fine, the production of more than some four children by any married pair. This would, he was certain, produce a rapid fall in the death-rate, and no evil effect could ensue. Laws were by far the best ways of teaching positive morality to the average citizen, who had no time, and little inclination, to learn his duty by mere appeals to a sentiment of what was useful for the State in individual conduct.

Provident Dispensaries and Paying Patients at Hospitals. By H. NELSON HARDY, F.R.C.S.Ed. (London).—Having defined the position of provident dispensaries as distinct, on the one hand, from free and voluntary charities, and, on the other, from clubs and Poor-law dispensaries, Mr. Hardy stated that, though professedly a system of mutual health insurance, these institutions have no solid basis to rest upon—such as would satisfy any sane actuary, or induce any prudent speculator to invest money with the hope of ever seeing it again. The new rules of the Metropolitan Provident Medical Association were described as even worse than those sanctioned by the Charity Organisation Society, since they proposed to have no wages limit of membership, and threw additional duties on the medical officers without any additional remuneration, though even at present, in the best provident dispensaries, this was shown to be quite inadequate. Turning to the scheme for the admission of paying patients at St. Thomas's Hospital, it was stated that the interests both of the profession and the public had been fully considered. The framers of that scheme had kept in view certain important facts and principles which were too generally ignored by governing bodies of hospitals. 1. All who are sick and in need of hospital treatment are not poor. 2. Those who can ought to pay for their treatment at hospitals. 3. Outside the staff of each hospital there were medical men capable of treating disease. 4. Whether connected with hospitals or not, the medical labourer is worthy of his hire.

Remuneration by Clubs. By ALAN REEVE MANBY, M.R.C.S.Eng. (East Rudham).—Mr. Manby commented briefly on the difference between trade and professional remuneration, quoting Mr. Seymour Haden's suggestion, that the healing of disease, being an art, might be valued similarly to painting, etc.; he then proceeded to discuss the demoralising tendencies of contract work, enlarged on his remedy for the present unsatisfactory condition of club-payment, describing the system briefly referred to in the BRITISH MEDICAL JOURNAL of last November, in his letter signed by "One of a Contented Firm". He claimed for it many advantages, of which the diminution of imposition; the complete cessation of unnecessary and vexatious calls and journeys; the admission of the lower middle class; the satisfaction of the club members; the payment of out-lying patients' bills; and, generally, the fair payment for fair work, were some of the most important. He asserted that, from an experiment of forty years' duration, the ordinary 4s. or 5s. *per annum* poll-tax was amply sufficient to pay fair middle-class fees for illness and accident during an average of years, and to leave at least 25 per cent. as a saving to the club for emergencies. As this 25 per cent. meant a loss of something like £200,000 *per annum* from a none too wealthy profession, he anticipated opposition from medical men, but promised that the loss of money would be easily compensated for by a gain of comfort and dignity.

Suggestions for the Reform of the Out-patient Departments of Hospitals. By A. ERNEST SANSOM, M.D., F.R.C.P. (London).—Supposing it taken for granted that some reform was necessary in the gigantic out-patient departments of our great hospitals, the author invited discussion as to the best means of bringing about such reform. He acknowledged himself at variance with those who had promulgated a plan for the establishment of provident dispensaries in various districts of London, and he considered that the rules issued for the conduct of such dispensaries were open to much objection. The erection of these

institutions was but the putting in force a plan on a large scale, which in London, on a smaller, had been a conspicuous failure. The final proposition which the author submitted was :—1. That any movement for the reform of the out-patient departments of hospitals, in order to be effectual, should start from these departments themselves. The out-patient departments fulfilled useful functions, and were beneficial to the community when the physicians and surgeons were not over-burdened by the numbers of applicants, and when it was possible to give adequate attention to the cases. The author submitted : 2. That it is not desirable that the out-patient departments should be abolished. The reform which appeared to be practical was to abrogate the out-patient departments in their character of *dispensaries*, retaining them only for *consultation*. Thus they would be free to the patient on his first visit only, when a proper diagnosis could be made. The medical officer should have the power of requiring subsequent attendances for the purpose of maturing diagnosis, but it should be considered no function of the department to provide a continuous supply of medicines. It was submitted : 3. That the out-patient departments should be made institutions for consultation only. There could be little doubt that the out-patient system as it existed at present injured the moral tone of those above the rank of paupers, whom it was supposed to aid. A considerable proportion of the patients were able to make some contribution towards the expenses of their treatment. It would seem by no means impossible to establish a dispensary in connection with each out-patient department, which the payments of patients should make, at least, self-supporting. It was submitted : 4. That it is desirable that there should be affiliated to every hospital at present receiving out-patients a dispensary supported by the contributions of those who seek its benefits. Such dispensary should give distinct advantages to such as would join it on the *provident* principle, but the author was of opinion that this principle was not capable of universal application on account of the nomadic habits of many of those who would be amongst its patients. It would be most desirable that payments should be made according to a pre-arranged scale, and certainly the dispensary should not be open to those who are able to pay the legitimate fees of a qualified practitioner. Given a liberal constitution to such dispensary, a representation in its management, as well as in its active conduct, of the medical practitioners resident in the district in which it was placed, its establishment could scarcely fail to be an advantage. The plan would ensure for the patient a careful investigation of his malady, and a continuing treatment which, whilst being efficient, would do no injury to his self-respect ; to the physicians and surgeons of our hospitals there would be opportunities that they so much desired of the closer study of disease, impossible when they were overborne by the weight and tumult of throngs of patients ; to the general practitioner who should desire it would be given a share in the work now wholly undertaken by the out-patient department, as well as a facility for correcting abuses which might affect his private clientèle.

Communication of Air into Main Sewers. By C. A. CAMERON, M.D. (Dublin).—Ventilators had been lately placed in the street-sewers of Dublin, and had alarmed many persons whose houses were close to them. They apprehended that there might be dangerous emanations from the ventilators. Observations made showed that the atmospheric air is constantly going into, instead of gases coming out of, these ventilators. When the fires began to be lighted in the morning, a remarkable increase in the velocity of the current of air into the sewers through the ventilators was observed. This showed to what an alarming extent the communication between the house-drains and street-sewers was defective. The higher temperature of the house (especially the kitchen) cause an insuction of air from the sewer, unless the traps were in good order. Street ventilators were useless to prevent this insuction. In a house in a fashionable square, where there were four cases of typhoid fever, Dr. Cameron found the sewer-air entering the scullery (the bell-trap having been left off) with such force as to blow out a candle ; opposite this house, the sewer was provided with a large ventilator.

BEQUESTS, ETC., TO MEDICAL CHARITIES.—The British Home for Incurables has received £1,600 under the will of Mr. Thomas Hall.—The Hereford Infirmary has received £1,000 under the will of Mr. Matthew Tombs of Leominster.—The Bristol Royal Infirmary has become entitled to £500 under the will of Miss Fanny Brookman.—Mr. Peter Reid has given £5 to the National Hospital for Consumption at Ventnor. The Charing Cross Hospital has received thirty guineas from "G. H. B.", and £25 from Mrs. Tomlinson.—The Hospital for Women has received thirty guineas from Mr. J. Benson, and thirty guineas from the Lady Jane Taylor.—Mr. John Kahres, 1 Camden Road, bequeathed £200 to the German Hospital.

THE ANNUAL MUSEUM.

DURING the meeting of the British Medical Association in Cambridge, the exhibition of Surgical Instruments, Microscopes, Pharmaceutical Preparations, Dietetic and Sanitary Appliances, was held in the Guildhall.

Messrs. Allen and Hanburys exhibited their new petroleum product, chrisma, now extensively used as a basis for ointments and for lubricating purposes ; their malted farinaceous food for infants and invalids, which they have recently patented, and which differs from other malted foods in that the malt is present in a soluble form ; their well-known "perfected" cod-liver oil, and nitrite of amyl capsules ; also tonga, a drug recently introduced, and apparently with great success, as a remedy for neuralgia ; and a beautiful series of medicated pastilles or jujubes, made at the suggestion of Dr. Prosser James, which, being of a soft consistence and ovoid shape, are better suited for tender conditions of the mouth than the hard angular lozenges commonly in use.

Messrs. Arnold and Sons exhibited, among other specimens of the work of their well known firm, their improved combined duck-bill and bivalve speculum, by means of which, it is said, a larger view of the cervix uteri and roof of the vagina are given than by any other cylindrical speculum. They also showed Dr. Clement Godson's portable gynæcological case ; the patent flexible throat-spray (see BRITISH MEDICAL JOURNAL for July 17th); steam-spray producers for Lister's antiseptic treatment ; and also their light and compact bed-rest and their improved stethoscope, with a secret spring in the joint obviating the necessity of using India-rubber bands to bring the ear-pieces into position.

The microscopes exhibited by Messrs. R. and J. Beck of London and Philadelphia were especially selected to meet the wants of the medical student. There were histological dissecting instruments, which could be used with simple lenses or with the compound body, complete in case, from four pounds sterling. Their "economic", "popular", and "national" instruments are perfect as regards workmanship, and the optical quality of their lenses is second to none. The "economic" microscope, with inch and quarter-inch object glasses and two eye-pieces, meets all the necessary requirements of the student. Messrs. Beck also exhibited a complete series of oculists' trial lenses and enamelled test-types, together with clinical thermometers and typical urinary preparations, of great beauty.

Messrs. S. M. Burroughs and Co., of Snow Hill, London, exhibited their useful preparation of beef and iron wine, which, we believe, is coming rapidly into favour. Some of our most eminent physicians, who have given it a trial, speak of its efficiency, both in acute and chronic cases, in very high terms. It is a concentrated preparation, and bears a large dilution with water ; and, in this condition, is readily taken by delicate persons and children unable to assimilate the usual tonics and nutrients. The same firm exhibited the preparations of the Kepler Malt-Extract Company, of London ; viz., the Concentrated Malt-extract, together with palatable combinations with cod-liver oil, etc., in which they have recently made great improvements. Capsule pills, of oval form, manufactured by McKesson and Robbins of New York, were also exhibited by Messrs. Burroughs and Co., who are the sole agents. These pills are beautiful in appearance ; the colour of the medicine showing clearly through the thin, but perfect and soluble, coating of gelatine. Their oval shape appears to give them a great advantage over the round form of pill, as they are much more easily swallowed. They are all that can be desired in point of solubility, as the coating of gelatine is put on while the mass is soft. If one of their quinine pills be placed on the tongue, the taste is at first entirely imperceptible until, in about half a minute, the coating dissolves, and the mass itself (being soft) dissolves in about two minutes more.

Messrs. John Wyeth and Brother, of Philadelphia, U.S.A., exhibited, through their representatives, Messrs. Burroughs and Co., specimens of their compressed drugs. Conspicuous among them was a large jar of the compressed tablets of chlorate of potash, which are now frequently prescribed by most medical men in affections of the throat. Our attention was called to a new compressed tablet of small dimensions, called soda-mint, composed of bicarbonate of soda and carbonate of ammonia with oil of peppermint in minute quantity. It is consequently very prompt and efficient in correcting acidity and the dyspepsia produced by it ; it is also useful in heartburn, colic, and flatulence. Messrs. Burroughs also exhibited Messrs. Wyeth's compressed pills of bisulphate of quinine (which are extremely soluble), and their well known compressed tablets of chloride of ammonium, bicarbonate of potash ; as well as their excellent preparation of dialysed iron.

Messrs. Burroughs and Co. also showed specimens of Fellows' Compound Syrup of Hypophosphites. This is a chemical combination of the hypophosphites of iron, quinine, strychnia, manganese, lime, and

potass. Its characteristic and peculiar excellence is explained by an alkaline reaction and its harmony of composition, whereby it may be administered for an indefinite period without unpleasant effect, and may be discontinued at any time without injury. It brings a good reputation from America, where it continues to be a favourite with the profession in the treatment of nervous and pulmonary disturbances, and has already obtained many friends amongst the profession in England.

Messrs. Burroughs also exhibited the Urethral Irrigator, for the treatment of gleet and the prevention of stricture, constructed by Messrs. Symes and Co., pharmaceutical chemists, of Liverpool. It was introduced by Mr. Reginald Harrison, Surgeon to the Liverpool Royal Infirmary, and has been used by many members of the profession with satisfactory results. The patient seats himself in a chair with his pelvis inclined forward to the edge, and introduces the soft catheter gently into the urethra, having previously anointed it with some vaseline; the other end of the syringe is placed in a tumblerful of the fluid to be used, tepid. He steadies the catheter in his urethra with his left hand (not squeezing the meatus), and slowly compresses the ball of the syringe with his right hand, the vessel containing the fluid to be injected being placed by his right side. The fluid most suitable for irrigation is fifteen grains of sulphocarbolate of zinc in half a pint of water.

Dr. Barber's inhaler was also exhibited by Messrs. Burroughs. This inhaler is composed of two small glass jars. Into the neck of one is fitted an elongated tube holding a piece of sponge, which may be saturated with aqua ammoniæ; the bottom of the bottle being covered with hydrochloric acid. The air, being drawn down through the tube, becomes saturated with ammonia-gas, which, coming into contact with the acid, combines with it to form vapour of chloride of ammonium. This gas or vapour is conveyed to the second glass jar by a tube, which dips under the water with which it is half filled. After being thus purified, it may be drawn into the mouth and throat through the mouthpiece and exhaled through the nostrils if so directed by the physician.

Bishop's granular effervescent preparations of citrate of caffeine and of extract of nux vomica were also exhibited by Messrs. Burroughs. The former of these preparations is now extensively prescribed in cases of nervous and sick headache, neuralgia, and other nervous disorders, as also in cardiac dropsy. The name of Mr. Bishop is a sufficient guarantee to the profession that the article is skilfully prepared. The granular effervescing extract of nux vomica forms an agreeable method of administration, the bitterness of the extract being considerably masked.

Messrs. Burroughs also exhibited Lawton's absorbent cotton. It absorbs moisture with remarkable facility; and, if placed on water, quickly or immediately becomes saturated with it, and sinks to the bottom. It will be found preferable, in many instances, to the ordinary cotton-wool or linen-lint for the application of medicated lotions, the dressing of wounds, and for absorbing discharges. This cotton is now largely employed by surgeons, both here, in America, and on the Continent.

The exhibition of Messrs. Brady and Martin of Newcastle-upon-Tyne was an important feature in the Museum, occupying as it did a considerable space, and comprising many objects of special interest to physiologists as well as to medical practitioners. The old-established reputation of the firm for drugs and pharmaceutical products was well sustained by their stand of new and selected preparations, among which we noticed tinctures of quebracho, casca, and cocculus Indicus; fluid extracts of caroba, ergot, and jaborandi; and some concentrated infusions, which were of the highest standard of excellence. Some well prepared samples of ointments of boracic acid, chrysophanic acid, iodoform, and oleate of zinc, as well as a case of elegantly prepared suppositories, pessaries, and bougies, were also shown. In addition to the drugs, Messrs. Brady and Martin exhibited a careful selection of surgical instruments, including a steam-spray, with a gauge; a small aspirator, of elegant appearance, especially useful for small abscess; a new form of clinical thermometer; and a silver hypodermic syringe, which attracted the attention of the numerous visitors. The position of this firm on the Tyne gives them many advantages in supplying apparatus and instruments used in scientific investigations; and, in coming to Cambridge, we think they did wisely to exhibit a considerable selection of apparatus adapted to physiological and chemical research. Microscopes by Beck, Hartnack, and Zeiss; microtomes; injection-syringes; materials for hardening, staining, and mounting preparations; as well as the physiological and pathological slides, mounted by Cole; beakers; boiling flasks; burettes; evaporating dishes, both glass and porcelain; bottles with embossed labels, for laboratories and surgeries, were a novelty. Air-tight glass museum-jars, for the preservation of anatomical specimens, attracted considerable attention, and admirably meet a long-felt want. We could mention many other objects of interest exhibited by Messrs. Brady and Martin, did our space permit; but a well-written catalogue, with notes, issued by them, amply supplements this brief notice.

The Chesebrough Manufacturing Company had a fine display of standard ointments made with vaseline as a basis. As a proof of the stability of these articles, we were informed that some of the ointments had been exhibited at the Paris Exhibition of 1878, afterwards at the Association meeting at Cork last year, and then at Amsterdam; and are, at the present time, in no way deteriorated. We are glad to learn that, in consequence of the large demand, the Company are now able to supply vaseline at a greatly reduced rate, without in any way depreciating its quality.

Mr. W. T. Cooper of Oxford Street exhibited, *inter alia*, a new tube for injecting the urethra, introduced at the suggestion of Mr. C. B. Keetley. The tube contains two ounces, and resembles the compressible tubes in which painters carry moist colours. It may be charged with solution of tannic acid, sulphate of zinc, sulphocarbolate of zinc, or other material used in urethral injection.

The exhibition of Messrs. Corbyn, Stacey, and Co., of London, was replete with interest of a varied character, from the food essential to the infant to the beautifully prepared active principles of the more powerful drugs. As an instance of the first, we may mention lactose, an elegant food for infants and children, so prepared as to contain, in their right proportion, all the nutrient properties of the mother's milk, for which it may be considered an eligible substitute; and, as an instance of the latter, the crystals of sulphate of duboisia were conspicuous. Amongst others of the same description, we might mention cotoin, eserin, ethyl bromide; whilst amongst the numerous pharmaceutical preparations, all of which were of the high character attaching to this firm, we noticed the solutions of the bromide and iodide of iron, made, we believe for the first time, without liability to change. Chaulmoogra oil and Valentine's meat-juice also attracted much attention and eulogium; and it was evident that the development of pharmaceutical research holds a high place in the objects and intentions of this firm. We cannot attempt to name all their exhibit; but an admirable *résumé* of them will be found in their "Notes on Drugs, etc.", which, we understand, can always be obtained on application. Among the standard preparations of peculiar merit and popularity, special to Messrs. Corbyn, are Liebreich's well-known Pepsin-Essenz, a glycerine-extract prepared in Berlin with a light hock, and which Preyer and Panum abroad and Bartlet in England have found to be of marvellous digestive power, and which physicians in all countries employ with advantage, while dyspeptics find it as agreeable a *liqueur* as it is an efficacious medicament. Liebreich's syrup of chloral, prepared in palatable solution by the directions and under the guarantee of Professor Oscar Liebreich, bears the signature of the illustrious chemist and pharmacologist on each bottle, and thus the purity and efficacy of the solution are secured: this is no small advantage, since it is stated on the best authority that, on the one hand, there is no chemical test by which the use of the cheaper and less perfect crystals or plates can be detected in solution; and, on the other, such imperfect crystals (of which an enormous proportion are sold and consumed) are apt to contain irritant by-products of a poisonous character, which are in themselves dangerous, and which, by counteracting the sedative and sleep-compelling properties of chloral-hydrate, have the insidious danger of favouring the use of unduly high doses. When a person accustomed to the use of these high doses of the less effective solution happens to have the same prescription made up at another shop with a pure and effective solution, the chances are that a too deeply sedative effect may be produced. The dangers of the currency of unreliable solutions of chloral are, therefore, considerable and imminent; and the introduction of a guaranteed and reliable solution, such as Liebreich's syrup of chloral, guaranteed by the signature of the Berlin professor to whom we owe its introduction into medicine, is a boon to prescribers. It is especially important, seeing that persons for whom chloral is prescribed are too apt to repeat the prescription for themselves in out-of-the-way places, and under circumstances where they are no doubt liable to meet with untrustworthy solutions. The dose is that of the pharmacopœial syrup.

Messrs. Coxeter and Son, of London, exhibited amongst other things various new forms of their medical batteries, which have been found, after careful trial in the hands of well-known medical men, to deserve favourable notice. They produce powerful currents, are extremely portable, the fluid cannot be spilled, and they seem to stand an immense amount of wear and tear, and are sold at a very reasonable price. They have also adopted a general plan of putting a screw upon all forms of bottles for medical use, and employ a screw cap in place of the usual glass stoppers. They exhibited neat cases of midwifery bottles and hypodermic syringes with the same principle carried out both as to the morphia bottles, and the parts connecting the glass with the metal of the syringes themselves, no current being employed.

They also showed India-rubber pads for splints; various forms of poroplastic splints and corsets; a new portable Turkish and steam bath; Mr. Berkeley Hill's modification of Dr. Bigelow's lithotrite and *débris* extractor; a small aspirator; steam sprays, etc.

The Gloucester Sanitary and Œconomic Supply Association exhibited their Sanitary Water-closet Disinfector, designed by Dr. F. T. Bond, and adapted for use with his fragrant disinfectant "terebene", or with carbolic acid, or any other non-metallic disinfectant. By the shutting down of the lid after use, a small quantity of the disinfectant is discharged into the pan below, and mingles with the water left behind. The same Company also exhibited Dr. Bond's euthermic ventilating gas-burner, designed to facilitate the ingress of fresh air into rooms in which gas is burning. It consists of a hollow vertical cone, suspended above the globe which surrounds the flame. To the lower end of the cone is attached an opal glass shade. A horizontal tube is let in through the wall, and opens into the cone. As the hot air from the flame ascends through the cone, it is joined by a stream of cold air, which is drawn in through the horizontal tube, according to a well-known physical law. Thus the heated and vitiated air is constantly compensated for by the ingress of fresh external air. The Company also showed Dr. Bond's euthermic gas-stove; also his filtering cistern. It is alleged that, as this cistern can be supplied continuously from a main, or from an independent cistern, its size need not be so large as to prevent its being placed in a pantry, larder, kitchen, or other place where it is at all times accessible. Every portion of it can be inspected at any moment; the water can be run off from each of the compartments for cleaning or other purposes; and the charcoal can be taken out, cleaned, and replaced in a short time.

Messrs. Harvey and Reynolds of Leeds, among their other specimens, showed an extract of meat prepared by the process of Liebig from the best English beef. This extract is very carefully prepared by steam-apparatus, and is remarkable for its superior delicacy of flavour and general qualities, which have caused it to be preferred by physicians for use in the sick room and in other cases where the advantage in the price of the foreign extract is of secondary importance as compared with that of the peculiarly agreeable flavour and high quality of an extract prepared freshly from the finest English meat.—They also showed specimens of clinical thermometers. The Phœnix thermometer has evidently obtained much favour, and its indestructible index justifies this. The flattened bore and the lens front render it valuable to those whose sight is failing. A new form of thermometer shown was that constructed by this firm for Mr. Scattergood, to take the temperature of water for hot uterine injections. Eye-drop flasks, so inexpensive as to be used by some hospitals by hundreds, were also shown. Messrs. Harvey and Reynolds also showed salicylic silk, as used by Mr. McGill of Leeds, and containing 10 per cent. of pure salicylic acid. This is alleged to require much less frequent changing than the ordinary dressings, and to produce more rapid union of surfaces. Amongst pharmaceutical preparations, the firm showed Merck's hyoscyamine, recommended by Dr. Robert Lawson as a calmative in mania. It has been issued by Messrs. Harvey and Reynolds in its pure form, or in various preparations, to asylums in all quarters of the world. Preparations of iodoform, oil of stavesacre, bromide of morphia and quinine, salicylate of quinine, duboisine, chrysophanic acid, etc., were also exhibited.

Mr. Hawksley of Oxford Street, London, exhibited Thomson's ametrometer, for measuring the refraction of the eye without the aid of lenses, which was highly commended for its ingenuity; and a very complete set of instruments, in case, for use in aural surgery, as suggested by Mr. Dalby. Amongst the acoustic appliances for the relief of deafness, which were very varied, we noticed ear-cornets, with springs for adjustment on the head; ear-trumpets, designed on mathematical principles, with hyperbolic and parabolic curves; conversation tubes of unusual power; and a receiver, intended for the centre of a table, having a long tube for the use of deaf persons, by which the general conversation of the company may be listened to. There were also shown many improvements and novelties in the accessories of the armamentarium of an aural surgeon—such as a pneumatic speculum, nasal syringes, Politzer-bags, audiometers, etc. Mr. Hawksley also exhibited Professor Schäfer's case of transfusion apparatus.

Messrs. Horn and Son showed an improved regulating digitorium. This is used at the National Hospital for the Paralysed and Epileptic, Queen Square, London. Messrs. Horn and Son's improved regulating digitorium is an instrument, occupying the place of a mechanical adjunct, for restoring and developing the power of the fingers, in cases of paralysis and general wasting of the muscles of the hand. It is characterised by three distinctly novel features: 1. The regulation of the depth of touch; 2. The regulation of the pressure; 3. An index showing the progress made. The instrument consists of a case containing five or more notes, like piano-keys, across which is a rail, called the key rail, which, being attached by a hinge to each side of the case, may be raised and lowered by means of screws, thus varying the depth of touch of the notes from one-eighth to seven-eighths of an inch. The object of this is to afford the patient an opportunity of exercising the extensor muscles, apart from the nerve power required to press various degrees of resisting force. The regulating of the pressure or resistance of the notes, imperceptibly, comprises the second feature of the invention. This is accomplished by means of springs—equal tension guaranteed—each travelling in a groove underneath the note, the said springs being fixed to a rail, called the spring rail, which is moved forward to increase the pressure, and backward to diminish it, by means of a screw. To prevent tampering, the screw is turned by a key, which may be kept by the medical attendant. As the springs are moved, a pointer, attached to the spring rail, shows on an index at the side of the instrument the progress made in a range of twelve powers, the lightest being lighter than a piano, and the heaviest heavier than an organ with all manuals coupled. A rest, which may be drawn to and fro, and raised at will, is also constructed for the wrist. It is desirable that the patient begin with a light shallow touch, otherwise his muscles will be strained, not developed, by the exercise. The Resident Medical Officer of the National Hospital for the Paralysed and Epileptic, Mr. Charles Beevor, reports that he has used the instrument in several cases of stiff finger-joints from hemiplegia and other causes, and he has found that the individual power in the fingers has been much increased by the use of the digitorium.

Messrs. H. T. Kirby and Co., of London, showed their Miniature Dispensary, which contains a selection of thirty-four medicines and all the instruments and appliances usually required in cases of urgency. The assortment is enclosed within a small handy case, the whole weighing about four pounds.

Messrs. Krohne and Sesemann of Duke Street exhibited, *inter alia*, Mr. Anthony Bell's dry atomiser for the antiseptic treatment of wounds, and a smaller instrument of the same kind for disinfecting the sick-room or any dwelling; also Mr. Bell's solid atomiser for the topical employment of medicaments in diseases of the respiratory tract.

Messrs. McDougall Brothers, of Mark Lane and Manchester, exhibited a very valuable self-raising flour, prepared after the data furnished by Professor Horsford of Harvard University, on the principle of supplying in the flour itself the elements for generating carbonic acid and so raising the dough for baking; while, by the use of phosphoric acid, the phosphates are restored which are removed in the ordinary process of decorticating wheat. In this way, an extremely palatable and light bread is made, not mechanically irritating like ordinary brown bread, and having the advantage of retaining all the phosphatic elements of nutrition. The idea is not only ingenious but practicable, and has been carried out on a large scale. The flour has received the approbation of the most eminent dietetic authorities among European physicians; and its general use would, in our opinion, constitute a distinct progress in family dietetics. The same firm also exhibited Horsford's acid phosphate, from which a very agreeable and refreshing drink may be made in summer.

Mr. T. M'Ilroy exhibited gynæcological chairs; operating tables; an invalid bedstead; and a *post mortem* and operating weighing table, constructed at the suggestion of the Surgeon-General of the United States Army, which indicated different weights from a quarter of an ounce to 600 lbs.

Messrs. Mackey, Mackey, and Co., exhibited a large number of new remedies and special preparations manufactured by them. Among them were the following. Mistura cerii composita is a new and soluble compound of cerium, combined with chloroform, nux vomica, and hydrocyanic acid. It is recommended for vomiting in pregnancy, and in cases of indigestion arising from debility; also in alleviating the pain and vomiting in carcinoma and general chronic vomiting.—Ammonia-citrate of cerium is a perfectly soluble scaly preparation; of which a liquor was also shown.—Liquor secalis ammoniatus is said to prevent *post partum* hæmorrhage, to hasten delivery and produce uterine contraction.—Mackey's compound mixture of bismuth contains bismuth in its most effective form, in combination with chloroform, hydrocyanic acid, nux vomica, morphia, and aromatics. It is a valuable remedy for various forms of indigestion; and, in consequence of its direct sedative action, is prescribed with great success in checking pyrosis, and soothing the symptoms of internal malignant diseases. In infantile diarrhœa, its effects are said to be remarkable; and its calmative action on the stomach generally is worthy of notice.—Mackey's emulsion of cod-liver oil with hypophosphites of lime and magnesia, as recommended by Dr. Churchill, contains 50 per cent. of pure cod-liver oil, combined with nutritious tonic agents, It is specially recommended for persons unable to take cod-liver oil. Each tablespoonful contains two teaspoonfuls of pure cod-liver oil, two grains of hypophosphite of lime, two grains of hypophosphite of

soda, and one grain of hypophosphite of magnesia. The dose is a teaspoonful to a tablespoonful. It may be taken as it is, or in water, milk, or wine.—Mistura olei morrhuæ is a perfect emulsion, miscible in all proportions in water, etc. This preparation is emulsified by sugar, and is entirely free from gums and alkalies, thereby permitting the addition of any other drug. It is guaranteed to contain 60 per cent. of the finest Norwegian oil.—Theobromoleine (registered), or chocolated cod-liver oil, is a new and elegant preparation, which contains the purest cod-liver oil minutely divided, and in an agreeable form for administration.—Mackey's quinquinine contains the whole of the pure alkaloids of the officinal cinchona barks. It is alleged to be in many respects superior to the sulphate of quinine, at less than half the present price of quinine. The firm also showed citrate of iron and quinquinine, and tincture of quinquinine.—Epulixon has been introduced by Messrs. Mackey for the antiseptic treatment of surgical cases, wounds, sores, and offensive discharges of all kinds; also in porrigo, eczema, psoriasis, and in rhinorrhœa, otorrhœa, gangrene, etc.—The same firm also exhibited phosphorated refreshing saline; liquor vesicatorius, or blistering collodion; solution of crystalloids of opium; solution of pure hydrate of chloral; syrupus ferri dialysati; Mackeys' saxcere, or rock wax (a pure petroleum jelly, rendered innocuous by purification); euonymin; iridin; cortex quebracho; salicin; camphorin (antiseptic and disinfectant); oleum gynocardiæ (chaulmoogra oil); oxychlorogene (a powerful deodoriser); ethereal essence of ergot; liquor secalis ammoniatus; liquor rosæ compositus (for colouring mixtures); hydrobromic acid; salicylate of quinine; genuine Chian turpentine; emulsion of Chian turpentine with sulphur; liquor santali cum copaibâ, buchu, et cubebâ (miscible); liquor copaibæ compositus (miscible with water); tinctura hamamelis Virginicæ; tincture of jaborandi; styptic colloid; etc.

Mr. David Marr, of Little Queen Street, exhibited the latest improved forms of spray-producers as used by Professor Lister; also several handy sized bags containing in the smallest possible space all the requisites for antiseptic practice; the antiseptics being carried in an air-tight compartment. He had also a general show of modern surgical instruments, among which was a new fistula-knife, designed by Mr. Lister, dispensing with the aid of directors.

Messrs. Mayer and Meltzer, of Great Portland Street, showed Fawk's new needle for cleft palate or vesico-vaginal fistula; a new instrument for cutting sutures; flexible forceps; a tracheotomy-tube, containing knife complete, to carry in the pocket; a pair of polypus-forceps, etc.

Messrs. Newbery and Sons, of King Edward Street, exhibited specimens of Warner's ingluvin, from the gizzard of the common fowl, said to be a reliable remedy in cases of indigestion from debility of the stomach. It is in the form of a powder, and is prescribed in the same manner as pepsin. They also showed Warner's sugar-coated pills, of all formulæ.

Messrs. Parke, Davis, and Co., of Detroit, exhibited fluid and solid extracts of various kinds, sugar-coated pills, gelatine capsules for the administration of nauseous medicines, pepsin in various forms, desiccated bullock's blood, etc.

Messrs. Pickard and Curry, of 195, Great Portland Street, exhibited a series of instruments for the use of oculists, all of which they allege to be improvements on what had been previously in use. Foremost should be mentioned Couper's new refraction ophthalmoscope, with swinging mirror, already well known to our leading ophthalmic surgeons. An oculist's trial case (kindly lent for the occasion by Dr. Davidson of St. Thomas's Hospital, for whom it was made) was also very much admired.—Mr. Couper's adaptation of the Javal optometer, the Tweedy optometer, Holmgren's worsteds for testing colour-perception, Mr. Anderson Critchett's chart for determining the field of vision, and several microscopes for medical students, were also exhibited.—A set of *test-types*, for both near and distant vision, were also shown. These were exceptionally fine, and we were informed that this firm is desirous of placing a set at the disposal of every hospital and ophthalmic surgeon, free of charge.

Mr. Pratt, of Oxford Street, showed, among other articles, an instrument made for Mr. Willett for wry-neck, with a large number of movements to admit of most accurate adjustment; also a small and cheap form of hypodermic syringe providing a good and useful instrument, with a spare glass barrel, etc., at the cost of a very few shillings.

Messrs. Salt and Son of Birmingham as usual had a very comprehensive display of instruments, embracing all the most approved and modern examples; conspicuous, however, were their own specialities, now favourably known to the profession. We noted a number of beautiful aluminium cases, containing subcutaneous syringes, pocket dressing instruments, and aspirators for facial abscesses. They also exhibited their improved Sayre's apparatus, and invalid hammock, designed by them for Mr. Gamgee. A life-sized model of the female pelvis, showing the internal organs of generation, attracted considerable attention.

The exhibit of Messrs. Savory and Moore comprised the specialities and preparations of interest for which this firm has become famous. In glass globes were exhibited beautifully crystallised specimens of citrate of caffein and monobromide of camphor, and two or three samples of pearl-coated pills, which, we understand, this firm is prepared to supply. In other globes, we noticed permanganate of zinc, salicin and salicylic acid in effervescent granular form, mannite, thymol, menthol, cotoin, specimens of the cholagogues (reported upon by Dr. Rutherford), as iridin, leptandrin, euonymin, and several sulphocarbolates. A series of upright jars held specimens of coto, alstonia, and sassy barks, gelseminum root, and sections of guarana. In smaller jars were fine specimens of the leaves of boldo, coca, jaborandi, and papaya, the newly proposed digestive agent. Other jars contained kava and coptis roots, grindelia, and damsana herbs, etc.

A choice collection of liquid preparations of interest were exhibited on two stands, and we specially noticed a series of fluid extracts obtained from jaborandi, guarana, rhamnus frangula, and sumbul, dialysed preparations of iron, opium, belladonna, and cinchona, solutions of the hypophosphites, either separate or combined (as described by Dr. F. Churchill in the pages of this JOURNAL), phosphorised cod-liver oil, and the essences of pepsin and pancreatin, recently noticed in this JOURNAL; and we noticed that Messrs. Savory and Moore have prepared a saline essence of fibrinous food, and have also added a neutral and nearly tasteless essence of pancreatin for the predigestion of milk, arrowroot, and other delicate food for invalids. Among the tinctures exhibited by this firm were the tinctures of coto, gelseminum, jaborandi, ergot, with ammonia and podophyllin resin. The exhibit of this firm of course contained fine samples of their dietetic preparations, as pepsin, pancreatin, peptodyn, infants' food, pancreatic emulsion, etc.

A flat case contained an assortment of Messrs. Savory and Moore's ophthalmic and hypodermic discs; and the medicated gelatine lamels were exhibited as two framed pictures holding together about seventy distinct lamels; and around these cases upon the counter were the very ingenious ways of packing or preserving these medicaments, such as tubes, wallets, cases, etc. One case, less than four square inches in extent, we were assured, contained more than 1,000 divided doses of assorted drugs, and was a representative sample of some sent to India, and of which favourable reports were recently received by this firm. This peculiar portability will, of course, attract the attention of travellers having limited space at their disposal, or country practitioners having large areas to attend.

The mention of a few instruments, as a disinfecting vaporiser, hypodermic syringe, Felton's chloride of ammonium inhaler, etc., must close our notice of this exhibit.

Messrs. W. Schacht and Co., of Finsbury Pavement, exhibited, among numerous other articles, Wickersheimer's preserving fluid, and showed various specimens which had been submitted to its action for a considerable time.

Messrs. Southall Brothers and Barclay, of Birmingham, made a good exhibit of their various specialities. Foremost may be mentioned their new sanitary towel, for use in childbed and during the catamenia. It has already gained the good opinion of many obstetricians, and, as it is antiseptic as well as absorbent, and light as well as of downy softness, will doubtless be found by ladies vastly superior and more comfortable than the inconvenient diaper in common use. In addition to the "towel", larger pads intended for obstetric use only, and special pads for various surgical cases, were exhibited. As both towels and pads are intended to be burned after use, all morbid matters are effectually destroyed. The pads for surgical dressings, designed by Mr. Sampson Gamgee, were shown along with others which had been used in actual surgical practice—these latter being exhibited with the intent of proving their antiseptic qualities and permanent elasticity.—Samples of hospital strapping, a speciality of the firm, and "tenax", a substitute for tow, oakum, etc., also formed part of the exhibit.—Messrs. Southall also showed their "A 1" cod-liver oil, which they manufacture in Norway, and which, from having been freed by a special process from the excess of solid fatty acids, remains bright at very low temperatures, and, from its lightness, readily suits the stomachs of invalids. Emulsions of the same oil, containing hypophosphite of lime, hypophosphite of lime and iron, etc., were also exhibited.—Chian turpentine was illustrated by a number of examples and microscopic slides, including a set of specimens supplied by Mr. John Clay, and showing the article in an unstrained condition, when strained abroad, and as strained by Mr. Clay from specimens received by him directly from Scio. The curious seeds of the tree yielding Chian turpentine (*Pistacia terebinthus*), of a bright green colour, were included in this set of illustrations.—Amongst the rarer drugs, chemicals, and pharmaceutical preparations

also shown by Messrs. Southall, may be mentioned liquor emetinæ, of the same dose as ipecacuanha wine, but said to be of a constant strength and not liable to deposit; liquor epispasticus fortior, a strong blistering fluid, stronger than the *B.P.* article; casca bark, dita bark, duboisin, homatropin and hydropin—the latter being the new Russian remedy for dropsy, and prepared from the cockroach *(Blatta orientalis)*. There was also to be seen, among Messrs. Southall's exhibits, the "aquarium" sea-salt, alleged to possess all the constituents of real sea-water, and intended for salt-water baths, but applicable also for aquarium purposes, and practically identical with that used by the exhibitors in preparing large quantities of artificial sea-water for the public aquarium at Aston, near Birmingham, and in other places. A set of food-specimens, intended by Messrs. Southall to afford teachers and others a means of illustrating the chemical composition of various articles of food and drink, and containing a type-specimen of each of the different classes of foods, was also sent by the above firm, packed in a neat wooden box, and in the form usually supplied.

Mr. W. F. Stanley showed a new histological microscope.

Messrs. Weiss and Sons of the Strand, exhibited a number of instruments; and an improved Leclanche's battery, set in action by lifting the lid.

Amongst the numerous modern instruments exhibited by Messrs. C. Wright and Co., of 108, New Bond Street, London, were a very complete set of minor operating instruments in portable case representing an ordinary travelling bag when closed; Benham's new portable steam antiseptic spray-producers; Alexander's portable urine test-case; Dr. Ward Cousins' portable vaccinating-case and vaccine tube-holder, and new spring tourniquet, admitting of self-application with one hand to any limb; Pollock's new hæmorrhoidal crusher and improved *écraseur*; Davy's improved continuous suture-needle, and levers for compressing the common iliac *per rectum* in amputation at the hip-joint; a complete set of Barnes's obstetric and gynæcological instruments; new non-breakable Ferguson's specula vaginæ; new binaural stethoscope with concealed spring, dispensing with the India-rubber band usually employed.

Messrs. Young and Postans of 35, Baker Street, London, exhibited a collection of their various medicated granular effervescing preparations, and phosphorised cod-liver oil, together with some special bandages, and an ingenious contrivance in the form of a barometer (aneroid) with a daily and weekly register attached; also an universal hydrostatic spray enema and douche. In addition, the same firm exhibited a new vulcanite sponge, a laryngoscope with tongue-depressor and mirror attached; a most complete doctor's vade-mecum or miniature dispensary of Messrs. Kirby and Co's. manufacture; iodoform bougies recommended by Mr. Cheyne for gonorrhœa (BRITISH MEDICAL JOURNAL, July 24th and 31st); also Dr. Routh's new pessaries, manufactured by Mr. Russell of 37, George Street, Portman Square; and some rare alkaloids from Messrs. Petit, Paris, lent by Mr. Thomas Christy.

Several non-alcoholic drinks were exhibited and on taste, including Zoedone. This is a sparkling palatable drink, containing phosphates essential to the human frame—lime, iron, soda, and potash.

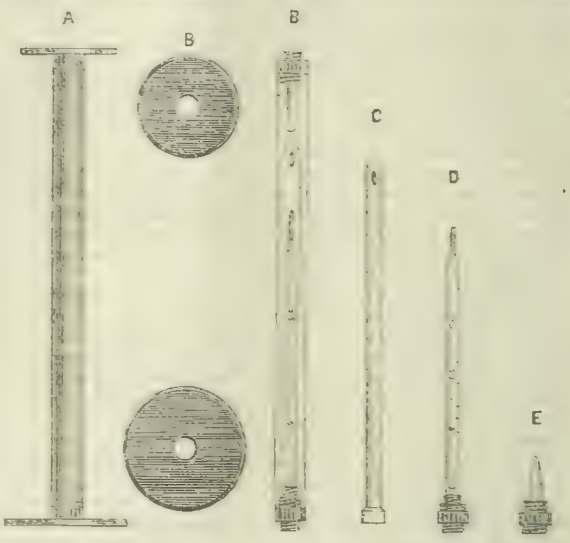
MR. F. CHAPMAN, Registrar of Eton College and Coroner for South Bucks, has contributed £750 towards the construction of a swimming bath for the pupils of the British Orphan Asylum at Slough.

HOMES OF THE WHITECHAPEL POOR.—At a recent meeting of the Whitechapel District Board of Works, the sanitary inspector reported that a complaint had been made that pigs were being kept in a house, 186, Hanbury Street, Mile-end New Town. Upon inspecting the premises the same day, the officer found that three pigs had been kept in the first-floor room for some days, the place being also occupied by a man, his wife, and two children, for living and sleeping. Two of the animals had died in the room shortly before the inspector's visit. The room was in a very filthy state, and a most offensive odour pervaded the whole house. Upon remonstrating with the man for keeping such animals in the room, he replied that a friend of his had made him a present of the three pigs, and that he had nowhere else to keep them. A still more serious case was discovered on the same day in Laml Street, Spitalfields. In the back garret of No. 27 in that street, there was found a man, his wife, four children, the wife's mother, and a man lodger. All these persons lived and slept in the room, and in addition to them there were also a small dog and four puppies. The place was, of course, extremely dirty and the stench [illegible]. The man told the inspector that he had served the occupier with a notice to quit. In both cases notices, under the Sanitary Act, were issued forthwith for the suppression of the nuisances, and overcrowding and indecent occupation.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

TAYLER'S COMBINATION STETHOSCOPE.

MESSRS. LYNCH AND CO. have forwarded to us a stethoscope capable of multiple uses, invented by Dr. W. H. Tayler of Tudor House, Anerley. This stethoscope is also a *porte-caustique* (E), and it carries concealed within it a clinical thermometer (D) and female catheter (C). These are firmly secured by screwing into the interior, and are easily available by unscrewing the parts of the stethoscope. They add necessarily some-



what to the size and to the weight of the stethoscope; but we can testify, from practical experience, that they do not affect its value in auscultation. We have had it tested for this purpose by the side of various approved stethoscopes by an accomplished and experienced stethoscopist, who was naturally prejudiced against the probability of its having a suitable conductive power; but scepticism was routed by practical experiments, which have testified that it is thoroughly efficient for its various purposes.

SALICYLIC SILK.

MESSRS. HARVEY AND REYNOLDS of Leeds have introduced an useful novelty in salicylic silk, containing 10 per cent. of pure salicylic acid. It is used by Mr. A. F. McGill, Lecturer on Pathology at the Leeds School of Medicine, and consists of silk-waste, forming a very delicate and beautiful surgical dressing. It is recommended as an antiseptic surgical dressing in place of carbolic gauze. It is alleged to possess the following advantages. 1. The number of dressings required is much diminished. 2. As a consequence, early union of the wound is more frequent. 3. It is economical. 4. It retains its antiseptic properties for an indefinite period. The price is five shillings per pound.

AN International Food Exhibition will be held in the Agricultural Hall, Islington, on October 13th, 14th, 15th, 16th, 18th, 19th, and 20th, 1880. Its objects are to bring prominently before all classes of the public, and in a comprehensive manner, the multitudinous articles applicable for food in both the animal and vegetable kingdoms—British, colonial, and foreign—together with the various modes of producing and preparing the same for consumption, embracing all the different processes of manufacture, preservation, and cooking.

QUADRUPLE BIRTH.—The wife of a labouring man named May, living at Devonshire Grove, Old Kent Road, was delivered some days ago of four children at a birth—three boys and one girl. The woman, on a previous occasion, had given birth to twins. The father is a "framer", or dyer's labourer. Two of the children died two days after birth.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 18TH, 1880.

THE SANITARY MEDICAL SERVICE.

WE have had on numerous occasions, in former years, to protest against the delegation to lay inspectors of the duties of advising local authorities as to the appointment of health-officers of districts; and we have repeatedly shown how chaotic and conflicting the advice of such inspectors has been. The result that is now being observed is, perhaps, only a natural one. Combinations, hastily and carelessly formed, of any authorities who were found willing to join, crumble into ruins; whilst the abolition of objectionable arrangements becomes increasingly more difficult when they are, year after year, tolerated by the central authorities. Abundant experience has shown that the only really efficient plan of providing a health-officer for a district is by appointing a man who is free from the cares of private practice, and whose pecuniary interests are not perpetually at war with a due and fearless discharge of his duties as Medical Officer of Health. That there are certain striking exceptions to this rule, only proves its general applicability. It is the opinion of all those who have carefully studied the subject, that a health-officer, to be efficient, must not have to look for his bread to private practice. At one end of the scale, we have the highly trained and skilled officer of health, working over a large area, and having no other duties; on the other, we have the Poor-law medical officer, with no special aptitude for the work and with no time to keep pace with the progress of hygiene, who is paid a miserably small percentage on his Poor-law salary for the sanitary supervision of his parochial district. That this latter plan is a vicious and unsatisfactory one, whatever be its theoretical advantages, has been practically proved in numberless instances.

The difficulties of getting authorities now to combine would seem, however, to be insurmountable (we believe no fresh combination has been set up for a very considerable time); and certain of the general inspectors of the Local Government Board, in whom is still vested the responsibility for the provision of health-officer, have, therefore, hit upon a highly ingenious device for getting over both difficulties that present themselves. A combination being impracticable, and the working of the old district-medical-officer arrangement being too glaringly unsatisfactory to be tolerated any more, these inspectors have hit the happy medium in advising local authorities to appoint one officer instead of several for a particular sanitary district, giving him the salary distributed amongst the former officers. The governing idea of this policy evidently is that, by giving a man a salary which shall be an appreciable addition to his annual income, it will be possible to get a greater amount of attention to the district than that given conjointly by several officers with many other things to think about. The central inspectors have, on behalf of the Local Government Board, been promising largely that, if such an arrangement be assented to, half the salary of the officer will be repaid; whilst they have darkly hinted that, if their proposition be not accepted, the Government subvention and sanction will be withdrawn.

Now, we are prepared to admit that an arrangement of this kind is so far an improvement on the employment of the district medical officers, that the advice to the authority on sanitary matters is at least uniform; and that the officer may be expected to get up his subject somewhat more carefully. But the evils inherent in the system of employing a man whose professional prospects hang upon the goodwill of his private clients, and whose advice must needs be largely tempered by thoughts of its effect upon his purse, are by no means surmounted by the plan which has of late been so industriously and so successfully urged by certain inspectors of the Local Government Board. We deem it but right, therefore, at once to disclaim any approval of an arrangement which is, at best, but a compromise. No doubt, there are great difficulties to encounter in the formation of combinations of sanitary authorities, as at present constituted; but this is only one argument the more for the establishment of county boards, in whom the appointment of such officials as medical officers of health should be vested. The Sanitary Medical Service is now in no better plight than it was when the central lay inspectors tried their hand at its organisation, on the passing of the Public Health Act of 1872.

That the above remarks are not uncalled for will, we think, be apparent from a newspaper report of the proceedings at a recent meeting of the South Stoneham Rural Sanitary Authority. The Local Government Board had for some time been dissatisfied with the sanitary administration of this district; and, receiving a request from certain inhabitants for an inquiry, sent down Dr. Blaxall to inquire into its sanitary condition. Dr. Blaxall's report revealed a most neglected and unwholesome state of affairs. Throughout the district, he found an entire absence of efficient sewerage. The method of excrement removal was into receptacles of huge size, and of the worst construction. The water-supply was mainly derived from shallow wells exposed to all sorts of pollution; and many nuisances of the gravest kind existed. As to sanitary administration, Dr. Blaxall found the work both of the authority and of its officers to be of a very lax description. Of the five district medical officers who acted as the medical officers of health, Dr. Blaxall reported that "they have submitted to the Local Government Board annual returns of mortality, accompanied by written reports, but these latter have been so meagre of information respecting the circumstances of the districts, as to render them of little or no value. With regard to the performance of their duties generally, it is manifest that the medical officers of health have failed to appreciate the responsibilities attaching to their office, inasmuch as they have neglected to recommend in these reports the adoption of any comprehensive measures to remedy the sanitary evils which characterise this district. The action taken by them in this direction has been limited to effecting certain improvements in individual dwellings, and securing temporary abatement of certain exaggerated nuisances, which for want of more timely measures had become intolerable. Epidemic disease of a fatal and highly contagious character has from time to time been present in this district, but it would appear that the medical officers of health have failed to point out to the authority the need for any special means for dealing with those cases that could not be properly isolated or treated in their own homes." As a consequence of his inspection, Dr. Blaxall recommended that the authority should join the authorities of the adjacent districts of Southampton and Shirley in the appointment of one officer of health for the three districts. He said: "The districts are so intimately connected, and the intercourse between them so frequent and free, that the appointment of one officer acting for the whole area would result in much public good; and the amalgamation would allow of such a salary being given that the officer could be required to devote his whole time to the duties of his office."

This is an arrangement which would appear to afford hope of a very efficient discharge of the duties of medical officer of health in the district, and which would have obviated all the difficulties to which we have referred. But at the last meeting of the rural sanitary authority, we find Mr. Baldwyn Fleming, the general inspector of the district, urging, not this plan, which had received medical sanction, but his favourite one of a single officer of health for each district. He told the authority that "he did not want to put them to one penny of expense that might be avoided, but he asked them to place themselves upon a proper footing by appointing an efficient officer of health for the whole district. They at present paid £20 *per annum* to their five officers,

making £100. They would not be able to pay such a salary as would justify their requiring the whole of the time of the person they appointed being devoted to the duties; but he suggested they should advertise the office for three years at a salary of £200 or £250 *per annum*. The Government would repay half of this, whereas they paid nothing of the £100 at present, so that they would only have to go to an additional expense of £25. Mr. Fleming then threw out dark hints as to the intentions of the Local Government Board, who "would not allow the present state of things to exist in the district;" and he pleaded that "it was surely far better that what was to be done should be done by their own officers, than that they should leave it to be carried out compulsorily by the very large powers the Board in London possessed." In the course of the subsequent discussion, Mr. Fleming endeavoured to convince the guardians that, "if the authority had a competent medical officer to advise them, they would be able to do what is necessary at little expense. If not, the Local Government Board would certainly see it is done. It was their duty under the Public Health Act." He also warned the authority that, if the wishes of the Local Government Board in this respect "were not complied with, it would be necessary for them to act". Mr. Fleming's zeal seems to have run away with his discretion. Independently of the legal question whether the Local Government have "the very large powers" that he ascribed to them, he ought to know sufficiently well that the powers which they undoubtedly do possess with regard to this matter have not been used by them; and he has, therefore, to gain his point, put his official masters in a position which we feel sure they would be extremely reluctant to sustain under opposition.

We refer to this case as one of a type that is becoming far too common. A lay inspector, with his own notions of what is medically right and wrong, coaxes or cajoles an authority into carrying out his pet plan by the offer of a Government grant, and of the approbation of the Local Government Board. We do not see how Mr. Fleming would be able, in face of the facts reported by Dr. Blaxall, to justify his remarkable assertion that, "if the authority had a competent medical officer to advise them, they would be able to do what is necessary at small expense". To say this, appears to us to compromise both the authority and the Local Government Board. The former having now agreed to adopt the advice of the official of the latter, the appointment of the health-officer on the terms suggested by Mr. Fleming may be looked upon as an accomplished fact. We regret this, not only on general principles, but because a grand opportunity has been carelessly thrown away of carrying out Dr. Blaxall's sound advice. If the powers of the Local Government be so great as Mr. Fleming represented them to the authority, the Board could surely have insisted on the arrangement deliberately advised by one of their skilled officers. Yet this advice seems to have been completely ignored, and a half-hearted arrangement of questionable utility put forward in its place.

THE NOTIFICATION OF INFECTIOUS DISEASES.

THE yearly increase in the number of towns in which what the Local Government Board has described as "local experiments" in the compulsory notification of infectious disease are being carried on, is affording the means of gathering together a great mass of evidence in favour of the applicability of a similar requirement throughout the whole kingdom. Our readers will have noticed the growing prominence which this subject is assuming in the discussions of the Branches of our Association and of other kindred societies. Not only so, but local authorities themselves are coming to see the advantages which would accrue to the health of the populations under their charge from the possession of powers of notification; and a large increase in the number of towns seeking for similar powers may confidently be expected. We believe that the experience of those authorities who have been invested with the powers of requiring cases of infectious disease to be reported to them is in every instance wholly favourable. Certainly, when the local Act has been worked with tact and discretion, the happiest results have been attained. Those achieved in two of the towns where the system of notification is in force—viz., Bolton and Leicester—have recently been published in the annual reports of the health officers of those places, and are so striking as to merit special mention.

At Bolton, which, it will be remembered, was the first town that took power for requiring the notification of cases of infectious disease occurring amongst *all* classes of the population, the system had been in work for more than two years when the health-officer, Mr. Sergeant, made his last report. He refers to the difficulty which was at first experienced in working the Act, and to the alteration made in it by provisional order last year, and then gives the number of cases reported in the twelve months ended September 1879. From his table, it appears that 5 cases of small-pox, 103 of measles, 404 of scarlet fever, 8 of diphtheria, 2 of cholera, 88 of typhoid, 20 of typhus, 19 of continued, and 2 of puerperal fever, were reported to the authority during the year. These figures are much fewer than the corresponding numbers for 1878 (see JOURNAL, vol. i, 1879, p. 980); and although this may, to some extent, be ascribed to the notification not being satisfactorily carried out, pending the alteration in the Act, yet Mr. Sergeant regards as the main cause the exceptional immunity enjoyed by the town from infectious disease. Last year, there were fewer deaths at Bolton from zymotic diseases than have ever been recorded before; and the medical officer of health attributes much of this good result to the early information which enabled the authority to combat successfully with outbreaks of disease.

The testimony of Dr. William Johnston, from his experience as health-officer of Leicester, is, however, even more significant. When the clauses providing for compulsory notification were inserted in the local Bill of last year, they evoked strong opposition on the part of certain of the medical profession of the town, who petitioned Parliament against them, on the ground that the provisions "imposed upon medical men new and onerous and unnecessary obligations"; and that these obligations were "inquisitorial in character, uncalled for, and likely to lead to endless mischief and complication". We pointed out at the time the fallacy of these objections; but it is part of Dr. Johnston's purpose in his report to show how experience has disproved the inconveniences which the Leicester doctors feared would follow from the passing of the Bill. When the Act came into operation, scarlet fever was epidemic in the town. With the exception of an occasional note from some of the medical men, the only means by which the health-authority could at that time gain information when scarlet fever existed were the death-register and the weekly returns of sickness sent in to the board of guardians by the medical officers of the several parishes. The information gleaned from such sources was scanty, and the action taken by the Health Committee for suppressing the disease was, therefore, limited, and proved, as in former years, of no effect in arresting its spread; for, according to the greatly increased information received, on September 13th, 1879 (when the newly acquired powers for compulsory registration came into force), cases of the disease had become thickly scattered over considerable areas of the borough.

With the increased information thus obtained, conditions were found to exist everywhere among the classes affected which favoured, to an eminent degree, the spread of the malady. Children from infected houses were frequently sent to school; mothers of families, free from the disease, were often found visiting the infected houses of their neighbours; hosiery goods were being made up by mothers as they nursed children suffering from malignant forms of scarlet fever; and, in scores of families, no attempt at all had been made to isolate the sick from the family. Under such circumstances, a complete arrest of the epidemic was hardly to be expected; but evidence is not wanting to show that, in many instances, a check was given to the spread of the disorder by the measures adopted when the sources of information became more extended. Wherever scarlet fever was reported as existing, the sanitary inspectors visited the dwellings, and, by persuasion, succeeded largely in obtaining the parents' consent to the removal of their suffering children to the Fever Hospital. Failing in this, they gave information to the occupiers of the other houses in the yard of the near existence

of the disease, and advised them to hold themselves aloof, and more especially to keep their children away from the infected house; the inmates of the latter were also cautioned against visiting their neighbours. By the instructions thus given, the disease, in many of the yards, confined itself to the infected house; whereas, in the epidemic of 1875, it was ascertained that scarlet fever had appeared in almost all the houses in the same yards. Again, where children from infected houses were found to be attending school, the managers were apprised of the fact, and the parents were cautioned. It is but fair to assume that the "weeding out" of such cases from the various schools was productive of most beneficial results, for the instances met with of such attendances became much less numerous after the powers for compulsory registration had been but a short time in operation.

With the view of showing the effect which the compulsory notification of cases had in stemming the epidemic, Dr. Johnston adds a most interesting comparison of the behaviour of scarlatina in the three epidemic years, 1870, 1875, and 1879. The deaths recorded from the scarlatinal epidemic of last year, when compared with the fatality caused by similar visitations in 1870 and 1875, afford most substantive evidence of the satisfactory results that followed the more extended efforts of the health-authorities, when once they gained a wider information of the foci of the disease. The returns of the deaths from the epidemic visitations in 1870, 1875, and 1879, prove all the more useful for comparative purposes, since the disease began to assume an epidemic form at the same period in each year, viz., about the twenty-seventh week. In 1870 and 1875, the maximum fatality, on both occasions, was reached in about an equal period of time and at an advanced stage of prevalence, viz., from the forty-fourth to the forty-sixth week, showing that the disease burned up and ran its course unimpeded. The legitimate inferences to be drawn from the weekly deaths in 1879 are, however, of a very different nature. They show that the acme of the epidemic occurred much earlier than on previous occasions—viz., a week after the fresh powers for notification came into operation; while the deaths afterwards recorded afford, by their uniformity, an unmistakable sign of a successful interference with the future spread and development of the disease. If the scarlatina deaths in the last fifteen weeks of the years 1875 and 1879 be compared, the type of the disease on both occasions being the same, it appears that the deaths registered in this period of 1879 were 66, against 94 in 1875. But, if the increase of population be taken into account, the deaths in 1879 would (with the same imperfect means for prevention) have increased to 107, or 41 more than the actual number recorded. The number of certificates sent in during the same fifteen weeks of last year was 496, and referred to 467 different habitations; this number, when divided by 66 (the number of deaths), shows that one death took place among every seven houses visited with the disease. The probable result that followed the increased vigilance of the health-authorities during the fifteen weeks of scarlatinal prevalence may, therefore, be briefly summarised as follows: no fewer than 41 lives were saved to the town from the disease, and 287 homesteads were preserved from an invasion of this dire and fatal malady.

Dr. Johnston concludes with some very able observations on the general subject, which have our entire concurrence. Speaking of the objections raised to the clause as "likely to lead to endless mischief and complications", he observes that the reply is simple, and lies in the fact that, from the time when the provisions of the Act first came into operation up to the date of his report (which embraces a period of over six months), not a single complaint had reached the ears of the sanitary authority, from either the general public or the medical men themselves, of any mischievous result or complication having arisen from their compliance with the newly-imposed duties. Up to December 31st, 1879, the cases reported on were, of scarlet fever, 496; typhoid fever, 56; erysipelas, 125; diphtheria, 24. These cases existed among all classes of the population; and, if any just ground for complaint had appeared, the authorities would undoubtedly soon have been communicated with. The fact of no friction having occurred in the working of the clauses in Leicester undoubtedly shows that the objections and fears at first entertained in regard to the probable issues of compulsory registration of disease were alike groundless and illusory. Where such a glaring lack of precaution, as Dr. Johnston describes, existed among the people, favouring, as it did, the spread of contagion of any kind, it will, he thinks, be admitted that the obligations imposed upon the medical faculty in Leicester for the compulsory registration of infectious diseases occurring therein were neither "unnecessary" nor yet "uncalled for". Dr. Johnston truly says: "During the last twenty years, the mind of the profession has been much enlightened with respect to the intimate nature and mode of spread of these infective diseases; numerous fresh channels for their transmission have also been brought to light, while the risks of infection among children have been considerably multiplied since education was rendered compulsory. Under such altered circumstances, an evolution of fresh obligations, together with a slight change in those already in force, should not meet with opposition from medical men, so long as it can be shown that, by their fulfilment of the new duties, medical interests are in no way encroached upon, while numbers of human lives may be annually saved and much bodily suffering averted." With so convincing a testimony as Leicester affords of the value of compulsory notification of infectious cases, it will be difficult for the objectors to such a system to argue against its general application to the entire population.

THE Russian Red Cross Society will despatch to Skobeleff's army, in a few days, thirty-seven doctors, eight chemists, two veterinary surgeons, and fifty hospital surgeons. The cost of maintaining this hospital staff will be 120,000 roubles. A further number of Sisters of Mercy, to reinforce those under the Countess Mileutin, at Bami, will also shortly depart from Russia.

THE Committee of the movement for establishing a nurses' institute in Croydon, promoted by the medical practitioners of the town, have secured a house for the purposes of the institute, which will be ready for occupation at Michaelmas. A lady-superintendent has been appointed, and applications from nurses wishing to join the institute are numerously received.

DR. BUCHANAN of Philadelphia, the fraudulent diploma seller, who arranged a pretended suicide by jumping from the ferry-boat on the Delaware River, on August 17th, has been arrested in Michigan. He absconded to Canada after his pretended suicide. He was followed by detectives, who captured him at St. Clair, on the Detroit River. He will be taken to Philadelphia for trial.

MEDICO-LEGAL EXAMINATIONS.

AN error, which might have been of the gravest importance with regard to a recent poisoning case, is reported to have occurred at the Queen's Hospital, Birmingham. The stomach of the deceased, Margaret Johnson, which after the *post mortem* examination it was understood would be analysed, was, as alleged, found to have been inadvertently burnt, before there was an opportunity of submitting it to a chemical test. The allegation will, it is expected, be inquired into, though from the various circumstances of the case, the absence of analysis is not regarded as material.

FALSE CERTIFICATES.

THE Home Secretary has set aside another magisterial conviction. Some few weeks ago, a midwife named Needle was fined £5 or two months' imprisonment, for giving what was alleged to be a false certificate, for the purpose of procuring the burial of a child. The case was heard before the county magistrates. The certificate stated that Needle had delivered a single woman named Mobley of a still-born child, but it appeared in evidence that Mrs. Needle was not present until some hours after the birth of the child. Mrs. Needle's certificate was accepted by the superintendent of the cemetery; and the Bench asked the Burial Board to prosecute the official, but they declined, saying that he had committed no offence, that the Act of Parliament did not point out any

form of certificate, and the county magistrates were under the impression that a certificate from a medical man was required; but that this was not the law. A number of the inhabitants of the town petitioned the magistrates to mitigate the sentence on Mrs. Needle, but they refused to do so, and told the petitioners to apply to the Home Secretary. This they did, and on Saturday morning a letter was received setting aside the conviction.

UNQUALIFIED MEDICAL PRACTITIONERS.

AT the Liverpool Police-court, John Oldenshaw, of "The People's Dispensary", was summoned on thirty-six technically-framed informations for falsely pretending to be a duly-qualified medical practitioner, and for giving false certificates of death. The prosecution was undertaken by the Medical Society—partly, it was stated, in their own interests, and partly in the interests of the public. After the case had been entered into, several informations were withdrawn; those relating to the giving of false certificates of death were, however, proceeded with. The defendant had formerly been assistant to, and partner of, a duly qualified medical man named Jolly, who now swore that he had never given defendant authority to sign his (Jolly's) name to any certificates of death, which defendant had done in the case of two children. It was urged, in defence, that the authority of Jolly was given under the partnership. The defendant was committed for trial at the sessions, being liberated on his own recognisances.

CHELSEA HOSPITAL FOR WOMEN.

AMONG other interesting ceremonies of the year has been the laying of the foundation-stone by the Prince and Princess of Wales of the new building to which the Chelsea Hospital for Women has been transferred. We were unable to notice the ceremony at the time; but, from the particulars communicated to us, we learn that this hospital has been established ten years in its temporary home; that the demand for beds is five times greater than the number available, and has been for several years; but the board, anxious to avoid any financial embarrassment, has waited until sufficient funds were subscribed for the purpose, and £8,000 has already been received; and it is hoped that the new building will be completed in about twelve months. In addition to free patients, who are treated in every respect as generously and attentively as those in a position to contribute to their cost, patients are received who pay according to their means, and it is thus partially self-supporting.

VACCINATION IN WHITECHAPEL.

MR. LIDDLE states, in his last quarterly report, that, from the vaccination returns which were laid before the Board of Guardians, and by them submitted to the Local Government Board, it appears that, during the year 1879, 2,735 births had been registered in the union. Of that number, 2,409 had been successfully vaccinated; one was unsusceptible of vaccination; 227 died (or 8.3 per cent. of the number born); 22 had been postponed; and 26 had removed to other districts or gone abroad. He remarks that this report, so far as the vigilance of the vaccination officer is concerned, in tracing the children whose births were registered in the district, and inducing the parents to obtain vaccination for their children, is highly satisfactory, and reflects great credit upon all those who are entrusted with the working of the Vaccination Act; for it shows that only 61, or 2.2 per cent. were lost sight of; and, as the authorities of those districts where it was ascertained the children had been removed were apprised, it is probable that some of the children were vaccinated in their new abodes. This return seems to show that, with care and diligence on the part of the vaccination officer, the provisions of the existing Act work very satisfactorily, and no fresh regulations are, Mr. Liddle is decidedly of opinion, required to secure greater efficiency in promoting the vaccination of nearly all the children born in his district, and consequently it is better to let well alone, and not try to amend the Act. In addition to the number of children whose births have been registered in the Whitechapel district, 212 unregistered children have been successfully vaccinated.

THE LATE MR. AMPHLETT.

DR. HARDWICKE, the Central Middlesex Coroner, on Saturday, held a long inquiry, at the Buffalo's Head, Marylebone Road, as to the death, which we last week reported, of Mr. Edward Amphlett, F.R.C.S., aged 32, nephew of Baron Amphlett, and Assistant-Surgeon to Charing Cross Hospital. The death of the deceased occurred on Thursday morning, at his residence, 40, Weymouth Street, Portland Place. The evidence showed that on that morning, shortly before nine, he was found holding on to the balusters of the stairs, unable to proceed to his room, and Dr. Murrell, residing next door, Dr. Fox, of 14, Harley Street, and other physicians, were immediately called in. Death took place two hours afterwards. Mr. Richard Holmden Amplett, barrister, of 22, Upper Dorset Place, Dorset Square, and of the Temple, brother of deceased, said he was staying at Wychbold Hall, Droitwich, when the latter was taken ill. He was telegraphed for, but did not reach London until five hours after death had taken place. Deceased had suffered from asthma for years, and had been in the habit of taking chloral and morphia in considerable quantities. The books showed that deceased was in easy circumstances, having plenty of ready money and secured resources. His life was not insured, and no one benefited by the death. Esther Price, housemaid, confirmed previous witness as to deceased suffering from asthma; and Dr. Murrell deposed that when he saw deceased he was sensible, but the pupils of his eyes were contracted. On charging deceased with having taken something in the way of chloral or morphia, he denied it. On being taken into a room, deceased became very drowsy, and the usual steps were taken to restore animation, including the application of galvanism; but all was in vain. He made a *post mortem* examination, and came to the conclusion that the death was from some overdose of medicine, probably morphia, or possibly morphia and chloral. The coroner asked if there were any letters that would throw light as to the state of mind of the deceased at the time. The brother replied that there were some letters, and it appeared that there had been also a disappointment in love. Several letters were here put in, and one from a lady to whom deceased had been engaged was read, in which she referred to having made the acquaintance of another gentleman. A copy of a letter from the deceased to the lady was also read, in which he stated that he had received his death-blow. A subsequent letter from the lady, from which it seemed that she had given him up, was also read, and the brother said he was sure the letters were enough to drive the deceased mad. The coroner, having summed up, left the jury to say whether the deceased had died by his own hand, or been accidentally poisoned; and, after a stormy discussion, lasting half an hour, the following verdict was returned: "The jury find that the deceased died from an overdose of narcotic poison, taken unconsciously whilst suffering from excitement; and, further, that such death was the result of misadventure."

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during August, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other companies and by the Tottenham Local Board was: Kent 1.6, Colne Valley 1.6, Tottenham 1.6, New River 3.1, Chelsea 5.1, Grand Junction 5.8, West Middlesex 6.7, East London 7.0, Southwark 7.1, and Lambeth 7.8. All the samples of Thames water supplied to the metropolis during August were of very bad quality, and were quite unfit for dietetic purposes owing to their pollution with organic impurity. The water supplied by the Chelsea and Grand Junction Companies was slightly turbid, but all the other samples had been efficiently filtered. The Lea water delivered by the East London Company, although efficiently filtered, was not superior to the Thames water. The best river water was sent out by the New River Company; but this was inferior to that delivered during July. The deep-well waters supplied by the Kent and Colne Valley

Companies, and by the Tottenham Local Board, were of their usual excellent quality; the Colne Valley Company's water had been softened before delivery. The river waters were delivered at a temperature ranging from 63 to 68 Fahr., rendering them vapid and unpalatable. The temperature of the deep-well waters did not range higher than from 54° to 56.3°.—Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town, although slightly turbid, maintained its improved quality of the two preceding months.—Dr. Mills reports that the Loch Katrine water supplied to Glasgow contained much suspended matter.

RECTAL ALIMENTATION.

At the meeting of the French Association for the Advancement of Science at Rheims, M. Catillon read a paper on "Alimentation by the Rectum", in which he stated that he had fed two dogs during two months with injections of eggs. The first, which had eggs only, lived with difficulty, with considerable loss of weight; the other, in which the injected eggs were mixed with glycerine and pepsin, lived in an apparently normal manner, weight and temperature being constant. After thirty-seven days, the pepsin having been stopped, the animal lost weight, and the temperature fell from 102° Fahr. to 99° Fahr. It is therefore apparent that, in order that nutrition should be properly performed by the intestine, digestive ferments must be associated with the food—that is to say, they must be transformed into peptones. In another series of experiments, M. Catillon demonstrated that the same result is attained with peptones prepared artificially. He found that, with a regular daily alimentation composed of 300 *grammes* of meat, 350 *grammes* of bread, 300 *grammes* of potatoes, he excreted an amount of urea varying from 25.40 *grammes* to 24.50 *grammes*, his weight being 71 *kilogrammes* and 900 *grammes* (about 160 pounds). During three days, he completely abstained from meat, the urea then falling to 15.60 *grammes*, and his weight to 71.4 *kilogrammes*. During the next week, he replaced meat by peptones of meat; the urea rose to 30.95 *grammes*, and weight to 72.3 *kilogrammes*. During the four days he took enemata of peptones, the weight remained constant, and the urea was in proportion to the peptone. Finally, he went on low diet, without peptone or meat, and the urea fell to 15 *grammes*, and the weight to 71.8 *kilogrammes*. For the sustaining ration, there is required 160 *grammes* of saturated solution of peptone, making 19° by Baume's areometer, and representing three times its weight of meat. For an alimentary enema, the formula is: peptone of meat (saturated solution at 19°), 40 *grammes;* water, 125 *grammes;* laudanum, three or four drops; bicarbonate of soda, 30 *centigrammes*.

SURGERY AND SUPERSTITION.

In the Anthropological department of the Section of Biology, at the recent meeting of the British Association, a paper by Miss Buckland, entitled "On Surgery and Superstition in Neolithic Times", was read. The paper was to the purport that Dr. Broca had asserted that, in neolithic times, a surgical operation was practised which consisted in making an opening in the skull, chiefly of infants, in order to cure certain internal maladies, such as epilepsy and those convulsive disorders which in early times were confounded with that disease. Such individuals as survived this operation were looked upon as endowed with peculiar properties of a mystic character; and, when they died, rounds or fragments were frequently cut from the trepanned skull to serve as amulets—these amulets being cut by preference from the portion of the skull close to, and embracing a part of, the cicatrised hole caused by the trephine. Dr. Broca proved by experiment that holes resembling those discovered could be scraped in a child's skull in five minutes with a flint instrument, whilst the operation would take an hour on an adult. He also showed conclusively that these holes could not have been the result of accident or of disease. He believed that these trephined skulls proved that the people of neolithic times had attained to a belief in spirits, and regarded epilepsy as a possession by spirits, the hole being cut to facilitate their expulsion. At the same time, he referred the whole of the trephined skulls known to neolithic times, and thought the custom died out with the introduction of bronze, and with it of a new religion and of a new mode of sepulture. This conclusion Miss Buckland doubted, because, as shown by Dr. Broca, the practice of trephining for epilepsy, by a very similar process to that of neolithic times, existed in France as late as the seventeenth century; and she suggested that, although the practice of cremation might have destroyed the proofs in many cases, yet a more minute search would probably reveal traces of this curious custom, not only in France, but also in Great Britain and Ireland, and, in fact, wherever the holed stone was found as a covering to dolmens, believing that these holes were connected with the same superstition, being made to facilitate the entrance and exit of the spirit; and that the discovery of trephined skulls in these dolmens would be of great ethnological importance, as proving, if not a radical identity, at least some common indication between widespread peoples in prehistoric times. Looking upon it as an important fact that this custom of trephining still exists, according to Dr. Broca, among some of the South Sea Islanders, the Kabyles of Algeria, and the mountaineers of Montenegro, Miss Buckland suggested that greater attention should be directed to this curious subject by English antiquaries.

HEALTH OF THE LONDON POST-OFFICE STAFF.

In the just issued report of the Postmaster-General, it is stated that, according to the chief medical officer of the department, Dr. Waller Lewis, the mortality amongst the Post-office staff in London during the financial year 1879-80 was small, notwithstanding a long and severe winter. The death-rate was only 5.1 per 1,000, as compared with 5.5 per 1,000 in the previous year. The number of deaths was 54, more than half of which were due to diseases of the lungs; six were from typhoid, and one from scarlet fever. The ordinary sickness among officers in the metropolis is reported to have been less than usual.

DEATHS FROM DIARRHŒA.

The deaths referred to diarrhœa in the twenty largest English towns, which had been 958 and 853 in the two preceding weeks, rose again to 917 last week, and were equal to an annual rate of 6.4 per 1,000. The death-rate from diarrhœa ranged in the twenty towns from 3.2 and 3.9 in London and Bristol, to 18.5 and 19.7 in Salford and Leicester. The deaths referred to diarrhœa in London, which had been 270 and 232 in the two preceding weeks, further declined to 223 last week, but exceeded the corrected weekly average by 62. The 223 fatal cases included 157 of infants under one year of age, 52 of children aged between one and five years, and 8 of persons aged upwards of sixty years. The deaths of six infants and children, and of one adult, were referred to simple cholera or choleraic diarrhœa.

ST. JOHN AMBULANCE ASSOCIATION.

Active preparations are already being made at many places for the ensuing autumn and winter session of this very popular and useful Association, and the formation of numerous new centres is being arranged. During the past year 4088 certificates for first aid to the injured, have been awarded to pupils at the centres; 1314 certificates to detached male and female classes (held pending the formation of centres, in addition to the bestowal of 327 vellum certificates for the second or higher course. These numbers represent only the successful candidates, and therefore only a small number of those actually receiving instruction—about a third; the remainder either failing to pass the required test, or being prevented attending the examination. The handbook written for the pupils by the late lamented Dr. Shepherd (killed at Isandula), 20,000 copies of which have been sold without a single advertisement, is being revised prior to the issue of a second edition. Though the Ambulance Association was only established by the Order of St. John in 1877, its area of operation has been more than quadrupled every successive year, and continued applications for its extension are received from not only all parts of the United Kingdom, but even from the Colonies and America.

COMMUNICATION OF PHTHISIS FROM ANIMALS TO MAN.

WITH reference to this condition, Mr. Law of Cornell University, U.S.A., writes in a report to the American National Board of Health;

Phthisical cows are often eaten without causing obvious disease in the consumers. I have known large dairies of tuberculous cows, in the hands of vigorous and healthy looking owners, who consumed the milk freely. I have kept two rabbits consuming *all* the milk of a tuberculous cow for months, and until the latter died, without developing any signs of tuberculosis in the rabbits. I have kept other rabbits for two months on the milk of a cow suffering from acute tuberculosis, without any appreciable evil result. It may be freely concluded that a large number of individuals while in the enjoyment of robust health will withstand the influence of tubercle taken in by the stomach, but it must be otherwise with the weak and young, those with poor feeding and worse air, those living in damp sunless localities, and subjected to much exposure. In a case that recently came under my notice in Brooklyn, New York, a family cow was found in an advanced state of tuberculosis, and the owner and his wife were evidently rapidly sinking under the same malady. In another case reported to me, a family cow, supposed to be suffering from the lung-plague, was found to be afflicted with tuberculosis instead, and the owner's wife (a consumptive), who had been making free use of the milk warm from the cow, was persuaded to give it up, and underwent an immediate and decided improvement. It is for infants and adults who are somewhat infirm or out of health, or whose surroundings are not of the most salubrious kind, that the danger is greatest; but this embraces such an extended class that the moral interests involved are almost illimitable. The destruction of infancy and wasting of manhood from this cause is unquestionably far greater than has been heretofore realised.

INOCULATION OF ANIMALS FROM SPLENIC FEVER.

DR. GREENFIELD'S very able report of his recent work at the Brown Institution on the subject of splenic fever and allied disease, is of no small public interest, taken in connection with the recent experiments of M. Pasteur on fowl-cholera. Some time ago Mr. Duguid, at the request of Dr. Burdon Sanderson, performed experiments which seemed to show that, when anthrax is communicated to bovine animals through rodents, the animals so infected, although exhibiting severe symptoms, recover; and also that such animals are less liable than others to future infection by the same process. Dr. Greenfield has followed up this line of inquiry, and has obtained results apparently of a very positive character. A steer, in good health and condition, was kept under observation for three weeks. It was then inoculated with a small quantity of fluid which had been obtained by cultivation of the Bacillus anthracis in aqueous humour, and which swarmed with rods and spores of bacillus. The fluid thus used was the second generation of the cultivation of spleen of a guinea-pig which died of anthrax. This guinea-pig was the third of a series through which the disease was transmitted from the cow by inoculation. For about twenty-four hours nothing was observed, but on the morning of the second day the temperature had risen 4° Fahr. The animal was drowsy and stupid, and fed badly. The temperature continued high for several days, during which the animal was seriously ill, and at times seemed hardly likely to recover. On the eighth day, however, the temperature began to fall, and in two or three days more the animal was perfectly well. Some weeks later, this same animal was inoculated from the fresh spleen of a guinea-pig which had died of anthrax. On the following day the temperature was a little elevated (1° to 2° Fahr.), and the animal showed some indisposition, and took food badly, but on the third the temperature fell, and the animal remained quite well. A third inoculation was made some weeks after the second. In this third inoculation the poison was obtained from a guinea-pig, which had died of anthrax derived from the horse. An inoculation with the same material was made on a cow. In the case of the steer no effect was produced, while the cow died within four days with the typical symptoms and *post mortem* appearances of anthrax. A period of three weeks having elapsed after the third inoculation, during which the animal was in good health, a fourth inoculation was made from the spleen of a guinea-pig which had died of anthrax. The result was *nil*. In fourteen days the fifth and last inoculation was performed, the material being obtained from a sheep which had died of anthrax. The effect was a small abscess, but no infection of the animal. Dr. Greenfield is still keeping the animal, with the intention of inoculating it with anthrax directly from another bovine animal. These results, following those published by Pasteur with reference to inoculation of chickens with attenuated cholera poison, and those obtained by M. Toussaint by inoculation with the filtered blood of animals which have died of splenic fever, are of the greatest interest, and justify Dr. Greenfield's hope that in this way animals may be protected by a sort of vaccination from this dreadful disease. How this may be safely carried out—whether by vaccination with modified poison from a rodent, or by some form of prolonged cultivation, or, as M. Toussaint seems to indicate, by filtration of the infected blood—is still a problem. Dr. Greenfield in his report mentions, though he does not give details of his experiments, that, when the virus of the disease (the Bacillus anthracis) is cultivated in an indifferent fluid, each successive generation becomes less active than its predecessor, and, when inoculated, acts not only with less intensity, but more gradually, and often in a different manner. This modification, he says, takes place to such a degree that when the cultivation has been carried to the fourteenth or fifteenth generation, it may be introduced with impunity into the system of a mouse, which is one of the animals most susceptible to the poison. Such a result is quite new, and, though somewhat in accordance with Buchner's experiments on the hay bacillus, it differs from that generally obtained in the cultivation of other organisms, where the virulence has remained but little affected. But if it be confirmed by further experiments, it will be an important step gained in the attempt to ameliorate or eradicate this and allied diseases.

DIARRHŒA AT SHEFFIELD.

DR. WHITESIDE HIME'S last monthly report on the health of Sheffield shows a large increase in the number of deaths from diarrhœa. In the four weeks ended August 28th last, 616 deaths were registered in the borough, an excess of no less than 256 over the number recorded for the corresponding period of 1879. In the two preceding months, the deaths numbered respectively 443 and 422. This great increase in the mortality was almost entirely due to diarrhœa. In May, June, and July, the deaths from diarrhœa were respectively 5, 15, and 28; but, in the four weeks under report, the numbers rose to 218. Last year, the deaths from diarrhœa in the corresponding months (May, June, July, and August) were respectively 4, 7, 13, and 19. As a consequence of the mortality from diarrhœa, the death-rate, which was 19.0 and 18.1 in the two preceding months, rose to 26.4 in August. Dr. Hime recommends his authority to supply lime for whitewashing, and disinfectants, gratuitously to the poor; suggests greater supervision over the very numerous offensive and dangerous middens, and advises that a supply of diarrhœa medicine should be prepared for gratuitous distribution during the continuance of the diarrhœa.

THE VALUE OF DIPLOMAS AND TITLES.

THE *Times* has a singularly cynical article on the value of titles. It intimates that bogus diplomas are nearly as good as any others; and that the title of M.D. might well be abolished, leaving to everyone the right to call himself doctor who follows the indicated profession. Commenting upon the prosecution of Dr. Buchanan in America for forging medical diplomas, it says our ancient universities have sinned quite as much as he in making degrees a mere matter of money. Many thousands of men add M.A., D.D., or D.C.L., to their names without having answered a question, or shown any scholarship or knowledge over and above what was implied in a B.A. degree. It is idle to say that the degree of D.D. means anything at all, except as an addition suitable to some offices. There is no title in such utter disrepute; the 'city knight', once so scoffed at, being a real and honourable personage in comparison with it. He has generally done something for his title. But it is becoming a question whether any of these nominal distinctions will long maintain their ground. It is enough if the prefix, or the addition, expresses the profession, which it is convenient to know. Let all be doctors, or none. Dr. Buchanan only noted and accepted the universal feeling on this point. So many were flaunting doctorial

honours over the heads of men in no wise their inferiors, that it was only fair to offer at the cheapest possible rate a title which was really good for nothing. No one seems to challenge the bearers of these diplomas, though there are legions of them; and, if they are challenged, they are prepared, the *Times* would expect, to stand comparison with the graduates of many other bodies of undoubted respectability. There are many who never took a fee, but who deserve the title of doctor. Why should they not have it? Paley was not much of a D.D., but a capital M.D. Unhappily for the extenuations, not to say justifications, that an impartial view of the subject may suggest, Dr. Buchanan does not seem to have much confidence in his own case. But it cannot be forgotten that his diplomas are worth quite as much as many others; that they are admitted to cost much less, and that the indiscriminate diffusion of them levels down distinctions not always warranted by personal merit and ability. Such is one view of the subject.

SCOTLAND.

SCOTCH WHISKEY.

AT the recent trial at the Circuit Court, Dumfries, of James Dunning, a farm-servant, on the charge of murder, it transpired that, on the evening of Saturday, the 3rd of April last, the prisoner and three other men of his class, respectable and industrious agricultural labourers, accompanied by the sister of one of them, who was also a farm-worker, met together in the town of Glenluce, and, having adjourned to a public house, consumed in two hours an amount of whiskey which the lowest estimate placed at three Scotch half-pints (equal to nearly three English quarts), and the highest at four Scotch half-pints (equal to nearly four English quarts). The woman did not partake of the whiskey, but had a glass of wine; so that the four men had amongst them, on the most moderate computation, three quart bottles of whiskey. Not content with this, they purchased, on leaving the inn, another quart bottle of whiskey amongst them, with which to regale themselves on their walk home, if that can be called a walk, which was really a drunken stagger, varied by occasional delirious outbursts. "The four men", said the female participator in this orgie, "were all the worse of drink when we started, and they drank out of the bottle as we went.....Harvey" (one of the men) "was just jumping along the road, swearing. He fell down at the bogs of Barnsallie. He ran in about the side of the road where there were rashes (rushes) growing. Ramsey and I lifted him up, and we went along together again. He was still swearing. He went before us; and, when we came up, he uttered an oath, and gave Ramsey a shove, causing him to fall on his hands on the bank." "I had just as much drink as I could well walk with", said another of the men named Murray, of whom a witness, at whose house he called, deposed that he was so "fractious and violent with drink that he struck a chair with his fist, and knocked a piece of skin off his knuckles, which bled; that he wanted to strike the mantelpiece, and threatened to whitewash the walls with her daughter's brains if she did not say she was his friend." The third of the men, named Ramsay, was found on the following morning, in the ditch by the roadside, with injuries on his head, from which he soon afterwards died; and the fourth of them was tried on the 31st instant for having caused his death; and, although acquitted of the murder, was proved to have been drunk and incapable in the company of the murdered man. This shocking story must not be taken as illustrative of the manners and customs of the agricultural labourers of the South of Scotland, who are, as a rule, a sober and thrifty class; but many of whom, unfortunately, have a most reprehensible practice of getting deliberately drunk periodically at certain fairs and markets. These occasional isolated acts of drunkenness are looked forward to as pleasant variations in what is a somewhat dreary and monotonous existence, and are not very seriously condemned by the moral sentiment of the district. Wives and mothers make preparations for them; and a decent prudent father of a family will be brought home once or twice a year helplessly or uproariously drunk—more often the latter than the former—without feeling that he has forfeited his good name or influence, or done anything more reprehensible than commit a rather broad practical joke. The generally uproarious character of the occasional drunkenness of the Scotch hind or bondager is, perhaps, to be attributed partly to the effects on the nervous centres of a sudden and unaccustomed inundation of alcohol, at a time when they have been stirred out of their wonted lethargy, and slightly stimulated by social excitement; and partly to the injurious effects of young coarse spirit, containing fusel oil and other deleterious ingredients. Whatever its explanation may be, the fact that Caledonian drunkenness is like its scenery, "stern and wild", is unquestionable. Its violent and tumultuous character leads to brawls on the highways, and not to the comatose slumbers in dark corners of Anglican beer-drinking; and hence, perhaps, have arisen some exaggerated notions as to the prevalence of drunkenness in Scotland.

INJURY OF THE CEREBELLUM IN ITS MEDICO-LEGAL RELATIONS.

AN interesting medico-legal observation in connection with injuries of the cerebellum was made by Dr. Mc Cormick of Glenluce, in a case of murder which was tried at the Dumfries Circuit Court on August 31st, and to which we have alluded in another paragraph. It appears that a youthful farm-labourer, named Ramsay, was found lying at the point of death on the public road near Glenluce, on the morning of April 4th last, with serious wounds on the back of his head, which the evidence left no doubt must have been inflicted with a spade, and with great violence, from behind, while he was in a state of intoxication. The *post mortem* examination showed that these wounds were four in number, and penetrated the skull, from which brain-substance had escaped, and that there was an injury of the cerebellum on the right side. Ramsay was quite insensible when discovered, and beneath his head there was a pool of blood. But, at a distance of five yards from the spot on which his head rested, there was a clot of blood about the size of a man's hand, while at several places between these two points there were traces and smears of blood. These appearances Dr. McCormick explained by supposing that the injury of the cerebellum or the irritation set up by it had caused a rotatory movement, and that the man, after he was struck down, and was quite incapable of any voluntary action, had automatically rolled over and over. Additional probability was given to this supposition by the statement of one of the witnesses who had seen Ramsay lying on the road, just before his death, and when he was quite exhausted, to the effect that he rolled backwards and forwards on his side. Dr. McCormick's observation is interesting and ingenious; and we trust that he will be induced to publish much fuller details of the case than have appeared in the newspapers. The precise extent of the intracranial injuries should be defined; and the character of the movements which the man actually performed, as well as of those which it would have been necessary for him to perform in order to effect the change of position from the clot to the pool of blood, should be accurately described. It is well established that section of the middle peduncle of the cerebellum on one side almost invariably gives rise to a forced movement, the animal rolling rapidly round its own longitudinal axis, the rotation being generally, but not always, towards the side operated on, and being accompanied by nystagmus; but Hitzig and Ferrier have found that injury to, or removal of, the lateral lobe produces the same forced movements in animals as section of the middle peduncle. No case, however, is on record of an injury confined to a lateral lobe producing rotatory movements in man.

THE VENTILATION OF THE NEW UNIVERSITY BUILDINGS, EDINBURGH.

WHAT at first sight seemed a chimney-stalk, arising from the centre of the buildings of the Medical Faculty in the new University Buildings in Edinburgh, has now been completed as a ventilating tower or shaft. While it was in its rudimentary state, the brick column excited the hostile comments of a good many of the citizens. It was soon explained that it was necessary for ventilating purposes; and that its being of brick, instead of stone, was owing to the limited funds at the disposal

of the Building Committee. Now that it is completed, it forms rather an attractive feature as regards its form, although there is no doubt that, if the munificence of the citizens or some benefactor were to transform it to stone, it would be much more so. The shaft rises to a height of 180 feet; it is 50½ feet in circumference at the base, and 17½ feet at the summit. About thirty feet from the top, there are eight ornamental openings for the escape of air that has been vitiated in the class-rooms and led into it. Occupying the axis of the column is an iron chimney, 2½ feet in diameter, and which opens at the summit of the shaft. The heat caused by the chimney is intended to produce the necessary draught for ventilating the class-rooms efficiently.

CASE OF POISONING.

LAST week, a case of poisoning, most probably by aconite, occurred at Broughty Ferry. Mr. Lindsay, agent of the Royal Bank of Scotland there, retired to rest in apparently good health; during the night, however, he was troubled by a slight cough, and arose to take some paregoric for it. He went to a cupboard, and took from a bottle there a teaspoonful of some medicine, and again went to bed. The taste of the medicine, however, and some sensations he began to experience, caused him to believe he had made a mistake, and he summoned assistance. The bottle was found, and its contents were ascertained to be a liniment containing aconite, which he had been using some time ago. He left his house at midnight, accompanied by his daughter, and went for medical assistance to Dr. Wemyss; by the time he arrived, the prickly feeling in his extremities was obviously felt. He explained to Dr. Wemyss the circumstances and his symptoms, and was at once treated. Unfortunately, all means proved unavailing, as he grew worse and died in a few hours.

IMPORTANT REGULATION REGARDING THE SUPPLY OF MILK IN GLASGOW.

THE importance of attending carefully to the milk supplied to a large city has been fully appreciated by the authorities in Glasgow, who have approved of the following important regulations. "1. No milk-shop, milk-store, dairy, or place or premises where milk is kept, stored, or exposed for sale, shall be used as a dwelling or sleeping apartment, or be in direct communication with a dwelling-room or sleeping apartment, nor shall be used for any purpose whatever other than that for which it is registered. 2. The trade of washing or mangling clothes shall not be carried on where milk is stored or exposed for sale, nor in any apartment communicating therewith. 3. No articles shall be exposed for sale along with milk other than bread and eggs and dairy produce, which includes butter and cheese." These regulations thoroughly carried out, if accompanied with efficient supervision of the farms and stock supplying the milk, cannot but be effective in diminishing largely, if not entirely suppressing, the evils that have been traced on previous occasions to a vitiated milk-supply.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS DURING AUGUST.

DURING the month of August, there were registered in the eight principal Scotch towns the deaths of 2,143 individuals, of whom 1,075 were males and 1,068 females. Allowing for increased population, this is 306 under the average of the ten previous years. The respective rates of mortality were, per 1,000 of the population, Greenock 17, Aberdeen and Dundee 18, Edinburgh 19, Glasgow and Perth 21, Leith 24, and Paisley 27. Forty-five per cent. of the deaths were of children under five years of age. Perth, with 33 per cent., had the lowest; while Greenock, with 54 per cent., had the highest infant mortality. Zymotic diseases caused 24.7 per cent. of all the deaths. In some towns, however, this rate was much exceeded. In Leith, scarlet fever alone caused 25.2 per cent. of the mortality. Of 52 deaths ascribed to fever, 12 were returned as typhus, 35 as enteric, and 5 as simple continued fever. Diarrhœa caused 191 deaths; in Glasgow this caused 10.2 per cent., and in Dundee 12.3 per cent., of the entire mortality. Apoplexy and paralysis caused 118 deaths; cardiac diseases, 105; hydrocephalus, 60; and premature birth debility, 53 deaths. Pulmonalis pulmonalis caused 239 deaths, equal to 11.2 per cent.; while inflammatory affections of the respiratory organs, other than croup or whooping-cough, caused 265 deaths, equal to 12.4 per cent. of the entire mortality. Two males and two females were over 90 years of age, one of the males being 100 years of age. There were registered the births of 1,776 males and 1,673 females. During the month, the mean barometric pressure was greater by 0.183 inch, the mean temperature greater by 2.5°, the mean humidity greater by 1, the rain-depth less by 2.59 inches, and the wind-pressure less by 0.65 lb. per square foot, than the average for the same month during the previous twenty-three years. The highest mean temperature was recorded at Dundee, 61.4°; and the lowest at Aberdeen, 59.0°. The least number of wet days was at Greenock, although the greatest amount of rain fell there, amounting to 2.48 inches; while all the other stations had less than 1 inch.

THE CHAIR OF PHYSIOLOGY IN ANDERSON'S COLLEGE, GLASGOW.

A VACANCY has occurred in the Chair of Physiology at the above institution, through the resignation of Dr. D. C. M'Vail. Several candidates are already in the field, and among them is Dr. Barlow, at present assistant to Professor McKendrick, and Muirhead Demonstrator in the University of Glasgow. The appointment rests with the Trustees of Anderson's College.

DEATH OF DR. JAMES SIMPSON OF ABERDEEN.

LAST week's JOURNAL contained a notice of the drowning of Dr. Hirschfeld of Banff. Another young member of the profession in Scotland, Dr. James Simpson, has succumbed, not to death by drowning, but to disease incurred while on a boating expedition. About six weeks before his death, Dr. Simpson went on a boating expedition in Southampton Water; the boat stranded on a mud-bank, where it remained a considerable time. During the night, Dr. Simpson fell asleep, and was supposed to have caught cold. Fever of a malarious type supervened; this was complicated or followed by cardiac disease; and on Friday last he died. Dr. Simpson had a distinguished career; as a student, he obtained many prizes, and on graduating M.B. and C.M., he was awarded the Murray Gold Medal as the most distinguished graduate of the year; recently, he obtained a first place in the Indian Medical Service examinations. He had held the appointments of Surgeon to the Aberdeen Engineer Volunteers, medical attendant at the Corporation gas works, and he was one of the physicians to the Aberdeen Dispensary. His death has caused much regret in Aberdeen.

THE HEALTH OF GLASGOW.

FROM the report of the medical officer of health for the fortnight ending September 4th, it seems that the number of deaths registered was 428, representing a death-rate of 19 per 1000 living. The mean temperature during the fortnight was 60.8°. The number of deaths from pulmonary diseases was 99, and from fever 16; viz., 14 from enteric fever, and 2 from typhus. There were 34 deaths from infectious diseases of children; viz., 16 from whooping-cough, 4 from measles, and 14 from scarlet fever. There are at present in the hospital at Belvidere 146 cases of enteric fever, 99 of scarlet fever, 6 of whooping-cough, 26 of typhus, 15 of measles, and 2 of small-pox; in all, 294 as compared with 258 this day fortnight. From the above returns, it is evident that the amount of enteric fever in the city is still large, and that scarlet fever is very prevalent.

THE REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 4th, it appears that the death-rate in the eight principal towns was 19.3 per 1,000 of estimated population. This rate is 3.2 above that for the corresponding week of last year, and 0.9 above that for the previous week of the present year. The lowest mortality was recorded in Aberdeen—viz., 15.1 per 1,000; and the highest in Paisley—viz., 27.6 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.2 per 1,000, or a slight increase on that for last week. Scarlet fever appears to be on the increase in Edinburgh. Acute dis-

cases of the chest caused 65 deaths, or 10 more than the number recorded during last week. The mean temperature was 62.1°, being 2.9° above that of the week immediately preceding, and 8.2 above that for the corresponding week of last year.

IRELAND.

AT a meeting of the Belfast Board of Guardians, held last week, Dr. Wall was appointed resident surgeon to the Fever Hospital, and Dr. Dunne resident surgeon to the Infirmary.

DR. G. ROBINSON died at his residence, Elgin Road, near Dublin, on the 9th instant, at an advanced age. Deceased was a graduate in medicine of the University of Dublin, a Fellow of the Royal College of Surgeons in Ireland, and formerly acted as medical officer of Blessington Dispensary District.

QUEEN'S COLLEGE, CORK.

THE Professorship of Surgery will shortly become vacant in this institution, and candidates for the office must forward their applications to the Under Secretary, Dublin Castle, on or before the 30th instant. The gentleman selected will have to enter upon his duties without delay.

ATTACK ON A HOSPITAL PHYSICIAN.

WE see, with great regret, from the pages of a local paper, that an absurd and utterly groundless, not to say culpable, attack has been made on Professor Macnaughton Jones of Cork, on the ground that, in the treatment of a child sent to the Fever Hospital, suffering from suppressed scarlatina, he employed pilocarpin as a remedy. The malady appears to have been one of a very severe nature, and in which skin-action was suppressed, and the severity of the poison fell upon the internal organs. In such cases, the use of an agent which would provoke the action of the skin and salivary glands, and secure profuse sweat, is so obviously indicated, that it might be supposed that the merest tyro would find no cause for other feeling than that of applause and thankfulness for the skill exercised in such a case. Dr. Jones wielded the most recent weapons which science puts at our disposal for combating disease. The use of pilocarpin tends to become more generalised every day in practice. It is quite possible, however, that those who have made this ignorant attack are unaware of the progress of modern science, and unacquainted with the remarkable powers of jaborandi, of which pilocarpin is the active principle, in producing skin-action, and thus relieving internal congestions. In any case, to found an attack upon a physician upon the fact that he has availed himself of the most recent knowledge in order to combat fatal disease, is an incident which can only reflect disgrace upon those concerned. There was a further complaint in this case, that Dr. Jones declined to consult in the treatment of the patient with an outside practitioner, preferring that of the physicians attached to the hospital. It is unnecessary to say that the claim of any person not attached to the staff of the hospital to take part in the treatment of a patient in the hospital, is one which can have no foundation in right, custom, or precedent. The whole circumstances are such, that laymen are necessarily apt to be not only uninstructed in such matters, but occasionally influenced by prejudice of one sort or another; and we feel sure that the more this matter is investigated, the more credit will be given to Dr. Jones for that course which he pursued, and the more clearly it will be seen that there is not only absolutely no ground for attack, but that the course which he pursued showed competent knowledge of the resources of medical science, and a full acquaintance with the best methods of treatment and procedure. The fact is, some ignorant persons appear to have forged an arm for attack out of the very fact that in this case he was a little ahead of the vulgar knowledge of those who may have inspired the hostile proceedings to which we refer—proceedings which are in themselves as ignorant as they are reprehensible. Since the above was written, we have seen the report of a lay inquiry, in which the result is to bring out in a most triumphant manner the skill and ability with which Dr. Jones conducted the case. The conclusions of the lay committee are not yet made known; but it is impossible to doubt that they will amount to a triumphant vindication of Dr. Jones and the confusion of his persecutors.

HEALTH OF IRELAND: QUARTERLY REPORT.

DURING the quarter ended June 30th, there were registered in the 801 registrars' districts in Ireland 34,969 births, being equal to an annual ratio of 1 in every 38.1, or 26.2 per 1,000; and 28,715 deaths, affording an annual ratio of 1 in every 46.4, or 21.6 per 1,000 of the population. The birth-rate was 1.6 per 1,000 under the average for the corresponding period of the five years 1875-9; while the death-rate was 1.9 above the average for the second quarter of the past five years. The apparent proportional increase in the death-rate would, it is believed, be more than accounted for by the improved registration consequent on the burial returns furnished under the Public Health (Ireland) Acts, 1878-9; and, judging by the registration returns, it would not appear that there has been any material increase of disease, or any extensive epidemic outbreak. Whooping-cough, however, prevailed extensively; and scarlatina and fever cases were above the average. As regards the distress which prevailed during the quarter, it is satisfactory to learn that in only two instances was disease attributed to want, and in these cases indirectly. The number of deaths which resulted from the eight principal zymotic diseases amounted to 3,060, or 10.7 per cent. of the total deaths registered, and equal to 57.4 in every 100,000 of the population. This number is 711, or upwards of 30 per cent., over the deaths from the same causes in the June quarter of lastyear, and 536, or 21.2 per cent., over the average mortality for the second quarter of the three years 1877 to 1879. Small-pox caused 182 deaths, against 94 in the previous quarter, of which 137 were in the county and city of Dublin; and it appears that the continued and increased fatality of the disease in Ireland is almost altogether due to the persistent prevalence of the affection in Dublin, where it has been constantly present during the past three years. To measles 266 deaths were ascribed; scarlatina, 570; diphtheria, 68; and diarrhœa, 482. Whooping-cough caused 612 deaths, against 554 in the preceding three months, and 416 in the June quarter of 1879, showing an increased mortality. To fever 877 deaths were due, being 89 in excess of those recorded in the previous quarter; diarrhœa, 482; and simple cholera, 3. There were 683 inquests held during the quarter, a number equal to 1 in every 42 of the total deaths registered.

DUNDRUM CENTRAL ASYLUM FOR CRIMINAL LUNATICS.

ON December 31st, 1878, there were in this institution one hundred and seventy-seven patients—one hundred and forty males and thirty-seven females; and, during last year, twenty-eight were admitted, fourteen were discharged, and four died. As regards classification, the actual homicides number at present seventy; those charged with assaults of an aggravated or violent character, forty-one; while twelve others were convicted of burglary, and became insane in prison. The Resident Medical Superintendent draws attention to the inconvenient results attending the admission of persons from gaols, who have become so troublesome as to interfere with prison discipline, and are sent to Dundrum Asylum as insane, although labouring under no delusions and presenting no other signs of insanity than their furious and ungovernable tempers. Dr. Ashe remarks that, if such persons are continued to be sent to him, a much stronger staff will be required; and a radically different system must be adopted, separately, for them, which will even necessitate important structural additions to, and alterations in, the building. The health of the inmates during the past year was favourable, but four deaths having taken place—giving a percentage of 2.2 on the average daily number, and 1.95 on the total number under treatment. In consequence of overcrowding, the female patients have always to take their meals in their day-rooms; and the Inspectors of

Lunatic Asylums in Ireland are of opinion that it would be advisable to increase the dining-hall accommodation; and also to procure a better supply of water than that obtained at present.

QUEEN'S COLLEGE, GALWAY.

In the session 1879-80, the number of students attending lectures during that period amounted to 180, the largest number since the opening of the College. Of this number, 57 were students in Arts, and 101 in Medicine; the preponderance of the latter being what might be expected in the case of a College mainly recruited from the middle and professional classes; for, in this working and necessitous age, it is natural that the branches of learning which seem to yield the most profitable and early fruits should be the most eagerly sought after; and it will be generally found that, owing to the constant demand for the services of medical practitioners, and the comparative certainty of immediate employment which the profession holds out, students of medicine far outnumber students in Arts in colleges circumstanced as the Queen's Colleges are. It should not be forgotten, however, that the medical curriculum of the Queen's Colleges includes a large element of Arts education. Every medical student is required to pass a strict examination in English, Greek, Latin, and Mathematics; and, in addition to his strictly professional training, is obliged to pursue the following courses: Modern Languages, Natural Philosophy, Chemistry, Botany, and Zoology.

MILK-ANALYSIS.

The difficulty analysts feel in fixing upon any rigid standard of purity in dealing with suspected samples of milk has again been brought under notice by a case lately before the Dublin Police Court. A sample of milk examined by Dr. Cameron, the Medical Officer of Health for Dublin, was certified by him to contain 10½ per cent. of solids and 89½ per cent. of water, and was therefore, in his opinion, not pure milk. The vendor was summoned before the magistrate; but, at the hearing of the case, an analysis of the milk from another eminent chemist, Mr. Tichborne, was put in, the deduction from which analysis did not coincide with Dr. Cameron's. Under these circumstances, a third sample of the same milk was sent to the chemists of the Inland Revenue, Somerset House, as provided for by the Act. These authorities also found the milk to contain only 10½ per cent. of solids, but they said that they were unable to affirm that the milk was adulterated. Owing to these differences of opinion, not in the analyses, but as to the minimum amount of solids, the magistrate dismissed the case. Dr. Cameron states, as the result of sixteen years' experience, that he is satisfied that the milk of Dublin dairy cows never contains less than 12 per cent. of solids, and that it generally contains from 13 to 15 per cent. According to Professor Wanklyn, town milk contains on an average 14½ per cent. The standard adopted by the Society of Public Analysts is 11½ per cent., including 9 per cent. of non-fatty matters. Dr. Cameron does not issue certificates stating that milk is adulterated unless the solids are below 11 per cent.; and he states that he shall adhere to this standard. According to a letter which Dr. Cameron has received from its Secretary, the Society of Public Analysts have repeatedly expressed their dissent from the low figures of solids, no fat, and fat adopted by the chemists of Somerset House, on the ground that such figures have been deduced from results obtained from utterly unreliable sources, and in some cases from feeble and emaciated cows; and that therefore they would, if adopted, or were in any way accepted by the profession, sanction the adulteration of milk. The whole subject is likely to attract renewed attention, as it has been referred by the Corporation of Dublin to their Public Health Committee to report upon; and their report, after submission to the Municipal Council, is to be forwarded to the Chief Secretary for Ireland, with a view, we presume, of urging the Government to [illegible], if possible, a legal standard of milk purity.

The [illegible] Local Board and Urban Sanitary Authority have adopted the report of a committee recommending the appointment of a medical officer of health at £20 per annum, instead of £5 as hitherto.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The report from the Board and the Court of Examiners of the Royal College of Surgeons on the candidates who presented themselves for the Primary and Pass Examinations for the Diploma of Member in 1879-80, gives the following as the numbers from each medical school who passed and who were rejected.

PRIMARY EXAMINATIONS.—1879-80.

[illegible]	Totals.	Number Passed.	Number Rejected.	Rejections per cent.
[illegible]	[illegible]	[illegible]	64	39.08
[illegible]	[illegible]	75	[illegible]	24.[illegible]
[illegible]	[illegible]	59.75	[illegible]	7.27
[illegible]	[illegible]	24.50	1	[illegible]
King's College	[illegible]	33	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	12	7.4
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1	7	[illegible]
[illegible]	[illegible]	21.50	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	30.50	[illegible]	16.43
Leeds	[illegible]	[illegible]	9.50	[illegible]
Cambridge	[illegible]	[illegible]	6	26.66
[illegible]	[illegible]	9.25	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bristol	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	57
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	38.46
Galway	[illegible]	[illegible]	[illegible]	33.3
[illegible]	[illegible]	[illegible]	.50	[illegible]
Belfast	[illegible]	[illegible]	[illegible]	[illegible]
Edinburgh	[illegible]	[illegible]	[illegible]	28.38
Glasgow	[illegible]	[illegible]	8	[illegible]
Aberdeen	[illegible]	[illegible]	.50	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Toronto	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Philadelphia	[illegible]	[illegible]	[illegible]	[illegible]
Ontario	[illegible]	[illegible]	[illegible]	[illegible]
Ohio	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Würzburg	[illegible]	[illegible]	1	66.6
Seville	[illegible]	[illegible]	[illegible]	100
Malta	[illegible]	1.50	[illegible]	66.6
Totals	[illegible]	[illegible]	[illegible]	[illegible]

PASS EXAMINATIONS.—1879-80.

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	28.50	[illegible]
Guy's	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
St. Thomas's	[illegible]	[illegible]	33.33
[illegible]	[illegible]	[illegible]	[illegible]
London	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	33.33
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	47.32
[illegible]	[illegible]	[illegible]	38.33
Birmingham	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	5.50	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Bristol	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	12.5
Sheffield	[illegible]	[illegible]	[illegible]
Hull	[illegible]	[illegible]	[illegible]
Dublin	[illegible]	[illegible]	[illegible]
Belfast	[illegible]	2.50	28.57
Cork	[illegible]	[illegible]	[illegible]
Galway	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Aberdeen	[illegible]	2.50	[illegible]
Bombay	[illegible]	[illegible]	[illegible]
Bengal	[illegible]	[illegible]	[illegible]
Madras	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Toronto	[illegible]	1	[illegible]
Colombia	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Pennsylvania	[illegible]	[illegible]	[illegible]
Melbourne	[illegible]	1	[illegible]
Berlin	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Paris	[illegible]	[illegible]	[illegible]
Totals	[illegible]	[illegible]	[illegible]

In both lists, candidates who are indicated by a fraction have received their education at more than one recognised school of medicine.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIS Association held its annual meeting, in August, at Reims, under the presidency of M. KRANTZ. The following is a brief abstract of the principal papers read in the Medical Section.

On a Remarkable Case of Traumatism.—M. P. LANDEWSKI described this case. The patient had suffered from rheumatic attacks for several years. Some months since, he was squeezed between two carriages, and lost consciousness from terror. There was no visible wound on the body, nor any subsequent bruises. Two months afterwards, he had a slight excoriation on the penis, not of venereal origin; a kind of scrofula of the gums; patches of purpura on several parts of the body; and œdema of the scrotum and penis, which became partly sphacelated. Large *debridements* were made and tonic treatment pursued; the patches of purpura, however, continued to spread, with slight fever and general loss of strength, and scars on different parts of the body. Finally, under the influence of tonic treatment, both general and local conditions improved, but the patient was not yet cured. M. Landewski thought that this was a case of emotional purpura.—M. QUINQUAUD, who had seen the patient, thought that the squeezing of the carriages produced some nerve-lesion, probably of the dorsal abdominal plexus, and that the purpura was perhaps of neuro-traumatic origin.

On the Treatment of Consumption by Climate in Algeria.—M. LANDEWSKI attributed the great efficaciousness of the Algerian climate, in the treatment of pulmonary affections, especially to its barometric and thermometric stability, and to the mildness and equable character of the climate. These peculiarities allowed the patient to remain in the open air nearly all day, and were constant throughout the whole winter. The climate of Algiers, being half-way between a dry and exciting and a damp and soothing climate, was extremely well suited to both the erethic and the torpid forms of phthisis. M. Landewski gave particulars of sixteen cases, collected from amongst his patients at Mustapha Superior, near Algiers. Eleven were cases of torpid phthisis and five of erethic phthisis. In all the cases, the treatment consisted of careful hygienic precautions, milk-diet, and medication in accordance with the symptoms. M. Landewski, however, attributed the good results obtained especially to the climate.

Modification of the Quality of Hæmoglobin.—M. QUINQUAUD pointed out certain lesions which affected the quality of the active material of the red blood-corpuscles. From the pathological point of view, hæmoglobin might be: 1. Active, that is to say, absorbing oxygen; 2. Inactive, not absorbing this gas in the vessels, but allowing itself to become oxidised in contact with the air; 3. Inert, that is to say, not absorbent under any circumstances; 4. Dissolved, that is to say, having quitted the corpuscle to become diffused in the plasma, and thence out of the vessel. The experiments of the writer enabled him to formulate the following laws. 1. In the physiological state, in the blood-vessels a small quantity of hæmoglobin is inactive. 2. During fever, the inactive portion absorbs oxygen, and becomes active in the circulating current. 3. In certain diseases, hæmoglobin becomes inert; it is so in the last stage of confluent small-pox, croup, cholera, peritonitis, and acute infectious puerperal disease. In these cases, patients succumb with cyanosis, and with the appearances of that form of asphyxia known as white; the hæmoglobin absorbs much less, a large portion becomes inactive, and then inert. 4. Hæmoglobin may become changed to such an extent that it leaves the blood-corpuscle, becomes dissolved, and easily transudes from the blood-vessels. This takes place in diseases accompanied by extensive hæmorrhage—as in variola, scurvy, etc. M. Quinquaud said that the principal cause of the dissolution of hæmoglobin seemed, according to analyses, to reside specially in the mineralisation of the corpuscles and of the plasma of the blood. In these cases, the corpuscular and plasmatic albuminoids were also changed.

Pessary for Retroflexion.—After a series of experiments, M. COURTY had adopted a form of pessary, in which the posterior portion was flexed forward, and supported the neck of the uterus. He recommended the following plan to obtain immediate reduction. The woman should be placed in the genu-pectoral position, and the anterior and posterior walls of the vagina separated by a speculum. So soon as air entered the vaginal passages, the retroflexion became reduced, and remained so, even if the patient lay on her back. As soon as reduction was obtained either by this plan or the introduction of the hysterometer, the pessary could be applied.

Discutient Treatment of Myomata.—M. COURTY read a paper on this subject. Some myomata were general, and were treated with tonics, alteratives, and iodide and bromide of potassium; while others were specially in relation with the uterus. M. Courty relied on the following methods: 1. Injections at as high a temperature as the patient could bear (about 113° Fahr.) of water mixed with carbolic acid at the rate of twenty-five *grammes* per *litre;* this was an excellent anti-congestive and antihæmorrhagic means; 2. Subcutaneous injections of ergotin; 3. The electrolytic action of the continuous current applied by regulated intermittences with a metronome. M. Courty was of opinion that good results were certain if this method were used in the treatment of uterine fibro-myomata.—M. VERNEUIL believed that this method was only successful in about a third of the cases treated. Excellent in cases of fibroma of the congestive type, it had no effect on old-standing fibromata. In cases where profuse hæmorrhage was noted, and in which one or two painful points were found in the tumour corresponding to the ovaries, subcutaneous injections of morphia soothed the pain, and also arrested the hæmorrhage.—M. COURTY allowed that cure could not always be obtained, but said that his method procured, in every instance, real and considerable relief of the suffering. In answer to a question by M. Millard, M. Courty said that an exaggerated value had been attributed to the employment of saline mineral waters in the treatment of uterine fibro-myomata. Alkaline waters were often useful in certain general conditions of the patients.—M. DENUCÉ thought that, of all the methods pointed out by M. Courty, the injection of morphia seemed to him the most effective; and he related the particulars of a case of complete resolution of a fibroma obtained in three or four months by this method.

Rectal Alimentation.—M. CATILLON read a paper on rectal alimentation, to which reference has been made elsewhere.

A New Method of Operating in Suppurating Cataract.—M. GAYET (Lyons) reminded his hearers that, after extraction of the crystalline lens by operation or lesion, the iris became inflamed, infiltrated with plastic products, and formed as it were a kind of veil, which prevented the rays of light from reaching the retina. Ordinary iridectomy was impossible when the iris was thus indurated. On the other hand, it was known that the iris was not isolated, but belonged to the ciliary system, and was continuous with the processes. At this point it was thin, and tore when touched; but when it had become inflamed, and it adhered frequently to the neighbouring parts, the iris only tore by traction; this became transmitted to the ciliary organ; and it was well known that rough treatment of this region was liable to bring on sympathetic ophthalmia or other serious accidents. These considerations had long been known; and the importance of making an artificial pupil, and the difficulties of accomplishing it, had long been recognised. Cheselden's needle-method gave too small an aperture, and there was danger of wounding the crystalline lens and bringing on a fresh cataract. Von Gräfe's process gave a large opening in the pupil; it was a good plan, but frequently brought on a small hæmorrhage, which showed that the ciliary body had been detached. M. Gayet had endeavoured to avoid that inconvenience. The knife being directed obliquely backwards, the blade forwards, he punctured the cornea and the iris; then turned the handle of the knife backwards, and carried it behind the iris. When he reached the other end of the anterior chamber, he directed the handle of the knife backwards, and brought the point outwards. The tension of the iris caused the knife to cut it in proportion as it advanced; the operation was then ended, as soon as the cornea was opened at two points. M. Gayet had performed this operation four times successfully, without difficulty or consecutive accidents.

The Etiological Function of Traumatism.—M. VERNEUIL said that the part played by injury in the production and progress of so-called spontaneous affections was more considerable than was generally supposed. Besides the affections considered as wound-complications, injuries gave rise to affections which would only be produced later on; such are the manifestations of diatheses—syphilis, gout, rheumatism, etc. Traumatism increased the receptivity to certain diseases, the eruptive fevers in particular; it determined the localisation of diathetic manifestations at points actually or previously wounded. These might likewise appear at a point some distance from the wound. M. Verneuil showed the importance of these theories in the study of the etiology, progress, and treatment of diseases of surgical origin.—M. ONIMUS recalled to mind that nervous affections of traumatic origin, especially those which succeeded railway accidents, assumed a character which distinguished them from similar affections of spontaneous origin.

Milk-diet in the Treatment of Diseases of the Heart.—M. POTAIN said that milk-diet was peculiarly efficacious in secondary cardiac affections, hypertrophy, or simple dilatation having a renal or gastric origin. This regimen on the one hand modified the state of the kidney, on the other that of the stomach, in that it gave more complete rest to those organs; consequently, to be truly efficacious, it should be absolute, and more or less prolonged. It might usefully intervene in cases of simple reflex palpitation of gastric origin. Its diuretic action might be utilised specially in cases of dropsy, perhaps exclusively when this was the result

of secondary renal disturbance, or of intercurrent inflammation of the serous membranes. Finally, the regimen could only be efficacious on the condition of its being well tolerated; that is to say, provided the milk could be digested and assimilated.—M. ROUSSEAU believed that there were no passive dropsies, but that dropsy was always connected with an inflammatory condition. He was of opinion that, for milk to be useful, it must be well digested. On this condition, as much as desired might be given.—M. MAUREL had ascertained the weight in numerous cases of patients under milk-diet. He had found that those to whom less than two and a half pints of milk were given during twenty-four hours lost flesh; above that quantity, they retained their weight; so soon as they had three *litres* of milk, they all made flesh. He, therefore, concluded that it was useless to give to patients larger quantities of milk.—M. LEUDET was of opinion that, in cardiac disease following nephritis, and not cachectic, the milk-regimen was one of the best systems; but that, in cachectic patients, milk was of no utility.

The Results of Treatment of Aneurism of the Aorta by Galvano-Puncture.—M. L. H. PETIT stated that he had been successful in 114 cases of this nature. In 111 cases, continuous currents were employed; in three cases, interrupted currents (Zdekauer, Piedagnel). Of the 114 cases, three were improved; 38 patients died without any notable amelioration; in three cases, there were no results; in four, they were doubtful; 39 patients survived less than a year, though much improved, and 10 from one to two years. The others survived from two to five years. In those patients who had been followed up long enough to have their deaths verified, rupture of the aneurismal sac was noted in about forty. After the disappearance of the immediate symptoms, or even immediately after the application, amelioration had shown itself in a certain number of cases by the diminution of the pains and pulsations, by increase in the consistency of the tumour, and its progressive diminution. This retrograde progress of the disease continued in twenty-four cases after a single application, and lasted from two to seventeen months; in others, three, four, and five applications had to be made; in others, even so many as eleven or even twelve; but that was because the improvement did not last long after each of them. The persons forming this category all died soon after the last application of galvano-puncture. Intrathoracic aneurisms had yielded thirty successful and seven unsuccessful cases. Those which had made their way outwards yielded thirty-six successful and one unsuccessful cases. It was, therefore, evident that, if the proportion of successes were greater when the aneurism was still contained in the thorax, good results might be hoped for in about half of the cases of aneurism of the aorta with external tumour. In 114 cases, 292 applications were made, which were thus classified as to the immediate results: improvement, 186; aggravation, 61; *status quo*, 14; not exactly indicated, 31. Improvement had specially been apparent in the relief of pain, the cessation of paroxysms of angina pectoris, the return of sleep, appetite, etc. Amongst the symptoms by which the aggravation had been characterised, augmentation of the size of the tumour, inflammation in the course of the needles, circumscribed sloughing, somewhat persistent hæmorrhages, etc., had been noted. These accidents were observed especially when the needles were put into communication with the negative pole; on the contrary, they were very rare when the positive pole was employed. M. Petit, therefore, concluded, with McCall Anderson, Dujardin-Beaumetz, Teissier, etc., that positive galvano-puncture was the best proceeding hitherto employed.—M. POTAIN believed that the improvements which supervened after the employment of electrolysis in the treatment of aneurism was wrongly attributed to coagulation. In support of this opinion, he quoted the following fact. A man, attacked with an aneurism of the aorta with secondary tumour, was treated by M. Dujardin-Beaumetz. After two or three meetings, the patient was so much relieved, that he was able to leave the hospital; the secondary tumour had considerably diminished. But, after some time, the improvement disappeared, and the patient came back into M. Potain's wards, where he was treated with iodide of potassium and milk-diet. The improvement was soon as marked as after the treatment by electrolysis, and the patient again went home; but, as on the first occasion, the improvement was only temporary. He came back into hospital with pneumonia, of which he died. At the necropsy, a rather thick layer of fibrine was found lining the wall of the aneurism, but no clot. M. Potain [illegible] with the aorta, and where the clots might give rise to embolism.—M. [illegible] importance, and that the coagulation of the blood was not the cause of [illegible] ment, the chemical action being very feeble. When clot was found in an aneurism, it was wrong to ascribe it invariably to electrolysis, for clots were found in cases where this plan was not employed.—M. HEUROT, from a case which came under his notice, maintained that electrolytic action produced clots. In his case, the external tumour became solid and hard, and the pains were remarkably relieved.—M. OLLIER remarked that statistics had the great disadvantage of not being complete. Successes were published, but not failures. Statistics could not, therefore, be taken as a basis to ascertain how far recovery might be anticipated. On the other hand, M. Ollier did not believe that a complete and permanent cure had been observed. Finally, large clots had been supposed to occur after galvano-puncture, but these clots melted in some way, or they might be displaced by the needles. For these reasons, M. Ollier preferred to employ milk-diet and iodide of potassium. Cases of spontaneous cure of external aneurism had been observed, and there was nothing to prove that the same thing did not occur in the aorta.—M. LEUDET remarked that all cases of failure had not been made known; for instance, he had operated on two patients whose cases had not been published.—M. HENROT pointed out that galvano-puncture was specially a palliative means; and, from this point of view, it was very valuable. It had been specially employed in desperate cases, when rupture of the sac was feared, or existence was unbearable to the patient on account of the acute anguish of dyspnœa, etc., and had always improved the patient's condition.—M. PETIT replied that, in the majority of the cases collected by him, coagulation of blood in the aneurismal sac, and diminution of the pulsation, *souffle*, etc., had been noted. He was aware that, as a rule, statistics mostly recorded the successes, and that the failures were passed over in silence; but, his statistics being for the greater part compiled from the complete statistics of Ciniselli, Verardini, Duncan, Anderson, Althaus, and Dujardin-Beaumetz, he was scarcely open to that reproach. Complete cure had scarcely been observed in more than two or three cases, but improvement had lasted a long time in a large number of others.—M. DENUCÉ had recently treated two cases of aneurism with galvano-puncture. In the first case, there was aneurism of the aorta of two or three years' standing, with a large external secondary tumour; the skin was attenuated, and the pains very acute. A first application of Gaiffe's pile of ten or twelve elements, making use of the positive current applied with three needles during ten minutes, caused immediate cessation of the pains; the tumour became indurated, and the pulsations diminished. After some days, a tendency to dissolution of the clot, and return of the pains and pulsations, were observed. A second application with only two needles had the same result as the first. M. Denucé had made four applications, and the benefit rendered by galvano-puncture to the patient was very considerable. In the second case, an aneurism of the brachio-cephalic artery, as large as a child's fist, and prominent above the clavicle and sternum, was treated in the same way. But, after the first application, there was no induration of the tumour; on the contrary, it increased rapidly, and in five or six days, rupture of the aneurism was apprehended. M. Denucé then tied the common carotid and the subclavian arteries. The tumour then became more tense, and diminished twenty days afterwards. The wounds of the ligatures were cured, but the tumour remained *in statu quo*, and everything pointed to the probability of its speedy rupture.

Perineal Lithotomy.—M. GAILLET (Reims) showed a rather large number of vesical calculi extracted in the course of his practice, and gave some details of this operation, and the methods employed by him. He added that, in old people, lithotomy across the prostate need not be avoided. This plan often succeeded in removing obstinate cystalgia and retention of urine. He was of opinion that everything should be done to prevent the retention of urine and hæmorrhage after this operation, and that, with this object, a *sonde à demeure* and a sponge should be left in the wound.—M. OLLIER had formerly seen, in consequence of errors of diagnosis, lithotomy performed on patients suffering from diseases of the prostate, and showing symptoms which led to the supposition of the existence of vesical calculi when there were none present. The patients having been perfectly cured, M. Ollier had since performed [illegible] lithotomy in analogous cases to relieve the pain and re-establish the flow of urine, and he had reason to congratulate himself on the result.

SUPERANNUATION.—Dr. [illegible], medical officer of Clontarf and Howth Dispensary District, having resigned from ill-health, the dispensary committee have recommended that he should receive the full retiring allowance to which he is entitled under the Act. The committee have also expressed their regret for the cause assigned, and their appreciation of the value of his services during the thirty-three years he has held the appointment of medical officer of the district.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:
NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the office of the Association, 161A, Strand, London, on Wednesday, the 13th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 14th, 1880.

EAST ANGLIAN BRANCH.

THE annual meeting of this Branch will be held at Lowestoft, on Friday, October 8th.

It is requested that notice of intention to read a paper or other communication may be forwarded to Dr. Elliston by September 14th.

J. B. PITT, M.D., Norwich. } *Honorary Secretaries.*
W. A. ELLISTON, M.D., Ipswich. }

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held at Barnard Castle, on Tuesday, October 5th.

Members intending to read papers are requested to communicate at once with the Secretary.

Durham, September 9th. T. W. BARRON, *Honorary Secretary.*

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this District will be held at the Town Hall, Folkestone, on Thursday, September 23rd, at three o'clock; Dr. FITZGERALD of Folkestone in the Chair.

Business.—To receive the resignation of the Honorary Secretary, and to appoint a successor.

Communications promised:

1. A Case of Imperforate Rectum. By Dr. Thomas Eastes.
2. Specialities in General Practice. By Mr. W. J. Tyson, F.R.C.S.
3. Some of the Evils arising from Enlarged Tonsils. By Mr. W. Knight Treves, F.R.C.S.

Dinner will be provided at the West Cliff Hotel at five o'clock; charge, 6s. 6d., exclusive of wine.

Members intending to be present are requested to signify the same to the Secretary on or before Tuesday, the 21st instant.

WM. KNIGHT TREVES, *Honorary Secretary.*

Margate, September 14th, 1880.

BORDER COUNTIES BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the County Hotel, Carlisle, on Friday, June 25th; Dr. MACLAREN, and afterwards Dr. CAMPBELL, in the chair.

The Report of Council was read by Dr. BURT. It stated that the number of members belonging to the Branch was one hundred. The financial statement showed: Balance from last year, £3 0s. 7d.; receipts this year, £12 17s. 6d.; disbursements, £5 13s. 3d.—leaving a balance in hand of £10 4s. 10d. The Council recommended that the sum of five guineas be given to the British Medical Benevolent Fund.

Dr. LOCKIE proposed, and Dr. CULLEN seconded: "That the report of Council be adopted." This was carried unanimously.

New Members.—The following gentlemen were elected members of the Association and Branch: John Thompson, M.B., Dumfries; A. Patterson, Esq., Carlisle; —. Lediard, Esq., Carlisle.

President-elect.—It was proposed by Dr. TIFFEN, seconded by Dr. LOCKIE, and carried unanimously: "That Dr. Grierson of Melrose be President-elect."

Honorary Secretaries.—Dr. Smith and Dr. Burt were re-elected, on the motion of Dr. BARNES, seconded by Dr. CAMPBELL.

Members of Council.—The following gentlemen were elected: Messrs. Tiffen, I'Anson, Taylor, Barnes, Macbean, Thompson, Brydon, Forbes, and Maclaren.

Representative upon Parliamentary Committee.—Dr. Taylor of Penrith was re-elected.

Number of Meetings.—It was resolved that two meetings, in addition to the annual meeting, should be held in the ensuing year—one in the autumn, at Dumfries; one in the spring, at Penrith.

A Vote of Thanks was given to the retiring President (Dr. Maclaren) and the office-bearers of the past year.

President's Address.—Dr. CAMPBELL, the President, delivered an address. He briefly alluded to the good which the meetings had done, both medically and socially; but regretted the absence hitherto of papers on sanitary subjects; named several sanitary topics of local interest, on which light might be thrown; and expressed a hope that, during the ensuing session, some contributions on these points might be laid before the Society by medical officers of health connected with this Branch. He then offered some remarks "On Insanity: its Treatment and Prevention"—explaining that the magnitude of the subject merely allowed a sketchy outline. He traced the history of the treatment of insanity from the times of the Athenians and early Romans down to the passing of the Lunacy Acts in England, in 1845; touching briefly on the state of matters abroad, and the philanthropic actions of Pinel and William Tuke. He then discussed the results of the Lunacy Act; gave a short account of what he had noticed during the fifteen years he had spent in the study and treatment of insanity; and, among many other things, pointed out the increasing tendency to examine into the physical condition of the insane; to look for, and in the majority of cases to find, bodily causes for mental manifestations; and to keep careful records of cases; also, an increased interest in pathological research, and increased facilities for the theoretical and practical study of this disease. He then discussed the present medical treatment of insanity, especially with reference to sedative treatment; and stated that he considered that the consensus of opinion of careful observers in asylum practice questioned a direct curative action from sedative treatment, while quite admitting its use to enable an acute attack to be safely and more easily tided over. Passing to the subject of the prevention of insanity, he pointed out the difficulties of finding the true causation; gave an analysis of the Commissioners' Return on this head for 1878, stating the vast preponderance of physical over moral causes, both as excitant and predisposed, in attacks of insanity; gave statistics for two years from Garland's Asylum; dealt with the City of Glasgow Bank failure, as a cause directly acting on the mind, and gave statistics of those ruined by it, and the number of patients sent to Scotch asylums, the disease considered to have been brought on by this failure; and briefly mentioned the remedies proposed, and which he would propose, for physically induced insanity. He entered into the subject of the bringing up and educating children; the choice of professions, and the want of consideration of the capabilities and nervous states of children in both these respects; the acquirement of bad habits in young persons of both sexes the result of ignorance; the improper importance which social, monetary, and even religious, considerations had acquired in reference to marriage; and the utter disregard shown to personal drawbacks, or to family history, with the results. He afterwards touched on the time which should elapse before another confinement in cases of puerperal mania, giving records of practice; treated of the evils of over-nursing, and the necessity of medical practitioners watching this, a most preventable and fertile cause of insanity; ascribed many cases of insanity to over-rapid gestations or miscarriages; and dealt with the necessity of good health in the parents previously to procreation, if healthy offspring were desired—pointing out the frequency with which diseased offspring from drunken parents were seen, and coarsely formed and stupid children from intemperate parents—that this might just be a question of degree, and that both the mental and physical state, immediately before the time of procreation, probably exercised a far greater influence than is commonly supposed. In conclusion, he said that medical science was a progressive study—that each year new facts should be observed, and medical men should make themselves more acquainted with the wonderful laws of nature which deal with human creatures, and fit themselves to advise—with such certainty as is to be expected from fallible man—on many of the points touched on in this address, as, each year, more would be expected in this direction.

Dr. BARNES proposed, Dr. TIFFEN seconded, and it was carried unanimously: "That the best thanks of the meeting be given to Dr. Campbell for his very able address."

Papers.—The following papers were read:

1. On Chronic Accidental Poisoning. By HENRY BARNES, M.D. (Carlisle).—After referring to the progress which had been made in recent years in the department of preventive medicine, the paper referred to the necessity of some further legislation for the prevention of chronic accidental poisoning by mineral poisons. The different sources of lead-poisoning were alluded to, and a case was reported in which the poison was traced to a source unsuspected both by the patient and by his employers. The connection between gout and lead-poisoning was also discussed, reference being made to Dr. Garrod's discoveries; and a new exciting cause of the gouty paroxysm was described. After referring to the report of the Medical Society of London on Arsenical Poisoning by Wall-Papers, Paints, etc., two cases of poisoning were reported in detail, in which the symptoms were evidently due to the impregnation

of the system with arsenic, and in which abundance of arsenic was found in the wall-papers. The author agreed with the Committee of the Medical Society of London that legislation is desirable, and recommended that, until such legislation is obtained, the profession should take every opportunity of advising their patients to purchase only such papers as are guaranteed "free from arsenic".

2. The Aspirator as a Guide to Colotomy. By RODERICK MACLAREN, M.D. (Carlisle).—For the purpose of illustrating the use of the aspirator as a guide to operation in obstruction of the bowel, Dr. Maclaren reported a case in which he had employed it—Mrs. R., aged 43. At the time when operation became necessary from threatened collapse, there had been no motion for nine days. There was some evidence that the stoppage was in the colon; but, from the absence of marked physical signs, the exact seat was doubtful. It was a question whether it would not be better to open the small bowel close to the cæcum rather than run the risk of cutting down on the colon below a stricture. Aspiration of the ascending colon settled the question by withdrawing liquid fæces and air; and right colotomy relieved the patient. Five days after the operation, the patient passed some fæces *per anum*, and in a short time she had daily an apparently natural motion. Two months after the operation, she was found dead in bed, though she had been strong and well on the previous day. A *post mortem* examination showed degenerated heart-muscle, which accounted for the sudden death. In the bowel, just above the sigmoid flexure, was a cancerous mass. This did not then occlude the bowel, but had at the time when she suffered from the obstruction. In conclusion, the paper drew attention to the very valuable aid to diagnosis which aspiration afforded in this class of cases, by determining whether a given portion of the great bowel contains liquid fæces or not.

Medical Education.—Of the five resolutions submitted by the Committee of Council, the Branch approved of 1 and 2, disapproved of Resolution 3, and moved amendments to 4 and 5.

Dinner.—The members dined at the County Hotel, where they were joined by several of the local clergy.

CORRESPONDENCE.

THE NAVAL MEDICAL SERVICE.

SIR,—The Warrant, or not the Warrant? This is the question that agitates the Naval Medical Service at the present moment. Parliament has been prorogued; the Lords of the Admiralty have gone on holiday-trips after inspections of some medical establishments; and the Medical Director-General is now on his tour of inspection. Have these officials dropped any hints that may cheer hearts pining under the influence of "hope deferred"? Were a summary of the recommendations of the Committee communicated through the professional papers, and some indication given as to the probability of their being carried out, it would do much good in many ways. It would explain why a deputy inspector-general has been promoted, though not qualified; why officers of long and good service on the fleet-surgeon's list have been passed over in the late promotions; in fact, it would explain all that is now veiled in mystery, to the prejudice of those in the service and those who would join were sufficient inducement offered. Most probably you will agree with me that what is wanted to allay discontent, soothe disappointment, and encourage youthful ambition, is

September 13th, 1880. THE WARRANT.

*** We entirely agree with our correspondent; nevertheless, we have good grounds for anticipating that the delay will ultimately be succeeded by satisfactory concessions. Let no man, however, put his trust in official promises in this matter; they have been too often proved hollow. We believe the intentions of the Government to be liberal; and we feel assured that Dr. Watt Reid, the Director-General, will spare no exertion to second those intentions, and to make them fructify. But nothing but the actual appearance of a thoroughly satisfactory Warrant can allay the existing discontent, or ought to satisfy the service and the schools.—[ED. B. M. J.]

ALCOHOL AND INSANITY.

SIR,—It was with deep regret that I was compelled to leave Cambridge suddenly, and thus had no opportunity of saying a word of explanation with reference to Dr. Bacon's most interesting paper on Insanity and Alcohol. Dr. Bacon spoke of what he considered exaggerated statements as to the influence of alcohol in the production of insanity as emanating from temperance advocates, who had formed a preconceived opinion. Permit me to assure Dr. Bacon that temperance advocates never originated any statements or statistics on the subject in question. They simply quoted the opinions of non-abstaining alienist medical and other experts, such as Dr. Shepperd of Colney Hatch, the Chairman of the Lunacy Commission, and Dr. Crichton Browne, not one of which gentlemen is an abstainer. Dr. Bacon's quarrel, therefore, is with his own colleagues, and with such authorities as the Chairman of the Brookwood Asylum and the Chairman of the Commissioners in Lunacy. To show the candour of temperance reformers, suffice it to state that the *Alliance News* reported Dr. Bacon's and the other able papers and speeches in support of his views *in extenso*. Temperance men, while bound to use the evidence of experts as that is given, will be perfectly content with the final verdict of the profession, well knowing that the lowest estimate of the insanity caused by alcohol is more than enough to call for the unceasing efforts of all who are interested in the mental and moral health of the community.

Your obedient servant, NORMAN KERR, M.D.

42, Grove Road, Regent's Park, N.W., September 4th, 1880.

THE BIRMINGHAM AND MIDLAND EYE HOSPITAL.

SIR,—In your notes of "The Week" contained in the JOURNAL of August 21st, appear some remarks on the sanitary condition of the Birmingham Eye Hospital, and on the official relations existing between its Committee and that of the public health of the Corporation. The statements are a curious admixture of fact and fiction, while some facts, material to the question discussed, have been omitted. Of course, in such matters you have often to rely upon the *bona fides* of your local correspondent, who, in this instance, has proved misleading as I shall presently show.

Some of the erroneous statements have been publicly refuted by me elsewhere. I will, therefore, confine my comments to that passage in the JOURNAL which runs as follows: "It is customary for the managers of an unhealthy hospital to afford the sanitary authorities every possible facility they may require to enable them to overcome the existing evils". Any one reading these words, would assume that our Committee had refused the assistance of the Medical Officer of Health in rectifying the sanitary defects of their hospital. But, so far from this being true, our Committee immediately after the publication of your "Report on the sanitary condition of the hospital" (which in some important particulars was admitted by the Medical Officer of Health to be not founded on fact) about eighteen months ago, invited the Medical Officer of Health to investigate the condition of the institution. He was met on his visit by our chairman and two of the medical staff; also by our architect and plumber. His examination was searching and complete; nothing was withheld from him. And on receiving his report from the Health Committee, all his suggestions were at once carried out by the hospital authorities. Having done this, our Committee declined some months afterwards to receive a proposed deputation of certain members of the Health Committee of the Corporation; and they also successfully disputed the legal right claimed by the Health Committee to enter the building at their pleasure. These facts are perfectly well known in Birmingham, and there is no excuse for the misleading statements that have been imposed upon you. Moreover, at the annual meeting of the subscribers recently held, the Committee, which includes the two senior members of the medical staff, stated in their report that, "the hospital has been remarkably free from all hospital diseases", a conclusive evidence, if any were needed, that no further interference on the part of the Health Committee is required. Our conduct has not, therefore, differed in any respect, as alleged in your article, from that of the managers of the hospitals of Norwich, Manchester, and Oxford.

We received a copy of the report of your commissioner; we met the Medical Officer of Health, and assisted him to examine in detail our hospital. We carried out all his recommendations under the superintendence of an experienced and skilful architect. We obtained a perfectly healthy institution, and at the end of a year some one has the audacity to write to you and say that it is unsanitary, and that we refuse to avail ourselves of the services of the public health authorities. I repeat that there is no excuse for such misrepresentation of facts accomplished, and well known to the profession in Birmingham.

Let me say, in conclusion, that within about six years of the present time, the mortality of a small local hospital exceeded anything that has ever been known in the annals of the operative surgery of Birmingham. This mortality was known to members of the Public Health Committee, but no notice whatever was taken of it. It may, however,

interest the profession to learn that the death-rate referred to was diminished upon all the surgical instruments being carbolised, and other antiseptic precautions adopted; the gradually increased experience of the operators may also be taken into consideration.—I am, sir, yours obediently,

J. Vose Solomon, Surgeon and Trustee of the Birmingham and Midland Eye Hospital.

P.S.—Six years since, the Corporation made an offer for the 1000 square yards and building thereon, constituting the property of the hospital, which includes a hotel, yielding a revenue of about £300 *per annum*. The offer was carefully considered and declined. Since this, it has been pretended by interested parties that the site of the hospital, which stands 450 feet above the level of the sea, and is in close proximity to four acres of open space, is unsuited for an Eye Hospital; and threats have been thrown out by members of the Corporation Health Committee that, whatever our plans for reconstruction may be, they will not be passed by them. I trust that the Chairman will publicly vindicate the honour of his Committee by disclaiming sympathy with an intention so flagrantly wrong and hostile to the interests of the public.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

Answers.—According to a recent decision of the Local Government Board, medical officers of unions are not precluded from being justices of the peace. The only restriction placed on them is, that they must not act as *ex officio* guardians in the unions in which they hold office.

MR. BLACKBURN AND THE BARNSLEY BOARD OF GUARDIANS.

Our contemporary the *Barnsley Chronicle* of the 4th instant, in its report of a recent meeting of the board of guardians, gives the proceedings consequent on the application of Mr. Blackburn, medical officer of the district, for an increase of his stipend. In his letter, read at a previous meeting of the board, he showed that for £75 a year (with all medicines to supply—for the Barnsley guardians do not find anything in the way of expensive drugs), he had attended, in the preceding half-year, the large number of 437 cases of sickness, which was more than all his district colleagues put together, whose aggregate salaries amounted to £170. His application now came on for consideration, after some show of opposition from a Mr. Senior, who made some jocular observations about the cost of medicines (they need not be much in the Barnsley Union if Mr. Blackburn does not stand to lose heavily by his appointment), a resolution was submitted that the doctor's stipend be increased to £100 a year. This, on being put to the vote, was unanimously adopted. The principal ground taken by the proposer was the very satisfactory manner in which Mr. Blackburn had performed his onerous duties.

We congratulate Mr. Blackburn on the augmentation of his stipend, not alone from the fact that he is justly entitled to it, but also for the reasons alleged by the mover of the resolution. It must be very difficult to continue one's work satisfactorily under the conditions which Mr. Blackburn has had to encounter.

POOR-LAW MEDICAL APPOINTMENTS.

Abbott, C. E., L.K.Q.C.P., appointed Medical Officer and Public Vaccinator to No. 7 District of the Braintree Union.

Adrien, Edward N., L.K.Q.C.P., appointed Medical Officer to the Balbriggan District of the Balrothery Union, *vice* Francis J. McEvoy, L.K.Q.C.P., resigned.

Blenkenham, John, L.R.C.P.Ed., etc., appointed Public Vaccinator for the Borough of Cambridge, *vice* Edward Knowles, M.R.C.S.Eng., deceased.

Constable, John, M.D., C.M., Leuchars, appointed Parochial Medical Officer of the parishes of Logie and Dairsie, *vice* James W. R. Mackie, M.D., deceased.

Galpin, Richard, M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator to the 6th District of the Braintree Union.

Hinings, John William, L.R.C.P.Ed., appointed Medical Officer to the Knightwich District of the Martley Union, *vice* David Holmes, M.B., resigned.

Macintyre, Alexander, M.B., appointed Medical Officer for the Parish of Ardchattan and Muckairn, Argyleshire.

Magner, Edward, M.D., appointed House-Surgeon to the Cork Workhouse, *vice* T. F. Riordan, M.D., resigned.

Mills, Samuel, A.B., L.R.C.S.Ed., appointed Medical Officer to the Donaghmore Dispensary District of the Newry Union, *vice* W. F. Saunderson, M.B., deceased.

Pentland, A., M.B., appointed Medical Officer to the Ryan Dispensary District of the Mohill Union, *vice* Wm. Creery, M.B., resigned.

Reid, John, M.D., appointed Medical Officer to the Fifth District of the Fulham Union, *vice* M. A. Gleeson, Esq., resigned.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 9th, 1880.

Braganza, Bellarmin Moscardi, Bombay.
Ford, Lewis Frederic, Highgate, N.
Northcott, Arthur, Albert Street, N.W.
Rodway, Edwin Augustus, Taunton, Somerset.

The following gentlemen also on the same day passed their Primary Professional Examination.

Atkinson, Thomas Ruele, St. Bartholomew's Hospital.
Bird, Ashley, St. Bartholomew's Hospital.
Davis, Edward, Middlesex Hospital.
Deane, Herbert Edward, Middlesex Hospital.
Duff, Charles Henry, Middlesex Hospital.
Girdler, George Toussaint, Westminster Hospital.
James, James Prytherch, St. Thomas's Hospital.
Moore, Thomas Ricketts, Charing Cross Hospital.
Robinson, John Henry, St. Mary's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

The following vacancies are announced:—

BALLATER PAROCHIAL BOARD—Medical Practitioner. Salary, £35 per annum. Applications, with testimonials, to the Inspector of the Poor, on or before October 4th.

*BETHLEM HOSPITAL—Two Resident Medical Students. Applications, with testimonials, before October 9th.

*CAMBRIDGE COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and attendance. Applications, etc., on or before September 27th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, before October 10th.

CHESTER GENERAL INFIRMARY—Visiting Surgeon. Salary, £80 per annum, with residence, maintenance, and washing. Applications and testimonials to the Chairman of the Board, on or before September 27th.

*EVELINA HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with board, washing, and residence. Applications, with testimonials, on or before September 21st.

GALWAY UNION—Medical Officer for Oranmore Dispensary District. Salary, £120 per annum, exclusive of sanitary, registration, and vaccination fees. Election on 20th instant.

LEEDS PUBLIC DISPENSARY—Resident Medical Officer. Salary, £80 per annum, with board, lodging, etc. Applications, before September 22nd, to Mr. Jacob, 12, Park Street, Leeds.

MANCHESTER DISPENSARY FOR SICK CHILDREN, Gartside Street.—Visiting and Medical Officer. Salary, £180 per annum, without board and lodging. Applications, with testimonials, on or before September 25th, to Chairman of Medical Staff.

*RIPON DISPENSARY—Resident House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, etc. Applications, with testimonials, to the Honorary Secretaries.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*Briggs, H., M.B., appointed Senior House-Surgeon to the Stanley Hospital, Liverpool.

Drannigan, Henry C., L.R.C.P.Ed., appointed House-Surgeon to the Liverpool Infirmary for Children, *vice* James Pointon, L.R.C.P., resigned.

Firth, R. H., M.R.C.S., House-Surgeon to the Blackburn and East Lancashire Infirmary, *vice* E. W. S. Wilkins, M.R.C.S.Eng., resigned.

Hammond, Thomas, L.R.C.P.Lond., late Assistant House-Surgeon to the Halifax Infirmary, appointed House-Surgeon, *vice* Robert Scott, M.D., resigned.

Lunn, J. R., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

*Lytle, J., M.D., appointed Junior House-Surgeon to the Royal Albert Edward Infirmary and Dispensary, Wigan.

Macpherson, A., M.B., appointed Junior House-Surgeon to the Stanley Hospital, Liverpool.

Mackenzie, Murdo T., M.B., appointed Resident Medical Officer to the Greenock Infirmary and Fever Hospital, *vice* S. Rutherford Macphail, M.B., resigned.

Newsholme, A., M.R.C.S., appointed Resident Accoucheur to St. Thomas's Hospital.

Porritt, Norman, M.R.C.S.Eng., appointed House-Surgeon to the Huddersfield Infirmary, *vice* W. H. M. Evans, M.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

Strange.—On September 14th, at Bicton, Shrewsbury, the wife of Arthur Strange, M.D., of a daughter.

MARRIAGES.

Home—Whitworth.—On September 7th, at the Parish Church, Nantwich, Cheshire, by the Rev. James Campbell Home, M.A., Vicar of Rawcliffe, Garstang, Lancashire (uncle of the bridegroom), assisted by the Rev. Walter Hillyard Vicar of

Worleston, near Nantwich, and by the Rev. Foster Blackburn, M.A., Rector of the Parish, Rev. James David Home, only surviving son of the Rev. John Home, B.C.L., Rector of Bradley, Redditch, Worcestershire, to Sarah Jane, widow of the late Dr. James Whitworth, Tenby, Pembrokeshire.

BATT—WAKE.—On the 14th instant, at the Parish Church, Ecclesfield, by the Rev. E. H. Bucknall Estcourt, M.A., Rector of Eckington, assisted by the Rev. Alfred Gatty, D.D., Sub-Dean of York and Vicar of Ecclesfield, and the Rev. Nathan Jackson, M.A., Vicar of Easingwold, brother-in-law of the bridegroom, Charles Dorrington Batt, M.B.Lond., fourth son of the late Edward Augustine Batt, Surgeon, of Witney, Oxon, to Isabel, eldest daughter of Bernard Wake, Esq., Abbeyfield, Sheffield.

DEATHS.

BAKER.—On September 9th, at his residence, No. 6, Gambier Terrace, Hope Street, Liverpool, John Copleston Baker, M.D., aged 43.

CAMPBELL, William, M.D., of Westbourne Place, Eaton Square, drowned at Redcar, on September 9th.

DAVIES.—On the 5th instant, in London, John Davies, M.D., late Surgeon Ebbw Vale Ironworks, Monmouthshire, aged 60.

O'CONNOR, William, M.D., Senior Physician to the Royal Free Hospital, at Upper Montagu Street, aged 68, on September 3rd.

THOMSON.—At 9, Burnbank Gardens, Glasgow, on the 7th instant, Noel George William, infant son of A. Tinling-Thomson, M.D.

WILLIAMSON, John E., M.D., formerly of Nantwich, at Grahamstown, Cape of Good Hope, aged 45, on August 5th.

MEDICAL MAGISTRATE.—Dr. Myrtle of Harrogate has been made a Justice of the Peace for the West Riding of the county of York.

PUBLIC HEALTH.—During last week, being the thirty-sixth week of this year, 4,140 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 21 in Edinburgh, 17 in Glasgow, and 35 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bristol, 20; London, 20; Birmingham, 24; Plymouth, 24; Leeds, 27; Portsmouth, 28; Sheffield, 29; Bradford, 29; Manchester, 30; Hull, 30; Newcastle-upon-Tyne, 30; Oldham, 31; Norwich, 31; Brighton, 32; Nottingham, 32; Sunderland, 36; Wolverhampton, 38; and the highest rate, 39, in Liverpool, Leicester, and Salford. The annual death-rate from the seven principal zymotic diseases averaged 8.3 per 1,000 in the twenty towns, and ranged from 4.8 and 6.4 in London and Bristol, to 21.7 and 22.7 in Leicester and Salford. Scarlet fever showed the largest proportional fatality in Norwich, Salford, and Sunderland; and fever (principally enteric) in Plymouth, Portsmouth, and Sheffield. In London, 1,391 deaths were registered, which were 4 below the average, and gave an annual death-rate of 19.8 per 1,000. The 1,391 deaths included 5 from small-pox, 7 from measles, 55 from scarlet fever, 8 from diphtheria, 19 from whooping-cough, 18 from different forms of fever, and 223 from diarrhœa—being altogether 335 zymotic deaths, which were 17 below the average, and were equal to an annual rate of 4.8 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 124 and 152 in the two preceding weeks, declined again to 124 last week, and were 18 below the average; 68 were attributed to bronchitis, and 38 to pneumonia. Different forms of violence caused 49 deaths; 37 were the result of negligence or accident, including 13 from fractures and contusions, 2 from burns and scalds, 13 from drowning, 1 of a labourer in East London from plumbism, and 5 of infants under one year of age from suffocation. —At Greenwich, the mean temperature of the air was 62·8°, and 4.0° above the average. The direction of the wind was variable, and the horizontal movement of the air averaged 8.1 miles per hour, which was 3.2 below the average. Rain fell on four days of the week, to the aggregate amount of 1.51 inches. The duration of registered bright sunshine in the week was equal to 29 per cent. of its possible duration.

BEQUESTS, &c.—Among various bequests for charitable purposes left by Messrs. Joseph and John Morrison, are—for the Glasgow Royal Infirmary, £500; Glasgow Asylum for the Blind, £300; Glasgow Eye Infirmary, £300; Glasgow Institution for Deaf and Dumb, £300; while by a codicil a third of the residue of the estate is left to Glasgow University. The West of England Sanatorium has become entitled to £1000 under the will of Miss Fanny Brookman of Winscombe, and £2000 further on the deaths of two persons therein named. The rector and churchwardens of the parish of St. Edmund the King and Martyr, trustees of the Long Charity, have given £1000 to the London Hospital, £500 to the Metropolitan Free Hospital, and £250 each to the Charing Cross Hospital, the City of London Hospital for Diseases of the Chest, King's College Hospital, and the Westminster Hospital. The Dundee Royal Infirmary has become entitled to £100 under the will of Mr. Thomas Couper. The National Hospital for Consumption at Ventnor has received £10 under the will of Mrs. Margaret Caulfeild Fisher. Lady H. M. Scott Bentinck has given £50 to the Hospital for Women. Mr. J. H. Good has given £50 to the building fund of the Home for Incurable Children.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, &c., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT. We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

TREATMENT OF VOMITING IN INFANTS.

SIR,—If Dr. Collie had mixed his fasting patient's bile a few drops of chloroform, and then allowed her to drink it, he might have saved it. I have employed this method with success, but cannot find any reference to its use.—Yours faithfully, M.B.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

VACCINATING ECZEMATOUS CHILDREN.

SIR,—Your note on Dr. Drury's communication in the last issue of the JOURNAL is apt to make general practitioners too timid. A child with eczema is rough [illegible] vaccination. It is, or ought to be, known to all practitioners that vaccination is one of the infantile remedies. I do not remember having seen this mentioned before; and if Dr. Drury was the first to point it out, he deserves credit for so doing. But most medical men of [illegible] have found, for themselves the value of vaccination in eczema. I remember [illegible] thirteen years ago, a near relation of mine had a boy with eczema [illegible] defied ordinary means. Soon after the usual time for being vaccinated was [illegible] I found the brother that vaccination might cure it. I had, no doubt, observed [illegible] results from vaccination before; but the lasting impression was made then, and I decided me to practise and recommend vaccination in eczema—the result, which I observed, being cure.—I am, yours faithfully, J. CARRICK MURRAY, M.D.

44, Newgate Street, Newcastle-on-Tyne, September 4th, 1880.

SIR,—In your impression of September 4th, p. 411, is an interesting paper by Dr. Drury upon the curative effects of vaccination in cases of eczema. In the *Medical Digest* is a reference to a paper by Dr. Grant upon the value of vaccination in cutaneous affections, published in the *Medical Times and Gazette*, March 1863, page 293, which will repay perusal by those interested in the subject.—Yours truly, RICHARD NEALE, M.D. Lond.

109, Boundary Road, South Hampstead, N.W., September 8th, 1880.

SIR,—I have been much interested in reading Dr. Drury's cases of infantile eczema in the JOURNAL of September 4th, in which he describes the decline and speedy disappearance of the eruption after vaccination. If the vaccine virus be the factor in these cases in eliminating the *materies morbi*, it becomes an important question whether the frequent practice of granting certificates of unfitness in children suffering from this and other cutaneous affections, advising the postponement of the operation for three or six months, be justifiable. The question, of course, can only be solved by further experience; and, with this object in view, I beg to instance an analogous case to Dr. Drury's, which recently occurred in my own practice. A strumous child (aged 2 years), whose vaccination had been repeatedly postponed in consequence of eczematous eruptions, came under my observation with a most severe attack of two months' duration. He was placed under the usual treatment, which failed to produce any mitigation of the symptoms. Being curious to try the effect of vaccination upon the disease, I selected with some difficulty an available spot on the arm, and introduced two points of calf-lymph (making three vesicles). The typical development of these was attended by a palpable decline of the eruption; and, in fourteen days, the disease had entirely disappeared.—I remain, sir, your obedient servant, THOMAS WILSON, F.R.C.P.

Yoxall, Burton-on Trent.

SIR,—About ten years ago, I repeatedly postponed vaccinating a poor child on account of extensive eczema. At last, thinking it could do no harm, the child being in a very pitiable condition, I determined to vaccinate. The operation was successful; and, to my surprise and gratification, the eczema disappeared. I shall certainly repeat the experiment when opportunity offers. I am, sir, yours truly, R. P. TYLER, M.D.

Wedmore, September 10th, 1880.

THE ENGLISH UNIVERSITIES AND THE COLLEGE OF PHYSICIANS.

SIR,—Professor Humphry, in his presidential address to the British Medical Association, after referring to the charter granted to the Royal College of Physicians by Henry VIII., continues, "The graduates of Oxford and Cambridge were exempted, forasmuch as, by virtue of their degrees, they were independent of the College, except within its precincts." Was this privilege repealed by the Act of 1858? If so, would it affect a graduate of Cambridge *in statu pupillari* prior to that Act? I shall be glad, for the sake of information, to know how I stand, as I was recently seriously informed "that, though a graduate of Cambridge, I was not a physician", though practising "beyond the precincts, which used to be so many miles from Charing Cross".—I am, etc., GRADUATE.

ENQUIRER. 1. The number of members of the British Medical Association at the time of the annual meeting in Cambridge was 6,052. The *Medical Directory* for 1880 gives the following as the number of qualified medical practitioners in the United Kingdom: England and Wales (including 3,947 in London and suburbs), 15,211; Scotland, 1,987; Ireland, 2,323. In addition, there were at the end of last year 2,156 practitioners resident abroad with British qualifications, and 2,379 practitioners in the Army, Indian, and Naval Medical Services and in the Mercantile Marine. The total number of practitioners entered in the *Medical Directory* for 1880 is 24,056. 2. The weekly issue of the BRITISH MEDICAL JOURNAL to members, foreign subscribers, clubs, reading rooms, etc., is now 9,750.

"THE ATTACK ON LORD LYTTON."

SIR,—Under the above heading, an extract from the *Times of India* occurred in the *Daily Telegraph* of the 25th ultimo. In it, a Dr. Payne, superintendent of the asylum in which De Sa, the man accused of firing at Lord Lytton's carriage in India is confined, is reported to have said "that De Sa had, since his admission, been in a state of imbecility; but never appeared to be altogether unfit to take his trial". Referring to the *Official Nomenclature of Diseases*, published under the auspices of the Royal College of Physicians, London, with the view of ensuring uniformity in the description of disease, I find the definition of "an imbecile" to be "a congenital idiot"; and, with this description, Tuke and Bucknill's standard work on *Psychology* harmonises. Such being the case, it seems difficult to reconcile the first part of Dr. Payne's statement with the latter portion of it. How could "a congenital idiot" be at any time fit to take his trial for anything he might do? There is something which strikes one as still more extraordinary in the circumstance recorded that De Sa had not only had the wits to purchase a revolver for a definite purpose, but was able intelligently to tell to the magistrate before whom he was brought what that purpose was. However came a "born idiot" with money at all? What were his parents about? Surely they must be responsible for the doings of their son, or else there is something anomalous in Dr. Payne's statement.—I have the honour to be, sir, your obedient servant, F. H. SPENCER, M.D.

Bath, September 10th, 1880.

CORRESPONDENT (Weston-super-Mare) should write to Dr. Langdon Down, Normansfield, Hampton Wick.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

CHIAN TURPENTINE IN CANCER.

SIR,—In your issue of August 21st, Mr. John Clay, in his reply to Mr. Brown, declares he is able to confirm his original statement that "true cancer of the uterus" does disappear under the influence of Chian turpentine. This is a bold assertion, calling for further elucidation, viz., a clear and distinct definition of what Mr. Clay means, and what he supposes the profession to understand, as "true cancer of the uterus". I will relate a case which had been diagnosed to [illegible] the uterus, which [illegible] treatment—including the Chian turpentine, [illegible] tried—and rapidly to death.

In February of this year, a married lady, aged 36, consulted me. For more than a year she had been subjected to frequently repeated attacks of uterine hæmorrhage, each attack lasting from ten to fifteen days, sometimes longer. Various opinions had been expressed as to the cause. She was very anæmic and reduced in strength. On examination, the uterus was found to be high up behind the pubes. The os could be reached by the index finger, but no information could be gathered as to the precise condition of the organ, beyond the fact that the os was more open than it ought to be in health, while the cervix was shortened and softened, as in pregnancy. The sound passed six inches. On introducing a speculum, the os and cervix could be seen: their appearance presented nothing remarkable, beyond the fact that the cervix was unusually pale and bleached. The uterus being fully dilated with tangle-tents, and the patient placed under chloroform while in the lithotomy position, the uterus was drawn down and fixed in the vagina, while the left index finger was introduced into the cavity. As far as the finger could reach, the uterine tissues appeared healthy. On introducing the sound by the side of the finger, it was found that the fundus was nearly three inches above the tip of the finger, but nothing like a polypus or fibroid could be found. A curette was now passed up to the fundus, and brought down the side of the uterine wall; and, when withdrawn, its mouth was filled with small growths, from the size of a pea and downwards. They had the appearance of epithelioma. These bodies pretty clearly indicated the true nature of the case; viz., epithelioma of the fundus. The instrument was again introduced, and the cavity was fairly scraped, and a considerable quantity of similar growths was removed. The hæmorrhage, which had been pretty free, now ceased. The uterus was swabbed out with a dilute tincture, and the patient put to bed. As it was of the greatest importance that there should be no mistake in the diagnosis, I sent a portion of the growths to Mr. Doran at the College of Surgeons, and a second portion to Dr. Gaird in at Guy's Hospital, with a request that they would examine them microscopically and report as to their nature. They knew nothing of the history of the case, neither was it known to either that they were both examining the same specimen. Yet they both reported the case to be epithelioma of the uterus. Dr. Barnes afterwards saw the case, and he had no hesitation in the correctness of the diagnosis. Shortly afterwards, Mr. Clay's paper appeared; and as this case was doubtless one of malignant disease of the uterus, it was thought to be a proper case for the remedy he suggested. In order that there should be no mistake about getting the correct article, Savory and Moore were applied to to compound the pills as suggested by Mr. Clay. For the first week, two were taken three times daily; afterwards, every four hours for three months, without any appreciable change in the symptoms; but there was neither "sickness" nor the "horrible loathing of the drug", as stated by Mr. Brown.

I saw this lady on July 14th. Her bleedings were more frequently repeated and more severe than before taking the Chian turpentine. The intra-uterine injections of perchloride of iron had to be frequently resorted to; they alone appeared to have any influence in controlling the hæmorrhages, and their power was very limited and transitory.

I have used the Chian turpentine in several other cases where as much care has been taken in the diagnosis, as well as in obtaining the pure drug; but as yet I have no good result, save in one case of epithelioma of the body of the uterus, where the glands in the right loin were swollen and painful. The pain for a time was relieved, but returned again.

It is quite possible that I have, in my ignorance of what is meant by "true cancer of the uterus", been treating sarcoma, cirrhosis, epithelioma, etc., with Chian turpentine, and have lamentably failed, believing I was dealing with what Mr. Clay, in his original paper, called cancer of the uterus. These may not be the diseases he means by his term "true cancer of the uterus"—hence my failure. Thus it becomes incumbent on Mr. Clay clearly to define what he means by "true cancer of the uterus". I should define cancer of the uterus to mean a disease having a tendency to destroy the organ, to poison the organism, to invade surrounding tissues, and ultimately to cause the death of the patient. I believe sarcoma, cirrhosis, and epithelioma, have one common object, viz., the destruction of the patient; and as far as my observation has enabled me to form an opinion, they accomplish their end in the same manner. This, after all, may make "true cancer of the uterus".—I am, sir, your faithful servant,

THOMAS CHAMBERS, Senior Physician to the Chelsea Hospital for Women.

Chester Square, S.W., August 23rd, 1880.

S. C.—Answer postponed.

THE CONVICT MEDICAL SERVICE.

SIR,—Will you allow me to give a warning note to all who may be invited to accept employment in the medical department of the Convict Service. Much as the Army and Navy Boards are to be condemned for their unwarrantable depreciation of, and enmity to, medical officers, the official mind that directs the affairs of prisons is invested with a thicker coating of prejudice than that which forms such a marked development in the head of the other branches of the public service. Without the doctor, the occupation of a prison governor would be at an end. Questions of every conceivable kind are submitted to the doctor's judgment from morning to night. The authorities know his value; but prejudice, or whatever the contemptible spirit is, forbids the recognition of his worth. They place assistant surgeons very nearly on an equality as to pay with a chief warder; and when promotion, which may be very slow, comes, the maximum pay never exceeds, and is often below, that of a deputy governor, who may have been in the service only three months, and who easily acquired a knowledge of his duties in thirty minutes. As to treatment, *ad nauseam dixerunt*: an assistant-surgeon, who had been a distinguished scholar in his school, recently declined in health. Knowing that, in two or three instances, deputy governors had obtained leave of absence for long periods, on sick certificate, he applied for a similar privilege, and offered to provide a substitute. The reply was on a level with the contumelious disposition of the authori-

ties. He immediately received the notice ordinarily given to subordinate officers and domestics, that he must go in a month, and that he would be recommended for a gratuity, probably a few pounds. Let candidates, therefore, beware. They cannot join a more woful branch of the public service.—Yours obediently,

August 23rd, 1880. R. W.

SOME of our members, especially those present at Cambridge, may like to know that the choir of King's College is composed of boys of gentlemen elected by competition, who live in the Choir House, a newly erected building, the Rev. J. Reynell being the head-master. The boys receive a free classical and school education and board, the only expense being books and laundry. We mention it as very likely members of the Association are unaware of these advantages. There is, as is well known, a similar institution at Magdalen College. Three medical men have sons at King's College.

MEDICAL ETIQUETTE ON BOARD-SHIP.

SIR,—I hardly know whether it is worth my while to reply to Dr. Beard's letter in your issue of the 28th ultimo, seeing that it is in no sense an answer to mine. With amusing audacity, he seizes the opportunity, and gives us his treatment of sea-sickness, skips lightly over his breaches of etiquette, and dexterously intimates that his services were in almost universal request on board the *Germanic*, a fact of which no one on the ship appears to be aware, even now.

My question remains unanswered. "Did Dr. Beard act on the *Germanic* with that regard to professional decorum which is binding on every qualified practitioner?" I say nothing about his book, or about his treatment of sea-sickness, except that I dislike the one (as addressed under a catchpenny sensational title to the general public), and disapprove of the other (as a factor of bromic acne, and productive, in one case at least within my knowledge, of dangerous symptoms). Neither, as regards myself, is there any "national" feeling at stake, as Dr. Beard, with the skill of a special pleader, would lead you to suppose, seeing that my own relatives are nearly all Americans, and that I have the honour to hold an American as well as an English qualification. But, since he evades the real point at issue between us, I ask for a few words from yourself, *ex cathedrâ*, that I and others in my position may learn whether or no we are to be at the mercy of any free lance who by accident or design may be thrown within our sphere of action, whether we are to stand humbly by and witness experiments (unsanctioned by ourselves) in "dosage and combination", or whether we are to resent such proceedings as discourteous and unprofessional to the last degree.—Your obedient servant,

J. FOURNESS-BRICE, M.D.

Pierce Grove, Oxton, Cheshire, September 7th, 1880.

SIR,—Dr. Beard's reply to the charge of unprofessional conduct brought against him by Dr. Fourness-Brice is one of the most refreshing examples of "bounce" I ever came across. With the guilelessness of the "heathen Chinee", he utilises your offer of facility of explanation to puff his own ideas, and almost completely ignores the question at issue, viz., breach of etiquette. I am unacquainted with Dr. Fourness-Brice, but I imagine that, in his capacity of ship-surgeon, he has had as much experience of sea-sickness as Dr. Beard, if not more; and evidently, from his letter, he would not have objected to co-operate with Dr. Beard had he been asked to do so. It is to be hoped the British medical profession at large will give Dr. Beard a cool reception until he has made Dr. Fourness-Brice such a full apology as his unwarrantable interference requires.—Yours, etc.,

AN ENGLISH MEDICAL PRACTITIONER.

SIR,—I read Dr. Fourness-Brice's letter in the MEDICAL JOURNAL of the 7th August with much interest and sympathy for the writer. I never heard of a parallel case. I consider, and I am sure the whole medical profession will agree with me that Dr. Beard not only showed that he possessed a want of medical etiquette, but a want of gentlemanly feeling towards a professional brother; and that he grossly insulted Dr. Fourness-Brice. I think that Dr. Fourness-Brice showed great forbearance in the case, and I admire the manner in which he behaved towards Dr. Beard, although if I had been medical officer in charge I could not have borne Dr. Beard's insult, of sending a prescription to my surgery to be made up; and that event would have brought the matter to a climax.

Dr. Beard, as passenger on the ship, had no more right to administer a dose of medicine or give advice without first consulting the medical officer in charge, than any one of us would have to go to one of the London hospitals and administer some favourite medicine of our own, without first asking the physician or surgeon in charge. I always thought the contents of his pamphlet very insulting to sea-surgeons, particularly as I tried his remedies and found very little use in them, and had to have recourse to my own.—I am, sir, your obedient servant,

THOS. DUTTON, L.R.C.P.(Ed.), etc., Late Surgeon S.S. *Elysia*.

130, High Street, Aldgate.

J. J. P. asks us to state the respective positions, in regard to superiority of the medical degrees conferred by them, of certain universities in the United Kingdom, which he names. We must decline the attempt to perform a task which would be both difficult and invidious. The degrees of all the universities in the kingdom are highly reputable.

MOUNTAIN-AIR IN PHTHISIS.

SIR,—In answer to your correspondent Mr. Goodchild, in his remarks on Davos Platz in the BRITISH MEDICAL JOURNAL of July 17th, I should wish to point out that Davos can claim a slight superiority to Cannes in regard to the amount of watery vapour suspended in the atmosphere. The mean humidity of Davos varies from 62 to 74, that percentage, with an average temperature of 32°, gives 1.42 grains of water in a cubic foot of air. Cannes, according to De Valcourt, averages 65.2 per cent; this, with the average temperature of 50°, shows us that 2.67 grains of water are held in suspension in each cubic foot of air, making a difference of 1.25 grains in favour of Davos, without taking barometric pressure into consideration. The quantity of watery vapour in the air, affecting as it does the rate of evaporation from the lungs, is a matter worthy of consideration.

The ranges of temperature at Davos are fairly well borne, even out of doors; but the extremely cold temperatures generally occur at night, with still air, when patients are in bed; consequently, the cold is not felt, even with a fair amount of ventilation, in the hotels, as the number of porcelain stoves is sufficient to warm an Arctic temperature if they were all alight.

Wind, humidity, and temperature are so closely associated in producing the impressions of cold or warmth on the external senses, that temperature, if considered alone, becomes extremely misleading in its indications. This has been my experience of the cold of Canada and Nova Scotia, which resembles in many features the climate of Davos. A temperature in England of about 10° Fahr., with wind and moisture, is more pinching to the frame, painful to the air passages and parts exposed, than the cold air of an Alpine height in winter. It is impossible to realise the effects on the subjective sensations of the low temperatures of cold climates, from an English standard of cold. The late Dr. Moss remarks, in his work *Shores of the Polar Sea*, p. 47: "An icy tub on an English winter morning feels colder to the skin than the calm Arctic air; cold alone never interrupted daily exercise; it was [illegible] after two or three hours over our snow-clad hills in a temperature of 100° below freezing without getting a single frostbite or perceptibly lowering the temperature of the body."

I cannot agree with your correspondent that any disorder of the digestive organs should be a barrier to patients being sent to Davos. In the first place, this would effectually exclude a very large number of phthisical cases; and secondly, the push given to nutrition is one of the principal climatic effects of these localities. During a short residence there last winter, I observed that the appetites of patients were extremely good, and food was also plentiful.

In spite of all theory on the subject, the fame of a health-resort must rest solely on the results obtained; these so far have been encouraging, according to all accounts, but I regret I cannot supply your correspondent with any of much value. At the end of next winter, I hope to be in a position to furnish further information of Davos Platz, as I purpose practising there during the approaching season. Then your correspondent shall certainly learn from me what he terms the "secrets of Davos". I am, sir, yours obediently,

ALFRED WISE, M.D.

82, Sutherland Gardens.

MR. EWART (St. Mary's Hospital, Manchester).—We have made inquiries into the matter which forms the subject of our correspondent's complaint. We believe that he will be easily able to assure himself that the whole matter arose from a purely accidental slip of memory on the part of Dr. Ashby, who has communicated the circumstances in reply to our inquiries, and who had already expressed his regret at this purely accidental occurrence to Dr. Lloyd Roberts; and, under such circumstances, the matter does not seem to us to call for any further correspondence. Our correspondent was naturally annoyed, and others to whom he may have communicated his views would sympathise; but there is only a slip of memory in question; and the mutual courtesy and confidence of the professional men involved will, we feel assured, easily set right any such misunderstanding without raising it into a subject of controversy. Any public discussion could only raise unfriendly feeling, which would be much to be deprecated.

G. T. SCHOLEFIELD (Mossley) should read Dr. Seaton's *Handbook of Vaccination*, published by Macmillan and Co., where he will find an answer in full to the various questions which he puts. A mere expression of opinion in reply would be nothing: it is necessary to give the reasons, and this would take up too much space.

LODGE OF ODD FELLOWS.

SIR,—In reply to Mr. Middleton, I believe the pay in such cases as he mentions to be one shilling per family per month; at any rate, two or three years ago, I held several clubs on those terms. This incl the children, as well as the men and their wives, until such an age as they we considered able to earn their own living. —Yours truly,

A SOMERSET SURGEON.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. J. Ingleby Mackenzie, Rugby; Mr. Arnold Thompson, Ampthill; Dr. Ward Cousins, Southsea; Dr. Borchardt, Manchester; Dr. J. Rogers, London; Mr. H. J. K. Vines, Littlehampton; Dr. W. A. Brailey, London; Alpha; Dr. Neale, London; Dr. B. Ball, Paris; Mr. J. C. Home, Edinburgh; Dr. Tyley, Wedmore; Mr. T. Wilson, Yoxall; L.R.C.P.Ed. & L.S.A.Lond.; M.B.; Mr. R. H. Firth, Stratford-on-Avon; Mr. E. M. Sheldon, Liverpool; Mr. Underwood, London; Calabar Bean; B. A. M.; Mr. G. Eastes, London; Mr. McNicoll, Ormskirk; Mr. W. H. Tayler, Auchley; Our Edinburgh Correspondent; Dr. H. Bennet, Weybridge; Mr. J. Philpot, London; Dr. G. McReddie, Bombay; Mr. W. Dingley, London; Dr. Clay, Manchester; Mr. G. Budd, Clifton; Our Dublin Correspondent; Dr. Fairlie Clarke, Southborough; Our Glasgow Correspondent; Dr. Ll. Thomas, London; Mr. J. Lightburn, Rosemount, Newry; Mr. Wright Sheffield; Mr. Norris, Weston-super-Mare; Mr. W. K. Treves, Margate; etc.

BOOKS, ETC., RECEIVED.

Fracture of the Patella. By F. H. Hamilton, A.M., M.D. New York: C. L. Bermingham and Co.

Animal Magnetism. By Rudolf Heidenhain, M.D. Translated from the German by J. C. Wooldridge, B.S.Lond. London: C. Kegan Paul and Co.

Malaria: its Causes and Effects. By E. G. Russell. Calcutta: Thacker and Co. 1880.

Lectures on Digestion. By Dr. C. A. Ewald. London: Williams and Norgate. 1880.

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REMARKS
ON THE
DIFFERENT METHODS OF COLLECTING, PRESERVING, AND EMPLOYING ANIMAL VACCINE.*

By E. WARLOMONT, M.D.,
Director of the Vaccine Institute at Brussels, etc.

In a conference on animal vaccination, held in London on December 4th, 1879, and to which the organ of this Association accorded a wide and friendly publicity, I took particular pains to define the part which, in my opinion, should be attributed to animal vaccination in the prophylaxis of varioloid affections.

To recapitulate, I then said: "Animal vaccination should not pretend to be a substitute for the traditional practice. Arm-to-arm vaccination is, and will yet long remain, strong from its time-honoured rights, the great assistance it gives to the prophylaxis of small-pox, and nothing should be neglected to encourage and regulate it. Animal vaccination should, at the present time, be but its faithful auxiliary, but so useful an auxiliary that it would be as unjustifiable to wish to dispense with it as to wish to suddenly relinquish the clinical practice."

In that communication, I insisted on this point, that the active principle of vaccine, whether animal or humanised, resides in special corpuscles, floating in an inert serosity, and not in the dissolved substances which form the basis of the plasma of the vaccinal serosity, as M. Chauveau has abundantly demonstrated.† These corpuscles, as I at that time pointed out, and as recent researches have confirmed, are nothing but microbes. The special virus of vaccine is, then, inherent in what were termed by M. Chauveau, a dozen years ago, "elementary granules" (*loc. cit.*), which, more recently, MM. Carsten and Overt‡ have named *globular molecules*, and which we shall henceforward designate by the name of *vaccinal microbes*.

The microbes of vaccine float in serum, either isolated or in groups. They seem to be subject to two successive transformations, starting from the coccus to became bacteria—transformations which at the present time are being studied by two Belgian *savans*, MM. Verriest and Bruylauts, who have already published some interesting researches on the microbe of the exudative pleuropneumonia of the bovine species.§ What is known of the microbe of vaccine at the present time is that, during the active period of the vaccine, it is a sporuliform body, uniformly about one-thousandth of a *millimètre* in diameter. It is smaller, apparently, in vaccine matter obtained from successive culture in the infant of vaccine originally obtained from spontaneous cow-pox, than in calf-lymph; at least, this peculiarity is pointed out by M. Mégnin,‖ which I am somewhat inclined to admit. And what, indeed, can be more natural than that an organised body should rather prosper on its native soil than on an adopted one? Another specialty is shown by the examination of the illustrations which accompany M. Mégnin's paper, which is, that the microbes, floating, as a rule, singly in the infantile vaccine lymph, are, on the contrary, rather gathered together in masses in calf-lymph. The illustrations are as follow. Fig. I. Calf-lymph (second transmission of horse-pox); Fig. II. Lymph from an infant (collected in a tube).

It is a question whether this varying division of the active corpuscles already exists in the interior of the vaccine vesicle; this scarcely seems to me probable. I am rather inclined to believe that the grouping only takes place after the vaccine has been extracted from the pustule, and that, if this grouping vary in vaccinal lymph of different origin, it must above all be attributed to the varying plasticity of these liquids. I am inclined to think that the microbes float in an isolated fashion in the vaccine lymph contained in the pustule, for the following reasons. It will doubtless be willingly admitted that, given equal proportions, the lancet of the vaccinator will more readily meet with one or several microbes, if these float in an isolated manner in the liquid, than if they be grouped in masses in some corner. On this rencounter depends the success of the impending vaccination. It is, therefore, incontestable, that vaccinators succeed as well with animal vaccine as with humanised lymph, when both are taken fresh from the pustule; whilst there is a manifest inferiority in those vaccinations which are performed with preserved lymph, in which there is a chance of the microbe escaping the lancet which is seeking it. This also occurs a very few moments after the lymph has quitted its areolæ, which should exclude the idea of referring the phenomenon to a cadaveric change.

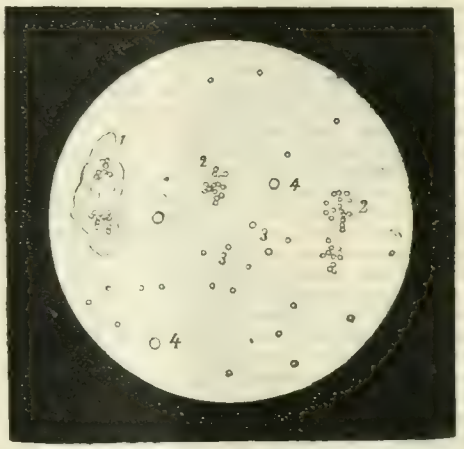


Fig. I.—1. Microbes grouped on an epithelial cell. 2. Microbes grouped. 3. Isolated microbes. 4. Fat-globules. 800 diameters.

The methods in use for extracting animal vaccine from the pustule containing it, either to use it on the spot, to send it to a distance, or to preserve it, are—1. The excision of the pustule and the scraping of the under surface; 2. The excision of the pustule in its different stages of development, and its trituration with glycerine; 3. The compression of the pustule with forceps and the deposit of the liquid thus obtained either (*a*) between plates of glass, (*b*) on ivory points, or (*c*) in glass tubes.



Fig. II.—Red blood corpuscles. 2. Albuminous coagulum adhering to one of these globules, and having taken up some microbes. 3. Grouped microbes. 4. Isolated microbes. These are one-fifth smaller than those coming from the heifer.

1. *Excision of the Pustule and the Scraping of the Under Surface.* This is the primitive proceeding. The little tumour is seized in a fold of the skin, and excised with a bistoury slightly curved on the flat. The pustulo-cutaneous fragment thus removed is then taken between the very wide blades of a pair of forceps *ad hoc*, and the inner surface is scraped with a lancet, which deposits on the spot the vaccine thus collected, either under the skin of the patients waiting to be vaccinated, or between two plates of glass, to be preserved or sent away.

* Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

† "Nature du virus vaccin: nouvelles démonstration de l'inactivité du plasma de la sérosité vaccinale virulente." (Académie des Sciences, Paris; séance du 17 Fevrier, 1868.)

‡ "La vaccination animale dans les Pays-bas quelques expériences provisoires faites au paré vaccinogène de la Haye, sur les qualités particulières du virus vaccinal." (Congrès Medical d'Amsterdam, 1879.)

§ Académie royale de médecine de Belgique, séance du 31 Juillet, 1880.

‖ "Examen microscopique et comparatif du Horse-pox cultivé sur la genisse, du vaccin de gehisse et du vaccin humain frais ou conservé en plaques". (*Journal d'Hygiène*, Paris, 17 Juin, 1880.)

The following method is recommended by M. Negri. He formerly practised it, and may yet do so for aught I know He took his calf in a little cart through the streets of Naples, stopped before the houses where there was some one to vaccinate, emptied the pustule, and proceeded to the operation. I have tried the process, short of the little carriage and the lymph carried though the town, and I soon left it off. It is not agreeable, causes the animal to lose much blood, and inflicts on it a great deal of useless suffering. It may also be advantageously replaced by other methods. By compressing the pustule with a spring forceps, describing a short radius and, then incising at a depth of one or two *millimètres* the little tumour, according to its length, the whole of the lymph in it will be expressed even from the deepest part, which, whether rightly or wrongly, M. Negri considers—and, in my opinion, wrongly—as the most active. The same end is attained in this way, but in a more thorough and delicate manner.

Not satisfied with making use of the bloody pustule, excised as above described, certain practitioners, in Italy especially, enclose it between two thick glasses, in a small furrow hollowed out in the thickness of one of them; and send away, to more or less considerable distances, these fragments of flesh, without any further concern, doubtless trusting to the scent of those to whom they are forwarded for the condition in which they arrive. The following fact shows the danger of this plan. On the 22nd of April last, the municipality of San Jeurino d'Oreca had asked a vaccination committee at Rome for a supply of vaccine, which arrived on the 24th. Although the vaccinators found that the vacciniferous vesicles sent exhaled a musty (mucedo) odour, they still used them to vaccinate thirty-eight children—all under twenty months old. If they had tried to sow septicæmia, they could not have taken a better method; and, as a matter of fact, whilst they were expecting the development of vaccine vesicles, they witnessed the advent of serious disturbances; extensive phlegmons detaching the muscles and penetrating into the joints, eclamptic symptoms, etc. The use, then, of these excised pustules, if not on the spot (and even then they may be advantageously replaced by other methods) is absolutely to be avoided; and it can scarcely be understood how thoughtful men can still have recourse to the plan.

2. *Excision of the Pustule in its Different States of Development, and its Trituration with Glycerine.*—This is the method employed by certain Italian committees; the *magma* thus obtained is found in the vaccine which has been widely diffused under the name of "Milan vaccine", with the appearance of a brown marmalade, like the preparation called by confectioners "quince jelly". It is sent out in quills made from old pens—a primitive plan, but as economical as it is convenient. At the moment of using, a certain quantity of it is moistened with glycerine or water. The liquid thus obtained is turbid and lactescent. If it be sold retail, as has been the practice for some years past at the Bureau d'Hygiène at Brussels, this more or less thick solution is placed between two plates of glass, and so sent out to vaccinators.

The paste thus prepared has incontestable advantages; it certainly contains all the active principles of vaccine; and if, at the same time, it contains animal detritus, this detritus is withheld from septicæmic evolution by mixture with the glycerine. Septicæmic microbes may, indeed, be deposited therein; but they never multiply. I have used this vaccine paste, received on several occasions from the Milan Committee, or prepared by myself; and I have been able to ascertain, on the one hand, that it is efficacious; and, on the other, that it retains its activity for several weeks. I have only discovered this peculiarity, that the vesicles obtained by its use have always had a phlegmonous character. And let it not be said that we complain of the bride, but only of her attendants. This phlegmonous character shows itself in all the subjects, calves or infants, on which the Milanese vaccine has been used; so that I have not been able to introduce this method of sale into the Belgian Institut Vaccinal de l'Etat, although it is thoroughly economical. In my opinion, the lactescent liquid introduced under the skin contains in suspension a large proportion of animal particles, which, although in my estimation they are not hurtful from the septicæmic stand-point, are none the less foreign bodies performing the part of a thorn, whence the inflammation of the surrounding skin, giving a fermenting aspect to the vesicles thus obtained. It may be added that this paste (the nature of which is to a certain extent unknown) and its milky solution, are of such an appearance as to be hidden between two plates of glass, instead of being placed in indistinctly transparent tubes, as amber Rhine wine is served in green glasses to conceal its unpopular colour. This paste, I repeat, has not an agreeable appearance. This is, professionally a matter of detail; but I am of opinion that in the question of vaccination, where it concerns passing a foreign substance under the epidermis, it is of importance that matter, like Cæsar's wife, should be above suspicion. Medical men and relatives are extremely exacting on this point, and their scruples should certainly be respected; and it is on this account that I have entirely given up the Milanese plan.

3. *Compression of the Vesicle by Means of Expressing-Forceps.*—When a vaccine vesicle on an infant is opened on the eighth day of the eruption, with a light hand, by a lancet or a vaccine-needle, some globules of a perfectly transparent matter exude. The process is different in the pocks on the heifer, from which the vaccine-lymph does not issue spontaneously after it is opened superficially with punctures, like the human vesicle; it only gives issue to blood. To ensure the appearance of the vaccine, it must be squeezed out, which is done by means of the forceps shewn in Fig. 3. This instrument prevents the blood or serous matter of the adjacent parts from reaching the pustule, either at its base or sides; and it may be incised when the slide is sufficiently narrow, when only the required liquid will flow out. If care be taken to remove quickly with a pocket-handkerchief, at the moment the slide is brought together, the surface of the tumour, to remove the layers of epidermis and sometimes a little blood which are found there, the liquid expressed is perfectly clear. If it do not flow abundantly, an incision of about a *millimètre* deep, parallel to the blades of the forceps, is made.

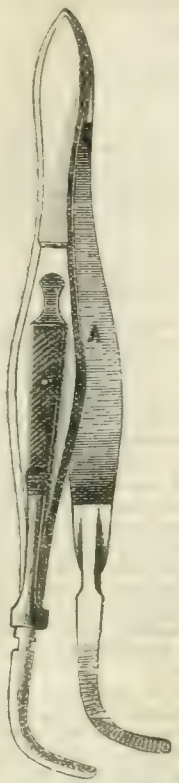


Fig. 3.—Expressing Forceps.

The different methods in use for abstracting, preserving, and sending out this vaccine, are the following.

a. Plates of Glass—This method, whether applied to human or to animal vaccine, is a relic of the past, and has a share of the defects of all the other methods put together. The vaccine thus confined in the liquid condition is, notwithstanding all efforts to the contrary, exposed to the action of the air, and consequently dies, not without having had to undergo, in the first instance, the maceration of its organisms in the serosity in which they are suspended. These organisms cannot have undergone maceration with impunity; and there is nothing surprising in the fact that most of them die before reaching maturity, or are much deteriorated when they are found still living in the dry material which represents the vaccine, lately placed in a liquid state between the plates. To soften this dry substance, a little warm water is added, which was formerly represented by the moisture of the breath, which, especially in the case of smokers, does not add to the cleanliness of the operation. Midwives are in the habit of using their saliva for the purpose. The use of these plates, still dear to old-fashioned practitioners and midwives, has nothing in its favour but its democratic appearance and the force of tradition. It should be given up, the more especially as it is the most inconvenient form for sending out.

b. Glass Tubes.—When a glass tube, open at both ends, is put to the small pool of vaccine obtained by compression, the liquid rushes into the tube. If the pool have been but a few moments exposed to contact with the air, it is no longer the same thing; it becomes coagulated very quickly after exposure, the vaccine heifer-lymph being very plastic. Neither does vaccine lymph taken into tubes escape coagulation; for, after some some hours, it is difficult to extract it; and what is so extracted is essentially unreliable in its action. These circumstances induced me to say at the commencement of my experiments, "If the use of tubes be persisted in, they will be the grave of animal vaccination, unless some means be found of preventing the coagulation of the vaccine". A means of preventing this coagulation is now found—a mechanical means, which does not deprive the vaccine of any of its activity; and our animal vaccine in tubes justly enjoys great popularity. Before being introduced into the tubes, it is defibrinated; a small quantity of glycerine is added to it, so as to preserve it from all consecutive change when it is not required to be used before five days. When it is to be used soon after collection, this addition may be dispensed with.

A noteworthy fact is the tendency of the microbes to draw towards the sides of the tube and adhere to it. If the tube be simply emptied by blowing through one end, many of these active agents remain fixed

to the glass. Before emptying the tubes, they should be rolled sharply between the forefinger and thumb, so as to make them discharge the whole of their contents, vehicle and microbes. In order to prevent the too direct action of light on the vaccine matter, we now use amber glass tubes.

c. Ivory Points.—The small ivory plates on which the animal vaccine is deposited are square at one end and pointed at the other. The pointed end is presented to the pool of vaccine squeezed out by the forceps, so as to charge it with lymph. It is afterwards quickly dried by the heat of the sun, or a clear fire at heat not exceeding 104 Fahr. When the point is heavily charged, it becomes dry at the end of fifteen or twenty minutes; the whole of the serous matter is evaporated, and nothing remains on the point but dried lymph, deprived of all humidity likely to macerate the active principles. Animal vaccine keeps for a long time in this shape. To prevent the porous nature of the ivory from absorbing a large part of the matter deposited on it, the points should be of a hard-grained ivory, and highly polished. Under these conditions, if the first layer have been widely distributed, it is absolutely useless to cover it with a second, as was formerly the practice. At the present time, the American points are highly esteemed. The points are sufficiently sharp to introduce the virus under the skin. These points are beautifully made, and I therefore give them the preference over all others;* but for the erosion of the skin, I always prefer metallic instruments.

Method of Employing Animal Vaccine.—As I have already said, vaccination with living vaccine, whether human or animal, succeeds at once, even when performed by simple puncture, if the operator know how to obtain the conditions necessary to ensure success; *i. e.*, vaccine taken at the required moment from good vesicles; the introduction of this vaccine under the skin without any flow of blood, etc. This is because evidently at this moment the microbes are in the enjoyment of their full vitality. They are uniformly diffused, and in isolation in their vehicle, without being able to escape the lancet of the vaccinator who goes direct to the pustule.

It is not so with preserved lymph. Many of the microbes have perished; those which have resisted have collected into groups, as if to say, "Union is strength". In order to have some chance of a good result, it becomes necessary to expend a much larger quantity of vaccine matter, and to introduce it by large and exposed openings; hence the scarification method, which I have recommended for the last fifteen years. Whether vaccine in tubes or vaccine on points be used, the object is that the vaccine should reach its destination with certainty and in sufficient quantity on contact with the dermis; and this end is obtained by the plan here recommended. After having drawn the skin tight, three scarifications about four *millimètres* in length each, not going deeper than the skin, and about one *millimètre* apart from each other are made; and it is on this group of scarifications, three of them being made at two *centimètres* apart, that the vaccine is diffused. If it be in tubes, it is enough to deposit it. If it be on points, they are first quickly plunged into warm water; and, after being taken out and the dried vaccine allowed time to soften, they are placed on the wound, well dried, and laid flat, and for a long time, until the ivory is completely freed from the vaccine with which it was covered. If a little blood be mixed with it, the whole is brought together on small groups of incisions and allowed to dry. Doubtless, nothing is more simple than to make these little scarifications; and yet, whether it be that their hand trembles, their sight deceives them, or routine misleads them, many old practitioners make them very badly, and the midwives still worse. The incisions they make are too long, or too deep, or too far apart; the blood flows; and the vaccination sometimes is accompanied by a wound which it is very easy to avoid, and sometimes is a total failure: the virus having been carried away by the hæmorrhage. It is for the purpose of regulating this little operation that I have invented the *vaccinator trephine.* (Fig. 4.) It comprises a circular blade two *centimètres* in diameter, enclosed in a cylindrical frame, to which a rotatory movement is imparted by the working of an internal spring. Applied closely to the tightly stretched skin, it suffices to apply the end of the index finger quickly to the button, to put in action the blade, which traces with lightning rapidity an annular furrow in proportion to the projection of the blade—a projection which is increased or lessened by turning the surrounding ferule round, giving it a backward turn. For infants with delicate skins, the blade should scarcely go beyond the level of the ferule. The incision made, the vaccine is applied in the usual way. It has been objected, that this instrument frightens the children, is difficult to apply, etc. Those who express these opinions have, however, never seen it in operation. It is no more difficult to make a correct incision with the trephine than to put a dot to an *i*.

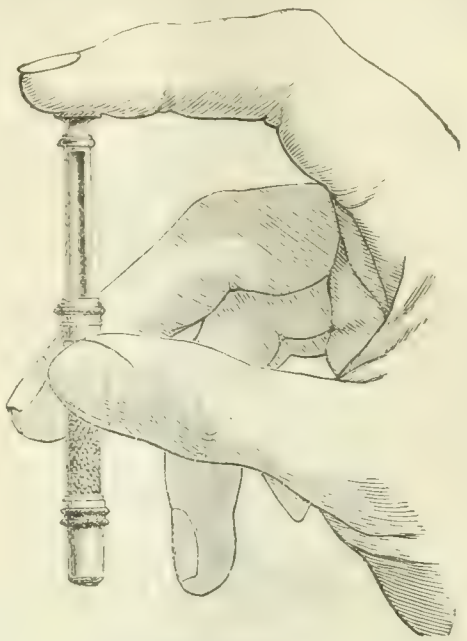


Fig. 4.—Vaccinator Trephine.

The conclusions at which I have arrived, then, are these. 1. The active principle of the vaccine is present in special corpuscles floating in an isolated manner in an inert serous matter. Everything tends to establish the conclusion that these corpuscles are animated germs. 2. These corpuscles float in an isolated manner in the vaccine contained in the pustule; they are collected in groups in animal vaccine which has been extracted at a more or less distant period. 3. The excision of the pustule, and the scraping of its under surface to obtain the vaccine matter; the ablation of the pock, and its trituration with glycerine, as in the Milanese method; the preservation of vaccine between plates of glass,—are imperfect methods. 4. The extraction of the vaccine from the animal pock by means of compressing forceps, the introduction of this matter defibrinated in capillary tubes, or its deposit on ivory tubes, are excellent, elegant, and practical methods. 5. Fresh animal vaccine may be introduced by punctures; the preserved should be introduced by sufficiently large scarifications of the skin.

* These points are manufactured at Boston, and can be had by writing to Dr. Martin, 27, Dudley Street, Boston, U.S.A.

ON AN APPARATUS FOR TREATMENT OF FRACTURES OF THE PATELLA WITH SEPARATION.

By W. I. WHEELER,

Master of Surgery of the Dublin University; Fellow of the Royal College of Surgeons, and Member of Council; Surgeon to the City of Dublin Hospital.

SOME years ago I brought under the notice of the Surgical Society in Ireland a splint for the treatment of fractures of the patella with separation, being a subject which had much occupied my attention, and from the knowledge that there was considerable difference of surgical opinion as to the most efficient way of adjusting the fragments—many, like myself, up to this time considering no method satisfactory—exemplified by the numerous plans advocated, from position, Malgaigne's hooks, and the recent appliances well illustrated in Professor Agnew's *Surgery*, to opening the joint and stitching the fragments together. Last year I was able to record the results of many cases treated by this apparatus, and to exhibit a specimen of osseous union.

In this discourse I allude to that most common form of fractured patella, in which separation between a superior and inferior fragment occurs. As can be observed, the apparatus which I use is a hollow wooden splint (Fig. 1) extending from above the middle of the thigh to the the sole of the foot, at which point a foot-board (E) is attached by means of a hinge. This splint having two transverse bars, is fitted into a long box splint, in the sides of which it travels horizontally. That portion of the splint on which the limb rests can be elevated or de-

pressed as required, by means of perpendicular slots, cut through the sides of the box splint—thus the splint can be adjusted to suit a long or short leg; the limb can be elevated or lowered at pleasure, and the foot placed at any angle.

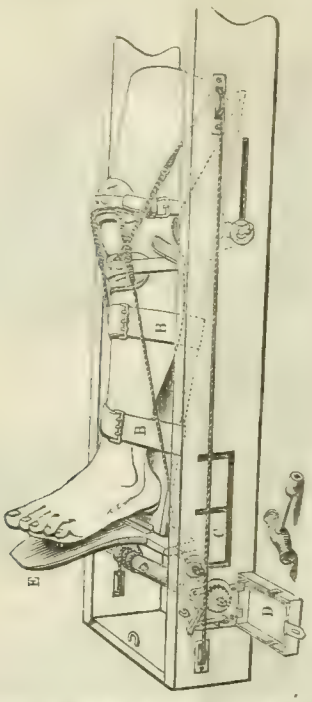


Fig. 1.—A A, Adjusting Pads; B B, Straps securing limb; C, Slots; D, Brass Cover to Lock; E, Foot-Board; *e e*, Buttons on adjusting pads for strap.

The hollow splint is fixed in position by means of thumb screws, which fit into the transverse bars before mentioned. Two semi-lunar pieces of metal, softly padded, are fixed, one above, the other below the fractured patella, by means of leather straps which pass round the limb; the leg is secured to the splint by two broad web straps, one round the calf, the other at the ankle (B B); the foot can be bandaged to the foot-board; a roller with rack adjustment is fitted in the box splint, below the foot-board. From this roller start four cords, fitted through brass sheaves, which are attached, two to the upper, two to the lower metal pads, by means of chains and light hooks. The roller is turned with a key, and acting on the cords, causes the metal pads simultaneously to approach each other, thereby bringing the fragments into apposition. The rack is covered by a brass box (D) which can be locked, so that the adjustment of the splint cannot be interfered with by the patient.

The person from whom this specimen was taken died two years and five months after his discharge from the City of Dublin Hospital, where he was admitted under my care in September 1875, suffering from fracture of his right patella in a transverse direction, the distance between the fragments being 2⅜ inches. Muscular action was the cause. He was placed on my apparatus at once; the effusion was subdued in eleven days, when the fragments were brought together by means of the adjusting pads; on the 5th November a starched bandage was applied; on the 13th December he was discharged. His avocation required him to get up and down out of his cart, which he did over the wheel about 440 times a week. This was a crucial test for the firmness of the union. He had all the normal motions of his joint; the patella moved freely upwards, downwards, and laterally.

On the 22nd November 1878, Professor Macalister, of Trinity College, Dublin, wrote to me "that he macerated and cut longitudinally the specimen, and found it bony throughout". The median half he cleaned, and removed from its back the articular cartilage. It is a perfectly continuous bone, and shows a ridge of new bony matter across the articular face. On the anterior aspect of the bone there is no visible trace of fracture, save a slight depression on the inner side. On the lower fragment on lower facet there are signs of an incomplete longitudinal fracture. (Figs. 2 and 3.)

If time permitted, I could recount several cases where no separation has taken place between the fragments, in periods extending from two to four years, although the subjects of the injury joined in athletic games and the most active exercises. Mr. Butcher, whose name is a sufficient guarantee for accuracy on any surgical point, states that it has fulfilled all I have claimed for it, and used it in two cases. Mr. Tufnell has treated a patient with it, and says the man is in the full exercise of the power of his limb.—(*Medical Press and Circular*, Jan. 8, 1879.)

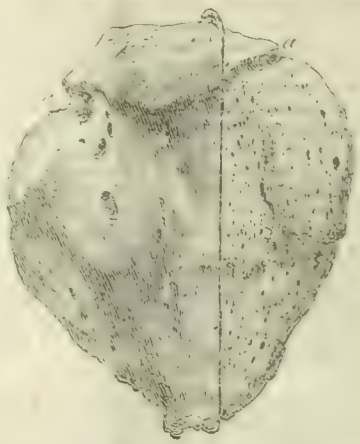


Fig. 2.—*a a a*, Line of Fracture; *b b*, Signs of an incomplete Longitudinal Fracture.

In examining the causes of separation, I believe two exist; the continued action of the quadriceps extensor muscle, and the effusion, which I cannot think purely synovial nor hæmorrhagic, but mixed. The latter (effusion) being subdued, does the quadriceps remain in a state of inaction? In my case, it did not; I have observed a spasmodic action of the quadriceps, and the patients were able to make the muscle act, although it was difficult to persuade them to do so. I have also felt it contract thirteen days after the accident, and have seen increased separation consequent. This is well exemplified in a patient (a champion pedestrian) very muscular, now under my care for transverse fracture of the right patella. When his limb is lowered there is increased space between the fragments, nor is this caused by the falling down of the lower fragment, for I marked its inferior edge before lowering the limb. What then is the cause of increased separation, for the effusion has subsided?



Fig. 3.—Showing perfectly continuous Bone.

In every case of transverse fracture of the patella that I have seen, position has influenced the upper fragment, except two, where the quadriceps extensor muscle was antagonised by the ligaments of Barkow being intact. In such cases only is the treatment by position alone admissible. In no case have I found the quadriceps weakened or thin—in the man from whom the specimen described above was taken, the measurement of the limbs corresponded. The only way I can account for the weakness and atrophy of the quadriceps, which is said to follow this accident, is by altered blood or nerve nutrition to the muscle from the method of treatment; or that the cases being weak or ligamentous union, that the muscle not having a fixed point to work on, and the patient not exerting that limb in consequence as much as the other—in fact sparing it—the muscle, from these two causes, becomes weakened and thinned. This is in a measure verified by a case that died of Bright's disease, in the City of Dublin Hospital some year or two ago. The man had been treated for fractured patella by the late Professor Geoghegan. There was very close union, but ligamentous. He was five-eighths of an inch less round the circumference of the limb above the patella which had been injured, than the sound one; and he told me, although he had excellent use and strength of the leg, he did "not make so free with it as the other one".

And yet there is nothing to show that it is from want of power in the bone to produce osseous material that bony union should not take place; for, as Larrey remarks, if the fragments are kept in perfect contact, by

means of a suitable apparatus, bony union becomes so complete that not a vestige of the injury can be traced. Besides, perpendicular fractures readily admit union by bone.

It would be unnecessary to discuss the obvious advantages of bony over ligamentous union. M. Depret appears to advocate the latter, because he can relate cases where patients sustained fractures on two occasions in the same bone, stating that it was the bone and not the ligamentous union that gave way; and attempts to prove thus, that the fibrous union is stronger than the bony. Surely, if he reflects, he will understand that the seat of the fracture depends upon the position of the limb.

The advantages claimed for this appliance are as follow. 1. It is suitable to any limb. 2. Tilting of the fragments cannot occur, the traction being downwards and backwards. Should there be a slight tendency to such, the strap fastened to the two buttons on the adjusting pads will prevent it. 3. The splint provides for the position of the limb. 4. There is no pressure on the arterial supply of the patella. 5. There is no risk to the life or limb of the patient (as may be by the hooks, or stitching the fragments). 6. It will produce perfect co-aptation without injury to the soft parts; and without pain and irritation. 7. It can make well maintained traction on the upper as well as the lower fragment, if required. 8. No fluid can separate the fragments. 9. The patient cannot interfere when adjusted, as in the plaster and other methods. 10. It has produced the best result—bony union.

PRIMARY CANCER OF THE LIVER.*

By JOSEPH EWART, M.D.,
Late H.M.'s Bengal Medical Staff.

In introducing to this meeting the subject of primary cancer of the liver, it is needful, at the outset, to say that no attempt has been made to treat it exhaustively. The opinions advanced—with special reference to diagnosis—are based on the clinical observations of the cases cited below.

Case I. *Primary Cancer of the Liver: Cholæmia: Death.*—C. —, aged 60, a robust and strongly built man, of strictly temperate habits, had resided upwards of twenty years in Calcutta, leading a most active and useful life. In 1866, he was invalided home for a year on account of enlarged and congested liver, attributed to repeated attacks of malarious fever. On the expiration of his leave, he returned to duty with his health completely restored. In 1874, after an attack of typhoid fever, he was again sent to England. The liver was then enlarged and tender, with slight jaundice. After remaining in this country for a year, he quite regained his health. He resumed work in India during the cold months, and was occupied in planning a system of drainage and sewerage for the city of Madras. He subsequently visited St. Petersburg, and designed a scheme for the purification of that city. In September 1878, he returned from a visit to Sydney and other towns in Australia, where he had been engaged in maturing an improved system of drainage for the principal towns in these colonies. He reached his home in what appeared to himself and his friends in excellent health. He remained so until July 1879, when he went to Eastbourne for the benefit of some members of his family. About the end of the month, he, without any tangible cause or discomfort, suddenly became jaundiced. There was then no discernible enlargement of the liver; but, in spite of all the drugs had recourse to, change to, and the use of the waters of, Harrogate in August and September, he continued to be intensely jaundiced down to the date of his death, on the 25th of January last. During the whole of this period, about five months, no bile whatever seems to have passed into the alimentary canal through the ordinary channel, the stools having been white and destitute of admixture with the colouring matter of this secretion.

In October, he consulted an eminent physician, who then assured him, after careful examination, that there was not even then any material enlargement of the liver. A month later, he was again examined by the same authority, when slight fulness and enlargement were discerned. In December, he consulted another physician, who recognised still further swelling of the organ. I saw him on the 12th January last, and then had no difficulty in diagnosing the existence of malignant disease of the liver, which was hard and nodulated and greatly enlarged. Below, it was felt to reach an inch beyond the umbilicus, and to the crest of the ilium; above, it extended almost to the angle of the scapula and the nipple. The tumefaction seemed confined to the right lobe of the organ.

As had been the case all along, there was not the slightest tenderness or pain. The jaundice was remarkably developed: the urine porter-

* Read before the East Sussex District of the South-Eastern Branch.

coloured, plentiful, and containing abundance of bile, with many evidences of tyrosine crystals. There were anorexia, flatulency, a foul tongue, offensive eructations, fætid and absolutely white evacuations, only varied to a moderate degree by the mercury which he had been taking. The emaciation was as extreme as the cachexia had been remarkably developed. He was singularly free from nausea. There were some purpuric spots on the trunk, before and behind. The pulse was weak, but not accelerated; temperature normal. During the whole course of the illness, the temperature does not appear to have been abnormally elevated at any time. There was and had been a good deal of irritation and itchiness of the skin. Two days before death, I again saw him, with Sir Joseph Fayrer, who also arrived at the conclusion that the case was one of rapidly proliferating primary cancer of the liver. He was then suffering from considerable dyspnœa; the pulse was weak; the extremities were cold; there were large patches of purpuric extravasations on the legs and arms, ears, nose, and trunk, and much drowsiness; the urine was diminished in quantity, indicating that the kidneys were clearly unequal to the great and prolonged strain of compensatory duty imposed upon them. He died comatose on the above-mentioned date. No *post mortem* examination could be obtained.

Case II. *Primary Cancer of the Liver: Cholæmia: Death.*—In January 1867, a Hindoo woman, the mother of four children, aged 45, was admitted under my care in the Medical College Hospital, Calcutta, suffering from jaundice. Four months ago, whilst in the enjoyment of good health, she suddenly became jaundiced, with porter-coloured urine, indigestion, white evacuations, flatulency, loss of appetite, and itchiness of the skin. There had been no local pain; but she experienced a sense of heaviness or weight in the hepatic region. She continued to perform her household duties till within a week of her admission, when the following symptoms and condition were noted. Jaundice was extremely developed, the yellow tinging being observed in the conjunctivæ and tears, the mucous lining of the mouth, fauces, throat, in the roots of epilated hair, and in the nails of the fingers and toes. There was yellow vision. The urine was dark and porter-coloured, free from albumen, loaded with bile, and containing abundant crystals of tyrosine; the motions were white; the skin was dry, harsh, and irritable, especially at night. The tongue was coated; she had much thirst, depraved taste in the mouth, bad appetite, and occasional nausea, but without vomiting. The pulse was weak and full; there was occasional febrile action, but neither marked nor prolonged at any time. There was great emaciation. The liver reached to the umbilicus and the iliac crest below, and to the nipple and angle of the scapula above. The whole of the region occupied by the tumefied viscus was full and swollen. The left decubitus was accompanied by a sense of weight and dragging. The recumbent position and right decubitus were not attended by any discomfort. There was no pain or tenderness. Over one of the protuberances, a sense of deep-seated fluctuation existed; but, as this was regarded as being due to the well-recognised resiliency communicated by a rapidly proliferating medullary carcinoma, no exploration was made. The emaciation proceeded; orthopnœa supervened; large purpuric spots appeared on the face, hands, arms, and trunk; the kidneys gradually struck work; coma came on; and, after remaining in a state of insensibility for two days, she died on February 25th.

On making a *post mortem* examination, six hours after death, the cancer was found to be restricted to the liver, which weighed one hundred and thirty ounces. It was nodulated from cancerous growths. The glands around the common duct were enlarged from cancerous growth, causing the complete obliteration of this and of the cystic duct. The gall-bladder contained a small quantity of pale-coloured fluid. Some of the bile-ducts were enormously dilated, and distended with bile. Large masses of medullary carcinoma occupied the right lobe—a great portion of the secreting structure, with its vessels, nerves and lymphatics, and efferent ducts, having been displaced and destroyed. The left lobe was free from cancerous material. Every other organ was healthy. All the parts viewed were deeply tinged with the colouring matter of the bile. On examining the cancerous masses by the microscope, caudate and endogenous cells, smaller round or oval cells, and nuclei in much greater abundance, were found.

Case III. *Primary Cancer of the Liver: Cholæmia: Death.*—In December 1873, I was consulted by a lady of Eurasian descent, aged 60, the mother of a grown-up family of six children, suffering from jaundice of three months' duration. The liver was greatly enlarged; but there had been little or no local pain. The surface was irregular, and somewhat nodulated. The kidneys had been working well, carrying off quantities of bile. There was marked emaciation and cachexia. The symptoms, during the two months she was under my care, were similar to those recorded in the preceding cases. She eventually died comatose, about five months after the onset of the jaundice.

On *post mortem* examination, the liver was found to weigh one hun-

dred and sixteen ounces. The right lobe was studded with cancerous growths, varying in size from a hazel-nut to a large orange. There was one large mass in the centre of the left lobe. The glands in the vicinity of the common duct were much enlarged from cancerous growth, compressing the same completely. The ducts behind were much dilated, and full of tenacious viscid bile. There was about a pint of pale straw-coloured fluid in the cavity of the peritoneum. All the tissues were tinged yellow; but there was no cancerous deposit in any of the other organs or parts scrutinised.

CASE IV. *Primary Cancer of the Liver: Internal Hemorrhage: Death.*—In May 1872, a cachectic Hindoo, aged 52, was under my care with enlargement of the left lobe of the liver. It had been first noticed four months before. It was very tender and painful. By its pressure upwards, it embarrassed the action of the heart, thus somewhat elevating the area of the cardiac dulness. Downwards, it reached the umbilicus. Laterally, it occupied a considerable portion of the left hypochondrium. Posteriorly, it unduly compressed the stomach, causing hiccup, nausea, and vomiting. It bulged prominently forwards. By placing the hand firmly upon it, the impulse of the aorta, communicated at each systole, could be distinctly recognised. There had been frequent febrile exacerbations. There was no jaundice. There was considerable cachexia and emaciation. There had been no hectic or colliquative night-sweats. There was no clear history of a rigor. Still, as he had been sent to me as having hepatic abscess, and as there was some sense of what to me appeared to be deep-seated fluctuation, an exploration was made with a fine aspirating needle—only, however, with the result of obtaining a small quantity of material, made up of blood-cells, large irregular cells, a few endogenous cells, and an immense proportion of nuclear-looking bodies. The patient died suddenly on June 20th. At the *post mortem* examination, twelve hours after death, about a couple of pints of blood (partly fluid and partly coagulated) was found in the peritoneal cavity, having escaped from a large fungating cancerous mass springing from the left lobe of the liver, the structure of which had been almost completely destroyed. The right lobe was unaffected. No other organ or part was involved.

REMARKS.—The chief aim I have had in view, in describing these four cases of primary cancer of the liver, has been simply to draw attention to some points bearing upon its diagnosis. Beyond palliation, nothing can be hoped for from the administration of drugs. But the earliest possible arrival at an opinion concerning the probable nature of the case presented is, nevertheless, very important—inasmuch as it may be the means of saving the patient from much harassing and drastic treatment. Thus might the symptoms due to the absence of bile from the alimentary canal, on the one hand, or to its presence in large quantities in the blood, on the other, be materially alleviated. The difficulty of establishing a correct diagnosis is enhanced by the facts, that primary carcinoma of the liver usually commences painlessly in the substance of the organ, and that it may attain considerable dimensions before attention is attracted to it. Thus, in the first three cases, it probably existed some time—how long it is impossible to say with anything like precision—before the glands in the portal fissure became sufficiently enlarged to cause jaundice by compression of the ductus communis choledochus. There is reason to believe that the obstruction of the duct is effected insidiously, gradually, and painlessly. Especially is this accomplished with freedom from pain when the cystic duct is also occluded simultaneously, or soon after the closure of the common duct. In this way, the channels behind become, in a measure, reconciled to an excessive accumulation of bile; the urine becomes dark-coloured, carrying off the bile absorbed for some time prior to the date of complete obstruction, and so preventing the outward manifestation of jaundice. When the occlusion is perfected, jaundice makes itself apparent in twenty-four or forty-eight hours, and persists with intensity, increasing in proportion to its subsequent duration, during the brief remainder of the patient's life. I have never been satisfied that, in the earlier stages, pain has been referred to the site of obstruction. When the cancer-growths approach the surface, causing intense tension of the capsule and irritation of the superjacent peritoneum, pain is doubtless produced. But it will have been observed, from the conduct of the three first cases narrated, that enormous enlargement may take place without pain or tenderness being complained of. In the fourth case, there was a good deal of pain due to peritoneal inflammation; but there was no evidence of its existence until the growth had reached a considerable size.

That a large portion of the parenchyma of the liver may be gradually and painlessly destroyed is demonstrated in large hydatid cysts, centrically situated; yet, a sufficiency of bile is secreted for the wants of intestinal digestion, the support of the blood, and the maintenance of animal heat. So, indeed, within certain limits, it may be with the invasion of carcinoma. The grand distinction is that, as the growth advances, the malignant or cancerous cachexia is soon developed with marked and progressive emaciation; and these conditions are much aggravated and intensified if jaundice, as is generally the case, be present. It must be recollected that jaundice may occur painlessly from enlarged glands due to syphilitic or tubercular growths, or to other causes. The further progress of the case, either towards amelioration or the contrary, will enable the physician to add clearness and precision to the diagnosis during the middle and later periods of life. In most cases, jaundice supervenes about five or six months before death; and, when once developed, it not only never disappears, but becomes more and more marked and intensified. The advent of death is chiefly dependent upon the inability of the kidneys to go on ridding the blood of the bile with which it is being constantly poisoned and contaminated.

TREATMENT OF SPRAINS.*

By R. DACRE FOX, F.R.C.S.Edin.,

Surgeon to the Manchester Southern Hospital; Chief Medical Officer to the Manchester, Sheffield, and Lincolnshire Railway Company; etc.

THE frequency with which sprains occur in general practice, and the somewhat unsatisfactory results of the treatment ordinarily adopted, induce me to bring forward a method that I have used in a great many cases with considerable success. Sprains may be broadly divided into two kinds, mild and severe; the former consisting merely of a temporary overdistension of the parts around a joint, which rest and anodyne applications usually soon cure; the latter involving, as I believe, much more serious pathological results, which the following plan is specially contrived to obviate.

The effects of a severe sprain are, that the fibrous ligaments controlling the movements of the joint and binding the tendons in their grooves become overstretched, swollen, and softened; the cellular tissue about the ligaments and in the tendon-grooves becomes œdematous; and plastic material is exuded; while, as a consequence of these changes, the tendons are displaced in their beds. If this condition be not actively treated, it may, and often does, lead to continued lameness, due, in all probability, partly to a diminution in the calibre of the tendon-groove, with impaired muscular action, and partly to the torn ligaments and bruised cellular tissue having undergone changes which render them incapable of adapting themselves to the movements of the joint, which are consequently impeded. I believe this result may be prevented by the application of firm direct equal pressure, applied manually at first, and kept up and controlled by pads placed in the line of the tendons, and kept in position by properly shaped plasters and bandages, and sometimes by splints. This pressure helps to disperse the œdema, to replace the tendon in its normal position, to hasten the absorption of any plastic exudation, and thus to prevent diminution in the calibre of the tendon-groove. I cannot say this is a novel method of treatment; but I think it is one not usually practised, partly because it entails the expenditure of much time and trouble, and partly, I feel sure, because there is and has been a tendency to underestimate the inconvenience and distress arising from a badly sprained joint.

The common practice, in treating a sprain, is to put on a bandage, telling the patient to take it off if the joint becomes painful, and to substitute warm water fomentations. When the swelling has subsided, if the injury be not so slight as to be already cured, a liniment or the application of iodine is generally ordered. Very frequently the tight bandage causes inflammation, while the rubbing and painting are practically useless. There are numbers of cases of slight sprain, indeed, which will get well with comparatively little treatment or none at all; but in that more severe form where, after an inflammatory or at least exceedingly hyperæmic stage, swelling takes place with the results I have described, the application of these remedies does not prevent the joint from being left rigid, painful, and unfit for use for a very long period. Now it is, as I have said, in preventing all this, that the plan of treatment by direct, equal, and continuous pressure will be found exceedingly valuable; for, where it has been properly carried out, I have always found that the joint returns quickly to its normal condition—pain being speedily relieved, and rigidity prevented. The treatment may be divided into two stages; the first lasting from a day to a week or longer, during which the treatment has to be directed to averting inflammation by rest, warm applications, anodyne lotions, etc.; the second commencing when the joint has become cold, swollen, and painful on movement—in fact, when the injury has assumed a more or less chronic character. It is during this second period that I believe the active treatment I advocate ought to be employed. It is important

* Abridgment of a paper read before the Lancashire and Cheshire Branch.

not to commence this until the surface-heat is normal; for undoubtedly, when any tendency to inflammation exists in the tendon-sheath, pressure aggravates it, and I have known it to lead to untoward results.

It is of course impossible, within the limits of this paper, to describe the special adaptation of this method to each joint; but I will take as an illustration the ankle. If a wire be passed round the joint so as to impinge on the two malleoli and the tendo Achillis, it will define three or four well-marked hollows: one on each side of the tendo Achillis behind each malleolus, one in front of the fibula, with a fourth shallower one in front of the tibia. When the ankle is severely sprained these fossæ become obliterated, and are filled up with effusion, overstretched ligaments, and displaced tendons.

Observation has led me to believe that there are very few sprained ankles in which muscular displacement to some degree does not take place. It most commonly occurs in front of the outer malleolus, involving the outer part of the annular ligament, the extensor longus digitorum, and the anterior fasciculus of the external lateral ligament; next, perhaps, the posterior peroneotarsal ligament and structures behind the external malleolus. Cases of similar overstretching and displacement on the inner side of the ankle are happily rare; but in gravity they bear much the same relation to the former as a Pott's dislocation does to a simple fractured fibula. I will assume an ankle-joint has sustained a severe sprain all round, and has arrived at the chronic stage: modifications of the treatment of such a case will meet all that are likely to occur. To carry out the first principles of treatment by direct, *equal*, and continuous pressure, it is clear the fossæ mentioned above must be filled, or rather their sites covered by pads so as to cause the retaining plasters, bandages, and splints to exercise equal pressure everywhere. By making pressure with the thumb from below upwards in the line of the fossæ, a good deal of the œdema may be squeezed away and the displaced tendons in some degree restored. I make, as a rule, five pads (of tow and lint or leather): two about four inches long by one inch wide (one a little shorter than the other, so as to be better adapted to the curve extending upwards from the dorsum of the foot to the crest of the tibia); another shorter, broader, and thinner, to place over the tibialis anticus and extensor proprius pollicis; and two, three or four inches long and bolster-shaped, to fill in the posterior fossæ on each side of the tendo Achillis. It is often advisable, in old-standing cases, to supplement the pads by strips of plaster to ensure firmer pressure. Both pads and strips of plaster should be made exactly to fit, as, if too large, they are useless, from the pressure being too diffused; and, if too small, they exercise too little pressure. A moment's consideration will render this obvious. If too large a pad, for instance, be placed over the outer postmalleolar fossa, its edges rest on the tendo Achillis and outer malleolus like the piers of an arch, leaving the fossa itself untouched. To keep these pads in their place, I use a long extended half-moon-shaped piece of plaster (emplastrum saponis spread on leather), long enough for the ends to overlap in front when the heel is placed in the centre, and a narrow oblong piece above this, placed round the lower part of the leg, to cover the upper part of the pads. The handiest way to apply the pads is to place an India-rubber band above the ankle, to slip the pads under it, and then, planting the heel in the centre of the curved plaster, to bring the two ends across the front of the joint so as to overlap. The pads having been secured in position, the elastic ring is to be cut, and the oblong piece of plaster put on so as to encircle their upper ends; lastly, the whole ankle is to be firmly bandaged. Amongst the working classes, or in the case of an uncontrollable patient, it is advisable to apply two thin splints over the anterior pads, keeping them in position by a long strip of adhesive plaster. Where there is much superficial ecchymosis, where there are bullæ, or where there is unhealthy-looking skin, instead of using soap-plaster, the pads may be kept in position and pressure maintained by a piece of lint on which ointment has been spread. Calamine ointment made stiffly is clean, and not uncomfortably greasy. If, as occasionally happens, even this should cause irritation, warm wet lint covered by oiled silk may be advantageously used over the pads, and secured by a firm bandage; but neither of these applications can compare in efficiency with the soap-plaster spread on leather.

It is, as I have said, impossible in the limits of this paper to describe the method of adaptation of the pads to all the different joints; but a very little consideration will suggest the shape, size, and thickness necessary to be employed in each case.

It is reported that Professor Krafft-Ebing has resigned his office as director of the asylum at Gratz, the reason assigned being that he has been deprived of the material for clinical instruction by a resolution of the public authorities no longer to admit patients in easy circumstances, in order to increase the accommodation for those of the poor class.

THE FORMS, CAUSES, AND TREATMENT OF TINNITUS AURIUM.*

By W. DOUGLAS HEMMING, F.R.C.S.Ed., etc., Bournemouth.

The subject of tinnitus aurium being one of those selected for special consideration in the Subsection of Otology, I thought it might be as well, partly as an introduction to the discussion, to give a slight sketch, necessarily of course brief and incomplete, of the various forms of the affection, its most common causes, and the methods of treatment found generally valuable. Into pathological considerations I do not propose to enter, confining myself entirely to purely practical points.

Tinnitus is one of the commonest symptoms coming under the aural surgeon's notice, and it is decidedly one of the most intractable. It has been, by some authors, treated of almost as a distinct disease; this, however, it cannot be considered, as, though cases may, and do, occasionally occur in which no morbid condition is discoverable in any part of the organ of hearing, yet, even in these instances, there is, if not any local lesion, some deranged condition of the system interfering with the circulation or innervation of the auditory apparatus, and thus originating the symptom.

Of the various forms and kinds of noises, the descriptions given by patients are often perplexing, and not seldom ludicrous. The account varies with the occupation of the patients and the sounds most familiar to them. Careful consideration and examination of the various descriptions given in large numbers of cases show that noises in the ears may be divided into about six classes, which for convenience I will here arrange in tabular form, with the causes producing them in corresponding column, upon the lines first laid down by Dr. Woakes.

Kind of Noise.	Causes.
1. Tidal "to-and-fro" noises, like the sound produced when a shell is held to the ear.	Tobacco; chronic catarrh of the middle ear, ending in undue contraction of intrinsic muscles.
2. Humming or buzzing noises, like the sound of a humming-top or the buzzing of a bee.	Impacted cerumen, eczema, foreign bodies or parasites in the external meatus.
3. Gurgling or bubbling noises, as of air bubbling through fluid.	Fluid in either *(a)* the tympanum, or *(b)* the Eustachian tube; the result of catarrh.
4. Rustling or crackling noises.	Deficiency of cerumen; (hairs in the meatus or on the membrane give sounds like an Æolian harp); acute catarrh in its later stages.
5. Constant, rushing noises, like the falling of water in a cataract.	Venous congestion of the labyrinth.
6. Pulsating noises, often said to be like the beating of a drum; frequently synchronous with the pulse.	*(a)* Extra-aural causes, anæmia, aneurism, etc.; *(b)* Arterial congestion of the labyrinth.

The above are the principal forms in which we find the symptom showing itself. In considering a little more in detail the causes of them, it will be convenient to divide them into two great classes, extra-aural and intra-aural, and to subdivide the latter class again, in accordance with the three divisions of the organ of hearing.

The extra-aural causes of tinnitus may depend upon a derangement of some part of the body in the immediate vicinity of the ear, or may be due to a morbid state of the system generally. Causes situated in the immediate vicinity of the auditory apparatus are such as narrowing of a vessel, for example, a branch of the temporal, of the posterior auricular, or of the carotid artery. The position of this last-named vessel renders any abnormality in the circulation of blood through it especially likely to produce aural symptoms. The cause in other cases will be more remote, and may be found in an aneurism of a branch of the aorta or of that vessel itself.

Of general constitutional causes, anæmia is a very common one, the well know *bruit de diable* propagated from the vessels of the neck causing sounds which in this case, as well as in aneurism, are of a pulsating character. Other general causes are numerous; bathing, mental excitement, overwork of the brain, depression of spirits, hysteria, hypochondriasis, gout, dyspepsia, obstructed portal circulation, exposure to blasts of cold air, the effect of explosions or of artillery practice, have all been mentioned by authors as causes of the symptom. The effect of quinine in producing tinnitus is also well known.

Childbearing and lactation are frequently accompanied by troublesome tinnitus, which is also common about the menopause. It is probable that, in these cases, the actual cause is found in the anæmic

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* Read in the Subsection of Otology at the Annual Meeting of the British Medical Association in Cork, August 1879.

condition of the vascular system in the former cases, and the generally disturbed state of the nervous system in the last.

Tobacco, whether smoked, chewed, or snuffed, is a more frequent excitant of tinnitus than is supposed. The sound produced is of a "sea-shell" character; and, according to Dr. Ladreit de Lacharrière, it is the result of changes in the Eustachian tube, being more intense according as the obstruction of the tube is more complete. It is accompanied by deafness.

Tinnitus may or may not accompany the deafness frequently produced by the diseases of infantile life, mumps, whooping-cough, and the exanthemata, especially scarlatina.

Cerebral disease frequently accompanies, if it do not cause, tinnitus; but in the case of insane patients it is necessary to differentiate from tinnitus the hallucinations of hearing of which they are so often the victims.

Intra-aural causes, as I have said, may be subdivided according to the three divisions of the organ of hearing.

1. *External Ear.*—The conditions of this part causing tinnitus are: *(a)* Inflammation of the external meatus; *(b)* Impacted cerumen; *(c)* Deficiency of cerumen; *(d)* Hairs in the meatus or lying on the membrane; *(e)* Dried pus pressing on the membrane; *(f)* Aspergillus in the meatus; *(g)* Any other foreign body in the canal which presses on the membrane. Detailed consideration of these conditions is unnecessary, as they are all discernible by means of the aural speculum.

2. *Middle Ear.*—The following conditions of the middle ear cause tinnitus: *(a)* Adhesive mucus on the inner surface of the membrane, in the tympanic cavity, or at or near the orifice of the Eustachian tube, due to middle ear or postnasal catarrh; the tinnitus is of a bubbling gurgling character; *(b)* A foreign body in the Eustachian tube; *(c)* Acute catarrh, or inflammation of the middle ear; *(d)* Chronic catarrh having as its result contraction of the tensor tympani and intrinsic muscles, which causes incursion of the stapes into the fenestra ovalis, and consequently increased intralabyrinthal pressure. Tidal noises result.

3. *Internal Ear.*—Our knowledge with respect to the abnormal conditions of this region is still limited, in spite of the many laborious investigations which have been carried on, principally by our German and American *confrères*. The most common and obvious cause of tinnitus in this part is congestion of the labyrinthine circulation. According as this is either *(a)* venous, or *(b)* arterial, the tinnitus will be rushing or pulsating. In the pulsating arterial tinnitus, the beats will often be found to be synchronous with the pulse of the patient.

In many cases, two or more causes will be found co-existing. Thus an extra-aural cause, such as an overwrought brain, may be found in combination with a chronic catarrh of the middle ear, or a disturbed state the digestive functions may be coincident with the presence of impacted cerumen in the meatus. When different kinds of noises are present together, the differentiation of the classes of sound will often facilitate the discovery of the cause, but it is frequently most difficult to trace the tinnitus to its origin in these complicated cases.

The limited time accorded to papers forbids my entering into more detail with respect to etiology, and I must hasten to say a few words in reference to the most effective methods of treatment.

With respect to the treatment of cases due to extra-aural causes, little need be said, as it resolves itself into the treatment of the constitutional or local condition originating the symptom. Anæmia will require tonics; excited action of the heart may be combatted by digitalis; aneurism must be treated on the recognised principles; where there is suspicion of syphilis as the origin of cerebral or nervous disorder, iodide of potassium must be tried; disturbance of the portal circulation must be met with the familiar weapons, and the *primæ viæ* should always be regulated.

On the treatment of cases due to intra-aural causes I will endeavour to speak a little more fully.

1. *External Ear.* *(a)* Inflammation of the external meatus may be either circumscribed or diffuse. Tinnitus is more commonly a symptom of the latter than of the former. The treatment of diffuse inflammation consists in the application of leeches in front of the tragus in the early stages, followed by irrigation with warm water poured continuously (not syringed) into the meatus. If the pain be very severe, anodynes may be added to the water; laudanum or morphia, for example. Constitutional treatment must be combined with local, as the general health is usually deranged. *(b)* Impacted cerumen may be treated by removal, the membrane and meatus of the affected side being afterwards restored to a normal condition. For the removal of wax, the syringe and warm water are the only weapons which should be employed. If the cerumen has become very hard, the application for a few hours of a warm solution of carbonate of soda (ten grains to an ounce) will facilitate the process. After the cerumen has been removed, the membrana tympani should be carefully examined; if it be retracted, the tympanum should be inflated by Valsalva's or Politzer's method. The tinnitus will then probably cease; if not, some other cause is present, and must be sought for and treated. *(c)* If the secretion of cerumen be deficient, it is probable there will be co-existent a torpidity of the digestive canal, which may be advantageously treated by a combination of tonics and aperients. Deficient cerumen is often connected with a gouty or rheumatic diathesis. It may follow cold bathing. Weak astringent solutions, as of nitrate of silver or acetate of lead, may be applied locally. The condition of the throat must also be inquired into and examined, as enlargement of the tonsils or relaxation of the mucous membrane will not unfrequently be found. *(d)* Tinnitus resembling the sound of an Æolian harp, and apparently due to an abnormal growth of hairs in the meatus, can only be relieved by their removal. They should not be pulled out, but cut off close and removed with the aid of the syringe. A hair lying on the membrane may be dislodged by gentle syringing, or by means of a small brush moistened with equal parts of glycerine and water. *(e)* Dried pus on the membrane must be removed by the syringe. *(f)* The aspergillus fungus will have to be removed with the forceps under a good illumination. Syringing with warm water and alcohol will be of use to prevent a recurrence. *(g)* For the removal of foreign bodies, nothing but the syringe should be employed. There are two or three cardinal rules on this point, which, from the importance of the subject, I make no apology for introducing here. First, it should be remembered that a hard substance may be left in the meatus, even for years, without causing injury. Secondly—and this rule should *never* be departed from—*no attempt should be made for the removal of a foreign body which cannot be seen.* Thirdly, force must *never* be used for the extraction of substances from the ear. To effect removal by the syringe, the body having been seen, the fine nozzle, known as Toynbee's, should be employed; and, the auricle being drawn backwards and upwards so as to straighten the canal as much as possible, the jet of water should be directed along its upper wall. In this manner, the water will get behind the body and force it out. In some cases, removal will be facilitated by turning the patient on his side, with the affected ear downwards, and syringing from below. A small round substance, as a marble, may be removed by means of a brush, dipped in glue or coaguline, which, being placed in contact with it, is allowed to harden, and then brush and body are withdrawn together.

2. *The Middle Ear.*—(*a*) Collections of adhesive mucus about the pharyngeal orifices of the Eustachian tubes by the position of the head are not uncommon in the postnasal catarrh, which is so frequent a cause of middle-ear catarrh; in these cases, mucus will also probably be found in the tympanum and on the drum-head. In such conditions, benefit will accrue from the use of vapour inhalations, as of benzoin, benzole, and creasote, which should be forced into the tympanum by the Valsalvian method of inflation. The condition of the throat must be attended to, and the secretion in the nasal passages may be best removed, and that region brought into a healthy condition, by means of the posterior nasal syringe, for use with which a tepid solution of carbolic acid (gr. j. to ℥j.) will be found suitable. The Politzer bag must be frequently employed, and the Eustachian catheter, if necessary. Should these measures fail to remove the mucus from the tympanum, the membrane must be incised and the middle ear washed out with a weak solution of sulphocarbolate or bicarbonate of soda. For internal use in purely catarrhal cases, chloride of ammonium is of much value. (*b*) Foreign bodies in the Eustachian tube are very rare, and their removal presents much difficulty, each case requiring a special mode of treatment to be devised for it. (*c*) In acute catarrh there will be, besides tinnitus, severe pain, deep-seated in the ear, impairment of hearing, bulging of the membrane, and vascular injection. The warm douche should be employed, and leeches applied in front of the tragus. Poultices should, if possible, be avoided, or, if used, they should be made small enough to go into the canal. If there be much accumulation of mucus in the tympanum, early paracentesis of the membrane is indicated, and is, as Dr. Cassells has shown, a truly "conservative" measure. On the subsidence of the acute symptoms, inflation of the middle ear must be practised. General constitutional treatment must be coincident with the local measures, and this remark applies to all aural affections. We must be careful, while paying attention to local conditions, not to overlook their connection with, and frequent dependence upon, constitutional derangement. (*d*) In those cases where, from chronic catarrh, there is contraction or paralysis of the intrinsic muscles, we must endeavour to stretch these muscles, or restore to them their lost contractile power. The former indication is sometimes met by the employment of Siegle's speculum, which draws out the retracted membrane, and with it the

ossicles and attached muscles. More powerful forms of tractor have been devised and recommended; but I cannot but think that their use is attended with some danger. For restoring the lost muscular tone, the application of electricity is of value. The magneto-electric and galvanic current has often proved efficacious in the treatment of this form of tinnitus. Lastly, the tendon of the tensor tympani may be divided. In some cases, simple incision of the membrane, without division of the tendon, has afforded relief.

3. *The Internal Ear.*—In the cases due to congestion of the labyrinthine blood-vessels, more is to be hoped from internal than from local measures. Hydrobromic acid has had claimed for it by Dr. Woakes the position of "a specific remedy for congestive labyrinthine conditions, providing always that the auditory apparatus be first relieved of any well-marked process which by its presence might tend to keep up excessive vascular action". I have obtained good results from this remedy in many cases. The dose is from fifteen drops upwards.

The flight of time warns me that I must conclude this brief and imperfect sketch. There are many points on which I would gladly have enlarged had time permitted; but I must content myself with a hope that my paper will be indulgently received, and may form the basis for a discussion which will throw more light on this interesting subject.

CLINICAL MEMORANDA.

FLACCIDITY OF THE IRIS IN REAL DEATH.

THE question of real or apparent death having recently come before me in a few cases, in which it would have been difficult for anyone but a medical jurist to give a scientific or confident answer, it occurred to me that a sign of death which is so very simple in its application, and as far as I am aware not generally known, or at any rate rarely put to the test, would not be unacceptable to some of one's professional brethren, as one worth committing to memory.

I refer to a condition of complete flaccidity of the iris in real death. It can easily be shown by synchronous compression of the globe of the eye in two opposite directions, when the pupil will readily assume an oval or irregular shape, whereas in cases of apparent death no ordinary amount of compression in this manner will have the least effect in altering the usual circular form of the pupil. I have recently made several observations in cases of suspended animation, of coma, and of impending death from various causes; also shortly after death; and in every case with success, as regards confirming the test. This sign of death was first pointed out to me by Sir William Jenner; and as I had never seen it in print I thought it was an original observation, but on looking up the literature of the subject, I find the fact mentioned first by M. Ripault.

However, in every case in which I have tested the sign it has turned out so uniformly reliable, that I venture to think it a valuable help in determining the question of real and apparent death, especially as it is one which can be attested before the cooling of the body, and before the supervention of rigor mortis, and considering that life is not incompatible with a temporary suspension of the important functions of respiration and circulation.

BOYD B. JOLL, M.B.Lond.

St. Ives, Cornwall, July 31, 1880.

SEA-SICKNESS.

MODERN physicians are not likely to agree in their treatment of sea-sickness while so-called scientific theories to explain the disease continue to be vaguely enunciated and too credulously received. Sea-sickness has hitherto been regarded by the world as a disease outside of science; but, if there is one complaint more than another which deserves to be treated on straightforward principles of medicine, that complaint is the disease in question. In defence of this statement, I submit the following points for the consideration of your readers.

1. The stomach contains (except after urgent vomiting) fluid and gas, with or without a certain amount of semi-solid matter.

2. Physiologically, its contents are slowly moved in a circular manner from left to right along the greater curvature, and from right to left along the lesser curvature, except when the cardiac orifice opens to permit the reception of more food, or the pyloric to permit the expulsion of some into the duodenum.

3. Pathologically, the turbulent action of the sea interrupts the normal slow and circular motion, substituting for it a rapid jumbling up and down of the contents of the stomach.

4. The contents of the stomach thus become neither more nor less than a foreign body, whose presence readily accounts for all the distressing symptoms that usher in an attack of sea-sickness.

The objections to this theory of the disease are as follow. *a.* If this theory be the correct explanation of the disease, all persons would suffer alike. *b.* Nobody would be able to recover from the disease while remaining at sea. To these objections I submit the following answers. *a.* The natural power possessed by the muscular elements in the coats of the stomach for accommodating their action to the motion of the sea varies considerably in different individuals. *b.* This power, when not natural, can be acquired after a time, according to the law of "demand and supply".

The following rules for treatment I have found to answer best. Adopt recumbent posture, and administer a smart purgative. Let the diet be light and simple; avoid wines and spirits. If medicinal treatment be required, a mild vegetable tonic will be the most suitable to restore the stomach to its natural condition. A fluid drachm of the compound tincture of gentian every four hours in a wineglassful of water is an elegant preparation, which, perhaps, answers the purpose best. If the case be tedious, a little bicarbonate of soda, given in effervescence with tartaric acid, flavoured with a few drops of tincture of ginger, and sweetened with a little sugar, will often complete the cure.

GLYNN WHITTLE, M.A., M.D., M.R.C.P., M.R.C.S.,
late Surgeon in the Mercantile Marine.

ROTHELN.

GIDEON L., aged 29, married, without syphilitic taint, had measles and scarlatina (?) as a boy. His general health was good; and he was of active habits. He walked a mile to my surgery, and exhibited his chest covered with very bright red points in a most marked elevated eruption, coalescing in small blotches of a distinct horseshoe shape. They came out first on the breast, as he stated; there were none on the face or neck; they were abundant on the feet; he had very little on the legs. There were no constitutional symptoms, with the exception of itching; neither headache, sore-throat, cough, nor swelling of glands. The eruption lasted a week, and then peeling commenced, only on the chest. He has a wife and three children. One child had measles a twelvemonth since. The whole family are now perfectly well, and free from eruption of any kind.

W. G. DAVIS, M.R.C.S.Eng., Heytesbury.

SURGICAL MEMORANDA.

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

ABSENCE from England prevented my attending the meeting of the British Medical Association at Cambridge, or I should have availed myself of the opportunity of taking part in the discussion on Sir Henry Thompson's paper on stricture, and could have given such testimony in favour of the immediate treatment as would have satisfied the most sceptical of the value of the operation, and of its security and success.

I never have replied to Mr. Teevan's criticisms, and I never intend to do so, simply from the fact that, his experience of the operation being limited (as he informed me in a letter some time since) to four cases, I consider he is incompetent to form an opinion as to the value of the operation or its results. Mr. Wood, however, is reported to have stated that he had seen several fatal cases; and I therefore, on my return to London, wrote to that gentleman, asking for the number and the particulars of the cases he alluded to. Mr. Wood, in his reply, informed me that the deaths, two in number, occurred in the practice of his colleagues at King's College Hospital; and, so far as he could remember, they were both operated upon by the late Mr. Partridge. Of one, Mr. Wood could not recollect any particulars; but in the other, he remembers that the patient was the subject of albuminous urine, and correctly adds: "This, of course, was hardly a proper case for any operation of the kind." I therefore venture to affirm that, considering the large number of operations that have been and continue to be performed by surgeons at home and abroad, the fact of only two deaths having occurred, one in a patient who should never have been operated upon, speaks volumes in favour of the immediate plan, and its eminently satisfactory results. In conclusion, I may add that I am as strongly in favour of the operation as I ever was, and that I have this day operated with the most perfect success on an unpromising and difficult case. At the same time, I warn those who are deficient in the manipulative skill required for the passage of the dilator, to refrain from using an instrument with which they are practically unacquainted.

BARNARD HOLT.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. MARY'S HOSPITAL.

IDIOPATHIC ANÆMIA: RAPID IMPROVEMENT UNDER ARSENIC.

(Under the care of Dr. BROADBENT.)

[Mr. F. ST. GEORGE MIVART, Clinical Clerk.]

MARY D., aged 42, a servant, was admitted to Victoria Ward on February 24th, 1880. She had been married a second time. Her family history was very good. The catamenia had always been regular, though the quantity was then considerably diminished. Her general health had been good, and she had been able to do plenty of hard work without inconvenience until last October. About that time, she began to feel very weak and disinclined for work. Her appetite fell off, and she became pale and lost flesh. She also suffered from great palpitation on going upstairs or walking fast. These symptoms gradually increased very much, and she became quite powerless. Since Christmas, she had been six weeks in the infirmary without benefit. She said her legs had swelled, particularly when she stood much.

Condition on Admission.—The appearance of the patient was markedly anæmic. The conjunctivæ, etc., were extremely pallid; the tongue was white, and rather flabby. The bowels were confined (as they generally had been). Pulse 100, soft, and easily compressible. Temperature on admission (2.30 P.M.), 99.2°. The heart's impulse was felt in the fifth space, just inside the vertical nipple-line. There was a reduplicated first sound, resembling the presystolic rumble. A distinct *bruit de diable* was heard in the neck. Pulsation also was very clearly seen in the veins of the neck just posterior to the sterno-mastoid muscle, especially on the right side. Respiration and its sounds were natural. The surface of the chest was rather more rounded than usual. Its resonance was fair, but rather high-pitched. Posteriorly, the thorax was fairly resonant. There was no œdema of the legs to be detected; she said it had gone off since she had been in bed. The urine was of a pale straw colour; specific gravity 1015, feebly acid in reaction. It contained no albumen. A considerable number of pus-cells were seen under the microscope; a granular cast, in a broken state, was also indistinctly seen. She was ordered by the resident medical officer—Ferri et ammon. cit. gr. x; tinct. calumbæ ℥ss; tinct. digitalis ♏x; aquam chloroformi ad ℥j ter die. Her evening temperature was 100°.

February 25th. The patient was seen by Dr. Broadbent to-day. He called attention to the excessively anæmic state of the patient, and to the peculiar yellow waxy or tallowy complexion, contrasting with the pearly white sclerotic; and said the case should be watched as carefully as a case of fever, there being often considerable variations of temperature. The patient had, no doubt, taken already quantities of iron, which in these cases was of little use. He ordered: Liquor. pot. arsenit. ♏ij; tinct. digitalis ♏vij; aquam ad ℥j ter die. The patient's appetite was very good, and she seemed not to suffer from indigestion; nevertheless, she had been steadily losing flesh. Evening temperature, 100°. She complained of headache and nausea.

26th. Morning temperature, 99.4°; evening, 100°. The corpuscles of the blood were counted to-day with the hæmacytometer. The blood—drawn from the finger—was manifestly thin and poor. The corpuscles were somewhat irregular in shape—some were very shrivelled, while others were abnormally large. There was a complete absence of white corpuscles. A number of differently shaped corpuscles were found, together with a body which was apparently a squamous epithelial cell. In 14 squares of the micrometer on which the number of red corpuscles was counted, the *highest* number found on any one square was 8; while, on examining similarly the blood of a healthy young man, the *lowest* number on any square was 56. The average taken for 14 squares was 6⅔; while the number of corpuscles on 10 squares, added together and multiplied by 10,000, gave 560,000, instead of 5,000,000, the normal number.

27th. Morning temperature, 100°; evening, 99.2°. She complained much of feeling hot, and thrust her legs out of bed to try and cool them. The bowels were confined. The mixture was ordered to be [illegible] day.

28th. Temperature, morning and evening, 100°.

29th. Temperature, morning, 100.2°; evening, 101°.

March 1st. Morning temperature, 100.2°; evening, 99.2°. No improvement was yet to be detected, except that the pulse was a trifle firmer. Reduplication of the first sound was more marked, and the pulmonary second sound was louder. The bowels were confined. R Pil. hyd. c. col. gr. v hâc nocte.

2nd. The bowels were well opened. The patient said she felt better. Evening temperature, 100.2°.

3rd. The patient had vomited several times, and complained of headache. Morning temperature 100.2°; pulse 92. The digitalis was omitted, and three minims of tincture of opium added to each dose of the arsenic mixture. There was a slight improvement in the microscopic appearances of the blood. The average of the corpuscles on 20 separate squares of the micrometer was taken three times—the mean average being about 7 as compared with 6⅔ on February 26th. The varying size and shape of the corpuscles was the same. There were also one or two large cells seen of rather irregular outline, and nucleated—(?) epithelial cells, or cells mentioned in a similar case described in the BRITISH MEDICAL JOURNAL, January 3rd, 1880.

March 6th. Her temperature still ranged from 99° to 100°. The bowels were rather constipated. Yesterday, she had a bout of sickness and nausea. There was some improvement in her general condition. The pulse was rather firmer. The dose of liquor. potass. arsen. was increased to three minims.

March 13th. The dose of arsenic was increased to four minims six times daily.

24th. Since the last note was made, there had been a steady and very noticeable improvement in the patient's condition. A tinge of red had appeared in her cheeks, which had assumed almost a healthy look; while the conjunctival and buccal mucous membranes were quite pink. Her appetite was good, and she was very anxious to get up. The temperature now remained continually normal. The average number of corpuscles on a square of the micrometer was 18. There were still some deformed cells among them. The patient said she had not been "unwell" for nine weeks (her age being forty-two).

April 2nd. She continued steadily to improve. Her weight was unfortunately not taken at first; but she said she was sure she had gained flesh. The pulse was 80, and very much firmer. The venous *bruit* in the neck had disappeared. The heart-sounds were strong and normal. The average number of corpuscles per square was 22. The number of deformed cells was very much less.

April 15th. The patient was very much stronger. She now left her bed for a few hours every day. Her appetite was extremely good, and her bowels were open. She still had flushes of heat occasionally, and at such times she perspired considerably.

April 24th. The number of red corpuscles per square averaged 32, and they were nearly all of the normal shape. Very few white corpuscles of ordinary appearance were seen. The dose of arsenic had not been increased; she still took four minims six times daily.

May 1st. The patient being anxious to go home, she was discharged to-day cured. She was now able to walk about the wards and garden, and came upstairs without distress. The heart-sounds were normal, and the apex-beat was firm, and normal in situation. The pulse was 80, very much stronger.

REMARKS.—Few observations are needed with regard to this case. There can be little doubt that it was one of essential or pernicious anæmia; the patient had the appearance characteristic of this disease, and the subfebrile temperature; while the red corpuscles of the blood were not only reduced in number to an unusual degree, but deformed. Whether this diagnosis be accepted or not, the failure of iron to do good, and the rapid improvement during the administration of arsenic, are remarkable. In little more than two months, the patient passed from extreme anæmia to apparently perfect health, with wonderfully good colour of the cheeks and mucous membranes; and she continued well and strong for some months after leaving the hospital, up to the time when she ceased to present herself for examination. It will be seen that the arsenic was given in frequent small doses, instead of three times a day. The examination of the blood was made by Mr. Mivart with every precaution.

[illegible] IN THE RIGHT BRONCHUS; ABSCESS [illegible]; PERITONITIS; PYÆMIC ABSCESSES IN LIVER, ETC.

(Under the care of Dr. BROADBENT).

[Mr. BULL, Clinical Clerk.]

H. C., aged 15, an errand-boy, was admitted into the hospital on December 24th, 1879. His mother had died of consumption three years previously, but the rest of the family had had good health. He himself was always a weak, ailing lad, subject to a cough, and for the last three or four years, to occasional hæmoptysis.

On December 10th, he awoke with violent pains in the right side

resembling "stitch", aggravated by a deep inspiration; and for the relief of this he came to the hospital. He was of a dark complexion, his body was thin and spare, the fingers were long, and clubbed at the extremities. The right subclavicular region was dull, and the breath-sounds there almost tubular in character; the rest of that front was resonant, and the breath-sounds normal. The left front was resonant; breathing at the apex was rather harsh, normal elsewhere. The right back as far as the angle of the scapula was resonant; the breath-sounds were slightly tubular. Below this, the back was dull, and the breath-sounds were absent. The left back was fairly resonant; the respiratory sounds were normal. On a deep inspiration, the diaphragm moved very little, and the upper part of the abdominal walls was somewhat fixed, the lower part being soft and flaccid. The pain in his side was increased by inspiration. The cough was very troublesome, and he expectorated on an average every day three-quarters of a pint of dirty brown, fœtid, mucopurulent sputa. His pulse was always regular, about 120, full between the beats, and compressible. The bowels were open, but he had no diarrhœa. With these symptoms, which were pretty constant all through his illness, was associated, for the first sixteen days, a very fluctuating temperature. In the evenings of January 1st and 2nd, it rose to 105.2, and on the average was about 103°; in the morning, it kept between 98.8° and 100°. On the last day of December, and on the two days aforementioned, with the high temperature he had rigors. On January 13th, the pain over the liver left him, and he felt very much better. His abdomen was tympanitic, and fixed during respiration, but not painful on pressure.

On the 16th, the pain returned, and spread over the whole abdomen with the symptoms of peritonitis. Between this date and the 24th, a soft semifluctuating swelling about as big as a small egg, painful on pressure, moderately well defined, and situated below the margin of the ribs, gradually appeared. On the 28th, an aspirating needle was passed an inch and a half in an upward and backward direction into the swelling, just opposite the junction of the ninth with the eighth costal cartilage. No pus or fluid of any kind was drawn off, and the contents of the needle, when seen under the microscope, were found to be nearly pure blood. From this time, the lad continued to grow worse; his temperature fluctuated between 101° in the evening and 98.5° in the morning; his pulse became thready and weaker; the pain from the peritonitis increased; and he died, in a semiconscious condition, on February 6th.

His diet throughout had been simple and nourishing. The pain had been kept under by morphia injections, and he had taken quiniæ sulph. gr. ii, and ferri et quiniæ citratis gr. v., all through the illness. He had had, in addition, port wine ℥ iv.

At the *post mortem* examination, the following was the condition of the chief organs. The right lung was small, weighing 15 oz. The apex contained a small cavity, and patches of cheesy degeneration. The bronchi were very considerably thickened, and irregular in calibre. On following down the large division into the base of the lung, the bronchus was found to subdivide into a number of dilated anfractuous cavities, in one of which was found a fragment, apparently of a leguminous pod, stalked, five-eighths by five-sixteenths of an inch, and with lateral grooves. The bronchi were excessively thickened and dilated; and, in the larger cavities, the subdivisions had disappeared, and their walls become converted into irregular fibrous structure. The inner surface of all the cavities was of a deeply congested ulcerating character, and the lung tissue around was for the most part converted into firm fibrous tissue. There were firm pleural adhesions of the base of the lung to the diaphragm. The left lung was loaded with serum, otherwise healthy. There was extensive diffused purulent peritonitis, and the liver was riddled with pyæmic abscesses. There was a chronic abscess about the size of a Tangerine orange behind the pancreas, and extending into the transverse fissure of the liver, and deeply into the substance of that viscus. Its walls were very thick, and it contained stinking garlic-smelling contents of yellowish-white colour. The gall-bladder and bile-duct, which it grazed, had entirely escaped implication by it. The spinal column in the neighbourhood of the abscess was quite healthy. The spleen contained a few pyæmic abscesses, mostly small. The kidneys were healthy.

REMARKS.—The account here given of this interesting case is condensed by Mr. Bull, from careful notes made almost from day to day. The symptoms were most perplexing, and the poor boy's sufferings very great; and it was only by the discovery of the foreign body—part of a locust-bean—that the course of the disease, and the morbid appearances after death, were explained. When the bean entered the bronchus was never known, but its presence excited destructive inflammation of the lower part of the lung, and, later, gave rise to an abscess below the diaphragm; whilst, later still, pyæmia was induced.

KING'S COLLEGE HOSPITAL.

CASES OF CANCER OF THE SEROUS MEMBRANES.

CASE I. *Cancerous Nodules of Skin: Enlarged Axillary and Cervical Glands: Copious Sanious Effusion into Left Pleura.* (Under the care of Dr. JOHNSON.)—George A., aged 59, a dyer, was admitted on February 3rd, 1879. He said that, six months previous to admission, he caught cold, and a few days subsequently felt a severe pain in the left side of his chest. He was confined to his bed, suffering from great dyspnœa, anorexia, thirst, and cold shivers. These symptoms had continued more or less up to the date of admission.

On admission, he was somewhat emaciated, and his face shrunken; but his appearance was otherwise fairly healthy. On the left side of his chest, and in the neighbourhood of the ensiform cartilage, there was a distinct tubercular eruption. The nodules were hard and raised, but were freely movable, and not fixed to the underlying bone; their average diameter was about one-third of an inch. The smaller nodules were covered with pinkish epidermis; but the larger were of a deeper red colour; the overlying epidermis being stretched and thinned, and covered with tortuous ramifying vessels. A similar patch of nodules was also present on the left side of the abdomen, midway between the costal margin and the anterior superior spine of the ilium. The axillary and cervical glands were both considerably enlarged, especially on the left side; and the veins of the left side of the chest were larger than on the right. The patient complained of a severe cutting pain under the left nipple. The apex-beat of the heart was much displaced, being felt two inches to the right of the sternum, on a level with the right nipple. The heart-sounds were normal. The expansion of the left side of the chest was scarcely perceptible, and it bulged considerably; the right side measuring 16½ inches, and the left 18½ inches. The left side was entirely dull on percussion; and vocal resonance and fremitus, as well as breath-sounds, were absent. The right side was normally resonant, the respiration being puerile. The left pleura was punctured with the needle of a subcutaneous injection-syringe, and a small quantity of sanious fluid drawn off. The patient had no hæmoptysis, nausea, or vomiting; and the bowels acted two or three times a day. The urine contained no albumen.

February 23rd. The patient slept fairly, and was more free from pain, but was weaker than on admission. Some œdema appeared on the posterior surface of the left side.

March 12th. Fresh papules had developed over the sternum, while the older had become larger and fused together. The œdema continued to extend over the left side.

March 16th. The dyspnœa had increased, and was accompanied by a short hacking cough; but there was no difficulty in swallowing. The glands in the left axilla were larger and harder.

March 28th. There was considerable pain in the left side of the chest, with occasional vomiting. The nodules in the vicinity of the ensiform cartilage were large, and had commenced to ulcerate, exuding a sanious puriform discharge, which dried up into reddish brown scabs.

The patient left the hospital at his own request on April 3rd, 1879.

CASE II. *Cancerous Mass between Bladder and Rectum: Nodules throughout Peritoneum: Peritoneal Effusion, simulating Tubercular Peritonitis.* (Under the care of Dr. BEALE.)—Wm. T., aged 43, was admitted on May 31st, 1880. His father was alive and healthy; his mother had died of old age. One of his brothers died in the hospital in April last, of pulmonary phthisis and intestinal ulceration. The patient, a stoker, had an attack of subacute rheumatism about two years before, but had otherwise always enjoyed fair health. For about three weeks before admission, he had been losing flesh, and complaining of night-sweats, with gradually increasing weakness; and during the last fortnight diarrhœa came on, with severe lancinating pains in the hypogastric region. The diarrhœa, however, ceased three days before admission, leaving a dull aching pain in the abdomen. There were slight cough and scanty expectoration, and his appetite had completely failed.

On admission, he looked pale and cachectic, and was somewhat emaciated. There was a distinct fulness of the abdomen, especially at the epigastrium; and considerable pain was felt on pressure over the lower part of the right hypochondrium. The heart-sounds were normal. The respiratory sounds were harsh, but otherwise normal. The bowels acted moderately, the motions being light-coloured, and containing no blood. The urine was free from albumen. The temperature was 99.8° Fahr., and the pulse 75 per minute.

June 2nd. The temperature at night was 100.8° Fahr., and in the morning 99° Fahr. He complained of rectal tenesmus, which was relieved by a dose of castor-oil; but the abdominal pain still continued to be severe.

June 6th. The pain was now mainly felt in the hypogastric region. The abdomen measured 31½ inches at the umbilicus, and gave distinct evidence of the presence of fluid, being dull in the flanks, and fluctuating. The temperature varied from 100.4° to 98.8° Fahr. His condition up to the time of his death on June 16th varied very slightly. The temperature ranged between 101.4° and 98° Fahr. The abdominal pain was relieved by poultices; and occasional doses of castor-oil, with tincture of opium and enemata, were ordered for the tenesmus. During the last few days of life, diarrhœa returned, and he was troubled with bilious vomiting. The pulse became irregular and thready; and the abdomen was more distended, but not painful. He died on the morning of June 16th, 1880.

Necropsy.—The peritoneum contained a large quantity of straw-coloured fluid, and both its surfaces were studded in every part with small cancerous nodules, which varied in size from a split-pea to a horse-bean. The omentum was considerably thickened by cancerous deposit. A hard dense mass, about four inches in diameter, was fixed between the section and bladder; but it was uncertain whether the primary growth had originated within the peritoneum, or in the connective tissue around the recto-vesical pouch. Some coils of small intestine were adherent to the summit of the bladder. The base of the recto-vesical mass could be felt in the rectum, and in two spots it had commenced to ulcerate through the rectal mucous membrane. The spleen was normal; but the peritoneum over it, as over other abdominal organs, was thickly studded with small cancerous nodules. The kidneys were normal. The liver contained numerous secondary deposits; each mass being surrounded by a zone of hæmorrhagic effusion. The lungs and pleuræ were normal, the latter containing a small quantity of serum. The heart was flabby, both sides containing some discoloured clot, but it was otherwise normal. A microscopical examination of the peritoneal tumours gave the character of encephaloid cancer; the recto-vesical mass being, however, of a more fibrous consistence.

REMARKS.—The chief interest of this case centres around its diagnosis. His brother (Charles T.) had been admitted, under Dr. Beale, about three months previously, suffering from somewhat similar symptoms—viz., severe abdominal pain and diarrhœa—having, however, in addition, distinct consolidation at the right apex. His necropsy showed pulmonary phthisis and tubercular ulceration of the intestines. In the present case (William T.), the lungs were normal, but no abdominal tumour of any kind could be felt externally. The recto-vesical mass might have been detected *per rectum*; but, as ulceration of the mucous membrane had barely commenced, there were no symptoms in this part which called for a rectal examination.

CASE III. *Effusion into the Pleuræ and the Peritoneum: Cancerous Nodules in Peritoneum: no Nodules in Pleuræ.* (Under the care of Dr. DUFFIN.)—Julia L., aged 40, was admitted into Twining Ward, on August 18th, 1879. She was single, and worked in a laundry, where she was constantly exposed to cold and wet. Four years previously, she had an attack of jaundice, with sharp pain in the hepatic region, shooting up to the shoulder—the jaundice lasting about twelve months. Two months before admission, she stated that she felt "as if something had given way" in the right hypochondriac region; and she had since suffered from considerable abdominal pain. At the same time the abdomen had begun gradually to enlarge, and, a fortnight before admission, she became confined to her bed.

On admission, the abdomen was largely distended, measuring thirty-seven and a half inches around the umbilicus. It was tense and fluctuating, the dulness varying with the position of the patient, and, in the dorsal decubitus, being most marked in the left flank. There was considerable pain in the abdomen, especially at night, but no marked tenderness. The urine was high-coloured and scanty, but free from albumen. She complained of insomnia and some dyspnœa; the bowels were constipated, and appetite bad. Examination of the lungs gave evidence of a considerable quantity of fluid in the left pleura, which gradually increased in the succeeding weeks. The right side was resonant, and the heart-sounds normal.

August 30th. The abdomen was somewhat less tense, the dulness being still most marked in the left flank. There was great tenderness in the epigastric region, and the anorexia continued. The bowels acted well. The urine was free from albumen, but was high-coloured, and deposited abundant lithates.

September 2nd. The abdomen was very painful, and the superficial veins were enlarged, but the [illegible] remained the same as on admission.

September 12th. She had [illegible] and dyspnœa.

September 16th. The left pleura was aspirated, and twenty-three ounces of sero-sanguineous fluid withdrawn.

September 20th. There was less dyspnœa; but complete dulness, with [illegible] remained on the left side. The right side of the thorax was [illegible].

September 23rd. The abdomen was tapped antiseptically, and two hundred and four ounces of serous fluid drawn off. Under the microscope, the fluid exhibited a number of blood-corpuscles, together with large granular corpuscles, with well-marked nuclei. The patient was much relieved, and a distinct nodular sensation could be detected over the abdomen.

October 1st. There was increased resonance over the front of the left side of the chest, but dulness remained at the base.

November 1st. The base of the left lung was still dull, with feeble breathing and loss of vocal fremitus. The abdomen was thirty-three and a half inches in circumference at the umbilicus; and a tumour could be felt, mainly occupying the left iliac region.

November 12th. The abdomen measured thirty-four and a half inches. Dulness and absence of vocal fremitus, with feeble breathing, were now noticed at the right base. The left side was in the same condition, and was aspirated—eleven ounces of fluid being withdrawn; but the dulness remained after aspiration.

In the ensuing weeks she was occasionally sick, and the abdomen gradually increased in size—being, on December 9th, thirty-five inches at the umbilicus, and very painful. She was ordered subcutaneous morphia injections, and fomentations, etc., locally.

December 16th. The abdomen was again tapped, and sixty ounces were withdrawn.

December 31st. There was dulness over the whole of the posterior part of the left side of the chest, with absence of breath-sounds; but there was resonance in front down to the third rib. The right side was now normal. Fluctuation was distinct in the hypogastrium; but, from three inches below the umbilicus to, vertically, five or six inches into the epigastrium, and transversely into both lumbar regions, the abdomen seemed almost filled with a nodulated, resisting, moderately tender mass. The nodules were distinguishable by the fingers as being from one to three inches in diameter. Superficial percussion, over the umbilical region and right flank, gave a clear note, but the note was dull in the left flank.

The patient gradually became weaker and more emaciated, and ultimately died on March 11th, 1880, about seven months from her admission, and nine months from the commencement of the symptoms.

Necropsy.—A large quantity of dark straw-coloured fluid escaped on opening the abdomen. The skin, for one or two inches below and an inch and a half above the umbilicus, was indurated, and of a greyish colour; and above this point the abdominal wall was quite adherent to the liver and intestines. The two surfaces of the peritoneum were adherent in some places to one another, or to the viscera. Between the umbilicus and liver there was a sac of peritoneum, containing straw-coloured fluid. Both surfaces of the peritoneum were studded with carcinomatous nodules, about the size of beans—the nodules being freely scattered through the mesentery, and along the whole serous investment of the intestines. The liver was small and yellowish, but contained no secondary nodules. The kidneys and spleen showed nothing abnormal. The left pleura was full of fluid, and the left lung was completely collapsed. In the right pleura were a few loose adhesions. There were no nodules of cancer on either pleura. Both sides of the heart contained some partially decolorised clots, but the valves were natural.

CASE IV. *Scirrhus of Mamma: Enlarged Axillary Glands: Subcutaneous Nodules: Cancer of Ovaries, Peritoneum, and Pleuræ: Effusion into Peritoneum and both Pleuræ.* (Under the care of Dr. DUFFIN.)—Lydia M., aged 38, a cook, unmarried, was admitted on March 13th, 1880. She had always been temperate, and, with the exception of an attack of measles five years previously, had always enjoyed good health. Her father died of phthisis. About six weeks before admission, she began to complain of aching pains in the loins, and noticed that she passed a smaller quantity of urine; at the same time, the abdomen became gradually distended, and her attention was first drawn to a hard mass in the right mamma, together with enlargement of the axillary glands, and small subcutaneous nodules scattered over the chest. Three weeks subsequently, her legs and feet began to swell.

On admission, the patient was much emaciated, and complained of headache, and pains in the loins and abdomen, especially in the right iliac region. A hard nodular mass, about the size of a hen's egg, and having the evident characters of scirrhus, could be felt in the right mamma. The glands in the right axilla were distinctly enlarged and hard, and small subcutaneous nodules, the largest about the size of a hazel-nut, were scattered over the surface of the chest. The veins over the chest and abdomen were enlarged. The heart-sounds were normal. The lungs, on admission, were resonant; but, about a week subsequently, dulness was observed at the base of the right lung, together with diminished vocal vibration and feeble breathing: a loud pleuritic friction was at first audible above the limit of dulness. The abdomen was uniformly enlarged and fluctuating, but no definite tumour could be

felt. It measured 33¼ inches at the umbilicus. The urine was of specific gravity 1025, and contained no albumen.

March 23rd. The abdomen was tapped, and ninety-eight ounces of darkish-coloured serum drawn off. After the removal of the fluid, a hard mass could be felt in right iliac region, cropping up from the pelvis.

March 31st. The abdomen had regained its former size, and gave evident signs of fluctuation.

April 7th. The abdomen was again tapped, and eighty-eight ounces of a similar fluid were drawn off.

For some time, the patient's condition presented very slight change: the abdomen rapidly regained its former size; the temperature varied between 97 and 98° Fahr, exceptionally rising above the latter figure, but never exceeding 99° Fahr.; and the pulse ranged from 84 to 110 per minute. The fluid in the right pleura gradually increased; the base of the left lung also gradually becoming dull. The patient was treated with mixtures of iron and quinine; and ammonia and ether, together with local applications of poultices, stupes, unguent. belladonnæ, etc., to relieve the pain, which was at times severe.

At the beginning of June, the breathing became gradually worse; the right side of the chest being entirely dull, and the dulness on the left side extending halfway up to the angle of the scapula.

On June 12th, she had a severe paroxysm of dyspnœa, the respiration being 48, and the pulse 110, per minute. The patient gradually sank, and died on June 16th, less than five months from the onset of the symptoms.

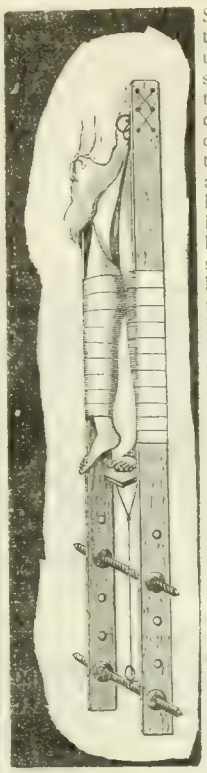
NECROPSY.—The right mamma contained a hard scirrhous mass; the glands in the right axilla being also much enlarged and hard. Numerous small scirrhous nodules, varying in size from a pea to a hazel-nut, were scattered over the chest. These had in no instance ulcerated through the skin. On opening the abdomen, a large quantity of dark straw-coloured fluid escaped. The whole of the peritoneum, both visceral and parietal, was thickly covered with small white nodules, which varied in size from a pin's head to a pea. The great omentum was considerably thickened with cancerous deposit, as well as the peritoneum over the liver. The liver itself contained only a few small deposits. The kidneys were normal. The pelvis was filled with cancerous deposit, which involved both ovaries, more especially the right; and extended downwards between the bladder and uterus, and uterus and rectum. Numerous cysts were found in various parts of the mass, especially in connection with the right ovary. The uterus was firmly fixed; but the cancer had involved neither the rectal nor genito-urinary mucous membrane. The right pleural cavity was full of reddish-coloured fluid; the right lung being quite collapsed, greyish-coloured, and condensed. The left pleural cavity also contained a considerable quantity of similar fluid, the base of the left lung being collapsed. Small nodules, similar to those on the peritoneum, were freely scattered over both pleuræ. The pericardium contained a small quantity of straw-coloured fluid; but there were no nodules on its serous surface, although they were abundant on its fibrous aspect. The heart was normal.

EPPING RURAL DISTRICT.—The most remarkable feature in the sanitary history of this district during 1879 was the almost total absence of autumnal diarrhœa, which may be attributed to the excessive rainfall and low temperature which characterised the season. The infantile mortality also showed a marked decline, being at the rate of 98.1 per 1,000 births registered. In speaking of the causes of infant mortality, Dr. Fowler says that it is to a great extent due to the want of proper feeding; and he adverts to the difficulty of obtaining new milk in the district as "quite a calamity". The total number of deaths in the district was 349, or at the rate of 15.0 per 1,000. Zymotic diseases caused 39 deaths; whooping-cough being credited with 17, and "fever" 10. The absence of any tabular statements is to be regretted.

NEW FOREST RURAL DISTRICT.—The report of Mr. R. W. Jenkins, on the sanitary condition of the part of this district under his charge, reveals, what we fear is too common amongst scattered rural districts, grossly unsanitary conditions, that only need the presence of infectious disease in their midst to spread havoc in the neighbourhood. Mr. Jenkins, whilst reporting that the death-rate is only 15.3 per 1,000, states that the water supply of the whole district is derived principally from wells in proximity to the seldom-cleansed cesspits and ashpits. The samples of water which Mr. Jenkins has analysed were either of very doubtful purity or dangerously impure. The "drainage" of the district is reported to be "principally into cesspools with or without overflow pipes"—an arrangement which cannot but endanger the purity of the water. The churchyards of the district seem to be very full, and some of them unwholesome. Certain of the roads urgently need repairs, and generally the sanitary administration seems to be very lax. The authority has evidently yet to learn the preventive character of its functions.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

BOX SPLINT FOR CHILDREN.



SIR,—On account of the constant breakages that occur with the child's box splint at present used, and also on account of the variety of sizes that have to be kept in stock to fit, and then, perhaps, but imperfectly, any child that may come under treatment for fractured thigh, I have devised a splint as here represented. It has been tried for some time past at St. Mary's Hospital, and found to answer well. It possesses the following advantages. *a*. It can be applied exactly in breadth and length to any child for whom a box splint may be required. Should the two side-pieces not be long enough, another pair may be substituted; but the ordinary ones, which are three feet four inches in length, will answer, save in exceptional cases. The screws are sufficiently long to fit the broadest pelvis. *b*. It is much stronger than that now in use; the two screws and nuts retain the side-pieces quite firmly and at right angles, even when placed close together in the lowest holes; and, as the side-pieces can be screwed to the exact breadth of the child, there is no wrenching of joints as in the present dovetailed splint, the upper ends of which are forced (in cases where the splint does not fit properly) to converge or diverge, according as the transverse piece of the splint is either too broad or too narrow for the patient. *c*. When taken to pieces, it is easily stowed away; and hence another source of breakage is avoided. The splint is inexpensive, and is made by Messrs. Maw, Son, and Thompson, of Aldesrgate Street, at a slightly greater cost than that of those now in use. Believing that it will be found much more convenient than the present box splint, I take the liberty of bringing it to the notice of your readers.

I am, sir, etc., HERBERT SIEVEKING.

St. Mary's Hospital.

NITRO-GLYCERINE IN SEA-SICKNESS.

MR. TURNBULL, in crossing the Atlantic on board the steamer *Britannia*, writes: "……The sea was lumpy, and during the night the greater number of the passengers were paying their devotions to the sea-fishes. My fellow-passengers in the adjoining state-room soon excited my sympathies. They consisted of a lady about twenty-five years, a young girl of three years and a half, and a maid-servant. The latter was the most noisy by loud efforts and groanings; then followed the lady and girl, but in a quieter manner. I gave the husband three lozenges, one each for the adults, and a quarter for the little girl. Soon after, the husband reported the little girl quite better and playing on the floor, with no return; a decided improvement of the wife's condition, and even an amelioration of the noisy demonstrations of the maid. In the little girl, the improvement was entirely permanent; while the other two did vomit after, but soon after became quite comfortable. The next case was my associate in the same state-room, who stated he was always sick crossing. He was young—twenty-six years—robust, weighing two hundred pounds, with a most ravenous appetite. He took one lozenge; but in a few seconds after he stated he vomited it, and would not repeat the dose. Soon after, I gave him fifteen drops of aromatic spirit of ammonia, and from that time he had no return. The fifth case was a celebrated western bishop, who came upon deck and stated he felt nauseated and badly; but he thought by force of will he would not be sick. I told him of the remedy; he desired to take it. I gave him one lozenge; and soon after he told me it gave him such relief, that he was able to go down to the saloon and eat his breakfast; he with two others being all out of ten that were able to do so at our table during the stormy weather. To two adults also I administered the remedy; but in neither case was it of any value, not being retained."

Dr. Mulhall, of St. Louis, U.S.A., writes; "……I took them (the tablets) faithfully, but perceived neither any good or evil effects from them. Had I perhaps pushed the remedy until its physiological effects were noticeable, it might have been of service to me. I was sea-sick; but my illness was, with the exception of two or three vomits, displayed in a constant nausea. They relieved one steerage passenger most wonderfully; and two or three others expressed themselves as feeling decidedly better; whilst four or five others experienced no benefit. On the whole, one may say, from my little experience, that 50 per cent. of cases are benefited by the nitro-glycerine tablets. When one is himself sea-sick, he does not feel very energetic about arriving at exact results."

A lady, weak and delicate, after crossing the Channel, wrote: "I took one of the tablets, and it sent off my head a 'spinning'; and my temples were fit to split open; but, after half an hour or so, I brought it all up. So I fear it was not successful; but, however, I really did not suffer so much in my head as usual, and was in every respect better this time than on former occasions."

These nitro-glycerine tablets are supplied by Mr. Martindale, chemist, New Cavendish Street.

WOOLLAMS' PAPERS FREE FROM ARSENIC.

At the last Sanitary Exhibition at Croydon, a medal was awarded to Messrs. Woollams and Co., 110, High Street, near Manchester Square, London, W., as a special mark of merit for their paper-hangings free from arsenic, after full examination of a large number of samples. Messrs. Woollams and Co. have long had a well-deserved reputation for the highly artistic character of their wall and ceiling papers; this reputation is fully maintained by the samples which we have seen of their workmanship. In these papers and decorations, artistic merit of a very high kind is noticeable, and no æsthetic qualities are sacrificed to the rigid observance of sanitary considerations in the preparation of the colours with which the ceiling and wall papers are attended. In view of the frequent detection by medical men of cases of insidious injury to health from arsenic papers of yellow, green, buff, and other colours, and even of lead-poisoning from like causes, it is of importance to encourage the use of wall decorations which can be guaranteed free from poisonous colour.

LIEBIG'S LEGUMINOUS COCOA-POWDER.

Among the many recent products of chemical and dietetic ingenuity, none has come under our notice which is more promising than that now being introduced into this country under the name of leguminous cocoa-powder, after a formula devised by Baron Hermann von Liebig, and now carried out successfully on a large scale with the view to general introduction as an article of diet. The essential value of cocoa in this aspect depends, of course, in the first instance, upon its alkaloid element, which is nearly identical with that contained in tea and coffee, and claims to rank as a nerve-stimulant and waste-preventer, or, as the French have aptly styled all this class of dietetic articles, as "aliments of economy". The drawback to the use of cocoa extensively as a beverage is found in its excess of fat, which makes it to many unpalatable, and to yet more persons indigestible. Many devices are employed to overcome this defect. In some, the fat is abstracted purely; and in this it is partly abstracted; and other additions are made of sugar and starch—so large, indeed, that the solution drunk under the name of cocoa is often little else than boiled starch-water slightly flavoured with cocoa and sugar. Baron Liebig has here aimed at perfecting cocoa as a drink which shall be at once nutritious, digestible, and restorative; and for this purpose he has, after abstracting the excess of fat, mechanically combined with the cocoa finely-ground legumin. Thus he has, of course, added to the carbo-hydrates of the cocoa infusion a rich preparation of flesh-forming matter, whilst it appears also from careful analyses that 5 per cent. of the mineral matters consist of phosphates chemically combined. From the point of view of medical dietetics the leguminous cocoa of Liebig has much to recommend it; while, as a breakfast beverage, it has the essential recommendation of being very agreeable and of retaining in a high degree the fine aroma of good cocoa or chocolate. The London agency for this food-product is at 7, Idol Lane, E.C.

At the recent meeting of the British Association at Swansea, Dr. Schaafhausen of Bonn exhibited the Neanderthal skull which was found in 1857, and which, he submitted, was not the skull of an idiot, but of a man of the lowest development. Professor Rolleston was also of opinion that the man whose skull it was was not an idiot, and said that the abnormal development in connection with it consisted in the frontal ridge.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1880.

Subscriptions to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. Francis Fowke, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 25TH, 1880.

WOOLSORTERS' DISEASE IN BRADFORD.

Since the Commission was appointed by the Bradford Medico-Chirurgical Society to inquire into cases of this disease, four distinct instances of it have come under their observation. One of these presents some features of special interest, which may possibly lead to the opinion that the disease sometimes affects other members of the community besides woolsorters. There is nothing, of course, inherently improbable in the suggestion. Indeed, supposing the disease proved to be due to infection by impure wool or hair, it would seem to be rather more likely than not that persons occupied in the processes of the wool-manufacture beyond the process of sorting might occasionally suffer. The case in question is that of a man about forty years of age, who was occupied as a combing overlooker (wool-combing, it may be mentioned, is a process subsequent to carding, which, in turn, succeeds sorting; and both carding and combing are performed after the wool has been washed). This man was at work on Friday, September 10th, 1880, on English wool, superintending the combing; but he had been occupied up to a fortnight or ten days before "on Persian and other dirty wools". On September 10th, he was at work till half-past one o'clock, when, feeling ill, he went home, and went to bed. He complained of difficulty of breathing, and of pain in the region of the stomach. During the night, he slept pretty well, but perspired freely, though he had no pain. The next day, he rose in the afternoon, and was on the point of going out, when he was dissuaded by his friends. Soon afterwards, he became suddenly unconscious, and died in a quarter of an hour. There was valvular disease of the heart, a cause in itself sufficient to account for death; but what chiefly caused a suspicion of woolsorters' disease was the very rapid decomposition of the body. This led to an examination of the blood and of the fluid which oozed from the mouth. Both were found to abound in the *bacillus anthracis*. With this blood, a mouse was inoculated on September 13th, at 8 P.M., the site of infection being the root of the tail. On September 15th, at 9 A.M., the mouse was alive, and seemingly well, but must have died soon after; for, on examination in the afternoon of that day, it was found to be dead. A *post mortem* examination was made at 11 P.M. the same day. Decomposition had already set in, the root of the tail, where the bacillus-containing fluid had been inoculated, being discoloured; and the lower part of the back from this point, as high as the middle of the dorsal region, being soft, black, and putrid. Some fluid taken from the chest was found to be swarming with *bacilli*. Some fluid from the spleen was also loaded with *bacilli*, some of the specimens being very long.

The question, How long is the period of incubation in woolsorters' disease? arises in this case. We are told that, at the time of his falling ill, the patient was working in English wool. There is no suggestion from any quarter, as yet, that English wool induces the disease; and we are therefore driven to the supposition that it was from the "Persian and other dirty wools" on which deceased had been working from ten to fourteen days before, that the fatal infection was caught. But it would be premature to infer from this case that the period of incubation varies from ten to fourteen days, since the germs of the disease (otherwise the spores of the *bacillus*) might have been about the warehouse or comb-

ing-shed in the interval between the deceased's being engaged on Persian and English wools, and so might have infected him at any period. In point of fact, sorters generally attribute their illness to a particular specimen of wool, which has been handled generally only a short time before the commencement of the illness, very often a day or two days before; so that it seems likely that the period of incubation is a shorter one than "from ten to fourteen days". There are, however, no definite statements yet made which enable us to say what is the precise length of the incubative stage in woolsorters' disease; or if, as is most likely, judging from the analogy of other zymotic affections, the period is a variable one, there are no facts which yet enable us to state the limits of the variation.

In another of the cases above referred to, an inquest was held on September 15th. The deceased, J. W. Smith, aged 19, was engaged for three months previously to his illness in sorting average and white mohair; and it was a part of his duty to sweep, every Saturday, the room where van mohair was dealt with, and to pack the sweepings in bags. On September 4th, he was playing cricket, when, being attacked by illness, he was compelled to return home. On the 5th, he was seen by a medical man, who found him feverish and complaining of pain in the head and right side of the body. There was dulness on the right side of the chest posteriorly, and there was crepitation with inspiration. On September 8th, diarrhœa set in, and continued till death, which occurred on September 13th. No *bacilli* were found in some blood which was taken from deceased before death, but numerous specimens were found in the fluids taken after death at the *post mortem* examination, at which Mr. Spear (of the Local Government Board), Mr. Butterfield (the medical officer of health), Mr. Tordoff, and Dr. Bell, who attended the case, and Drs. Rabagliati and Goyder, were present. The inquest was adjourned till October 6th, for the taking of evidence regarding the precautions taken by the firm for whom deceased worked to combat the infectiousness of the materials on which he was engaged. The diarrhœa which existed in this case is not an usual feature of the disease, and served, to some extent, to throw doubt on the diagnosis; but there was no ulceration of Peyer's glands found, while the presence of the *bacillus* leaves no room for doubt. The most characteristic and *post mortem* features of the disease were also present, namely, an accumulation of fluid in the pleural cavity, and softening of the bronchial glands. In one of the cases which has come under the observation of the Commission, there were about three pints of fluid in the pleural cavity, while in Smith's case it amounted only to about half a pint. In a case which occurred at Keighley on August 30th, the blood, which as usual contained *bacilli*, was used to inoculate a rabbit and a guinea-pig, both of which died, one in forty-four hours, and the other in forty-six hours after inoculation. In their blood, *bacilli* swarmed.

It is clear from these cases, as from others, which have been previously reported, that woolsorters' disease, or, as Dr. Bell proposes to call it, *anthracæmia*, is by no means an uncommon affection; and it would appear certain that the *bacillus anthracis* has to do with it either as cause or effect. Now that attention has been directed to it, we shall probably hear more of it; and it is just possible that some obscure cases of disease, at present certified as malignant fever, may come to be classified under this head. Possibly, also, some cases of fatal illness among children, which are at present not understood, may be identified with it. If the *bacillus* could be developed in any way from the wool or from the dust given off by it, a link in the chain of evidence at present wanting would be supplied, and we should be a long way nearer the solution of some points which still remain undetermined.

A NIGHT MEDICAL SERVICE.

AT the instigation, and mainly through the praiseworthy efforts, of Dr. Henri Nachtel, it has been decided to organise a Night Medical Service in New York city, upon a plan which has worked satisfactorily in Paris, Berlin, and St. Petersburg. The purpose of the night medical service is, without assuming any authority, to place prompt and efficient medical assistance at the disposal of the sick during those hours of the night in which it is often difficult to secure such attendance; and thus, in cases of accident, of acute disease, of poisoning (accidental or designed), and in the many difficult emergencies of the night-time, to save life by prompt and decisive measures taken at the proper juncture, and not delayed until medical interference is too late. The service is not gratuitous, and any applicant availing himself of its facilities in an emergency is expected, if able, to pay the doctor in the same manner as he pays his family physician when he employs one. It merely enables a householder, in case of sudden emergency, when the family physician is absent or out of town, to apply to the nearest police-station; and having selected a physician from the authorised list kept at the office, to tide over the momentary difficulty, and leave him free to have recourse to the family physician in the morning. No obligation to employ the night-attendant a second time is established or implied by the temporary emergency. The call is for once only; and, if the doctor pay any further visits, it must be in consequence of a private agreement between the night-attendant and his patient, in which each acts upon his own responsibility, and at his own risk. If the night-attendant find his patient in such a condition as to render it advisable to telegraph for an ambulance, he is at liberty to act upon his own judgment promptly, if the patient or his or her friends consent, and to dispose of the case by removal to a hospital; or, under less urgent circumstances, the night-attendant may take such measures as are essential to the temporary relief of the patient, and advise removal to the hospital in the morning. The night-attendant is, however, not endowed with any legal authority whatever; he merely speaks as an adviser, and not as an officer. If he entertain a suspicion of malignant contagious disease, it becomes his duty to report the case to the Board of Health without delay, in the same manner as any other practitioner; but of his own motion he has no power or authority to make any arbitrary disposition of the case. Happily, the compulsory reporting of all cases o contagious disease attended by medical practitioners is enforced with the utmost rigour in New York city, and it is to be hoped that a similar law will soon be adopted in this country.

The regulations for providing medical assistance in cases of sudden sickness or accident during the night-time are embodied in a short Act which has been recently passed. Under it, it becomes the duty of the captain of each police precinct in New York to register in a book provided for the purpose the names and addresses of all physicians and surgeons of good and regular standing residing within such district, who shall make application for such registry, and who shall thereby pledge themselves to respond to any call for medical attendance made by the police. It is the duty of the registrar of vital statistics to revise this list, and it is not lawful for the police captain to employ any gentleman so registered until he has received a certificate of endorsement from the registrar. The revised list is then printed, and posted in a convenient place in the captain's office, and copies of it are posted in the hotels and telegraph-offices of each district. When application is made at the police-office for medical assistance, the name and address of the applicant, and also of the person needing such attendance, and the date of the application, are at once registered. If an applicant have no preference, it is the duty of the officer in attendance to select the name of the doctor residing nearest to the residence of the patient. An officer is then detailed whose duty it is to call upon the doctor without delay, and to conduct him to the patient's residence forthwith. He then verifies the accuracy of the entries made in the book at the police-office, and enters the name and address of the doctor attending, as well as those of the patient, and the date and hour of the visit, upon a blank form with which he is provided for the purpose, which he then signs and gives to the night medical attendant, who is entitled to receive three dollars from the public funds if the patient refuse to pay that sum in exchange for this certificate. In the latter case, the authorities reserve to themselves the right of recovering the three dollars from the patient in the law-courts, unless he proves to their satisfaction that he is without sufficient means to enable him to pay. The medical attendant has in all cases

to transmit to the Registrar of the Board of Health, during the next twenty-four hours, "a full and accurate statistical exhibit of the case". Provision is also made for the prompt attendance of a second medical attendant if the first be not immediately available; and any physician who neglects to respond to the call of the police-officer is liable to have his name struck off the register. An annual vote of three thousand dollars is made from the State funds to defray the cost of the night medical service.

The following objections have been made to the scheme. It is thought that the medical attendants will be mainly confined to young physicians just commencing practice, whose time is not fully filled up. This view is negatived, however, by the experience of continental cities. Many unqualified practitioners and quacks were thought likely to avail themselves of the service; but this will be impossible under the regulation which provides for the revision of the lists by the registrar of vital statistics, who has the power to erase the name of any practitioner for good and sufficient reasons, and who is thus enabled to investigate "the diploma, record, or regularity" of any physician as to whose competence he may entertain a doubt. As we have before said, until the captain of police has received a certificate of competency from the Registrar, he is not at liberty to employ any physician who has applied to have his name placed upon the register.

In our opinion, the scheme possesses the elements of success, and we shall watch its development with interest. If it succeed, there can be no doubt that it will confer great benefit upon a large class of the community, especially in case of epidemics; and we shall hope to see some similar scheme adopted in the metropolis and in other large towns throughout the United Kingdom.

PREVENTION AND CURE OF INFECTIOUS DISEASE.

In an anniversary address, delivered before the New York State Medical Society, and which has just reached us, Dr. H. D. Didama contrasts the immense progress which has been made in surgery during recent years with the comparatively slow rate at which our knowledge of preventive and curative medicine increases. With regard to the latter, he believes that a great work, now waiting to be accomplished, is the discovery of means for the prevention and cutting short of acute infectious disease. His argument is briefly as follows. The tendency of modern investigation tends to show that minute living things, call them what we will, are so associated with contagious, infectious, and even miasmatic diseases, that these diseases never arise unless the specific germ be present. In the small-pox of men and animals, minute granules and filaments, of peculiar shape and behaviour, have been found; in splenic fever, very narrow rod-like bodies are always present, and the disease cannot be propagated without them; in relapsing fever, certain spirilla, capable of producing the fever, have been demonstrated; and, in malarial diseases, the offending cause has been shown to be a variety of living bacillus, and not a dead chemical poison, the product of decaying vegetation. Facts like these give strong support to the hypothesis that in all the contagious and infectious complaints, and in some self-limited ones which are not contagious, a specific germ is a *sine quâ non* to the development of the disease. No harm can come, but much good, from a provisional adoption of the germ-theory. Well-directed sanitary and therapeutic blows may be delivered against a tangible enemy; but, if our foe be only a mysterious influence, we fight uncertainly as one that beateth the air. The germ-theory accounts, as no other hypothesis does, for the incubation of the eruptive and malarial fevers; the noxious granules received into the blood continually reduplicate, till they become sufficiently numerous to affect the nervous system, and produce the morbid elevation of temperature. It gives a reason for the limited cycle of these fevers; their germs exhaust the soil of some material necessary for their growth and multiplication, and then the fever dies of starvation. It assumes that each disease has its special pabulum, so that scarlet fever may consume its peculiar food, once and for ever, and yet leave an abundance of nutriment suitable for the growth of measles or small-pox. Furthermore, this theory may account for the recurrence of intermittent fever, at somewhat definite periods, after having been arrested by medication. Tyndall found that, while a short boiling destroyed the developed germs in his hay-infusions, the minute granules required a long continuance of the process, or a repetition after a few days. From analogy, we can understand that, while the drugs employed in ague promptly kill the full-grown ague-plants, they may leave the more obstinate seeds to grow to morbific maturity. We can understand, too, why that treatment is most successful which anticipates the recurring tendency, by giving a few efficient doses at weekly intervals.

Now, if minute organisms be the sole cause of contagious, infectious, and malarial diseases, then these diseases may be, and should be, prevented. In regard to one of them—small-pox—the prevention by vaccination is acknowledged to be adequate. Intermittent fever, also, is either prevented or cured, as the case may be, by quinine. It remains for some one to discover a parasiticide which shall destroy the morbific seeds already lodged in the blood, not leaving them to develop and eat out their peculiar food, and with it the life of the patient. Here is a field for the loftiest ambition and warmest philanthropy. Who shall be its successful occupants? There has not been any advance with regard to the prevention or cure of disease during the present century which can at all compare with Jenner's great discovery at the close of the last. Even this, however, would be surpassed if the great end indicated above could be attained.

We understand that an English physician (Dr. Alfred Wise) will practise at Davos Platz during the winter season.

A child has been poisoned at Liverpool by swallowing a chemical fly-paper.

Attention was called, at a recent meeting of the Liverpool Health-Committee, to the death-rate, which has been very high of late. It was stated that, in the week ending September 11th, diarrhœa alone caused over 112 deaths, of which 107 were those of children below five years of age, all occurring in Liverpool.

About £88,000 has now been subscribed towards the cost of the projected new University College at Liverpool, and little more will be needed to make up the amount required. £10,000 is given by the trustees of the late Mr. Roger Lyon Jones to the Royal Infirmary School of Medicine, to found a Chair of Experimental Physics, with which mathematics will be for the time associated.

A large volume containing the results of the Commission of Inquiry into the spread and causes of *pellagra* has been published, and is now the theme of discussion in the Italian press. Lombrosi, a celebrated writer on crime and criminals, maintains that, while the Government statistics put the number of *pellagrosi* at one hundred thousand, they are far nearer half a million; that this new plague is penetrating into the Vattellina and Umbria, and even descending to the territory around Rome at an alarming rate.

The *Pacific Medical and Surgical Journal* refers those who regard vaccination as "a relic of barbarism" to the medical statistics of India, where, in three of the local governments, the total deaths from small-pox in the year 1878 were 226,946, and advises the antivaccinationists to travel off to the Punjaub, where they may enjoy the fruits of exemption from what they are fond of terming the "Jennerian curse".

THE NON-PAUPER PATIENT QUESTION.

At a recent meeting of the Metropolitan Asylums Board, a letter on this question from the Local Government Board was read. It appears that the authorities of University College Hospital had sent a scarlet fever patient to one of the Board's asylums, in a manner opposed to the forms in which patients can be received, as under the Act of 1867 all cases have to go through the relieving officer's hands, and the Local

Government Board was asked by the University College Hospital authorities, to give its sanction to the Asylums Board opening the small-pox and fever asylums to whatever patients afflicted with those diseases the hospital might find it necessary to send. The Local Government Board, in reply, pointed out that patients could only be admitted through the medium of the Poor-law authorities (thus rendering each patient a pauper); but that by section 15 of the Poor Law Amendment Act, 1879, it was open to the vestry authorities of any London parish to contract with the Metropolitan Asylums Board to admit patients other than paupers to the asylums, the vestry paying the cost; but, the Local Government Board added, until the appeal was heard in regard to the case of the Hampstead Hospital ("Hill *v.* the Metropolitan Asylums Board") the managers of the Board would be indisposed to increase their responsibilities, which they would be doing if they undertook the care of non-pauper patients afflicted with fever or small-pox. The like question about Hampstead arose in respect to the Deptford Hospital. The committee asked the Local Government Board's sanction to provide necessary increased accommodation in respect to this asylum; but the Local Government Board, in reply, stated that the managers had better wait until the appeal was heard. Sir E. H. Currie remarked that the appeal, if decided in the Board's favour, would only give the managers the right to have a new trial, and the large hospital at Hampstead would remain empty all this time at the cost of the London ratepayers. It would be well, Sir Edmund suggested, that the boards of guardians of the metropolis should know this, and then probably some of them would take the asylum for a temporary workhouse in the prevailing pressure for workhouse accommodation in some of the parishes re-erecting workhouses.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

THE following gentlemen have been elected by the Council Examiners of this College for the ensuing year:—Anatomy and Physiology: Dr. W. M. Ord and Dr. Curnow. Medical Anatomy and the Principles and Practice of Medicine: Dr. Chas. Handfield Jones and Dr. Andrew. Surgical Anatomy and the Principles and Practice of Surgery: Mr. George Lawson, F.R.C.S., and Mr. Bryant, F.R.C.S. Midwifery and Diseases peculiar to Women: Dr. Alfred Meadows and Dr. Henry Gervis. Chemistry and Chemical Physics: Dr. Stevenson and Dr. Bernays. Materia Medica and Pharmacy: Dr. W. H. Stone and Dr. Lauder Brunton.

TYPHOID FEVER AT WORMWOOD SCRUBBS PRISON.

AT a recent inquest into the death of a prisoner at Millbank Prison from malignant typhoid fever, it was stated that he had contracted the disease at Wormwood Scrubbs Prison from air-poisoning, caused by the filthy state of piggeries in the vicinity. We are enabled to state, on the best authority, that this is by no means the case, as the following statement of facts will show. About the latter end of 1878, there appeared a report in the BRITISH MEDICAL JOURNAL, stating that the Government authorities were running much risk in not appointing a medical officer to Wormwood Scrubbs Prison, which then contained between five hundred and six hundred convicts. A few months after that report appeared, it was found that, although the prison had been opened nearly five years, and inhabited by a large number of convicts, no sanitary arrangements had been made for the removal of the excreta of the men, and that the sewage of many hundred convicts was being buried in the works in a very circumscribed area, some in large holes, not bricked or cemented, dug in the stiff clayey soil of the place, tons of excrement being put in without any previous admixture with loam or quicklime; the holes were then covered over and left. These holes still exist; some but a foot or a couple of feet below the surface of the earth. The warders' quarters were only provided with cesspools, which emitted an intolerable stench; water-latrines were, therefore, built for the use of the convicts employed on the works, and the officers' quarters were provided with water-closets. Previous mischief and bad arrangements, however, remained; and, on the digging out of one of the foundations of the blocks, large quantities of decomposed sewage were disturbed, causing much nausea at the time, both to the convicts and to the officers in charge of them. Last summer, and several summers before, being wet ones, no ill-effects appear to have resulted from this unhealthy state of affairs. What has happened this year, in consequence of continued hot weather, was a result to be justly anticipated. The epidemic caused by the effluvia arising from the semiputrid excrement has culminated in a marked form of typhus and typhoid. The soil upon which buildings were erected last year has naturally become to a certain extent excrement-sodden, in consequence of the numerous cesspits and cesspools about the prison-grounds. Only recently, a cesspool under the very window of the clerk of the works' office has been discovered; and the soil underneath the flooring of his office, on being taken up, was found saturated with sewage. The incriminated piggeries are situated about half a mile from the prison. The inhabitants of the locality were quite healthy, fever and sore-throats being unknown. The doctor who attends them, and the medical officer of health of the district, are each of opinion that the sickness at the prison could not in any way be attributed to causes proceeding from the piggeries in question. We are glad to know the authorities at the Home Office are now aware that the epidemic is due to purely local causes, and are now taking the necessary steps to obviate the sanitary defects enumerated. The prison authorities have invariably carried out the recommendations in regard to sanitary matters laid before them; but it will necessarily be a difficult matter to clear and disinfect the large space occupied by tons of semidecomposed excrement. Some blame has been cast on the medical officer of the prison at Wormwood Scrubbs for ordering the removal of the sick convict to Millbank. He, however, had no alternative; there is no hospital proper at Wormwood Scrubbs, although there are more than five hundred convicts; eleven ordinary cells being set apart for hospital purposes. The man Howard became quite deranged, and behaved in such a manner, that it was necessary he should be in a place where there are proper means of treating such a case; and Millbank Hospital is the recognised *succursale* to which serious cases are sent from Wormwood Scrubbs until the hospital now building there is completed. Again, the sick officer was not sent with the prisoner, as stated, but was also sent to Millbank for the same reason; that there is no proper hospital accommodation for severe cases either for officers or convicts at Wormwood Scrubbs, and it is compulsory that they should be sent to Millbank.

THE UNIVERSITY OF VIENNA.

DURING the summer session recently ended, there were 3,278 ordinary and 618 extraordinary students in the University of Vienna, against 3,258 and 687 in the preceding winter session. Of these, there were in the faculty of medicine, during the summer, 827 ordinary and 164 extraordinary students, against 679 and 144 in the previous session. Among the extraordinary students were 95 foreigners, of whom the largest contingent (38) was furnished by America: there were also 27 Servians and 29 Roumanians.

THAMES WATER AND WATER FROM THE CHALK.

AT the last meeting of the Bermondsey Vestry, the medical officer of health, Dr. Dixon referred to Dr. Frankland's report on the impurity of London water, and more especially to his statement that "the water supplied by the Southwark, and other companies was efficiently filtered, but quite unfit for dietetic purposes, owing to the large quantity of organic matter which it contained." Dr. Dixon went on to say:—"I think this unqualified statement is likely to cause unnecessary alarm. The total solid matter is less than a third part of a teaspoonful in every gallon. The greater part of that matter is chalk or harmless salts. The amount of free organic matter is about one grain in three gallons of water, the larger portion of which is of vegetable origin. There are no material facts which support the opinion, that river water of this character, when efficiently filtered, is really injurious. The water which is obtained from the deep chalk wells is doubtless of most excellent quality from a chemist's point of view, but medical men have failed to discover any differences worth noting in the death-rates, or any evidence what-

ever, that any special class of disease has been prevalent from drinking the waters of the Thames or Lea. Indeed, what differences exist, are in favour of the river water over that of the chalk wells. From the recent concurrence of an increased amount of dissolved organic impurity in the river water and an increased number of deaths from diarrhœa, it may be supposed that the former is the cause of the latter. Such is not necessarily the case. During the last few weeks the number of deaths from diarrhœa, has been quite as numerous, in proportion to the population, in the districts which are supplied by the Kent Water Company as in other districts which are supplied by the Southwark and Lambeth Companies. In the third quarter of last year, the proportional amount of organic elements in the river water compared with that of the chalk wells was 5.9 to 1. The number of deaths in London from diarrhœa was 1184. In the same quarter of the previous year (1878) the proportionate amount of impurity of the river water was only 3.4 to 1. but the deaths from diarrhœa were 2932. In the first quarter of 1872 the Thames water was nine and a half times as impure as the chalk water, yet the deaths from diarrhœa were only 132, being the lowest for that quarter during nine years (1871-79). In the third quarter of 1873 the river water was only two and a half times as impure as that of the Kent Company, but the deaths from diarrhœa were 3170, being the highest number in that quarter during the same nine years. Impure water is unquestionably a cause of diarrhœa and many other diseases; but these are due to the presence of decomposing animal matter, or of sewer gas, and not to the minute quantities of vegetable and animal substances from which no natural water is found to be absolutely free. The water of the Thames at Hampton, when efficiently filtered and properly stored, is, in a practical, if not in a chemical sense, a pure and wholesome water."

THE GOVERNMENT AND ANIMAL VACCINATION.

DR. BUCHANAN, principal medical officer of the Local Government Board, and Dr. Cory, chief vaccinator of the National Vaccine Establishment, have recently been paying a joint visit of inspection to the vaccination stations in Belgium and the Netherlands, where animal vaccination is carried on. This visit is in virtue of the results of the conference on animal vaccination in London in May last, under the presidency of Mr. Ernest Hart, and the subsequent pledges of Mr. Sclater-Booth and Mr. Dodson to act upon those conclusions. The impressions left upon the minds of these gentlemen after witnessing the results obtained from the use of calf-lymph, and the ease with which it can be propagated, would seem to have been of a very favourable kind, and it may be hoped, therefore, that we in England shall not have long to wait for the advantages as regards vaccination which are already enjoyed by almost every other European nation, and that the pledge of the President of the Local Government Board to provide a source of calf-lymph, will, in due course, and without unnecessary delay, be carried out.

THE LONDON WATER-SUPPLY.

THE Report of the Select Committee of the House of Commons on the London Water-Supply has now been issued as a bulky volume of 334 pages. The interest of the blue-book is chiefly financial, since the whole of the evidence turned upon the money side of the question. The Committee seem to have had but a very slender regard for the supremely important question of the sufficiency, as regards quality and quantity, of the supplies at present furnished by the companies; though their recommendation that "it is expedient that the supply of water to the metropolis should be placed under the control of some public body, which shall represent the interests and command the confidence of the water-consumers", may be held by implication to mean that the present companies do not command such confidence, as assuredly they do not. The Committee think—and the majority of thoughtful persons will be disposed to agree with them—that, "under such management, a greater efficiency, economy, and equality of charge than that which at present exists might be secured; the defects in the present provision for the extinction of fire might be remedied; and better provision might be made for the health of the community". Sanitarians will be careful to notice the order in which these several desiderata are placed; the question of health being evidently regarded as the least important. The Committee advise the creation of a "water-authority for the metropolis with statutory powers, which will enable such body to acquire and utilise, so far as may be deemed expedient, existing sources of supply, and to have recourse to such other sources of supply as, upon investigation, may prove to be available and desirable". But, as to the principles which should guide the water-authority, the Committee have left them absolutely in the dark; and it may be feared that, however much of a "representative character" the authority may possess, questions of expense will have precedence of the requirements of the public health. As we observed when Mr. Cross's Water Bill was first introduced (vol. i, 1880, p. 410): "What the ratepayers of London desire and have a right to expect is, that the present monopoly of water exercised by the companies shall be substituted by a better and purer supply, under the control of a single body, whose first thought shall not be large dividends, and whose last the convenience of their customers. Under any reasonable system of water-supply to a vast metropolis like London, these desiderata ought to be accomplished with a greatly decreased charge upon consumers." We think that the evidence taken before the Committee will amply bear us out in this last assertion; and it is to be hoped, therefore, that, in the consideration which must of necessity be given by the Government to the Select Committee's Report during the recess, the urgent claims of the public health in this matter will not be lost sight of in the financial difficulties which will undoubtedly have to be faced.

MEDICAL OFFICER OF HEALTH FOR MARYLEBONE.

A VACANCY has occurred in the office of Medical Officer of Health for Marylebone by the resignation of Dr. Whitmore. The appointment is one which has more than usual public interest. Dr. Whitmore filled the office with great judgment and public spirit: he published printed monthly reports in which, besides the ordinary details of sanitary work, he treated with skill any popular incidents of the moment which could be utilised to emphasise or to illustrate sanitary lessons; and his reports were, perhaps, more often quoted in the press, and thus more largely influenced the public mind towards sanitary progress, than those of any other medical officer. Dr. Whitmore had the advantage of serving under a vestry who appreciated and sympathised with his work, and had great confidence in his discretion. For the vacancy, there is a cloud of candidates, prominent among whom are Dr. Norman Kerr, whose services to public health have been considerable, and who holds an honoured position in the profession and in the parish; Mr. Danford Thomas, Deputy-Coroner for Middlesex; and Mr. Lawrence-Hamilton, who has used his pen more than once for sanitary objects.

EPIDEMIC DIARRHŒA IN LEICESTER.

IN recent years, there are few branches of mortality statistics that have received more attention than summer infantile diarrhœa. The marked variations in the intensity of this fatality in different English and Welsh urban populations, and the difficulty in the way of ascertaining the causes of these variations, has been frequently discussed, without, however, leading to any very satisfactory result. The constantly excessive fatality of summer diarrhœa in Leicester, Hull, Salford, and Norwich, as well as the comparative immunity from the disease enjoyed by Portsmouth, Bristol, and especially by the large towns of South Wales, suggest many theories as to the true causation of this disease. Leicester has almost invariably in recent summers shown greater diarrhœa fatality than any other of the twenty large towns; and the exceptional severity of this summer epidemic has been the subject of more than one special investigation, without, however, yielding results which have materially assisted in pointing out the means for controlling this fatality. The death-rate from diarrhœa in Leicester has, during the present summer, exceeded that which has prevailed in that town in any recent year, and we need scarcely say also exceeded the rate in any other of the Registrar-General's twenty large towns. Since the begin-

ning of July, 297 deaths have been referred to diarrhœa in Leicester, of which 227 were recorded during the five weeks ending last Saturday, averaging more than 45 per week. In the twenty large towns, the fatality of diarrhœa has showed, during the past summer, a marked increase upon that which occurred during the cold and wet summer of 1879, and has been equal to an average annual rate of 4.6 per 1,000 in those twenty towns during the eleven weeks ending last Saturday. In Leicester, the death-date from diarrhœa during the same eleven weeks has been equal to no less than 11.8 per 1,000, and considerably more than twice the average rate prevailing in the twenty towns. During the last five weeks, the annual death-rate from diarrhœa alone has been no less than 18.1 per 1,000. Unfortunately, the Registrar-General's weekly returns for the provincial towns do not give us the mortality statistics in sufficient detail to enable us to analyse the recent terribly high death-returns; neither have we seen any periodical or special returns issued by Dr. Johnson, the medical officer of health for the borough. The Registrar-General's return, however, shows us how disastrously excessive infant mortality has recently been in Leicester. The deaths of infants under one year of age, which averaged but 14 per week during the three months ending June last, have been equal to 35 per week in the eleven weeks ending last Saturday. Infant mortality in Leicester since the beginning of July has been equal to 364 per 1,000 births recorded; and the deaths under one year of age have amounted to nearly 50 per cent. of the deaths from all ages. The medical officer of health for Leicester is, we believe, inclined to attribute this excessive fatality of diarrhœa to the heavy floods of about a month since, which probably rendered the site of the town more than usually waterlogged. It is impossible, however, to believe that Leicester will be satisfied to remain under the imputation of the terribly high rate of infant mortality in the town, which is by no means confined to the summer season.

PUBLIC MORTUARIES.

THE great want of public mortuaries in the metropolis is being daily illustrated by the occurrence of cases shocking public decency, and detrimental to public health. In one case, in which Mr. Humphreys held an inquest into the cause of the death of a labourer at Mile End, the jury, having viewed the body, on their return, made a complaint to the coroner of the unseemly sight which they had just been obliged to witness. The body lay in a very small and squalid room, in which the relatives, three in number, were sleeping, and had to be aroused before the jury could perform their duty. The foreman justly observed that such a state of things ought not to be permitted to exist in an enlightened country. The coroner's officer explained that there was no public mortuary in the parish of Mile End New Town, or he should have taken the earliest steps to have had the body removed. The coroner could only recommend the foreman to make a representation of the facts in the proper quarter.—Dr. Hardwicke, the Coroner for Central Middlesex, on the occasion of holding two inquests at the Hampstead Workhouse Infirmary, also called attention to the inconvenience which has long been felt, by medical men and others having any connection with inquests at Hampstead, in regard to the want of proper mortuary accommodation. The building at present used for that purpose is the workhouse dead-house, situated at one of the extreme ends of that extensive parish, and is not properly fitted with appliances for *post mortem* examinations. Dr. Hardwicke said he had been requested, by medical men and others, to draw the attention of the jury to this matter. It was thought that the time had arrived when they should make some representation to the parish authorities on this subject. The present mortuary was a place for paupers, and it was not proper that the bodies of those who were not paupers should be taken to it. The medical men engaged, too, had not there the proper apparatus with which to do their work. Another grievance was, that persons dying in a distant part of that large parish had to be brought to this place. If it were the opinion of the jury that a more central place should be provided, quite apart from the workhouse, he would offer them a memorial for them to sign. The jury agreed to this suggestion, and a memorial was drawn up and signed by the jurors and others, and is to be followed by another from the medical men of the parish.—We are glad, on the other hand, to learn that a handsome mortuary chapel, of which Dr. G. P. Bate has kindly forwarded us the plan and elevation, has been constructed, and is now in use, in St. Matthew's churchyard, Bethnal Green. It was built from plans prepared by Mr. W. H. Gathercole, the surveyor to the parish, at a total cost, including the excavation of the site, and the removing and reinterring of the bodies, necessarily disturbed, of £1,522. The following details of construction may be found useful by medical officers of health interested in procuring these constructions for their districts. The building contains two mortuary chambers; one for ordinary uses, and the other for the reception of the bodies of persons who have died from infectious disease. Each chamber is sixteen feet square, and the height from the floor to the apex of the roof is twenty-three feet six inches. The two chambers provide accommodation for forty bodies. The material used is brick, with dressings of Portland stone; the floors are finished with patent Victoria stone. The whole of the exposed woodwork in the interior of the building is of pitch pine stained and varnished; the interior walls are finished with Keene's cement and painted; the shelves in the mortuary chambers are of thick slate slabs carried on iron cantilevers, and great care has been taken throughout to keep everything as flat as possible, and to avoid ledges and projecting mouldings, so as to prevent lodgment for dust and dirt, and so that the whole of the interior can be thoroughly cleansed without difficulty. The *post mortem* table is constructed of wood, with a leaden top, so arranged as to drain towards the centre; slate would, perhaps, have been better, but it is understood that there is some difficulty in working that material to a concave surface. In one corner of the *post mortem* room is a large sink with water-supply, and a hose-pipe is provided, so that everything can be washed down without delay or inconvenience; the room also contains a large gas-heated boiler, so arranged that hot water can be obtained in a few minutes; and gas is laid on throughout the whole building.

A MODEL WATER COMPANY.

AT a recent meeting of the Paignton (Devon) local board, one of the members stated that he had visited the works of the Paignton Water Company, and had found that at present the water supplied to the town ran through a duck-pond on the farm of Mr. Daniel Hext. The pond received not only the drainage of Mr. Hext's yard, but also the sewage of his house. Other members of the board having corroborated these statements, it was decided that the works should be inspected by the water committee pending negotiations for the transfer of the works to the board. It is to be hoped that this company will not follow the rumoured example of the Metropolitan water companies: steadily refuse to be bought up, and continue to supply water in accordance with their own ideas of necessary purity.

EXTRAORDINARY TEMPERATURE.

WE hear of a case in Dublin in which the temperature phenomena surpass even those of Mr. Teale's patient. The woman has been under the notice of all the staff of the Adelaide Hospital, and is now in Sir Patrick Dun's Hospital. The highest temperature reported is 131° Fahr. We forbear to mention other points in the case, in the hope that some of the able physicians who have had charge of the patient will send us a full account of the observations made, and also of the precautions taken to avoid imposition; these, as we are informed, have been of the most stringent character.

THE WORK OF A CORONER.

DR. HARDWICKE, the coroner for Central Middlesex, has lately printed and circulated among his friends a supplementary report on the office and duties of a coroner, in which he treats the following subjects: (1) Inquests alleged to be unnecessary and improper; (2) inquiries into deaths in public institutions; and (3) inquiries into deaths at sea. With respect to the first head, Dr. Hardwicke contends that the inquests held by coroners in general are too few rather than too many, and com-

ments with some severity on a resolution passed by the Middlesex magistrates, asserting that many inquests held were neither necessary nor proper. He asserts his intention to carry out the law in this respect actively and energetically; and shows that, with the increase of the population, and also of the use of various anodynes and subtle poisons, all more or less dangerous, the chances are that inquests will increase rather than diminish; and he urges that it is better for a coroner to err on the safe side by holding too many, rather than too few, inquests. He considers, also, that very many deaths which occur in workhouses and hospitals should be made the subject of investigation; and that the attention of Her Majesty's Secretary of State for the Home Department and of the President of the Board of Trade should be drawn to the very high rate of deaths among those engaged in the merchant service and in shipping employ. Acting under the advice of counsel, he waits patiently, being confident that justice will be done to the subject of the pay of coroners, either by Parliament or by the Home Secretary, "by considering the question of our claims of arrears and other matters relating to the office".

EVOLUTIONAL PERIODS.

DR. JULES WORMS, one of our French visitors at the late meeting at Cambridge, publishes, in the *Gazette Hebdomadaire*, a brilliant *feuilleton* descriptive of the various aspects of the meeting. M. Worms does graceful justice to the beauty and historic interest of the locality, the hospitality of the colleges, the eloquence of the orators, the charms of the *fêtes*, as well as the importance of the scientific work. Oddly enough, he thinks that the verbal communications and demonstrations "make a perceptible evolution in English science; the abandonment of preconceived theories for experimental procedure". This is a quaint judgment on the progress of medical science in the country of Harvey, Hunter, Bell, Marshall Hall, Boyle, Hope, Jones, Fergusson, Syme, Simpson, Spencer Wells, and Lister. We should have thought that the great British contributions to medical science—the discovery of the circulation, differentiation of nerves, the ligature of arteries, surgical treatment of aneurisms, investigation of reflex action, introduction of conservative surgery and of resections, perfection of ovariotomy, and antiseptic system of dressings—were all essentially results of experimental research; and that the English—that "practical nation"—were only too much given to slight theory. We should be curious, however, to hear M. Worms sustain his thesis, which he no doubt could do with instructive erudition and suggestive illustration. What are our English preconceived theories? Who were the masters who distinguished themselves in this department in the estimation of our French colleagues?

SMALL-POX IN HAMPSTEAD.

THE advocates of the theory that small-pox is spread from small-pox hospitals to the neighbourhood in which they are situate will find corroborative evidence in the twenty-third annual report of the Hampstead Vestry, in which Dr. Gwynn, the medical officer of health for that district, states that, since the closing of the Metropolitan Asylums Board's Small-pox Hospital at Hampstead, no deaths have occurred from that complaint in the parish; two cases have been sent to Homerton and one to Highgate Hospitals. The report also urges the importance of vaccination and revaccination; and states, as the result of the energetic action of the vaccination officer, that, out of the 1,019 births registered in 1879, "only seven remain unaccounted for".

POLLUTION.

THE question of the serious pollution of the river Arun and its adjacent streams has been brought before the Horsham Guardians (as the rural sanitary authority) by Dr. Kelly of Worthing, district medical officer of health. The result of Dr. Kelly's investigation shows that the pollution of the river, streams, and mill-ponds of the above watercourse could be [illegible] with the overfall of the Horsham new sewage-farm. Along the river, some distance west of the town, all the water had become a black, thick, offensive fluid, exhaling dangerous gases; and the [illegible] the death of the preserved fish on Mr. Stanford's estate recently reported. Dr. Kelly pronounced the sewage-pollution of the river very serious as regards local public health. He had found that the stench was unbearable in those branches of the River Arun agitated by the mill-wheels, and he called upon the Horsham Rural Sanitary Authority to lose no time in dealing with the pollution of the above waters. The guardians have consequently decided to co-operate with the Horsham Local Board in steps to be taken for remedying the evil.

THE DEAD AND WOUNDED FROM THE NINE ELMS RAILWAY ACCIDENT.

IN reply to our inquiries, we learn from Mr. Ballance, House-Surgeon to St. Thomas's Hospital, that there are now no patients in the hospital who were injured in the Nine Elms accident. The injured began to arrive at the hospital at 11.30 P.M. on September 11th. George Dale was brought in dead. He had injuries to the chest-organs, and some ribs fractured in front. Bloody froth was exuding from his mouth and nose. Arnott died fifteen minutes after admission. He had fractured skull and pelvis; injuries to the abdominal organs; and several cuts about the head and face. The Rev. John Lee died four hours after admission. He had a large hæmatoma over the lumbar region of the back, several incised wounds of the scalp, and internal injuries. W. E. Morris was suffering from compound fracture of the right leg. Amputation at the knee-joint was performed, at 2 A.M. on September 12th, by Mr. Anderson, with antiseptic precautions. The artery was tied with catgut. The patient suffered from considerable fever during the next four days—the thermometer registering in the evenings 103°. Secondary hæmorrhage occurred at 8.15 A.M. on September 16th, and was controlled in about half a minute. A very large quantity of blood was lost, and the patient died at 1.30 A.M. on the 17th. Transfusion was attempted; Mr. H. P. Butler, house-physician, giving his blood. Roussel's apparatus was used. George Harvey, who was suffering from shock, was discharged on September 15th. W. J. Cooper was found to have contusion of the left hip, and was discharged on September 21st. W. Atkinson suffered from lacerated incised wound of the right cheek, and had both his legs very much bruised. Several other cases were treated as out-patients. It is needless to add that all the patients were suffering more or less from shock. Both engine-drivers and one guard are seriously ill; they are being attended at their own homes, and not at the hospital.

THE SANITARY INSTITUTE.

THE Sanitary Institute of Great Britain commenced its sittings on the 21st instant, under the chairmanship of Earl Fortescue, President. After luncheon in the Guildhall, Exeter, the members visited an exhibition of sanitary appliances. The first general meeting was held at the Victoria Hall, when Earl Fortescue delivered the presidential address, dealing with the progress of sanitary science, the serious defects in local administration, especially with regard to the metropolis, and the work of legislation with a view to the health of the people. On the 22nd inst., Professor De Chaumont gave a learned and interesting address on Preventive Medicine; Mr. H. C. Burdett read a paper, which was very well received, and gave rise to an instructive discussion, on the Unhealthiness of Public Institutions, with special reference to Hospitals and Asylums.

DIARRHŒA AT BARNSLEY.

THERE has been, during the last six weeks, decidedly more than the average amount for the district of summer diarrhœa, and, of course, very much more than in 1879. In August, one death (a woman, aged 61) was registered from English cholera; but none before or since. The actual figures for the district, so far as it comes under the charge of Dr. M. T. Sadler as medical officer of health, are as follow. Barnsley: Population, about 30,000. In August.—Total births, 109; total deaths, 85; deaths of infants under twelve months, 34; deaths from diarrhœa, 20 (19 infants, 0 children over one and under two years); English cholera, one death. In September, from the 1st to the 15th.—Total

births, 40; total deaths, 41; deaths of infants under twelve months, 16; deaths from diarrhœa, 19 (of which 12 were infants and 4 children between one and two years). Since then, *i. e.*, in September, between the 15th and the 21st, 9 births and 18 deaths have been registered; of which last, 6 were from diarrhœa, and 3 of the deaths were those of infants. In the Barnsley Rural and Worsborough Urban Sanitary Districts, which are in the Barnsley Union, and the latter closely adjoining, the figures for August are: Population, about 25,000; total births, 111; total deaths, 51; deaths of infants, 17; from diarrhœa, 13. The returns for September are not complete, but for the Nether Hoyland and Darfield District (population about 9,500) up to September 18th, they are: births, 16; deaths, 14; deaths of infants, 7; from diarrhœa, 6. Thus, in Barnsley (as at Leicester), the deaths registered have exceeded the births during the present month.

REGISTRATION OF DISEASES.

THE question on what terms physicians should be called upon to report to the health authority, for the public good, cases of disease dangerous to the public health at the moment of their occurrence, has been much discussed in America. Legislation requiring practitioners to furnish such statistics gratuitously is becoming general, and has been accepted with little question, apparently. At a recent medical convention in the State of Ohio, the following resolution was presented from the board for the consideration of the Association: "That, in the opinion of the members of this society, the laws of the State requiring physicians to report to the local board of health, or to the health officer of their locality, all cases of sickness and death, of diseases contagious or dangerous to the public health, are wise and proper, and ought to be complied with." A motion to adopt the resolution brought on quite a spirited debate, the opposition being led by Dr. Brodie of Detroit, who claimed that the State had no right to either ask or compel the physicians of the State to perform any such services without remuneration. Drs. Jerome of East Saginaw and Hitchcock of Kalamazoo urged the adoption of the resolution, on the grounds that all physicians should be willing to perform the work for the benefit of humanity. The resolution was finally adopted.

YELLOW FEVER ATMOSPHERE.

ANALYSIS of the air at New Orleans, from Sept. 9th to Nov. 24th of last year, during the prevalence of yellow fever, revealed a series of extraordinary variations in the amount of free and albuminoid ammonia to the million of cubic feet of atmosphere, and these corresponded very curiously with the progress and fluctuations of the epidemic. Thus, on Sept. 9th, the analysis showed 125.62 grains of free, and 350.36 grains of albuminoid ammonia, to each 1,000,000 cubic feet of air. Ten days after the amount of albuminoid stood at the extraordinary figure of 400.75 grains; this was its highest point, and, with many fluctuations from day to day, it gradually declined as the epidemic wore out its fury, until, on Nov. 24th, the amount was only 47.25 grains. The curve of the free ammonia was less regular, but the decline had a general correspondence with that of albuminoid.

INDIAN HYGIENE.

THE Government of India has offered a prize of £100 for the best "Manual of Hygiene", to serve as a text-book for the use of the British soldiers in that country. Works submitted in competition for this prize must be sent in by their authors to the Secretary to the Government of India in the Military Department at Calcutta, so as to reach his hands not later than the last day of next March. Each is to bear a motto, and to have a sealed envelope attached, bearing the same motto on the outside cover and the name of the author within, after the fashion which prevails in our universities at home; and the prize will be adjudicated by a committee of officers, consisting of the Surgeon-General and the principal Medical Officer of the forces in India, the Sanitary Commissioner with the Government of India, and an officer of the Quarter-master-General's Department. The work is "to be written in clear and simple English, and to be thoroughly practical, showing the causes of disease affecting health, the special dangers to which British soldiers are exposed in India, more particularly during their first year in the country, and the best means by which those dangers may be averted". The work, if accepted, will be printed at the public expense, and become the property of the State; and it is not to exceed in bulk "more than fifty or sixty pages of print, of small pica, octavo size". It is added that the Government of India will not feel bound to award the prize at all, unless one at least of the manuals produced in competition shall be judged "in all respects suitable to the purposes for which it is required".

THE HEALTH OF BOMBAY.

THE Annual Report of the Health-Officer of Bombay shows that, notwithstanding a still further immigration from tracts of country afflicted with famine, the mortality decreased during 1879. Altogether, 4,472 fewer deaths were registered than in 1878; and, excepting small-pox, of which there was a partial resuscitation, there was a diminution in the mortality from the chief types of disease, the mortality from cholera being 859 less than in 1878. Exclusive of still-born, 22,527 deaths were registered, giving a death-rate on the census population of 34.95 per 1000. There was a diminution of the general infant mortality, but an increase in three particular districts. Of the races inhabiting the city, the lowest mortality, as in 1878, was registered in the Parsee race. Last year was exceptionally healthy for the Parsees, the mortality being the lowest since the last census of 1872 was taken. The mortality from fevers is still high, 8,445 deaths being recorded. Cholera caused the deaths of 423 persons, and small-pox the deaths of 479 persons, or 122 more than in 1878.

THE HEALTH OF BRUSSELS.

DR. JANSSENS has just issued his annual volume of mortality statistics for the city of Brussels. From this, it appears that, during the year 1879, there were, in an estimated population of 175,782 inhabitants, 5,685 births and 5,257 deaths, besides 328 still-born. Of the births, 2,893 were males, and 2,792 females. The illegitimate births numbered 1,514: 800 males, and 714 females. Of the deaths, 2,840 were males, and 2,417 females. Compared with the decennial period 1864-73, the deaths showed a decline of 453. The annual death-rate is calculated at 24.7 per 1000 of the population. Diseases of the respiratory organs greatly swelled the mortality at Brussels, as elsewhere, last year.

ALLEGED SPONTANEOUS COW-POX.

AN account is given by Professor Simonds in the current number of the *Veterinarian* of a supposed outbreak of natural vaccine at Halstead, and of the experiments made to determine the truth of this improbable occurrence, and the nature of the eruption. It appears that on June 1st last the cowman at a certain farm at Halstead noticed a sore on the udder of one of the cows. After this, other cows were similarly affected, and on June 19, when the local veterinary surgeon saw them, he found one cow with several papulæ on the udder, somewhat flattened, and of a slightly red colour. Only one of these papulæ subsequently developed a well-formed vesicle, and from this, on June 26th, some points were charged with limpid lymph, and forwarded to Professor Simonds. The other cows then affected were recovering. On June 24th, in consequence of a communication from Dr. Hinds of Halstead, Dr. Stevens of the Local Government Board, came to the farm and examined the herd, when two fresh cases in the papular stage were discovered. Apparently hoping to find in this phenomenon the indications of an outbreak of natural cow-pox, Dr. Buchanan, the chief of the Medical Department of the Local Government Board, Professor Burdon Sanderson, and Mr. Ceely of Aylesbury, came together on June 30th to inspect the herd. There were then two or three other fresh cases in the papular stage. Mr. Ceely, who alone expressed any opinion on the subject, regarded the disease as spurious, and of an eczematous nature, and since no one can speak with so great authority as Mr. Ceely on the pathology of this question, his opinion must be accepted as final and conclusive. After June 30th two other cows were attacked, but did not de-

velope vesicles of a size sufficient to yield lymph. From another case, however, some points were charged, and forwarded on July 3rd to Dr. Buchanan and Mr. Ceely. The animals all gradually recovered, and in a week or two all indications of the malady had passed away. In no case was there any marked disturbance of the general health, nor, as far as could be ascertained, was there any deleterious quality imparted to the milk. On July 2nd a calf was very thoroughly vaccinated by Professor Simonds with the Halstead lymph, but, with the exception of a little diffused redness on the day following the vaccination, no effects whatever were produced. Mr. Ceely, who made some experiments with the lymph sent him, introduced some points into the arm of a child without any result, and rubbed three points on a cluster of scratches on the back of his left hand, with the same want of success. In reporting these facts, Mr. Ceely observed, "I fully expected that the result of the insertion of the points would prove the spurious character of the eruption. The utmost that I looked for was the reproduction of the vesicle or bulla commonly yielded by the affected udder; but it appears that no result has occurred, proving that the serous fluid of the vesicle or bulla was neither specific enough to irritate the hand of the milker, nor to be reproduced on the calf by inoculation." Some points of the Halstead lymph were also used without result by Dr. Cory at the Blackfriars Station of the National Vaccine Establishment. Professor Simonds, in commenting upon these failures, remarks that he was prepared to expect nothing more from the use of the points than what ordinarily results from the spurious vesicle, as he did not see any indications of the source of the fluid being of the nature of true vaccine. It is satisfactory that the nature of this outbreak, of what might easily have been mistaken for true vaccine, has thus been set at rest by the consensus of high medical and veterinary opinion. The facts which we have given from Professor Simonds' account may, perhaps, act as a guide for the future in the diagnosis of similar spurious outbreaks of cow-pox.

HOW EPIDEMICS ARE SPREAD.

SOME time ago, we had occasion to criticise the action, or rather inaction, of the Derby Town Council, in allowing its infectious hospital to lie idle and unused whilst scarlatina was raging furiously in the district (see vol. ii, 1879, p. 1033). We regret now to find, from Mr. Iliffe's last published report, that, notwithstanding the continued prevalence of scarlatina in the town, no efforts were made until last June to secure the isolation of a single person in the building. During the first six months of the present year, no fewer than two hundred and eleven cases of scarlet fever were reported to the authority under the compulsory notification clause of the local Act of last year. Yet, notwithstanding the early intimation of the existence of cases which this clause affords, and the consequent increased facility for dealing with each case as it arises, it was not until the epidemic was well on the decline that "it was thought prudent" to bring the hospital "into general use for the reception of patients". The defects in the building would appear to be such that danger was apprehended to the patients before June, "a time when the temperature of the atmosphere allowed of admission without detriment to the treatment of such cases; for, unless favourable atmospheric conditions existed, a charge of manslaughter, in case of death occurring, might be preferred against the sanitary authority for the removal of patients suffering from dangerous infectious diseases". In plain words, the hospital was too dilapidated and draughty to admit of cases being admitted into it with safety to the patients. Of the scandal of such a state of affairs being permitted to exist whilst scarlatina is raging, we have already sufficiently spoken in our former remarks on the subject. It cannot be alleged that it was not possible to secure the isolation of the patients; for, in addition to the exceptional powers for dealing with infection which Derby took last year, in imitation of Jarrow, the medical officer of health has himself stated that the greater number of attacks were in houses occupied by the lowest classes, where there was much huddling together and overcrowding in filthy houses. Notwithstanding this, however, it was not until June last that the hospital received any patients. The experience gained even by this small amount of use is entirely convincing as to the influence which the hospital would have exercised, had it been brought into use at the proper time. During June, fourteen new cases of scarlatina were reported in the town, four of which were removed to the hospital. In the four cases removed, no further spread of infection took place; while of the ten not removed (in two of which the diagnosis was doubtful), the infection spread to eleven other persons, two of whom died. "It cannot", in the words of Mr. Iliffe, "be said that, of the removed cases, no soil was left in the houses upon which the poison might act and propagate itself; for in one case the patient was removed from a large drapery establishment, where several young persons were engaged in business. In a second case, the patient was removed from a lodging-house, usually a very fertile source of the spread of infectious disease. In a third, there were three other children, none of whom had suffered from scarlet fever." Facts such as these must surely teach the Town Council the lesson it should have learnt long ago—to keep its hospital always properly equipped and in readiness for the reception of the first case of infectious disease that may present itself in the district.

FRENCH AUDIPHONES.

A MODIFICATION of the audiphone, conceived in true French taste, has been submitted to the Paris Academy of Medicine. M. Mathieu of Estissac sent a series of these instruments, made of cardboard, in the form of cigars, flowers, etc., which, placed between the teeth, make the deaf to hear. It is necessary, however, for the proper action of audiphones, that the patient using them should be perfectly deaf; those who are only partially so derive no advantage from the use of the instrument. Of course, in order to ensure the success of the experiment, the acoustic nerve must have retained its anatomical integrity.

THE INSANITARY STATE OF PARIS.

FOR many weeks past, there have been complaints in various districts of Paris of the sickening smells which are experienced towards the evening, especially after rain-storms. Certain factories in the neighbourhood of Paris, the sewers, the cesspools, have successively been held accountable for the nuisance. For the most part, it was asserted that the plan of emptying into the sewers the liquid matters from the cesspools was alone to blame. The Prefect of Police having appealed to the Council of Public Health as to the means to be taken under the circumstances, and the precautions to be recommended to the managers of manufactories and the makers of sulphate of ammonia, that body has studied the question exhaustively. The majority of the members of the Council, and specially MM. Hillairet, de Luyrees, Peligot, Cloez, du Sonich, Bussy, Delpech, and Bourneville, were agreed in owning that the principal source of the nuisance was the sewer encumbered with matters which had no right to be there, and insufficiently flushed. M. de Sonich attributed the putrid emanations to the solid matters which the dividing apparatus allows to pass into the sewers; MM. Delpech and Bourneville were of the same opinion; and M. Delpech said that the sewers should be more copiously flushed. M. Bourneville thought there were three causes of the air-infection: the sewers, the objectionable system of emptying the cesspools, and the circle of night-soil depôts which surround the city.

THE BANJO AS A THERAPEUTIC AGENT.

DR. SAMUEL A. FRANCIS, Fellow of the New York Academy of Medicine, gives a report of a case in which he combined the parts of Æsculapius and Orpheus, with a *naïveté* and an air of conviction which offer irresistible attractions to quotation. We are compelled reluctantly to condense the unique narrative which he furnishes to the *Medical Gazette* of New York.

"Some few years since, I was summoned in haste to attend a lady who was said to be dying. On entering her elegant and luxurious bedroom, I found her parents and nurse apprehensively awaiting her certain exit. She was of an organisation that can be best described as delicate and intense."

Her delicate and intense organisation had combined with an abuse

of narcotics (henbane and chloral-hydrate) and absence of food, to bring her into a state of somnolence and exhaustion, which together presented a case alarming in its nature, and hopeless to all appearance. We must now quote the *ipsissima verba* of the physician.

"It is needless to enumerate the various approved methods adopted by me to resuscitate my patient, without the slightest promising effect. She, moreover, had made up her mind to die, and gracefully but firmly opposed every effort on my part to relieve her. Something must be done and at once. There was no time to call in consultation any prominent physician. Rapidly grasping the emergency, and coming to the conclusion that her body being poisoned was affecting her mind, and that a muffled exit would soon end this painful scene, I determined to affect the body through the mind, as it was utterly impossible to make her retain a single teaspoonful of milk and lime-water, or even keep down a small piece of cracked ice. Having attended her some time before through a dangerous attack of typhoid fever, brought on by a defective drain, I had remarked the high order of her cultivated mind, her quick appreciation of anything original, novel, or interesting, her love of music, and her keen sense of the ridiculous. On these characteristics I immediately determined to act; so, hastening home, I seized my banjo and returned to her bedside, where, her agonised parents and weeping attendants were gathered in solemn awe. Taking up a prominent position, I commenced, at once, one of those ludicrous negro melodies, with a rapid accompaniment, whose song and music combined in olden times to rouse the slave from despondency, and exhilarate the aged and infirm. The effect was magical. An entirely new set of nerves were excited. At first, there was a listless attention, followed by a gradual fading away of the cloudy intellect; then interest; then pleasure; then a smile; and, ere I had played and sung two songs, the low ripple of a laugh repaid me for what the little big men of the world might say was frivolous treatment; as if anything innocent and honourable that brought back one from the grave, when all else had failed, could be frivolous. For three nights and a great portion of three days, I remained at the house, playing and singing, thereby keeping her mind from feeding on itself, and preventing that exhausting introspection so baneful to the sick. At any hour, night or day, that she was taken with what an Irish attendant so tersely styled as 'strong weakness', I repaired to the bedside, and, with father and mother as chorus, lifted her out of herself. Elasticity soon came; then cheerfulness; then assimilation; finally appetite. She recovered entirely and completely, and is now in the enjoyment of perfect health. My fee was high, but was paid with gratitude."

Dr. Francis adds that he is "certain that many persons are allowed to 'fade away', after all the 'regular, legitimate, and scientific' remedies have been faithfully tried; instead of endeavouring to reach that vital spark, and fan it on to life, by adopting some entirely new and sudden, though pleasing method." The expedient can hardly be said to be "entirely new"; it is at least as old as David, who charmed away the melancholy of Saul. But the instrument is novel; and the little touches describing the "intense organisation" of the lady and her elegant bedroom; her graceful determination to make a "muffled exit"; the ludicrous nigger melodies played and sung during three days by the physician, with the chorus by her "agonised parents and weeping attendants", roused for the purpose from their attitude of solemn awe; all these make up a picture which is, perhaps, more fitted for the pencil of Du Maurier than the pen of Browning. We belong to the anomalous class who find the treatment funny, if not "frivolous".

SCOTLAND.

UTILISATION OF SEWAGE AT NAIRN.

A DRAINAGE system has been this season completed at Nairn, the expense of the works having been about £3,000. Instead of running the sewage into the sea, which would have decreased the amenity of the beach, a favourite resort of bathers, it was resolved to apply the sewage to the irrigation of a piece of waste-ground, for the growth of grass or other produce. The drainage had to be carried across the river, and for this purpose two piers, consisting of iron cylinders filled in with concrete, were sunk. The pipe (an eighteen-inch iron pipe) was laid upon them, and, with foot-boards and hand-rails on the top of it, the pipe has been converted into a handsome foot-bridge, which has proved a great convenience. The level of the pipe being higher than the ground on the other side, a large embankment was raised, in which the pipe is embedded, and the top of the embankment is utilised as a public walk. It is intended to plant the sides of it with shrubs, but in the meantime a covering of grass binds the soil. The place selected for the sewage-farm is known as the Salt Marsh. At present only ten acres are being treated for the utilisation of the sewage. Its distribution is carried on by a series of channels cut in the ground on the ordinary principles of irrigation, and is completely under control—one part being treated one day and another the next, the turning of a tap or two being all that is required to direct the flow to the desired spot. Provision is made to meet any emergency arising from a spate, or excessive flow of water in the pipes, so that all danger of the pipes bursting or the water flowing back is obviated, as well as the deluging of the land prevented. Very little, if any, offensive odour is felt even in passing over the ground, and one man is at present sufficient to direct the irrigation and keep the ground in order. It has yet to be seen whether the utilisation of the sewage will be profitable. Provost Leslie and others are sanguine that it will pay, after the first year, a very good return. Patches of ground which were irrigated a couple of months ago have a most luxuriant and rank growth of grass, which contrasts strikingly with the bare turf of the rest of the ground. This coincides with the experience gained at Craigentinny, near Edinburgh, where for many years the same results have been obtained, and which should lead to a much wider adoption of a plan which secures a good return for the expense, and, at the same time, preserves the salubrity of rivers and seashore.

THE FERGUSON EYE-BEQUEST AT GREENOCK.

SINCE the appointment of an ophthalmic surgeon in connection with the above bequest, the need of full and suitable accommodation for ophthalmic cases requiring admission into hospital has been felt; and accordingly a subcommittee of the directors of the Greenock Infirmary has been appointed to prepare a report as to the cost of fitting-up wards in the infirmary for patients being treated for diseases of the eye, who must necessarily reside in the institution. As soon as this report is prepared, it will be submitted to the trustees of the Ferguson bequest, with the view of obtaining from them a suitable grant of money.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 11th, it appears that the death-rate in the eight principal towns was 18.2 per 1,000 of estimated population. This rate is 1.4 above that for the corresponding week of last year, and 1.1 under that for the previous week of the present year. The lowest mortality was recorded in Dundee—viz., 13.4 per 1,000; and the highest in Leith—viz., 33.8 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.2 per 1,000, or the same as last week. Acute diseases of the chest caused 60 deaths, or 5 less than the number recorded during last week. The mean temperature was 57.1°, being 5.0° under that of the week immediately preceding, and 2.2° above that for the corresponding week of last year.

PROPOSED HYDROPATHIC SANATORIUM AT OBAN.

NOW that Oban has been made more accessible by the completion of the new railway-line, it has been decided to erect there one of those hydropathic sanatoria which have proved so successful in other parts of the country. The proposed site is on the rising ground above the town, and it is intended to take advantage of the experience gained in the construction of all previous hydropathic establishments, and make the buildings the most complete of their kind.

GLASGOW DISTRICT LUNACY BOARD.

AT a meeting of the District Board of Lunacy held last week, after other business had been disposed of, the meeting proceeded to the election of a medical superintendent for Kirkland's Asylum. At a meeting of the Committee of Management and Finance held previously, applications were laid before it from Dr. Archibald Campbell Clark,

Assistant-Physician, Morningside, and Dr. Robert Blair, Assistant-Physician, Gartnavel Asylum; a majority of two of the Committee were in favour of Dr. Clark. The approval of the Committee's recommendation was moved and seconded; while other members moved that Dr. Blair be appointed. Some discussion followed; but the most notable thing was that the meeting ultimately wisely considered that it could be of service to neither gentleman to be pitted against each other by a mere show of votes, and agreed to the recommendation of the Committee appointing Dr. Clark. It would be a good thing if all canvassing and voting for appointments were put an end to.

LOCH KATRINE WATER.

THE monthly report on the quality of Loch Katrine water, issued by Professor Mills of Anderson's College, gives the following results in parts per 100,000: Total solid impurity, 2.90; organic carbon, 0.174; organic nitrogen, 0.014; ammonia, 0.000; nitric nitrogen, 0.007; total combined nitrogen, 0.021; chlorine, 0.65; hardness, 1.05. The sample, which was taken on September 14th, was very light-brown in colour, and contained little suspended matter.

DR. IRELAND AND THE ST. PETERSBURG MEDICO-PSYCHOLOGICAL SOCIETY.

IN consideration of the value of his work on *Idiocy and Imbecility*, which he published three years ago, Dr. W. W. Ireland, of the National Institution for Imbeciles, Larbert, Stirlingshire, has been elected a corresponding member of the Medico-Psychological Society of St. Petersburg. The book has been recently translated into Russian by Dr. Tomaschewski; and Dr. Mierzejewski of the Medico-Chirurgical Academy, St. Petersburg, has written a preface to it.

SUICIDE OF A RECENTLY DISCHARGED LUNATIC.

A TAILOR called Henry Miller, who had been recently discharged from the Lunatic Asylum, Murthly, committed suicide in Crieff, where he has since resided, by swallowing a considerable quantity of hydrocyanic acid. Death occurred too quickly for medical aid to be of service.

IRELAND.

DR. SEGRAVE, Medical Officer of Monasterboice Dispensary District, Drogheda Union, has resigned his appointment, and has gone to reside in England.

THE QUEEN'S UNIVERSITY.

THE ordinary autumnal examinations in the Faculty of Medicine of the University commenced in Dublin on Monday last, and will be concluded on the 1st proximo. The honour examinations take place on Tuesday, October 5th, and the meeting of the University, at which the degrees will be conferred, will be held in St. Patrick's Hall, Dublin Castle, on Wednesday, October 13th. There are 84 candidates for the degree of M.D., 120 for the first medical examination, and 140 for the second medical examination. These probably may be the last autumnal examinations held by the Queen's University; as, on the 5th proximo, the Committee appointed by the Senate of the new Royal University of Ireland will, it is stated, meet to complete the revision of the scheme of studies, and settle other details. A few days later, the Senate of the University will assemble, and, it is presumed, make further progress in the preparation of a scheme for carrying out the provisions of the Act under which the Royal University was incorporated.

[illegible] MALFEASANCE [illegible] IN DUBLIN.

AN inquiry on sworn evidence, which was opened by the Inspector of the Local Government Board in the South Dublin Union Workhouse last week, on charges of malfeasance at the Kilmainham Small-pox Sheds, made by a former patient in them, shows how, by the grossest lack of supervision, the subordinates of this hospital have had it in their power to imperil the lives of the patients, and spread the disease. According to the evidence, as given in a daily paper, it is stated on oath that, not only was there a constant system of peculation in the shape of shortened rations, not only were the stimulants ordered by the doctors and supplied by the matron tampered with and withheld, but actually the not disinfected shirts and other clothes of the persons dying of this loathsome and infectious disease were taken away and pawned to raise money on for drink. The witness also swore that he saw cold water administered in teaspoonfuls to a small-pox patient in Kilmainham Sheds, instead of the brandy which had been ordered by the doctor and supplied by the matron, but which was intercepted on its way to the lips of the patients by the remorseless pauper attendants, whose life in the sheds appears to have been from end to end a scene of dishonesty, drunkenness, and desperadoism of the most dangerous and diabolical character. As the inquiry has been adjourned to next week, we will not allude further at present to this horrible disclosure; the occurrence of which, if half of what has been sworn to be true, is a disgrace to the city.

ADULTERATION OF DRUGS.

AT a recent meeting of the Board of Guardians of Gorey Union, a resolution was adopted that, in future, all medicines supplied to the Union should be analysed by Dr. Cameron of Dublin. A similar resolution has been passed by the Newcastle Guardians, who have determined to have the contractor prosecuted if the drugs, on analysis, are found to be adulterated.

THE HIGH DEATH-RATE OF DUBLIN.

IN the Dublin Registration District the deaths registered, during the week ending on the 18th instant, represent an annual rate of mortality of 39.2 in every thousand of the population. One hundred and twenty, or 51 per cent., of the deaths, were those of children under five years of age—sixty-two being of infants under one year old. The deaths in one of the city districts represent an annual death-rate of 55.5 per thousand.

WOOLSORTERS' DISEASE.

THE Trades' Union Congress, which has just brought its session in Dublin to a conclusion, adopted the following resolution on the 15th instant.

"That the Parliamentary Committee be requested to continue their exertions on behalf of those engaged in woolsorting, with the object of obtaining for them protection against blood-poisoning caused by the use of imported wool and hair infected with a malignant and dangerous disease, and to which woolsorters are rendered liable when pursuing their occupation."

CHARGE OF NEGLECT AGAINST A MEDICAL OFFICER.

A SPECIAL meeting of the Kanturk Dispensary Committee was held recently for the purpose of considering a communication from the Local Government Board in reference to the late Poor-law inquiry at Kanturk. The investigation was held in consequence of a charge of neglect preferred against Dr. J. Mackey, Medical Officer of the Kanturk Dispensary District, by a woman named O'Donnell, in which it was alleged that a child had died for want of medical attendance. The Local Government Board stated that, before arriving at a decision, they wished to have the opinion of the Committee of Management as to the manner in which Dr. Mackey had hitherto discharged his duties. The Committee unanimously adopted a resolution to the effect, that, during the three years Dr. Mackey had held the office of medical officer, he had at all times acted with much courtesy, attention, and kindness to the poor, and had fulfilled his duties with the greatest efficiency.

QUEEN'S COLLEGE, CORK.

DURING the session 1879-80, there was a substantial increase in the number of students, as compared with the preceding year, which, up to that period, had been the most prosperous the College had seen. During the session, the book collections were increased by 1,200 volumes, of which 550 were purchased and the rest presented. These latter include a fourth addition by Mr. Crawford to the "Crawford Library",

which now contains upwards of 2,000 volumes. The geological and zoological museums are stated to be in excellent order, and, some additions having been made to the cases in the temporary archæological and ethnological museum, room has been provided to exhibit part of the fine collection of weapons and other objects from New Guinea and the South Sea Islands, presented to the College by a former student, Dr. C. H. Haines, late Surgeon to Her Majesty's ship *Basilisk*. It has also been found necessary to devote a small sum, from the funds at the disposal of the College, for the salary of a curator for the anatomical, pathological, materia medica, surgical, and obstetrical collections; and Dr. C. Y. Pearson, a graduate of the College, has been appointed to the office, and is arranging the anatomical and pathological collections in the new museum, which is fit for their reception. By the munificence of Mr. W. H. Crawford, the astronomical and physical observatory building is now nearly completed; the equatorial telescope has been placed in position; the arrangements for the siderostatic telescope will soon be finished; and funds have been obtained for a separate meteorological observatory, provided with a full set of self-registering instruments.

DR. E. B. SINCLAIR OF DUBLIN.

THIS gentleman, upon whom Her Majesty the Queen has graciously signified her intention of conferring the honour of knighthood, chiefly in consequence of his most successful exertions in educating and training women to serve as midwives in the army, is the eldest son of the late Rev. Richard Hertly Sinclair, Vicar of Cashel, county Longford. Dr. Sinclair was born in 1824, and educated in Trinity College, and holds the degrees of M.A. and M.D. of the Dublin University. At the commencement of his professional career, he entered the Army Medical Department as assistant-surgeon in the "Royal Scots"; but, after nearly three years' service in that regiment, he left the army to take the appointment of Assistant-Physician to the Rotunda Lying-in Hospital. From that time, Dr. Sinclair has devoted himself to obstetrics, and has gained an influential position for himself in this department of medicine, to the literature of which he has also made several contributions. A Fellow, ex-Censor, and past Vice-President of the King and Queen's College of Physicians, he was elected to succeed Dr. Fleetwood Churchill in the King's Professorship of Midwifery in the School of Physic, Trinity College, Dublin; and also appointed Physician to Sir P. Dun's Hospital, and put in charge of its maternity department, which, indeed, he was mainly instrumental in establishing. On the institution by the University of Dublin of the degree of *Magister in Arte Obstetricâ*, it was at once conferred upon Dr. Sinclair, *honoris causâ;* and the Obstetrical Society of Dublin elected him as their President in 1878, and re-elected him last year. He is also the efficient Secretary of the Vaccine Department of the Local Government Board for Ireland. The comparatively short military medical experience that Dr. Sinclair had afforded him ample evidence of the discomforts, not to speak of dangers, that the wives of soldiers underwent in parturition, from the want of educated midwives to attend them in their hour of trouble. The regimental midwife of former years—as some of our military medical associates may have experienced—was generally a woman whose sole claim to the office consisted in herself having had a family. The results were too often not only deplorable, but frequently disastrous. This was a state of things which Dr. Sinclair set himself to improve. In 1869, with the sanction and co-operation of His Royal Highness the Field Marshal Commanding-in-Chief; the then head of the Army Medical Department; and the Board of Sir P. Dun's Hospital, he established this School—since which, up to July 1880, he has sent three hundred and eighty-eight well-trained midwives and ladies, nursetenders for service in the army. This School—to which two or three of the wives of non-commissioned officers or soldiers from regiments serving in Ireland are sent for training for a period of six months—is under the direct patronage of Her Majesty, and has been productive of an immense amount of benefit to the families of her soldiers in all parts of the world. We congratulate Dr. Sinclair on the well-earned honour which he will shortly, we presume, receive at the hands of Her Majesty in person. Since the celebrated Sir Fielding Ould, Master of the Rotunda Hospital, no obstetrician in Ireland has received any similar honour.

"FAMINE FEVER" IN IRELAND.

A VALUABLE report on the medical and sanitary condition of the distressed districts of Ireland has just been issued by Drs. Sigerson and Kenny. The information which reached the Mansion House Committee for the Relief of the Distress in Ireland showed that fevers were very prevalent; that, in some instances, the medical men themselves had been struck down; and that the poor were in a deplorable condition. Under these circumstances, the Mansion House Committee requested Dr. Sigerson, who was one of their members, to make a tour of inspection through the affected districts, and to aid the Committee with his advice. He associated Dr. Kenny with him in the work, and the report before us is the result of their joint labours. Dr. Sigerson and Dr. Kenny proceeded to the extreme west of Ireland, and visited the chief seats of distress in Mayo and Galway. The glimpses which the report affords of the general state of these counties is very suggestive; and shows that many works of public utility—such as the construction of roads, piers, and harbours—might be undertaken with great advantage. The allowances of Indian corn, upon which many of the poorer families have been living for months, were evidently insufficient for proper nutrition; and thus multitudes of people were predisposed to disease. The type of fever that was met with varied in different localities. Sometimes maculated typhus predominated, sometimes typhoid, sometimes relapsing (?) fever. Sometimes, in a single hamlet, these various fevers were all to be found, blended with dysenteric diarrhœa and other diseases. The report contains many suggestions, which Drs. Sigerson and Kenny have made with the view of mitigating the present evils and arresting the spread of disease. We are glad to learn from the preface, that the Chief Secretary for Ireland (Mr. Forster) has recognised the value of this report; and has stated that, in many instances, the recommendations it contains have been already adopted.

CORK FEVER HOSPITAL.

THE following is the report of the Committee of the Cork Fever Hospital, on the conclusion of the investigation of the charges preferred by Mr. J. B. Crawford.

First: "That, having received a direct promise that his (Mr. Crawford's) child would not be placed under the care of Dr. Jones, he was subsequently so placed." The answer of the Committee to that is: We are of opinion that Mr. Crawford had good reason to believe that such promise was given; but Dr. Jones is in no way involved in the matter. He knew nothing about the case until he saw it on his usual visit.—*Second Charge:* "That Dr. Jones, having refused to allow his (Mr. Crawford's) physician to be taken into consultation as to the proposed operation on his child, subsequently performed the operation (a new and dangerous one) without consulting his own colleagues in the hospital." The answer is: Dr. Jones did refuse Mr. Crawford to call in his (Mr. Crawford's) private physician in consultation. He was quite justified in so doing, according to the usage and the practice of the hospital. He did perform the operation by himself. We are of opinion that the operation, or application of the drug referred to, was new in the city of Cork; but the medical evidence shows that in medical practice it is not new either in the United Kingdom or on the continent of Europe. When skilfully administered, we do not believe the term "dangerous" applicable to the operation or use of the drug. We regret that, following the usage of the hospital, Dr. Jones did not consult his colleagues; and we are of opinion that, using pilocarpin for the first time in a case of scarlatina, he ought to have shared the responsibility with them; but, on the other hand, the medical evidence states that, from Dr. Jones's special knowledge of the drug, he was warranted in dispensing with a consultation.—*Third Charge:* "That he so performed that operation without any proper explanation to Mr. Crawford of its nature or effect, and without getting his sanction." The answer of the Committee to that was: We do not think it was necessary that Dr. Jones should have given any explanation to Mr. Crawford, nor was it necessary to get his consent.—*Fourth Charge:* "That he exhibited want of care and discretion as to the time of performing the operation, and great carelessness and neglect subse-

quently, considering the dangerous and novel nature of the operation." The answer is: There was want of care as to the time of performing the operation. Sufficient pains were not taken to procure the drug in due time, and lamentable delay occurred in its application. If the remedy was useful at nine o'clock in the morning, there was great neglect in not applying it until five o'clock in the evening. On the whole, we do consider that there was evinced an absence of sufficient care and interest in the treatment of the case. The Committee cannot close their unanimous report without stating that the facts disclosed in the course of this inquiry necessitate a searching investigation into the general administration of the hospital, which they have determined to make forthwith.

THE LARYNGOLOGICAL CONGRESS AT MILAN.

[FROM A SPECIAL CORRESPONDENT.]

SINCE the commencement of the present month, the town of Milan has been the seat of various international congresses, the members of which, in the intervals of their sittings, united in enjoying the hospitality most liberally offered by the prefect and municipality. The interests represented were Ophthalmology, Otology, Laryngology, Bienfaisance Publique, History, and the teaching of Deaf-mutes. The present is the first year of a Laryngological Congress; and, from the numbers present—upwards of fifty—and from the fact that various States of America, and practically every European country, were represented, the congress bids fair, in the future, to be as great a success as are the Ophthalmological and Otological meetings. It was decided that a meeting should take place every two years, and that the next congress should be at Paris. It was unanimously resolved that the members present should not accept the invitation to form a Subsection at the International Medical Congress to be held in London in 1881. Amongst those present were Drs. Stoerck and Schnitzler (Berlin); Krishaber, Gougenheim, and Fournié (Paris); Schmidt (Frankfort); Ariza (Madrid); Zawerthal (Rome); Capart (Brussels); Hering (Warsaw); Elsberg (New York); and Hartman (Baltimore). The communications were made in various languages, but the discussions took place for the most part in French. Several members, however, showed great and varied linguistic talents, amongst whom Dr. Massei of Naples appeared to be *facile princeps*.

The most interesting discussions resulted from papers read on Tuberculosis as appearing in the Throat, by Messrs. Schmidt, Schnitzler, Lennox Browne, Ariza, and Zawerthal. The German professors mentioned several cases of cure of laryngeal phthisis, but their *confrères* from other countries did not appear to have been equally fortunate.

Other communications on syphilitic affections of the throat were read, notably one by Dr. Gougenheim of Paris, which elicited a lively discussion.

A most interesting case was exhibited by Professor Caselli, of complete removal, twelve months previously, of the larynx, pharynx, base of the tongue, soft palate, and tonsils, for an infiltrating lymphoid growth interfering with respiration and deglutition. The patient appeared in excellent health, swallowed easily both solids and fluids, and spoke distinctly by means of an ingenious apparatus acting after the manner of a clarionet.

The members of the congress were fortunate enough to be invited to be present at the cremation of two bodies in the public crematorium; the bodies were consumed in separate furnaces, and by rival processes. The first body was operated on in the furnace originally erected, which consists simply of a chamber containing a fire, fed by wood, which is heaped around the corpse laid on an iron grill; smoke issues freely from the chimney, and there exists a strong suspicion of an odour. The second cremation was effected entirely by gas, produced and driven into the furnace by the destructive distillation of wood; and, by an ingenious arrangement, three distinct processes of combustion take place, and neither smoke nor smell issues from the chimney. Those present were all strongly in favour of the second process, and were unanimous in considering that there was nothing repulsive in the arrangements. As this was in a measure a scientific investigation, those present were permitted to watch the disintegration of the bodies through windows in the walls of the furnaces. It may be interesting to state that the Cremation Society is firmly established in Milan, and that nearly sixty voluntary cremations have taken place during the past year.

The municipal authorities gave several *soirées* in their magnificent hall in the Palazzo Marino, and the members of the congress enjoyed the hospitality of their president, Dr. Labus, at a charming dinner, followed by a *conversazione*, held at his house—a house, by the way, which would fairly raise the envy of the most successful London practitioner. The town of Milan invited the members of all the congresses to a trip to Como by special train, and a tour of the lake by steamer; and they were accompanied by the civic authorities and the prefects of several towns. As may be imagined, Como was *en fête;* the tourists were met by bands of music everywhere, and salutes of cannon; and the procession *en voiture* to the banks of the lovely lake was quite imposing. A most sumptuous *déjeuner* was provided at Bellaggio, covers being laid for 250, which was followed by various patriotic and international toasts and sentiments. A reduction of 30 per cent. was granted by the Italian railways. The entertainments ended with a grand and varied spectacle in the Amphitheatre, which was thronged by thirty thousand spectators, the mass of faces presenting a grand effect, such as certainly could nowhere be seen in England. The members of the Congress quitted the hospitalities of Milan with great regret.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE BROOKWOOD ASYLUM.

IN his well-digested and instructive report on the state of the Surrey County Lunatic Asylum at Brookwood—a large institution, containing 1,061 lunatics on the 31st of December last—Dr. Brushfield, the medical superintendent, points out material differences in the character of the patients received into Scotch and English asylums, making utterly futile any comparison between their statistical results. In the asylum for the counties of Beds, Herts, and Hunts, which he selects as a fair example of an English asylum drawing its inmates from a population engaged in agriculture, there were on the 31st of December last 130 epileptics and general paralytics, making 15.87 per cent. of the total number of patients resident; whereas in the Argyle and Bute Asylum, a Scotch asylum in an agricultural district, there were on the same day just 14 epileptics and general paralytics, making 4.39 per cent. of the total number of patients resident. In the Surrey County Asylum, again, which draws the bulk of its patients from the south of London, there were on the 31st of December 189 epileptics and general paralytics, making 17.81 per cent. of the total number of patients resident. It is clear that the great excess of epileptic and general paralytic patients in English, as compared with Scotch asylums, must proportionately swell their death-rate and depress their rate of recovery, and must also enormously enhance the difficulties of management in them; for it is amongst patients of these classes that a majority of the accidents and difficulties occur that chequer asylum administration.

THE BARNWOOD HOUSE ASYLUM.

THE Barnwood House Hospital for the Insane at Gloucester, which accommodates about one hundred patients, realised last year a net profit of £3,625; and this it did while acting to some extent as a public charity, and receiving a certain number of patients at rates of board little, if at all, more than is often charged for paupers. The average rate of board charged was £2 2s. 3d. per week; and yet, notwithstanding the comparative smallness of the charge, nothing seems to have been omitted that could minister to the recovery, comfort, and amusement of the inmates. The Commissioners in Lunacy express their entire satisfaction with the condition and management of the institution, and comment on the excellent order which prevailed, and on the comfortable and home-like look of the rooms, into which mirrors, pictures, and other objects of ornament and interest have been introduced, even where they are occupied by patients who are of an excitable class, and who are disposed to be destructive. "Barnwood House", says the Visiting Committee, "may be truly said to be an agreeable and comfortable home to all seeking admission within its walls". They cannot speak too highly of the manner in which the hospital has been conducted by Dr. Needham.

THE RANGOON LUNATIC ASYLUM.

THE report of the Rangoon Lunatic Asylum for 1878, issued from the office of the Chief Commissioner of British Burmah under date April 26th, 1879, reveals a state of matters in that institution calling for the close attention of the Colonial Office. That extensive alterations and reforms are needed in it will not be doubted, after a perusal of the following epitomised history of a tragedy which occurred within its walls on August 8th, 1878. Lookoo, a Hindoo from the Prome district, said to be suicidal, but not dangerous, was admitted on August 3rd, 1878. There was no empty cell to put him in, so he was lodged with two Burmese reported quiet, one of whom had been fifteen days under

observation, and the other eight days. The first night Lookoo was tied by the ankle to the door, with sufficient room to lie down or stand up; and, though he was sleepless, he did no mischief. Next day, by order of the medical superintendent, he was set free; and, although he was very noisy, and climbed on the door and window, nothing untoward happened on the 4th, 5th, and 6th of August. On the night of the 7th, he was again tied by the ankle to the bars of the door, to prevent him from injuring himself. At 4 A.M. on the morning of the 8th, the night-watchman, who was shown by the tell-tale clock to have made the round of the asylum regularly every hour, was attracted by a noise to the cell in which Lookoo was confined; and, on going there, he found that unhappy lunatic on the floor, with one of the Burmese on the top of him, kneading him with elbows and knees. He called the other two peons, and separated the Burmese and Lookos, and then summoned the native doctor and other officials. Lookoo died in a few hours: and a *post mortem* examination revealed fractured ribs, rupture of the liver, and an accumulation of blood in the abdominal cavity. Tsan Doon, the Burman, had his face much swollen and his hands torn, but recovered in a few days. The other Burman who was in the cell, and who could talk rationally at times, by name Shwe Gone, testified that Lookoo was always climbing on the gate, and that Tsan Doon pulled him down; and that Tsan Doon insisted on lying on the top of Lookoo. A quarrel ensued, and they fought; and Tsan Doon got Lookoo down, and pounded him with his elbows and knees. No blame in connection with this shocking event, which was fully investigated, first by the assistant-magistrate, and then by the committee of visitors, can, we think, be attributed to the medical superintendent of the asylum, who seems to have done the best he could with the means at his disposal; but the description given of it conjures up a picture of grievous defects and irregularities in the institution which ought to be remedied. If lunatics are to be shut up in cells without constant sane supervision, it would be only prudent to carry out the cellular system in its entirety, and to provide a separate cell for each lunatic. To hobble lunatics like animals, to keep them cooped up night and day, to leave them quarrelling together without interference, are so utterly at variance with all sound principles of asylum management and with the dictates of common humanity, that any establishment in which such practices exist is in need of radical reform. An asylum of the size of that at Rangoon, which contains upwards of two hundred patients, should be under the direction of a medical man who has had special experience in the care of the insane, and not of a military surgeon without such experience, however able he may be.

THE BARTON COTTAGE HOSPITAL.

THE first annual report of the Barton Cottage Hospital must be considered very satisfactory. The hospital was opened on the 31st July 1879, and since that time the number of patients who have been admitted and benefited has been thirty, so that there can be no doubt as to the need of such an institution in the village, or of its great usefulness. The readiness with which so large a sum of money has been subscribed to the building fund by numerous friends, the generosity of many others in adding to and improving the original building, laying out and planting the ground, and furnishing gifts in kind, prove the interest that has been taken in the progress and establishment of the hospital. The building is now complete, and except that some amount of painting and papering is required to finish the interior, it is not expected that any further outlay will be necessary for many years. There is a small debt remaining to be paid; but the experience of the past leads the Committee to hope that there will be no difficulty in clearing this off. So far as can be judged at present, an annual income of from £170 to £200 will enable the Committee to keep everything in good working order; and they appeal confidently to the subscribers for support to this extent.

LUNATIC ASYLUMS IN BOMBAY.

FROM the report of Surgeon-General Hunter, we learn that there are now five lunatic asylums in the Bombay Presidency, the largest of them being the Cohàbe Asylum, which accommodates 280 patients; and the smallest the Dharwar, which accommodates 18. The total population of the five asylums was, on the 31st of January last, 583. Each asylum is superintended by a medical officer of the rank of Surgeon-Major; and commendable attention appears to be given in each to conservancy, drainage, water-supply, and the repairs of buildings. The superficial space allowed to each patient varies considerably in the different asylums, being 104 superficial feet for Europeans and 74 for natives at Cohàbe Asylum, and only 50 superficial feet for patients at Hyderabad Asylum. The rate of recovery during 1879, for all the asylums, was 12.8 per cent., calculated on the average number daily resident, which seems discouragingly small to those accustomed to English statistics; and the death-rate was 11.6, also calculated on the daily average number resident, which is most satisfactorily low—unless, indeed, patients labouring under mortal sickness were included in the large group, numbering 113, discharged not recovered, but improved and unimproved to the care of friends during the year. The rate of mortality in the Hyderabad Asylum was 27.9 per cent., against 10.1 in the previous year; and the enormous increase on it was so inadequately accounted for by the Superintendent, that a special inquiry has been ordered, to be conducted by the Deputy Surgeon-General of the Sind District. Out of 434 cases admitted into the several asylums in which the cause of insanity was ascertained, 140 were attributed to gánga, 47 to spirits, and 8 to opium, or a total of 195, which gives a proportion of 44.9 per cent. of cases in which intoxicating liquors and drugs have produced insanity. In 66 out of the 434 cases, moral causes had been at work, grief having been responsible for insanity in 55 cases.

THE LEAMINGTON PROVIDENT DISPENSARY.

THE eleventh annual report of this institution shows that it continues to be useful and prosperous. The number of provident members on the books at the end of 1879 was 3,778; and their payments during the year amounted to £688 7s.—an increase of £42 19s. 8d. over those of the previous year. The nursing fund has again been found most useful in supplying suitable nurses to those patients who, from their extreme poverty, would otherwise be unable to obtain the necessary help. With a view to lessening the increasingly large expenditure connected with the midwifery department, the Committee have engaged a fully qualified midwife, holding the licence of "The Maternity of Sir Patrick Dun's Hospital, Dublin", who commenced her duties on August 1st, 1879. Any woman, being a provident member, may secure the assistance of the midwife by a very small payment. Should this scheme be successful, not only will the governors' fund be greatly relieved, but a boon will be conferred upon the poor, many of whom have hitherto been compelled to resort to unskilled and unqualified midwives.

At the close of the year, the sum of £467 9s. 10d. was divided among the four medical officers. Mr. Fenn Clark and Dr. Thursfield, who took an active part in the formation of the dispensary, and who have been on the staff for ten years, have been elected honorary consulting medical officers; and Dr. James Thompson has been elected a member of the acting staff.

HOSPITAL AND ASYLUM MANAGEMENT.

THERE appears to exist in America an organised means of conference between the lay and medical managers of asylums and hospitals in general meeting which may be conceived to be of much utility. Such conference might assist towards unraveling a good many knotty points which at present are causing difficulties in administration. We find in the *New York Medical Record*, of August 14th, an account of the seventh annual conference of charities and correctional institutions which met at Cleveland, June 29th and 30th, July 1st and 2nd; General Brinkerhoff, President. A large number of delegates, representing sixteen States, were present.

After the usual introductory speeches, the president delivered his annual address. This is described as an admirable *résumé* of the condition and methods of working of the various charitable and correctional institutions of each State which will form a valuable mine of information upon the subject. Of New York he said: "She is in the front rank in charitable and correctional institutions, and in some respects is in advance of all others. Her reformatory at Elmira is in most respects the best model for prison management in America, and her asylum for chronic insane, in a large degree has solved the problem of economy and comfort combined in the care of that unfortunate class". The third day was devoted to the discussion of the care of the insane. The report of a Committee on Insanity was read by Dr. J. P. Bancroft, Chairman. This was followed by a paper by Dr. R. Gundry, Superintendent of the Maryland State Asylum, "On the Care of the Insane". In these papers, and in the discussion following them, opinions favourable to non-restraint and to the greater occupation of patients were expressed. Dr. John G. Shaw, of Brooklyn, read a very candid and practical paper "On the Value of Non-restraint in Treating the Insane". He was followed by Dr. E. C. Seguin, who spoke on the right of the insane to liberty. A paper by Dr. Nathan Allen, "On the Supervision of Asylums", was read by Miss A. A. Chevalier. Dr. Geo. M. Beard made some remarks on the need of an association for the protection of the insane. A letter from Dr. Nathan Allen, of Massachusetts, was read, in which he expressed his hearty sympathy

with the project of forming such an association. Resolutions were unanimously adopted, recommending that greater facilities be furnished the insane for employment and occupation; condemning the architectural construction of many of the asylums on the score of their cost and inadequacy to meet the best needs of the inmates; endorsing the plan of separating in most cases the chronic from the acute insane; and recommending that consulting boards of physicians be attached to insane asylums. A national association for the protection of the insane was organised, with the following officers: President, H. B. Wilbur of Syracuse; Vice-President, Nathan Allen of Lowell; Treasurer, Geo. M. Beard, New York, and a council of fifteen, embracing a number of physicians, among whom are Dr. Mary Putnam-Jacobi, Dr. John G. Shaw, and Dr. Seybura of New York. The association meets in New York in the last week of September, to perfect its organisation.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the office of the Association, 161A, Strand, London, on Wednesday, the 13th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 14th, 1880.

EAST ANGLIAN BRANCH.

THE annual meeting of this Branch will be held at Lowestoft, on Friday, October 8th.

It was requested that notice of intention to read a paper or other communication might be forwarded to Dr. Elliston by September 14th.

J. B. PITT, M.D., Norwich, } *Honorary Secretaries.*
W. A. ELLISTON, M.D., Ipswich, }

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held at Barnard Castle, on Tuesday, October 5th.

Members intending to read papers are requested to communicate at once with the Secretary.

Durham, September 9th. T. W. BARRON, *Honorary Secretary.*

SOUTH OF IRELAND BRANCH.

A SPECIAL general meeting of the members of this Branch will be held in the Royal Cork Institution, on Thursday next, September 30th, at half-past four o'clock, to express an opinion on the medical inquiry which recently occurred at Cork, in which Dr. Macnaughton Jones was especially interested.

J. J. CRUMEN, M.D., } *Hon. Secs.*
T. C. ATKINS, M.D., }

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 21st, at a quarter-past five o'clock. The following question has been settled by the Council as the one on which members should be invited to express their opinion at the said meeting after dinner: "What, in your opinion, is the best method to be adopted by the Profession, the Public, and the Sanitary Authorities, in order to check the spread of Infectious Diseases?"

Members having any communication to bring before the meeting are requested to send notice of its title to the Honorary Secretary; they will further oblige by informing him, before the day of meeting, if they purpose being at the dinner.

[illegible], exclusive of wine.

W. H. [illegible], M.D., *Honorary Secretary.*

SHROPSHIRE AND MID-WALES BRANCH.

[illegible] of the Branch will be held at the Lion Hotel, Shrewsbury, on Thursday, October 21st, at 2 p.m.

The annual dinner will take place at the Lion Hotel, at five o'clock precisely.

[illegible] reading papers, or having [illegible] for discussion, are requested to communicate with

HENRY NORTON EDWARDS, *Honorary Secretary.*

READING BRANCH.

THE twenty-fifth annual meeting of this Branch was held at the Athenæum, Reading, on Wednesday, September 15th.

The President (Mr. SMITH of Heckfield) delivered a very able address on the Progress of Medical Science, for which he received the thanks of the meeting, the Branch undertaking the publication of the address.

The usual business of the Branch was transacted. A full meeting of members subsequently dined at the Queen's Hotel.

VICTORIAN BRANCH: ORDINARY MEETING.

AN ordinary meeting of the Branch was held in the hall of the Royal Society at Melbourne, on April 16th; Mr. WILLIAM GILBEE in the Chair.

Correspondence was read by the Honorary Secretary, Dr. Henry, relating to the satisfactory extension of the Branch in Victoria, and the Association in Australia; from Mr. Rudall drawing attention to an outbreak of diphtheria at Hamilton, and urging the need of an investigation by Government as to the cause of the outbreak. After some discussion, the Honorary Secretary was authorised to draw the attention of the Chief Secretary thereto.

Paying Hospitals.—The CHAIRMAN brought before the meeting the subject of "Paying Hospitals from a Professional Point of View". The proposal to establish such hospitals had been regarded with much favour by the public, and he desired to ascertain the views of representatives of the medical profession with regard to it. Personally, he believed the establishment of paying hospitals to be very desirable. He knew that a number of people sought admission into the Melbourne Hospital who were able to pay a certain sum. He did not blame them for so doing; indeed, he had himself sent persons to the hospital whom he desired to receive that attention which he could not give to them in private lodgings. It had always struck him, in considering such cases, that it would be highly advantageous to have an institution of the kind suggested—not a pauperising institution, but one in which the patients would receive the same attention as in an ordinary hospital by the payment of a sum within their means. They should have a separate institution, with a regular scale of charges, and in which patients would be at liberty to select their medical attendant, and thus secure the attention of one in whom they would feel most confidence. Two schemes had been suggested—the one to set apart a paying ward in some institution, to be attended by its honorary staff, and the other to establish a new paying hospital. The latter scheme had received a large amount of encouragement from the public, and he now desired an expression of opinion from the profession. In America, paying hospital patients were divided into three classes, the rates of payment being in proportion to their means. He thought a scale of fees might be arranged which would be within the means of many now dependent on the charitable institutions. The proposal under notice would do much to check imposition on the ordinary institutions, and to supply the wants of those who went into them simply because they could not obtain attention within their means elsewhere. He had before him a memorial sent by a large and influential body of medical gentlemen in London to the Lord Mayor. A meeting was held at the Mansion House, at which the scheme was approved, and commended to the warm support of the profession and the public, as the means of meeting a serious public want.—Dr. M'MILLAN observed that the proposal to establish a paying hospital had met with the approval of the public, and it only remained for them to take some practical steps towards carrying it out.—The CHAIRMAN intimated that a prospectus was being drawn up of a company, with a capital of £20,000, of which £10,000 would be called up. He felt sure that the company, if once started, would not only be beneficial, but also successful from a financial point of view.—Dr. HENRY quoted from a recently published work on the subject, in which it was remarked that there were no civilised countries except England and Russia in which paying hospitals had not been established, and referred to the great success of institutions of this nature in America. He had been in an hospital in Germany in which provision was made for the accommodation of three classes—the nobility and gentry of the place (who felt no shame in attending such a place), the poorer classes, and the members of the friendly societies. He submitted to the meeting elaborate plans of a large home hospital, the design of which provided for its being erected at a slight elevation from the ground, so as to secure the freest current of air under the whole floor, and showed a building provided with the most approved means of ventilation, and comprising many wards for single patients of a well-to-do class, besides large wards, operating rooms, and outbuildings for infectious cases. In supporting the scheme submitted, Dr. Henry dwelt upon the important purposes a paying hospital might serve, as a

place of training for nurses, and a house of disinfection, besides a retreat for paying patients.—Dr. GRAHAM moved: "That this Association considers it desirable that paying hospitals should be established." The motion was seconded by Dr. M'MILLAN, and carried unanimously.

Asylums.—Dr. GRAHAM moved: "That his former motion ('That a petition be presented to the new Parliament, asking for an inquiry into the management of the asylums for the insane in this colony, with a view to placing them on the same footing as the English institutions, as recommended by the Royal Commission of 1862') be rescinded; and 'That the Council wait upon the Chief Secretary to urge upon him the desirability of placing the asylums upon the same footing as in England.'"

Paper.—Dr. O'HARA read an interesting practical paper on the "Therapeutic Uses of Iodoform."

SPECIAL CORRESPONDENCE.

PARIS.

Professor Kuss on Syphilis.—Action for Malapraxis and Defamation. Avocate of M. Ricord.—Crime in France.—The Temperance Society of Paris.—M. Broca's Successors.—Proposed Monument to Broca.

As a sort of corollary to Dr. Desprès' peculiar opinion with regard to the pathology and treatment of syphilis, referred to in my letter of the 26th June, the *Moniteur Thérapeutique* has published an article on the same subject from the pen of a disciple of the late Professor Kuss of Strasburg, an epitome of which I submit for the benefit of your readers. The learned professor does not accept Ricord's classification of primary, secondary, and tertiary syphilis, but asserts that the various manifestations of the disease, all of which may exist at the same time, are due rather to the differences of individual constitutions than to any strict chronological influence. The treatment adopted and inculcated by Professor Kuss is founded upon the histological character of the tissues affected, which are the connective or cellular tissue, the epithelium, or both, at the same time. On this is founded three varieties of syphilis: the cellular, the epithelial, the mixed. To the first class belong pustular and tuberculous syphilides, syphilitic cellular iritis, exostoses, visceral lesions; to the second belong roseola, macular or pigmentary, vesicular, bullous syphilides, mucous patches, syphilitic epithelial iritis, etc.; to the third, all these different varieties occurring simultaneously. Another basis of treatment is founded on the elective action of certain drugs; thus, according to Dr. Kuss, mercury has a predilection for the epithelial tissues, whilst iodine or the iodide of potassium affects the cellular or connective tissue. These medicines, then, may be considered the specifics for each respective variety; and, as a natural consequence, to the mixed variety would be adapted the mixed treatment which Dr. Kuss employed, not simultaneously, but consecutively, selecting one or the other of the abovenamed drugs, according to the urgency of the symptoms or manifestations of the disease. In either case, Dr. Kuss adopted what he termed the "rapid method", that is to say, to bring the system under the influence of the medicine as quickly as possible, which he administered until the tissues became saturated with the drug.

The *Gazette des Tribunaux* has published a very interesting case of medical jurisprudence that was lately brought before the Civil Court of Paris, and the reporter facetiously headed the article "Venus and Mercury before the Tribunal". An action was brought against a medical man, and damages to the extent of 10,000 *francs* were claimed by a Mademoiselle D. for malapraxis, and, by insinuation, defamation of character on the part of the doctor. The advocate for the prosecution stated that his client had travelled a good deal, and that she was employed as a "figurante" at the Gaité theatre in the piece entitled *Voyage dans la Lune*—what a singular coincidence! The charge against the doctor was that he had treated the young demoiselle for a disease which she had not, and that she had got a clue to the nature of her "supposed" malady by the remedy which was prescribed, viz., mercury. The inference was that she had syphilis, which rather shocked the moral sentiment of Mademoiselle D. She thereupon consulted two other medical men (one of whom is a well known syphilographer), from whom she obtained certificates to the effect that she had nothing the matter with her. It came out, however, in the defence, that Mademoiselle D. applied to these gentlemen six weeks after having undergone the treatment prescribed by the first doctor, when of course she was cured, not of the disease, but of its external manifestations. This view of the case was corroborated by M. Ricord, who furnished a certificate to the effect that "all external traces of the terrible malady disappear in less than two months, after a treatment methodically and well carried out". After such evidence, and taking into consideration the antecedents of the prosecutrix, which were anything but of a moral character, the case was dismissed, and Mademoiselle D. was condemned to pay the expenses of the trial.

The above case, in which Ricord's name is brought forward, reminds me of an anecdote in connection with the eminent syphilographer; and as it is authentic, having heard it from his own lips, I may relate it here. At a *soirée* given last winter by a well known dentist in Paris, at which were present Ricord and other notabilities of the profession, the host introduced an artist, as having just arrived from the moon, and said that he was so well versed with the mysteries of the healing art, that he was quite capable of curing all maladies, even those reputed incurable, and that the doctors themselves might consult him. The *spirituel* Ricord, with wonted wit, asked the new comer whether he did not meet Venus and Mercury on his way. "You see the depth of this remark", observed one of the guests to me; "is he not well acquainted with the celestial chart?"

I referred in my last to the steady increase of crime in France; and, whatever may be the cause, it does not seem to have any tendency to abate. In Paris, particularly, the records of the criminal courts teem with crimes of the most abominable character—rape, murders, robbery, and assassinations being the principal; and just now there seems to be a regular epidemic of the latter, for, in one week alone, during last month, I counted no fewer than six. There seems to be also a fashion in the means employed for carrying out murderous designs. For the past few years, stunning the victim, and then cutting him or her up into pieces, has been in vogue. Suicides, even, are not infrequent; and the mode adopted for putting an end to one's self is pistol-firing by men, and drowning by women. Poisoning is now more rarely resorted to in either case; but the following is one of the most cold-blooded and diabolical on record. A man by the name of Baude, aged 32, and employed in a bakery at St. Denis, was lately tried for having, in the month of April last, poisoned, or attempted to poison, his master and mistress, in doing which, two or three hundred of the inhabitants of that town were very nearly falling victims. The substance employed was arsenic, of which the accused threw a certain quantity into the dough which was prepared for 180 loaves of about two pounds each in weight. The bread thus impregnated was sold in the morning—that is, a few hours after it was baked—and about three hundred persons, including the baker and his wife, who partook of the same series of loaves, were seized with symptoms of poisoning, some of whom were reduced next to death's door, and even the dog of the house was very nearly falling a victim. At first, it was thought that some mysterious or unusual epidemic was breaking out in the town; but, owing to the number of persons simultaneously and similarly affected (one medical man alone having attended no fewer than two hundred), suspicion of poisoning was aroused; the bread was analysed, and found to contain arsenic. The exact quantity thrown into the dough could not be ascertained, but it must have been considerable to have so sensibly affected such a number of persons. All were seized with the same set of symptoms: pain in the head, violent colic, cramps, general lassitude accompanied with fever, and shivering simulating ague, nausea, and diarrhœa; and it was to the latter circumstance, as stated by the medical witnesses, and to the presence of the gluten in the bread, that was due the escape of the unwitting victims. The crime was so cold-blooded and horrible in its character, that, notwithstanding the able defence by M. Lachaud, nephew of the celebrated *avocat*, who pleaded "extenuating circumstances", the jury returned a verdict of guilty, and the wretched man was sentenced to death. One of the arguments of Maître Lachaud was, that the man was not when he committed the horrible crime, and was still not, in full possession of his mental faculties, owing to a diseased brain resulting from chronic drunkenness, and that, consequently, the responsibility of the prisoner must be looked upon as being *nil*, or extremely limited; but the judge, in summing up the case, impressed upon the jury the necessity for drawing a distinction between a diseased mind resulting spontaneously and that caused voluntarily by irregular but controllable habits, such as the abuse of spirituous liquors, common in civilised countries, and the prisoner before them should be included in the latter category. In the former case, "extenuating circumstances" might be admitted; but, in the latter, the full penalty of the law should be applied, by which means the criminal would atone for his crime, and society would be rid of a dangerous subject. This, I consider, is a right view of the case; but I say it with diffidence, as I feel that such an opinion is at variance with that held by not a few medical jurists.

The Temperance Society of Paris, or rather of France, is still most zealous in its efforts, not to produce teetotallers, as the task would be simply impracticable in a vine-growing country like France, but to put down intemperance by every possible means. Legislation has not had the

effect anticipated, for it has been proved that, although the prohibitory measures in vogue in this country have conduced to limit the extent of open drunkenness, they yet allow more wine and spirits to be drunk now-a-days in France than at any former period, notwithstanding the heavy tax levied on them; and so it is with tobacco-smoking. Those interested in the cause are invited, whatever their nationality, to forward to the Secrétaire Général de la Société Française de Temperance, 6, Rue de l'Université, Paris, original communications bearing reference to temperance and to alcoholic drinks considered either as regards their composition, or their action on the system, which will be admitted for competition for the year 1881; but the following is that defined by the committee as the real subject for competition for the capital prize: "Do alcoholic liquors when introduced into the economy undergo any modifications?" The author of the best essay on this subject will receive a prize of 2,000 *francs* (£80). The essays should be in French and may be forwarded in manuscript or printed, not signed, but should be accompanied by the name and address of the author in a sealed envelope, and should reach the above address before the 1st of January, 1881.

By the death of the lamented Broca several important positions have become vacant. Professor Trélat succeeds him as Professor of Clinical Surgery at the Neckar Hospital; Professor Gavarret as principal of the Anthropological Institute; and Dr. Matthias Duval, an Agrégé of the Faculty of Medicine is appointed Director of the Laboratory and Professor of Anthropological Anatomy and Physiology at that Institute. A better choice could hardly have been made, as Dr. Duval is already reputed for his remarkable works on morphology and cerebral embryogeny.

It is proposed by the Anthropological Society of Paris to erect a monument to the memory of Paul Broca. What the form of the monument is to assume has not transpired, but it is to be hoped it will be something worthy of the man. Subscriptions will be received by M. Lequay, Treasurer, 3, Rue de la Sainte-Chapelle, Paris.

MELBOURNE.

(FROM OUR OWN CORRESPONDENT.)

Presentation to Dr. Neild.—Drinking-water of Melbourne.—Removal of an Abdominal Hydatid Tumour.

A LARGE number of medical men met lately, at the Hall of the Medical Society, to recognise the services of Dr. Neild to the Society and to the profession in Victoria. The President (Mr. Gray) occupied the chair, and presented Dr. Neild with a gold cup, accompanied with a complimentary address. Mr. Gray, in the course of his remarks, dwelt on the debt the medical practitioners of this colony owed to Dr. Neild for his long labours on their behalf; and, furthermore, bore a graceful tribute to his many excellent qualities in the varied relations of life. Dr. Neild, who seemed deeply affected, replied in eloquent and appropriate terms.

The discoloration of our drinking-water has been lately the subject of Governmental and public interest and inquiry. A proposal, emanating from a local chemist, suggested a means of purifying the water by the addition of a few grains of tersulphate of alumina or lime to the gallon of water. Experiments have proved that, by the addition of these ingredients, the impurities are thrown down. The Government were further strongly urged to make use of this chemical purifier in the large reservoir of water situated some distance from Melbourne, and from which we gain our only supply. The Royal Society and the Victorian Branch of the Association quickly, in the interests of the public weal, took up this matter, and exhaustively discussed it. The opinion to which the Victorian Branch seems to hold is, that, as the daily supply of water to Melbourne is thirteen million gallons, it would require a very large amount of lime or alum to carry out the process thoroughly; and that the danger likely to arise from the addition of the large quantity required would be the improbability of the chemicals being equally dissolved and distributed throughout the bulk—so that, instead of drinking-water holding in solution two or four grains of alum or lime, there is no guarantee that the same will not contain twenty or thirty grains, the continual drinking of which must have an injurious effect.

A very interesting case was lately operated on by Mr. T. N. Fitzgerald. The case at first was diagnosed, at a meeting of the staff of the Melbourne Hospital, as one of ovarian tumour, but turned out to be an hydatid tumour connected with the omentum and liver. The patient (a widow, aged 47, stated that since her second confinement, twenty years ago, a lump, which had been growing larger, had appeared suddenly in the right side. On examination, the tumour was found to be elastic and pretty freely movable. It was aspirated and some thick purulent matter drawn off, in which no traces of echinococci were found. Mr. Fitzgerald operated in the usual way. On the introduction of the cannula into the tumour, ten pints of puriform hydatid fluid, with daughter-cysts, came away. The parent-cyst was adherent to the omentum, transverse colon, and the right lobe of the liver, from which latter place it seemed to take its origin. There was great difficulty in detaching the tumour on account of the adhesions. A pedicle was made of that portion attached to the left lobe of the liver; hare-lip pins were passed deeply through the abdominal walls, including the peritoneum, transfixing the pedicle. The operation was conducted under antiseptic conditions. After about ten days, the ligature and pedicle came away *en masse*, and the patient was shortly afterwards declared convalescent.

June 24th, 1880.

SYDNEY.

Difficulties of Medical Legislation.—Irregular Practitioners.—Incautious Questions in Parliament.—The Sydney Exhibition.

THE greatest difficulty with which medical legislation has to contend is the great sympathy shown here for the unqualified practitioners. Many think they are better and more honest men than the qualified; and this feeling shows itself strongly, even in Parliament. So strong is this feeling, that some qualified practitioners advise for consenting to the arrangement passed as law in New Zealand, by which "any person practising medicine reputably for a period of seven years, will be recognised as duly qualified for the practice of medicine". To show how little interest the "House" has for medical matters, the House was lately counted out over the second reading of the Medical Bill. The first Medical Bill, which was somewhat similar, came to its end to no small extent from the direct opposition of a medical member now in the Upper House!

Sydney and the other larger towns of the colony are well provided with good practitioners of high standing; yet, in spite of this, many people rush off to homœopaths or any one calling himself homœopath, whether duly qualified or not. Impudence and advertisement, especially if combined with the word homœopath, seem to ensure success invariably. We have had two men in Sydney of this nature, of no qualification whatever, carrying on this trade with impunity. One advertised systematically in the papers his so-called "cures" somewhat thus: "Another case of cure when given over by qualified practitioners. A child was brought to me this morning suffering from a slight skin-eruption, which had been given over by Dr. A. and Dr. B." (names given in full) "of this town, as suffering from erysipelas. The child will be well in a few days." It was at the same time with the appearance of this advertisement that the child died. Another case under the same "practitioner" is the following. A mother brought her child, suffering from long-standing diarrhœa, to this "Dr. C.", a celebrated homœopath, as he called himself. He recommended the child to be bathed with vinegar and water, then to be exposed a day at the seaside to the keen sea-breeze. The child became worse, was brought back to the doctor, and he made it swallow a teaspoonful of powdered capsicum. The child died soon afterwards. The mother, in spite of this, took her other child to the same doctor for treatment for the same affection. He recommended the same treatment; but, terrified at the previous result of this, she took the child to a qualified practitioner, under whose care the child quite recovered in two or three days. Of the class of low practitioners we have our share. All find space for advertisement in a certain evening paper.

In Bathurst, we find a man of the "homœopathic class" advertising cancer-cures. The following will show how he uses all channels for advertisement. Two poor men suffering from tumours consulted him. An agreement was made for them to meet him at Mr. E.'s, the photographer, as they would be photographed in the act of getting their cancers cured by Dr. F. Such men must, of course, get their "cases of cure" published, and they get the requisite variety by placing in front of such patients as they consider will be most serviceable, a paper praising their doctor for his skill. To get this paper signed so as to appear original is the object now, and to do this they use every art; they praise, threaten, and coax, and, by exaggerating any little improvement, they gain their purpose.

There are some Chinamen in the colonies who call themselves doctors; one, I believe, in Ballarat, and one in Sydney. The latter, "Dr. On Lee", is ignored by his own countrymen, and yet run after by many white people, who ought to have more sense. He finds out as best he can, beforehand, either by his patient's own account, or however otherwise he can, what other doctors think about his patient, and then takes up a glass which he holds before his patient; then, with the greatest confidence under the sun, he tells the patient he has seen in his body the very spot affected, and finally gives the patient a small diagram showing the spot. Usually, he demands his fee before examining the

patient, and will ask his £5 5s. or more if the subject look likely to pay it quietly. He travels about a great deal, besides keeping a permanent house in Sydney.

The above shows the need of a Bill being passed to protect us; and the surprising matter is, that even some lawyers support these men—yes, lawyers in high position! It is not because good doctors are needed in Sydney, because all the large towns are full enough, if one must judge by the way most new arrivals go off to country practices, or else return to England. As to country practices, there are plenty of practices begging, but very few such as will let one have much to the balance at the end of the year, because the roads are bad, distances long, and bad debts too common; yet these will often pay if cash payments be insisted on. Fortunes are not made in Australia more easily or less easily than in Britain; but we understand that New Zealand is very much overstocked with doctors. This is the result of earnest inquiries. One hears often of vacancies, but, when they are examined, one finds that it needs self-denial and hard work before the reward comes; but, as a rule, it does come, provided there be steadiness.

It is very much to be regretted that members of Parliament do not make very thorough inquiries before they ask questions in Parliament implying misconduct or ignorance. Any person here in a public appointment may find his name implicated in a very unpleasant manner with some imaginary misdemeanour, not unfrequently trumped up by an enemy who is afraid to publish it out of Parliament, and who gets a member to ask in Parliament the usual questions, beginning with "Is it true?" etc. Unfortunately, more than one doctor has been touched up thus unfortunately of late.

The Exhibition here has closed, and was of much use, no doubt, in a general sense; and certainly, from a medical point of view, much good has accrued to the profession from the array of instruments, etc., shown. An enormous sale was effected by the exhibitors, because the supply in the colonies has hitherto been very unsatisfactory. An endeavour was made to bring into notice the natural products of the plants of Australia, with the hope of encouraging their use economically as well as medically. We have our wine, tobacco, and so on, but we hear no mention of cinchona and ipecacuan, though certainly there has been some talk of opium-growing. Not unlikely, a very few years will show great advances in our materia medica, for yearly we are learning new facts, which may enable us to do without the cinchona, etc.

CORRESPONDENCE.

DEATH FROM CHLOROFORM.

SIR,—Accompanying this note are the particulars of the death which recently occurred, during the administration of chloroform, in my practice at the London Hospital. I had previously arranged to give up the charge of my wards and to leave town on the afternoon of the day on which the death took place. The gentleman who gave chloroform was not my house-surgeon, or resident in the hospital. He was much distressed at the time, and I had no opportunity of seeing him again before his departure for America. My house-surgeon also was retiring from office. Under these circumstances, I was unable to collect full particulars for immediate publication.

Being engaged in attending to the patient's limb, and in adjusting Esmarch's bandage, when the dangerous symptoms supervened, I have given the account rendered to me by Mr. East, who, whilst supporting the patient's leg for me, was watching the inhalation, and who acted with most commendable promptitude in at once drawing forward the patient's tongue. It will be noted that the case corresponds with that related by Dr. Packer, in the circumstance that the patient had taken chloroform perfectly well on two previous occasions; in the amount of chloroform consumed; and in the use of Skinner's inhaler, one of the safest forms of inhaler that could be employed. For the sudden failure of the heart, after artificial respiration had been carried on for some minutes and had re-established respiration and circulation, apparently rescuing the patient from death, I am quite unable to account.

With regard to the choice of an anæsthetic, I may state that I used chloroform uninterruptedly from 1860, and without a cloud, until attention was prominently called, a few years ago, in the BRITISH MEDICAL JOURNAL, to the superior safety of ether. Then I adopted ether, and have used it largely since; but I have not been able altogether to discard chloroform, as it possesses some advantages over ether, and appears to be preferable at the extremes of life, and in some special cases of injury or disease requiring manipulative or operative interference. On two occasions, in my own practice, I have seen great embarrassment to respiration arise during the administration of ether. In one case—that of a female between thirty and forty years of age, with a sarcomatous tumour of the skull and another on the lower maxilla—the respiration ceased, and I was barely able to rescue her by the persevering use of artificial respiration. The occurrence led me to suspect that there might be secondary sarcomata of the lungs; but the opportunity was not afforded for verifying or disproving this conjecture, as the patient returned to her home in the country when she found that it would be impossible to have the tumour removed. She died in a few months, and there was no *post mortem* examination.

Many surgeons, I suspect, continue to employ chloroform because, having never experienced any untoward result from its administration, they concur in the opinion expressed by Mr. Lister (in his article on "Anæsthetics" in the *System of Surgery*), and which I was inclined to hold myself, that such results are to be attributed to a faulty method of administration. That some of the cases which have occurred were due to the neglect of necessary precautions—such as ensuring a plentiful supply of air with the vapour, not pushing the administration too far or too quickly, and bearing in mind the cumulative tendency of the anæsthetic in the system—may be admitted; but it is scarcely possible, in the face of the records, to maintain this dogma in all, or even in the majority of the cases, or to deny that chloroform occasionally proves fatal from its direct action upon the heart. The superiority of ether consists in the facts: that it is a stimulant, and that the danger which sometimes attends its administration supervenes through embarrassment to the respiration, and not through a sedative influence on the heart; and may, therefore, be more readily surmounted. In the particular instance which I have related, I regret that ether was not employed; but I believed with Dr. Packer that, as chloroform had been taken twice before, and within a short period, it was as safe as any other agent.—I am, sir, yours, etc.,

WALTER RIVINGTON.

Fyfield, Essex, September 17th, 1880.

M. R., aged 50, plumber, was admitted into the London Hospital, under Mr. Rivington, on May 18th, for a very severe compound fracture of the left tibia and fibula, and a simple fracture of the left femur, at the lower third, running between the condyles into the knee-joint. On August 10th, at 2.30 P.M., he was taken to the operating theatre with a view to amputation of the leg, which was deemed advisable, and which he wished to have performed. He had twice before taken chloroform without difficulty or complication. The chloroform was administered by a gentleman who was acting for Mr. Lawton, the house-surgeon (called off to a law court), and who had had considerable experience in the administration of chloroform. The inhaler used was the open bowl-shaped inhaler, formed of flannel stretched over a framework of wire, and which seems to be known as Skinner's inhaler. The amount administered, though not measured, could scarcely have exceeded, if indeed it amounted to, two drachms. The patient had been inhaling the chloroform quietly for four or five minutes, when Mr. Rivington, who had just previously been watching the patient, and had felt his pulse, deeming that he might make preparations for beginning the operation, removed the splints from the patient's leg, and commenced adjusting Esmarch's bandage, with the assistance of Mr. East, who had recently been one of Mr. Rivington's dressers. At this time, "it appeared as if the patient wanted to vomit; he attempted to rise, did not vomit, but only spat out a little mucus. It was about half a minute after this, when the inhalation had been gently resumed, that the patient's jaw dropped and his face turned blue. The administration of chloroform was at once suspended"; the tongue was drawn out by Mr. East; and artificial respiration was commenced. Respiration had ceased; there was no pulse at the wrist; and it was doubtful whether any could be felt in the larger vessels. After the performance of artificial respiration (the means of resuscitation chiefly relied on) for about five minutes or more, the patient suddenly rallied; a few audible inspirations were taken; the breathing became natural; and the pulse returned in the large vessels, and even at the wrist. The bystanders were beginning to congratulate themselves on the cessation of danger to life, when the pulse fluttered, became intermittent, and stopped altogether—respiration failing at the same time. No heart-sound could be heard with the stethoscope. Fatal syncope had occurred. Artificial respiration was carried on for some time longer, until it became evident that further efforts would be without avail. The *post mortem* examination was conducted by Mr. McCarthy, the assistant pathologist, who has made the following entry in the *post mortem* record: "Fatty heart; œdematous lungs; granular kidneys; death from chloroform." A coroner's inquest was held on the following Friday, and the coroner remarked that no blame was attributable to any one. The finding of the jury was to the effect that death had occurred from disease of the heart whilst the patient was under the influence of chloroform.

SCHOOL-HEADACHE FROM OVER-STUDY *VERSUS* DEFECTIVE VENTILATION.

SIR,—I have read with great interest and benefit, as we all have, Dr. Crichton Browne's far-sighted and suggestive address, delivered to the Physiological Section at the Cambridge meeting. In this address, he quotes a paper of Dr. Treichler's, read last year in Germany, in which it is stated "that one-third of the pupils attending schools in Germany and France suffer from headaches, which destroy much of the happiness of life, and blunt the acuteness of the faculties".

I do not doubt the fact, although, as Dr. Browne remarks, it is probably exaggerated; but I much doubt the explanation. I believe myself that the cause of these headaches is, in most cases, the defective ventilation of schools in those two countries. In both, little or no attention is paid to methodical, or indeed to any kind, of effective ventilation in the localities where bodies of children or of grown-up people are congregated, or even in every-day domestic life. Physiology in general, and that of the respiratory organs in particular, is taught and learnt in the medical schools, and then discarded by the doctors as well as by the public, in the routine of daily or public life.

I myself was educated in a French college in Paris for eight years, from eight to sixteen, and suffered severely from headaches during that time, solely, I am convinced, from the absence of ventilation in the rooms we occupied. Forty or fifty pupils were assembled in rooms not very large, without fireplaces or ventilators, warmed in winter by a stove. We were kept there for several hours at a time, doors and windows shut, in a really pestilential atmosphere. Several junior members of my family, who have been partly educated in these French colleges, have suffered in the same way.

The influence of the respiration of a contaminated atmosphere, of pre-breathed air, in the production of more or less intense headache, is daily felt by our countrymen who travel abroad; in the trains, in the hotels, in the dining-rooms, in the theatres, in private life, it is one of the penances of foreign travel to be stifled and made ill in all these conditions of life by a vitiated atmosphere, and, at the same time, to be considered dangerous lunatics if we insist on a physiological supply of air. The German doctors, even more than the French, ignore, practically, the physiology of respiration. They are, generally speaking, as averse as their countrymen to the application of the knowledge contained in their text-books as well as in ours, but forgotten apparently as soon as learnt. When practising in the winter at Mentone, I am constantly fighting this battle with my continental patients and their medical friends.

It is well that this state of things should be acknowledged and taken into consideration in discussing the question of education. It would be sad indeed were the intellectual development of children to be curtailed under the erroneous impression that brain-labour produces headaches in them, dangerous to health and to life, when the real cause is their being shut up the greater part of the twenty-four hours in a vitiated atmosphere, and poisoned thereby.

I thoroughly agree with Dr. Michael Foster, that physiology ought to become, and will become, the basis of the pathology of the future; and that every step made in our knowledge of the intimate processes of healthy life is a step towards a sounder and more accurate pathology. I would, at the same time, draw attention to the undeniable fact, that the already attained physiological knowledge of the various functions, such as those of digestion, of respiration, of cutaneous secretion, is not generally applied in every-day life, either for the prevention or for the cure of disease, even in this country. Physiology still remains all but in the domain of abstract science, and in practice is only partially accepted by the general mass of the profession; whilst, to the community at large, it is yet a sealed book. Great efforts have been and are being made by the more advanced members of the profession in England, to enlighten the public, to teach it what physiology has taught them; and sounder ideas on these subjects are beginning to permeate the educated masses; but, on the continent, progress has been much slower. With all their deep learning, the German physicians are deplorably behindhand in the application of physiological facts to the routine of every-day life, as must be evident to all who have travelled and lived in their country. As a body, they seem to me to accept tacitly, or even to endorse, the popular physiological errors against which we are beginning to combat in every possible way.—I am, etc.,

HENRY BENNET, M.D.

The Heras, Weybridge, September 12th, 1880.

SUDDEN CALLS UPON MEDICAL MEN.

SIR,—Referring to the letter from "A Victim" in your last number, I [illegible] meet the need [illegible] to medical men, as far as it can be met; for these institutions establish an intimate relation between the members of the dispensary and the selected family doctor; so that, he knowing beforehand the constitution and state of health of his patients, and having generally already advised them about it, there is less occasion for sudden calls for assistance; and, if such calls are made, he is better able to judge as to their necessity.—I am yours, etc.,

C. E. TREVELYAN.

Wallington, Sept. 7th.

THE FINANCIAL RESULTS OF THE PROVIDENT SYSTEM.

SIR,—The object of Dr. Fairlie Clarke's letter of the 23rd August must, I am persuaded, have been to call his professional brethren's attention to the provident system of medical treatment, and to induce them to see what its real bearing is upon their interests. On any other hypothesis, it is inconceivable that the writer of the article in the *Medico-Chirurgical Review* of January 1875, and the writer of this letter, can be one and the same person. If the letter had been written by another, the article might have been republished as an answer to it, for it contains the only answer that can at present be given, in the absence of the statistics required. Precise information is unobtainable, partly because the provident dispensary system is not sufficiently developed, but still more because there will always be great difficulty in ascertaining the amount paid in medical fees by any given number of persons.

The conclusions to be drawn from Dr. Clarke's article are: 1. That great reform is needed in the present administration of gratuitous medical relief, inasmuch as the majority of those who receive it are well able to pay either the ordinary medical fees or a subscription to a provident dispensary. 2. That the present system is an injustice to the medical profession, as it necessitates an amount of unpaid labour, which no class of persons ought to be asked to perform. 3. That the medical advice given under these circumstances must be of a very imperfect character, thereby defeating the object the subscribers to charities have in view; and 4. That this large amount of unpaid labour has a depressing effect upon the whole scale of professional remuneration, as well as upon the social position of the medical profession.

As a remedy for these evils, Dr. Clarke recommends the establishment of provident dispensaries, by which means every person not absolutely destitute may contribute towards the just remuneration of his medical attendant.

Dr. Fairlie Clarke informs us that at least one-fourth of our metropolitan population receive gratuitous medical relief, far the larger portion of this number belonging to the working class. If this be the case, the one hundred working-class families (or five hundred individuals) taken by Dr. Clarke as a sample for comparison, do not, except in individual instances, pay medical fees; and it follows that, in a financial sense, the medical profession have everything to gain, and almost nothing to lose, by the establishment of provident dispensaries.

I quite agree with Dr. Fairlie Clarke that medical men can no more afford, than the members of other professions, to overlook the bearing of any changes that may be proposed upon their scale of remuneration; but I am sure he would agree with me that this is not exclusively a professional question. It is also for the interest of the members of provident dispensaries that their medical officers should receive fair remuneration, in order that proper attendance may be secured from an efficient staff.

In the absence of detailed information, sufficient reason has been shown by Dr. Clarke himself to induce the medical profession to give provident dispensaries a fair trial. With their co-operation, and that of the managers of gratuitous medical relief, those who are in a position to pay a small contribution to a provident dispensary would avail themselves of this opportunity of securing their object in a more nearly perfect manner without any loss of self-respect. In other words, the success of our plan would be assured, and the results of such success must be that the health of the masses would be improved, and the medical profession would receive a more just remuneration for their important labours.—I am, etc.,

W. G. BANN,

Member of the Hearts of Oak Benefit Society, and of the Council of the Metropolitan Provident Medical Association.

London, September 10th, 1880.

THE BIRMINGHAM AND MIDLAND EYE HOSPITAL.

SIR,—To understand fully the bearings of this discussion your readers must know that Mr. J. Vose Solomon has been in the employ of the Birmingham Corporation in two capacities, surgeon to the gaol and surgeon to the police, and circumstances have led to his resignation of these two offices, one of them quite recently. I happen to be a member

of the Corporation and of the Health Committee, and to clear the way I must give you the assurance that the fact of Mr. Solomon being on the staff of the Eye Hospital has nothing to do with our action in the matter. The Health Committee simply has its duty to perform, and means to do it. Your commissioner drew its attention to an alleged most serious and disgraceful state of matters in a public institution, and we were bound at once to look into it. The only regret is that we did not find it out for ourselves. In the various steps we have taken we have shown a studied courtesy and consideration for the Committee of the Eye Hospital, because they are a public body working for a benevolent object. Had they been a trading firm we should have exercised our summary powers without hesitation, but our forbearance has not been reciprocated.

Mr. Solomon is singularly unfortunate and inaccurate in his statements. He says that on receiving Dr. Hill's report from the Health Committee, "all his suggestions were at once carried out by the hospital authorities." There are two important exceptions to this assertion, and these happen to be the basis of all the dispute.

Dr. Hill said, "the wards are overcrowded and inefficiently ventilated, the out-patients' waiting-room and the consulting-room being particularly bad in the last respect." Your own commissioner said that "the average cubic space per patient is 605 cubic feet, the minimum 483, and the maximum 722. In the men's day-room there are only 182 cubic feet per patient, and in the women's, 327 cubic feet", and the main ventilation of these rooms is from a ground-floor, in which between a hundred and a hundred and fifty people congregate every morning, crowded into a small waiting-room and the hall. He continues, "altogether it is doubtful if more sanitary evils are to be met with in any similar institution", and Dr. Hill's report gave us a very similar impression. It is upon these two points that the Health Committee is firm; and Mr. Solomon is premature in concluding that the legal right of the Health Committee of visiting any premises within the borough dangerous to the health of the inmates, has not yet been successfully disputed. We have not urged it, and I hope there will be no need. To make the hospital healthy, and not merely "remarkably free from hospital diseases", the out-patients must be dealt with in another building, and more cubic space must be allowed to each in-patient. An eye hospital ought to be absolutely and not remarkably free from hospital diseases.

Mr. Solomon's allusion to the Birmingham Hospital for Women is a most unfortunate choice. He says our mortality "exceeded anything that has ever been known in the annals of the operative surgery of Birmingham". And yet all the statistics have been published, and are within easy access to Mr. Solomon. He either must or ought to know that during the time he speaks of there were forty ovariotomies performed there, with fifteen deaths, a mortality of 37.6 per cent.—bad enough in all conscience. But up to the same time the combined experience of the same operation performed in the two large hospitals in Birmingham, the Queen's and the General, shows thirty-one operations with twenty-three deaths, or a mortality of 74 per cent. I think the officers of these institutions will hardly be grateful to Mr. Solomon for thus most wantonly obliging me to use these figures. They have been long in my possession, and I have never used them before, nor did I wish to do so now.

But the illustration is unhappy for Mr. Solomon, because after many costly experiments we came to the conclusion that the out-patient department was at the bottom of all the mischief. Exactly like the Eye Hospital, the Women's Hospital was an old three-story building, the ground-floor of which was used for the out-patients. We separated the departments, and built a new important department, in which sixty-seven ovariotomies have been done with only three deaths, or a mortality of 4.4 per cent. In the old building I have gone on operating, and have performed thirty-six ovariotomies there, with only two deaths, or a mortality of 5.5 per cent. This reduction is not due to carbolising the instruments, for that is a practice I have quite given up. It is due very largely, in my opinion, to the removal of the out-patients, and this we effected without any pressure from the Health Committee being required.

In his postscript Mr. Solomon says that threats have been held out by members of the Health Committee that whatever the plans for reconstruction of the Eye Hospital may be, they will not be passed. I hope no such threats have been made, for I have no sympathy with them, and personally I feel sure none such have been made. If the authorities of the Eye Hospital will remove their out-patients to another building, and allow reasonable cubic space to their in-patients, I shall do my best to have their plans passed by the committee. But if they will not do this, I shall use every means in my power to prevent them carrying on an institution dangerous in any way to the public health.

The committee of the Women's Hospital have made an offer of the use of their commodious and separate out-patient department, which is close to the Eye Hospital, and in every way convenient, by which both of their requirements may be carried out in the simplest possible way, and most completely. I fully believe the public interest will be best served in every direction by its acceptance. I am informed that Mr. Solomon is almost alone responsible for its rejection.

I am sorry that so much of your space has to be taken up by this letter, but the matter in question has more than a local importance.—I am, sir, etc.,

LAWSON TAIT.

September 18th, 1880.

HISTORY OF OVARIOTOMY.

SIR,—In answer to Mr. Wells's letter, in your JOURNAL of September 4th, I think your readers will allow that Dr. Keith has already confirmed my statement as to the positive contradiction recorded by Mr. Wells in your number of July 24th. It is expressed in the following terms. "After searching his diary in vain, I do not think I can be mistaken in saying," etc. Mr. Wells then says, "I never saw Dr. Clay operate till March 19th, 1863, and had then operated on fifty-eight women." If this be true, how does it happen that his thirty-fourth case in 1862, long after he visited me in Manchester, is particularly impressed on my memory from the fact that I had previously been consulted on the same case, and refused to operate, it being quite unfit. But Mr. Wells did operate, and the patient died in a very short time. It was this case on which he remarks in his first volume of operations, and states that Dr. Clay tapped a second time, made three punctures, but only once through the skin (can such a thing be possible?). The fact is, I never tapped at all, but used a small exploring needle. I again repeat, Mr. Wells's visit to me was in 1857, fifteen years after my first operation; and, if his diary ever existed, it would have shown it.

Let me now ask why he took a journey of nearly two hundred miles, and made so many inquiries as to the *modus operandi*, if he had already operated fifty-eight times. And also I ask why he experimentalised on living animals to prove a practice right which he had been told was always practised by me in all cases from the first in 1842.

One favour I ask of your readers, to read Dr. Peaslee's excellent work on Ovarian Tumours, 1872, pp. 271-2-3-4, where they will find my proper position as an ovariotomist, and also that the operation had not fallen into the disrepute Mr. Wells and others would have it to be thought.

Lastly, I have to observe that, on March 19th, 1863, when Mr. Wells says he saw me operate in Manchester, I was in London on business for three days; and I read in his first volume respecting Case 58, operated upon on March 16th, 1863, that he was in close attendance for four or five days after; and that, on March 20th, 1863, he was at Kensington, engaged upon Case 59.—I am, yours, etc.,

Manchester, September 14th, 1880. CHARLES CLAY, M.D.

BLOODLETTING IN INFLAMMATORY DISEASES.

SIR,—May I be permitted again, through the BRITISH MEDICAL JOURNAL, to invite the members of the profession to bestow well-merited consideration on the value of bloodletting as an efficacious remedy in cases of acute inflammatory diseases? I am induced to recur to the subject, in consequence of having heard of cases of pneumonia which have had a rapid and fatal termination, in which, in former times, I feel assured that relief might have been obtained, and possibly life saved, by timely bloodletting. As some proof of this, I may refer to a case reported some months ago in this JOURNAL by Mr. Gabb of Hastings, in which the most urgent symptoms of pneumonia immediately yielded to the abstraction of blood. On the other hand, I might refer to particular cases reported in this JOURNAL; but will not do so as others can read them as well as myself. But it appears that the remedy (salicylate of soda) much relied on in these cases cannot be considered a certain means of cure.

I have heard that patients have been suddenly too much reduced in strength to admit of bleeding. But was not this weakness the effect of the disease? and was not the relief of the disease the most likely mode of putting the patient in a condition to recover strength? According to my remembrance, I believed many years ago that, in cases of abnormal local accumulations of blood, whether arterial, as in inflammations, or venous, as in congestions, a powerful and reasonable means of relief was found in the diminution of the overfulness of the quantity of blood in circulation. Excuse me if I show in this matter what some may consider a degree of pertinacity beyond what it merits. If so, it arises from my deep impression of the great importance of the subject.—I remain, yours, etc.,

T. M. GREENHOW.

Newton Hall, Leeds, August 14th, 1880.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL RELIEF AT CAMBRIDGE.

In our issue of the 4th instant, we gave a full report of the proceedings at the meeting of the Poor-law Medical Officers' Association held at the Guildhall, Cambridge, on the 12th ult. We have since learnt that, as a result of that meeting (at which several members of the Cambridge Board of Guardians were present), a Committee of the Board was appointed to take the question of medical relief into consideration, and suggest such alterations as might appear advisable. From the reports in the *Cambridge Independent* and the *Cambridge Express* of the 18th instant, we learn "that, besides recommending an alteration in the medical relief districts (one of the points raised at the meeting), above referred to, whereby efficient attendance on the sick poor might be more effectively carried out, the Committee was empowered to hold an interview with the medical officers, and ascertain from them whether they were desirous of the introduction of the dispensary system of medical relief. On being thus applied to, the medical officers, with one honourable exception, Dr. Ingle, refused the offer of the committee to find all medicines, etc., for them, alleging as their reason, 'that, after what took place during the holding of the meeting of the British Medical Association at Cambridge, it might be regarded as an admission that they had been guilty of neglect'". We are at a loss to see, from a review of our report, how any personal neglect was alleged against either of them; but there might be some force in this assertion, "*as the facts* and deductions from them brought before the meeting by the chairman, Dr. Rogers, went to show that much of the excessive outlay on poor-relief at Cambridge was due to the very imperfect medical relief arrangement existing in that town: for it must always be remembered that sickness is the great factor in the production of pauperism. But, if the medical officers were desirous of being consistent, their objection to the introduction of a dispensary should not have been followed by the request that the committee should recommend an increase of their stipends: a question which the committee, if faithful to their instructions, was not competent to entertain. When the report of the committee was brought up, we learn that general surprise was expressed at the action of the medical officers in refusing to entertain so evident a boon; and one of the guardians, a Mr. Peck, expressed his 'doubt as to whether the medical officers gave the paupers cod-liver oil. He believed those who needed this had to go to Addenbrooke's Hospital for their supply; and he felt that it was most improper that paupers should have that which was provided by voluntary contributions for a different class of people'. They were told by the medical officers that the drugs given by them last year to their pauper patients cost £30, £27, and £25. He thought they forgot, when they made that statement, that there were two druggists on the committee and in the room. The committee was prepared to relieve them of the cost of finding drugs, *whatever it was*: and they would not accept it."

There can be no doubt that, under the provisions of the dispensary system, with its filing of prescriptions and record of attendance, no opportunity exists, or at most a slight one, for either scamping attendances or neglecting to prescribe proper medicines for the sick: but we will not assume that any fear of increased labours and more careful supervision of their duties weighed with the Cambridge medical officers when they refused the offer to save them the expense of providing and the labour of dispensing medicines. There is, however, one unwholesome thing that cannot be passed over, and that is their request for an augmentation of their stipends, which, under all the circumstances, the committee (even if they had the power) were clearly justified in not for a moment entertaining. The committee was appointed to report on the expediency or otherwise of establishing a dispensary, and of modifying the relief districts. It was, therefore, not within their competence to entertain a mere increase of the officers' stipends. Whatever were the motives which prompted the refusal of the medical officers, we have here before us the fact that the Cambridge Board of Guardians appear now to be more alive to the wants of their sick poor than those who have charge of them; and, further, that this action of the medical officers is eminently calculated to damage the cause of Poor-law medical reform. But then it is to be hoped that the Cambridge medical officers are solitary specimens of their class.

VACCINATION.—Mr. M. A. Kenny, of Holme-on-Spalding Moor, has received a Government grant of £4 11s. for successful vaccination, being the second premium in four years.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 16th, 1880.

Dadachanji, Edalji Rustanji, Bombay.
Kinneir, Francis William Edward, 42, Doughty Street, W.C.
Lane, Alexander, Bishops Castle, Salop.
Wasse, Gervas Miles, Nawton, Devon.

The following gentleman also on the same day passed his Primary Professional Examination.

Harris, John Harry, Guy's Hospital.

At the Preliminary Examination in Arts, held at the Hall on the 17th and 18th of September, 1880, one hundred and forty-five candidates presented themselves, of whom forty-seven passed and received certificates of proficiency in general education. In the First Class:

Florence Nightingale Toms.

In the Second Class, in alphabetical order:

C. A. Adams, R. H. Barrett, E. D. Bell, F. Brightman, E. H. Brock, G. T. Cattell, Kate Crooke, H. W. Denton-Cardew, R. Dobson, S. U. Duer, W. P. Felton, G. W. H. French, A. J. Gibbon, Edwin Gill, C. H. Glasson, G. R. Hall, E. P. Harris, W. E. G. Jackson, A. E. Johns, C. St. Johnston, W. M. Joyce, H. H. Kent, H. P. Lavies, R. B. Leggatt, C. E. Liesching, Emma M. D. Miller, Paul von Norbeck, G. C. H. Norman, A. C. A. Packman, Jiteudra N. Pall, S. J. Palmer, E. W. Paul, W. J. Procter, Edmund Raghib, H. V. Rake, H. E. Rayner, A. V. Reily, Jane Goff Richardson, Robert Rogers, W. D. Ross, S. E. Rossiter, S. N. Scott, G. H. Thompson, S. Walker, J. J. Wheeler, F. A. Younge.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

BALLATER PAROCHIAL BOARD—Medical Practitioner. Salary, £35 per annum. Applications, with testimonials, to the Inspector of the Poor, on or before October 4th.

BALLINGLASS UNION—Medical Officer for Workhouse and Fever Hospital. Salary, £— per annum, with £5 a year as Consulting Sanitary Officer. Election on the 28th instant.

*BETHLEM HOSPITAL—Two Resident Medical Students. Applications, with testimonials, before October 9th.

BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon. Salary, £150 per annum, with furnished apartments, etc. Applications, with testimonials, to the Secretary on or before October 12th.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Surgeon. Applications, etc., to the Honorary Secretary not later than October 5th.

BISHOP STORTFORD URBAN SANITARY AUTHORITIES—Medical Officer of Health. Salary, £50 per annum. Applications, with testimonials, not later than one o'clock on Thursday, September 30th.

CAMBRIDGE COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £— per annum, with board, lodging, and attendance. Applications, etc., on or before September 27th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £— per annum, with board and lodging. Applications, with testimonials, before October 1st.

CHESTER GENERAL INFIRMARY—Visiting Surgeon. Salary, £80 per annum, with residence, maintenance, and washing. Applications and testimonials to the Chairman of the Board, on or before September 27th.

DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich—House-Physician. Salary, £— per annum; also, House-Surgeon, salary £— per annum, with board, apartments, etc. Applications, with testimonials, on or before October 2nd.

GAINSBOROUGH FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Resident Medical Officer. Salary, £130 per annum. Applications, with testimonials, to the Secretary.

HALIFAX INFIRMARY—Assistant House-Surgeon. Salary, £— per annum, with board, lodging, and washing. Applications, with testimonials, on or before September 27th.

MANCHESTER DISPENSARY FOR SICK CHILDREN, Garside Street—Visiting Medical Officer. Salary, £— per annum, without board and lodging. Applications, with testimonials, on or before September 28th, to Chairman of Medical Staff.

NAAS UNION—Medical Officer for Kildare Dispensary District. Salary, £— per annum, with £— for duties as Medical Officer of Health, registration and vaccination fees. Election on September 30th.

*PENZANCE UNION—Medical Officer and Public Vaccinator for No. 4 District. Salary, as Medical Officer, £— per annum, with vaccination fees. Applications, with testimonials, etc., on or before October 8th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—House-Physician to the post to be held for six months. Appointment £— per annum, in board, etc. Applications to the Secretary before October 1st.

SUFFOLK COUNTY ASYLUM, Melton—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and attendance. Applications, with testimonials, to the Resident Physician.

SHEFFIELD SCHOOL OF MEDICINE—Demonstrator of Anatomy and Physiology. Salary, £— per annum. Applications at once to the Secretary.

SWINFORD UNION—Medical Officer for Dunsmark Dispensary District. Salary £— per annum, with £— per annum as Medical Officer of Health, registration and vaccination fees. Election on 1st prox.

WEST KENT GENERAL HOSPITAL, Maidstone—House-Surgeon. Salary £120 per annum, with lodgings, coal, gas, and attendance. Applications, etc., to the Secretary on or before September 30th.

WESTMINSTER HOSPITAL—House-Surgeon. Applications to the Secretary not later than October 5th.

WESTERN GENERAL DISPENSARY—Resident Dispenser and Assistant. Salary, £80 per annum, with furnished apartments, etc. Applications, with testimonials, on or before September 27th.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary before October 4th.

WOLVERHAMPTON UNION—Medical Officer for No. 2 District. Salary, £95 per annum. Applications, with testimonials, on or before September 30th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CLAY, Robert, L.R.C.P.Lond., appointed Assistant Medical Officer to the Barnwood House Hospital for the Insane, *vice* C. E. H. Warren, M.B., resigned.

KER, Alice J. S., M.D., appointed Assistant Resident Medical Officer to the Children's Hospital, Birmingham, *vice* L. A. Middleton, Esq., resigned.

KIRBY, Thomas, appointed Resident Medical Officer to the York Dispensary, *vice* Henry Ebenezer Spencer, L.R.C.P.Ed., resigned.

LAYCOCK, G. L., M.B.Edin., appointed Additional Assistant Physician to the West End Hospital for the Diseases of the Nervous System.

PARETTE, James, L.R.C.P.Ed., appointed Junior Medical Officer to the Exeter Friendly Societies Medical Association.

POOR-LAW MEDICAL APPOINTMENTS.

GALLNEY, Thomas, L.R.C.P.Ed., appointed Medical Officer to the Keadne District, Boyle Union.

HANDS, Arthur, M.R.C.P., appointed Medical Officer to the Wednesfield District of the Wolverhampton Union, *vice* Charles Broom, M.R.C.S.Eng.

MICKLEY, Arthur G., M.B., appointed Resident Medical Officer to the Workhouse Infirmary of the Parish of Islington, *vice* Philip Cowen, M.R.C.S.Eng., resigned.

REID, Thomas F. P., L.R.C.P., appointed Medical Officer to the 1st and 2nd Districts and the Union of the Wellington Workhouse, Somerset, *vice* G. Kidgell, M.R.C.S.Eng., resigned.

SIMPSON, Thomas, M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator to No. 3 District of the Braintree Union.

SMITH, Thomas Orde, M.B., appointed Medical Officer to the Kinnetty Dispensary District of the Parsonstown Union, *vice* Henry W. Dudley, A.B., M.B.

WALKER, Horace, L.R.C.P., appointed Medical Officer to the Third District of the Fulham Union, *vice* B. E. Spaull, M.R.C.S.Eng., resigned.

WATTIE, Alexander, M.B., appointed Assistant Medical Officer to the Manchester Workhouse, *vice* Wm. O. Deacon, L.R.C.P., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

COLBOURNE—KRABBÉ.—On the 7th August, at St. John's Church, Buenos Ayres, by the Rev. Francis Smith, M.A., M.D., Louis Colbourne, M.D., son of the late William Colbourne, Esq., to Nora, third daughter of the late Charles Brehmer Krabbé, Esq.

PROCTOR—OGSTON.—At 1, Union Terrace, Aberdeen, on the 8th instant, by the Rev. Mr. Duguid, F.C., Newmachar, assisted by the Rev. Mr. Thomson, Belhelvie, Robert Farquharson Scott Proctor, M.B., C.M., Belhelvie, to Sarah, youngest daughter of Andrew Ogston, Old Deer.

STOKES—BROWNE.—On September 15th, at St. Mark's Church, Hamilton Terrace, by the Rev. Canon Duckworth, D.D., Henry Haldane Stokes, Esq., M.B., Surgeon Army Medical Department, third son of the late Lieutenant-Colonel Stokes, S.O.P., Tralee, to Florence Henrietta, youngest daughter of Samuel Browne, Esq., Congo Road, Barbadoes.

DEATHS.

BREEZE, Richard G., M.B., at Park Lodge, Finchley, aged 46, on September 5th.

REID—At Moira House, Arnold, Notts, on the 20th instant, Alexander William Reid, M.A., M.B. & C.M.Glas., L.R.C.S.Ed., aged 31.

SIMPSON, John, M.B., Surgeon-Major 23rd Regiment Royal Native Light Infantry, at Sibi, South Afghanistan, of sunstroke, on August 13th.

STOLTERFOTH.—On September 19th, at Queen's Park, Chester, Sigismund Stolterfoth, M.D.Edin. & F.R.C.P.Lond., in his eighty-fifth year.

UNWHOLESOME FISH.—During August, the officers of the Fishmongers' Company seized at Billingsgate Market, as unfit for human food, the enormous quantity of 183 tons of fish—of which 100 tons had arrived by land and 83 by water. The single fish numbered 220,080, and included 5 brill, 57 coalfish, 150 cod, 10 crabs, 500 dabs, 176 dorees, 700 flounders, 33,510 haddocks, 34 hake, 79,151 herrings, 4,479 lobsters, 586 mackerel, 800 mullets, 19,646 plaice, 3,500 roach, one salmon, 1,289 skate, 4,800 smelts, 10 trout, 76 turbot, and 70,600 whiting; and, in addition, there were seized four bushels of cockles, 1,677 lb. of eels, 1,024 bags of mussels and 14 of oysters, 666 bushels of periwinkles, one kit of pickled salmon, 2,675 gallons of shrimps, 200 bushels of whelks, and 77 quarts of whitebait.

PUBLIC HEALTH.—During last week, 4,148 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 19 in Edinburgh, 21 in Glasgow, and 39 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Plymouth, 17; Bristol, 20; London, 20; Portsmouth, 26; Oldham, 26; Newcastle-upon-Tyne, 27; Manchester, 27; Birmingham, 27; Sheffield, 28; Brighton, 28; Bradford, 29; Nottingham, 29; Wolverhampton, 30; Leeds, 30; Sunderland, 33; Salford, 34; Liverpool, 34; Hull, 37; Norwich, 36; and the highest rate, 37, in Leicester. The annual death-rate from the seven principal zymotic diseases averaged 7.4 in the twenty towns, and ranged from 3.9 and 4.2 in Brighton and Plymouth to 17.3 in Leicester, 17.4 in Hull, and 18.8 in Norwich. In London, 1,438 deaths were registered, which exceeded the average by 87, and gave an annual death-rate of 20.5. The 1,438 deaths included 3 from small-pox, 10 from measles, 50 from scarlet fever, 12 from diphtheria, 17 from whooping-cough, 24 from different forms of fever, and 214 from diarrhœa—being altogether 330 zymotic deaths, which were 37 below the average, and were equal to an annual rate of 4.7 per 1,000. The deaths referred to diarrhœa in London, which had been 270, 232, and 223 in the three preceding weeks, further declined to 214 last week, but exceeded the corrected weekly average by 85. The 214 fatal cases included 142 of infants under one year of age, 54 of children aged between one and five years, and 15 of persons aged upwards of 60 years. The deaths of four infants and young children, and of one adult were referred to simple cholera or choleraic diarrhœa. The deaths referred to diseases of the respiratory organs, which had been 152 and 124 in the two preceding weeks, rose again to 153 last week, but were 6 below the average; 91 were attributed to bronchitis, and 45 to pneumonia. Different forms of violence caused 54 deaths; 39 were the result of negligence or accident, including 17 from fractures and contusions, 6 from drowning, 3 from poison, and 11 of infants under one year of age from suffocation. No less than 14 cases of suicide were registered. The duration of registered bright sunshine in the week was equal to 24 per cent. of its possible duration. The recorded amount of ozone was below the average during the week.

DEATHS FROM DIARRHŒA.—The annual death-rate from diarrhœa last week was equal to 3.0 per 1000 in London, and averaged 8.2 in the 19 large provincial towns, among which it ranged from 3.4 and 3.5 in Brighton and Plymouth to 15.3 in Leicester, 15.7 in Hull, and 15.8 in Norwich.

CORK WORKHOUSE.—At a meeting of the Cork Board of Guardians, held last week, the mayor proposed the following resolution in reference to the resignation of Dr. Reardon, which was unanimously adopted:—"That this board cannot permit their late medical officer, Thomas Reardon, to quit their service without placing on record their high sense of the efficient, intelligent, and humane manner in which he discharged the duties of resident apothecary and doctor of this house. We regret for the sake of the poor of this house that the connection between Dr. Reardon and the board has been voluntarily severed by him, and we hope success will attend him in his new sphere of duty."

MISS ALICE A. J. S. KERR, M.D., has been elected resident assistant medical officer at the Children's Hospital, Birmingham. The lady received ten votes, or two in excess of the number given for Mr. J. L. Thomas, surgeon, the other applicant for the office.

MR. PARETTE, surgeon, of Beaufort, Breconshire, was on the 14th instant presented with an illuminated address and a massive gold albert chain, by the workmen and inhabitants of Sirhowy and the district, in recognition of long and valuable service.

BEQUESTS.—Mrs. Sally Hall Bradshaw, late of Reading, has bequeathed £3,000 Three per Cent. Consolidated Bank Annuities to the Association for Promoting the General Welfare of the Blind, Euston Road; £1,000 like annuities each to the Royal Hospital for Incurables, the Royal Berkshire Hospital, the Winchester County Hospital, and the Westminster Hospital; £500 in like annuities to the Reading Dispensary; £1,000 in like annuities each to the Royal College of Physicians and the Royal College of Surgeons, to found lectureships on some subject in physic and surgery, to be delivered on August 18th in each year, to be respectively called the "Bradshaw Lecture", in memory of her late husband, Dr. William Wood Bradshaw.

THE vacant assistant-surgeoncy in the 2nd Life Guards has been given to Assistant-Surgeon P. Young, of the Scots Guards, who will be gazetted immediately. The vacancies in the Blues will be filled up in the course of a week or two.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 2; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY. Quekett Microscopical Club, 8 P.M. Ordinary meeting.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C.; Letters concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT. We shall be much obliged if the Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names, of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE EPSOM COLLEGE PROSECUTION.

SIR,—I beg to forward a second list of contributions to the testimonial to Mr. A. O'Brien Jones, which, with those already announced in the JOURNAL of August 28th, bring up the total amount received to this date to £200 5s. 0d., viz.:

Special Donations.

	£	s.	d.
The Rev. B. B. Beckett, Vicar of Epsom	10	10	0
Mrs. Beckett	10	10	0
Dr. Drage, Hatfield	10	0	0
J. F. Friehsen, Esq.	10	10	0
R. Brooks, Esq.	21	0	0
H. Brooks, Esq., Junr.	10	0	0
	72	10	0
Subscriptions in first and second lists	127	15	6
	£200	5	6

I trust that further contributions will soon enable me to hand over to Mr. Jones a sufficient sum to compensate him for the expenses which this prosecution has entailed upon him. I am, sir, yours obediently,

ED. HART VINEN, M.D., Treasurer.

17, Chepstow Villas, Bayswater, September 20th, 1880.

P.S.—The names of Messrs. Winter and Son in the last list of subscribers should be Messrs. Winter and Salzmann, Brighton.

Second List of Subscriptions.

	£	s.	d.
Dr. Allen, Hastings	1	1	0
Halchin Williams, Esq., Lee	0	10	6
Dr. Keely, Gosport	1	1	0
G. F. Richardson, Esq., Leatherhead	1	1	0
Dr. Leslie Jones, Blackpool	1	1	0
Dr. Easton, 14, Norfolk Crescent	1	1	0
W. F. Coles, Esq., Croydon	0	10	0
E. Adams, Esq., Liverpool	0	5	0
W. Hardman, Esq., Blackpool	1	1	0
T. Smith, Esq., 5, Stratford Place	2	2	0
J. F. Wells, Esq., Asylum, Wells	0	10	6
Dr. Aitket, Woolstone, Hants	1	1	0
Dr. Ed. Waters, Chester	1	1	0
Dr. Essex Bowen, Claughton	1	1	0
Dr. J. Taylor, Chester	1	1	0
Dr. J. Langshaw, Lancaster	1	1	0
Dr. Cholmeley, Grosvenor St.	1	1	0
Ed. Tegart, Esq., Jermyn St.	1	1	0
J. Burton, Esq., Epsom	1	1	0
Hugh Macpherson, Esq., St. James Square, per Dr. G. Johnson	1	1	0
Dr. Russell Reynolds	1	1	0
Geo. Ibbetson, Esq., Hanover Square	1	1	0
Per Miss Barclay, Dorking:			
Miss Barclay	1	1	0
Miss Barclay	1	1	0
Mrs. Fuller	1	1	0
Septimus Sibley, Esq.	1	1	0
Collected by Fred. Lee, Esq., Epsom.			
Mrs. Tritton, Ewell	1	1	0
H. J. Tritton, Esq., Ewell	1	1	0
T. Borradaile, Esq., Surbiton	1	1	0
Rev. E. Northey and Mrs. Northey, Epsom	2	2	0
J. H. Drought, Esq.	1	1	0
F. A. Hankey, Esq.	1	1	0
S. A. Hankey, Esq.	1	1	0
Miss Northey	1	1	0
Miss Trevelyan	1	1	0
Miss J. Trevelyan	1	1	0
J. B. Hankey, Esq.	1	1	0
Mrs. Phillips, Epsom	0	10	6
A Friend	1	1	0

WE very much regret to see in a Dundee paper a card from Dr. Arrott, intimating, by public advertisement, his consultation hours. Such a course is extremely unprofessional, and is especially to be regretted in a gentleman of Dr. Arrott's age and position. We are not surprised to hear that it has caused great regret and pain amongst the professional men of the district to see a senior man committing so undesirable a breach of professional rule.

A CORRECTION.

SIR,—Permit me to correct the report on page 466 of your last issue, in which the Rev. Dr. Haughton of Dublin is said to have made certain observations on the ventilation of sewers. I am alone responsible for the views therein expressed; at least, for the corrected abstract which I gave to the Secretary of the Section of Public Medicine.

I have long advocated the advisability in all, and the necessity in some, districts of erecting ventilating shafts, in which an upward draught is maintained by furnace-heat, as in mines, and by which the use of the gulley-holes now employed might be totally superseded. In localities where the outflow of the drainage of towns is shut up whilst the tide is in, as is sometimes the case, it is quite indispensable that the imprisoned gas should be allowed to escape where it can do no injury to human beings, and not, as at present, conveyed right under the nostrils of those who have done all that in them lies to render the sanitary arrangements of their own dwellings complete. I do not believe that any ordinary "traps" can stand gas under high pressure; and even if such could be constructed, the gulley-holes will still remain a disgusting public nuisance, unless relieved by some better arrangement.

I may mention that my papers and my wife's letters were also sent from Cambridge to the Rev. Dr. Haughton of Dublin; and that we did not get them for nearly ten days after we had made inquiry for them. As this is not the first time that my writings and speeches have been attributed to my more distinguished relative (who, no doubt, is equally annoyed by the mistake), I will conclude by saying: "Verba [illegible] scripta manent." I am, sir, your obedient servant,

EDWARD HAUGHTON, B.A., M.D.

Spring Grove House, Upper Norwood, S.E., September 20th, 1880.

MASONIC CHARITIES.—Amongst the candidates at the October election of the Royal Masonic Institution for Boys is Sydney W. F. Richardson, aged 9, son of the late Mr. Benjamin Richardson, Surgeon, of Glaisdale, near Whitby, P.M. of Cleveland Lodge, North Yorkshire Province. The candidate is one of six boys left fatherless and motherless, the youngest aged twelve months, and the eldest thirteen years. Mr. Handyside, Surgeon, of Stokesley, Yorkshire, will gladly receive votes, as will also Mr. W. H. Richardson (uncle of the candidate), for many years at the head of the dispensing department of Messrs. Savory and Moore, 143, New Bond Street, London.

VACCINATION OF EXCORIATED CHILDREN.

SIR,—Dr. Drury's relation of chronic eczema cases having been removed by vaccination is nothing new. I, and I doubt not many other practitioners, have frequently advised the parents of children labouring under a variety of chronic skin-diseases to have them vaccinated, with a view to their removal as a result of the operation. I remember a number of children in whom the practice was perfectly successful.

I am, sir, yours faithfully,

EDWARD CRICKMAY.

Larkfield, September 18th, 1880.

JOHN WARD. Duly received, and shall have attention.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MEDICAL ETIQUETTE.

SIR,—Mrs. W. engages the services of L. in her confinement. In the meantime, I am obliged, in consequence of illness, to go away, leaving a qualified locum tenens to conduct his practice. Mrs. W., when taken ill, sends her husband off direct to me (six and a half miles), requesting me to attend. Upon inquiry why a previous engagement had not been made, he informed me that L. had been engaged, but his wife objected to having his assistant (whom she disliked) him. I explained that he ought to adhere to his engagement, and that I would not interfere. He then said that his wife would not have anyone else if I objected to go, and that he would pay me any fee I liked. I then consented to go, again telling him that I would much rather he would still call in L. (or his substitute), and that, in any case, he would have to pay him his fee. This he promised to do. L. now claims the fee that was paid to me, and refuses to ask for his own, on the ground that he cannot enforce the payment thereof. Moreover, he states that I ought to have attended for him, as we had always assisted one another in emergencies. I maintained (1) as Mrs. W. distinctly refused to have anyone if I would not go; (2) sent for me direct; and (3) never asked me to attend for L., he had no right to ask for the fee that was paid to me. I shall be glad of your opinion, under the circumstances, what is the proper thing to do.—I am, etc., G.

*** There is no written regulation, nor code of ethics, which absolutely defines that which should be the rule of conduct in such a case as that above recited. If G. was on such terms of intimacy with L. as to attend each other's patients in their respective absences, or in case of inability to be present, then a division of the fee would be the proper course. In this case, however, after explaining to the husband that he (G.) should require the full fee, and that, under the circumstances, he would have to pay L. also, as his wife had declined to have the services of his qualified substitute, we do not see that L. can have any valid claim on the fee paid to G., or that he need hesitate in applying to the husband for payment for the services which were arranged for, but which, through the caprice, etc., of his wife, had not been given by his substitute.

TREATMENT OF ELONGATED UVULA.

SIR,—A tenor singer consulted me lately respecting his throat. I find the cause of his trouble to be an elongated uvula. Will you, or some of your readers, kindly inform me whether, by snipping off a portion of it, I shall run a risk of in any degree altering his voice? It is necessary to state his uvula has been in its present condition for a long time.—I am, sir, yours obediently,

HARVEY J. PHILPOT, L.R.C.P., etc.

79, King William Street, City, September 15th, 1880.

EXCESSIVE SWEATING OF FEET.

SIR,—Dr. Thin's article upon sweating feet in this day's number of the JOURNAL has caused me to trouble you with a plan for curing this nauseous malady: a plan I always adopt, and have always found successful in a few days (say from seven to fourteen). The feet are washed well over-night, and then enveloped in about a couple of folds of linen dipped in equal parts of hot water and the following: ℞ Zinci sulph. ʒi; glyc. acid. carbol. fl.ʒii; aquam ad ℥viii. The linen is tied on by a couple of pieces of tape, and the patient goes to bed, keeping the feet out at the bottom. This is done night after night, with improvement at once, and the cure in the time at first stated. I have known one case in which the disease recurred in two or three months, but quickly yielded to a repetition of the treatment. My experience of the disease has not been large, but I have not yet known the plan above given to fail.—I am, etc., E. DIVER, M.D

Kenley, Caterham Valley, September 18th, 1880.

FALLING-OFF OF HAIR.

SIR,—Several correspondents remind me I do not state the quantity of castor-oil and vaselin I prescribed with the other ingredients for falling-off of hair. Half an ounce of each is the proportion.—Yours truly, JAMES STARTIN.

17, Sackville Street, W.

MOUNTAIN ASH.

SIR,—Some of your more learned readers, I hope, will inform me through your columns, respecting "Mountain Ash". Pereira is silent, and I gain but little information from my friends.—Yours, L.R.C.P.ED., L.S.A.LOND.

MOIST HANDS.

SIR,—Having seen no reply to the letter from "Medicus", I beg to inform him that this subject was discussed, at some length, a few months ago in the JOURNAL. Many suggestions and forms of treatment were then given, but all equally futile. It is very doubtful if there be any remedy at all for this unfortunate condition of the hands; but I should be glad if you would allow the question again to be discussed. Only those who suffer from "sweating hands" know what a misfortune it is, and thousands would be grateful for a remedy. It does not appear to be understood that the affection is a purely local condition, and not a matter to be treated constitutionally. It is congenital, and inherited. I know of so many instances confirming this, of so many families in which this "complaint runs", that I have no hesitation in affirming so much.

Your recent correspondents were nearly all led astray with the notion that internal medicines could remedy the condition. The people who suffer from "moist hands" (and no class of society is exempt) enjoy, and have enjoyed (as a rule), the same good health as their fellows. They are often remarkably and exceptionally healthy, their one and only complaint being this extraordinary perspiration of the hands, which clings to them through life like a leprosy.

I lately consulted Mr. Erasmus Wilson in a typical case of this kind, and he shook his head: "There was no remedy." But I still hold that there ought to be a satisfactory method of treatment, if not an absolute cure—something that shall stop this unnatural and abnormal flow from the pores of the hands. For the health of the body cannot, at least, depend upon "sweaty hands".—I am, sir, yours faithfully, AN ASSOCIATE.

SIR,—In reply to your correspondents who have sought a remedy for "hyperidrosis", I venture to make the following suggestion. Dr. Ringer, in his excellent work on *Therapeutics*, strongly recommends the application of belladonna. I believe he generally uses the "linimentum belladonnæ" for the purpose. Steeping the hands and feet in water in which "club-moss" has been soaked is a popular remedy. Of the efficacy of such treatment, however, I know nothing. Of course, the general health of the patient should be carefully attended to.—Yours faithfully,

L.R.C.P.LOND.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE TREATMENT OF NÆVI.

SIR,—There have been, on several occasions during the last few months, letters in the JOURNAL on the treatment of cutaneous nævi. I am pleased to see that the ligature is very rarely necessary, and that a very old remedy—the liquor plumbi subacetatis—is far more to be relied on than anything else for destroying nævi of various kinds. I have used it very many times for more than twenty years, during which time it has never failed me, but once, in a case of nævus situated at the navel, which made its appearance after the separation of the cord, and which had to be ligatured. I have always found that, after it has been applied regularly for about four months, once a day (if used oftener it will give rise to ulceration), the nævus becomes dotted over with white spots, which gradually coalesce till the nævus disappears. This it will do, without fail, in the course of one or even two years, according to size. I had an illustrative case about three years since. A child about four years old had a nævus on the temple about the size of a two-shilling piece, with two or three smaller ones adjoining. It was daily becoming larger and more prominent. The liquor plumbi soon stopped its growth; in a few months, there was a very visible improvement, and for some time now all traces of it have disappeared.

Some years ago, when I was practising in New South Wales, a child was brought to me with a subcutaneous nævus on the forehead, extending into the orbit. It felt exactly like a large coil of worms under the skin. The mother said it was increasing; that she had been to several doctors in Sydney, who told her they could do nothing for the child. I gave her some of my remedy, with strict injunctions how to use it, but fearing it would not be of any use. I never expected to see the case again, as the woman was travelling up country, and was greatly pleased when she brought me the child about a year afterwards without a trace of the disease.

These two cases are quite sufficient to show the action of the remedy, and they did not admit of treatment by ligature. But even where the ligature is admissible and the cure certain in much less time, it must always leave a scar; and in the case of children, at any rate so long as a cure is certain, time is surely of little consequence. The application of the liquor plumbi is attended with no pain, and leaves no scar, unless applied too frequently, when I have more than once known it to cause a nasty sore. It only requires to be trusted, and the result will surely follow. —Yours faithfully, RICHARD BLIGH.

Dronford, Hants, September 4th, 1880.

SIR, In the numbers of the BRITISH MEDICAL JOURNAL there are recommended different ways of treating nævus. For the last thirty years, I have adopted the following plan, which I find successful in every case. I vaccinate the nævus with liquid vaccine lymph. This creates an inflammation on the surface of the nævus, which subsides in ten days, and leaves behind a white cicatrix, instead of the purple appearance of the nævus. So well is this known throughout my district, that the parents of a child so afflicted will show the nævus, and request it should be vaccinated thereon. The last case I had was a child residing in the village of Dripsey, who had a nævus on her nose, and instead of it there now remains a white cicatrix. I strongly recommend all medical men to try this method.—Faithfully yours, ROBERT C. MADRAS, Medical Officer, Dripsey District,

September 16th, 1880. Co. Cork.

UNQUALIFIED ASSISTANTS AND CERTIFICATES OF DEATH.

SIR,—Will you kindly advise me what should be done under the following circumstances? A child was brought to my house, which on examination I found to be dying. I was asked if I would give a certificate of death. I did not feel justified in promising that I would, and advised that the case should be reported to the police. Subsequently, I have learned that, on leaving my house, the child was taken immediately to one of the many so-called "dispensaries", and was seen by the unqualified man in charge, who gave, on the same or following day, a certificate signed by a surgeon not living in the town, but whose name this unqualified man uses on his door and for all purposes in connection with the carrying on of the business of his dispensary. I have communicated with the county police (unfortunately, it is on the outskirts of this city); but beyond making an inquiry, and finding no inquest necessary, they, I am afraid, will do no more. Surely it is time some reform should be made in the law as to unqualified assistants in branch practices.—I am, yours truly, X.

THE VACCINATION TREPHINE.

SIR,—In the JOURNAL for July 24th, your correspondent, "G. P.", in a letter headed "Vaccination", gives it as his opinion that the best "vaccinator" extant is "Coxeter's". I shall be obliged if he will kindly inform me if this instrument is the same as the "vaccination trephine" alluded to by Dr. Warlomont in the late discussion on vaccination, which is reported in the JOURNAL for December 20th, 1879, page 976; and also where the instrument can be obtained, and the price.—I am, etc., MEDICUS.

THE METROPOLITAN RAILWAY.

SIR,—As the subject of purifying the atmosphere of the underground railway is under discussion in your columns, I would suggest that an atomised steam-spray, of an alkaline or other suitable solution, might possibly be effectual for the purpose.—I am, sir, yours obediently, WALTER LATTEY.

THE MEDICAL PROFESSION AND INTEMPERANCE IN ALCOHOL.

SIR,—I have this morning received by post an appeal to the medical profession, bearing the signature of "Helena Richardson, Bristol". It is asserted by the author of this appeal "That it is the doctors who teach women to drink", together with other equally gratuitous and unqualified accusations. That these statements are a gross libel on medical men, and are utterly unfounded on facts, the daily experience of every intelligent and unbiassed practitioner fully proves. I have been in extensive practice for thirty years among all classes of society, and during that period I have never known or heard of a single instance in which a woman or man "dying from drink denounced the doctor who brought them to such a fearful death"; and I challenge this traducer of an honourable profession to name the individuals upon whose authority she makes this astounding charge.

In answer to this writer's exordium—"When shall we cease to hear the despairing cry, 'It was the doctor who first taught me to drink, and now I cannot resist the thirst; I must die a drunkard'"—I reply, we shall be spared the publication of such transparent falsehoods when women, and men as well, cease to be judged solely by the morbid influences of a weak intellect and stimulated by a puerile egotism. No member of the profession (nor of the community) is more opposed to drunkenness

than myself, or more ready to admit the baneful consequences resulting therefrom: but to affirm that the abuse of an article is a reason for its prohibition, betrays a want of common sense.

With regard to "the extracts and paraphrase this appeal". I will only remark that if they appear with the sanction of the gentlemen whose names they bear, in my opinion, it is to be regretted that persons of their standing should allow themselves to be associated with a publication whose only characteristics were its virulence and its mendacity. I may be excused if I do not attach much importance to these sensational effusions, when I can recall to mind the fact that similar testimonials were not wanting at the time when the late Dr. Todd promulgated a totally different theory.—I am, sir, your obedient servant. BENJAMIN BAKER, M.R.C.S.E.

Brentwood, September 1st, 1880.

DISEASE AMONG LEAD-WORKERS.

SIR,—In your issue of September 4th, you request information from members concerning disease attacking lead-workers, and suggestions for its amelioration. May I direct your attention to a paper read by me before the Association at Sheffield, and published in the JOURNAL of Saturday, October 14th, 1876? I do this as I remember, a week or two after that date, a letter appeared in the JOURNAL showing that, where patients suffering from lead-poisoning are placed in a hot bath, they obtain a great deal of relief; and that, on testing the water of the bath, lead was found in it. In my paper, read some time before this letter appeared, I spoke of the great advantage of hot baths (Turkish baths); and, though I could speak so surely of the relief afforded to chronic cases by their use, I was not aware that that was effected by the abstraction of lead from the tissues. I think you will find in that paper a full *résumé* of the disease, and my idea of its treatment; and I have had a number of cases. I believe it is the custom in all these lead-works to make a drink of dilute sulphuric acid and syrup for the workmen and workwomen; and I find that they are too idle or thoughtless to drink it. They often, also, take their food with unwashed hands, and so eat a quantity of the carbonate and deutoxide of lead that is on their hands, and is thence rubbed on the food.—I am, yours truly,

W. HOLDER.

10, Somerstown, Holderness Road, Hull, September 7th, 1880.

TREATMENT OF INCONTINENCE OF URINE.

SIR,—I cannot perceive the merit of the mixture prescribed by Dr. Robert Arthur Jones for the treatment of nocturnal urinary incontinence. It may be well to remind him that liquor potassæ annihilates the active principles of belladonna, and that any combination of the two drugs is (as far, at least, as the belladonna is concerned) absolutely inert. The prescription alluded to appeared in your last impression, and ran as under: R Tinct. radicis belladonnæ, *B. P.*, ℥ss; liquoris potassæ (Brandi) ℥ss; glycerini ℥j; aquam ad ℥viij. Fiat mist. I am, yours truly,

Richmond Hill, Clifton, September 15th. GEORGE BUDD (Junior).

TINEA SYCOSIS.

SIR,—In answer to your correspondent "Medicus", I may mention that there are two distinct varieties of sycosis—one non-parasitic, the other parasitic—and I conclude his patient is suffering from the parasitic variety, as that alone is tinea sycosis. The diagnosis is easy, as the diseased hairs in tinea sycosis—which are often broken off short, as in ringworm of the head—will be found to exhibit the usual fungus under the microscope. Very often, the disease will spread beyond the beard on to the face or neck, and show the ordinary characters of tinea circinata. Tinea sycosis generally spreads all over the beard, while the non-parasitic variety is often restricted to a certain portion. The hairs in the former affection can generally be extracted without pain. The best plan is to epilate freely, and employ some mild parasiticide. I have found the constant application of oleate of mercury (5 per cent. solution) the most effectual remedy, combined with frequent and careful epilation of all diseased hairs and stumps. The oleate must be freely rubbed into the roots of the hairs, night and morning, with a small sponge mop. When the fungus is thoroughly destroyed, by the oleate soaking to the bottom of the follicles, the healthy hair will appear, and the scabs, etc., can be removed by simple treatment. It is most important to remember—as in ringworm of the scalp—that the difficulty is not to find some parasiticide that will destroy the fungus, but to bring the remedy into contact with it. The conidia penetrate to the very bottom of the follicles, and into the bulbs of the hairs; therefore it is impossible to reach them by ordinary remedies simply applied to the skin, as the hairs plug the follicles into which we require the parasiticide to enter. We must therefore select a remedy that will penetrate deeply into the follicles, viz., oleate of mercury. During the last year, I have had a severe case of tinea sycosis under the above treatment; it is now perfectly well.—I am, etc., ALDER SMITH, M.B., F.R.C.S.,

September 4th, 1880. Resident Medical Officer Christ's Hospital.

SIR,—Replying to the query of "Medicus" in your issue of September 4th, I beg to say that I have seen a most intractable case of sycosis perfectly cured, when almost every other means had been tried unsuccessfully, by thoroughly rupturing each pustule by thrusting in a sharpened piece of wood first dipped in the glycerinum acidi carbolici *P.B.* The acidum carbolicum so applied appears to destroy effectually each focus of the disease. The treatment, which is somewhat painful, must be persisted in as long as pustules continue to reappear.—Yours, etc.,

September 4th, 1880. L.K.Q.C.P.

MIDWIFERY AMONG PAUPERS IN SCOTLAND.

SIR,—Are parochial medical officers in Scotland obliged to attend pauper midwifery cases where there is no special arrangement made betwixt the parochial board and surgeon for such events? If the surgeon attend, is he entitled to an extra fee? and, if so, what? An answer will much oblige.—Yours sincerely, R. A. M.

*** We consider that, in rural districts, etc., where the services of a midwife are not obtainable, the parochial medical officer, in accepting the position, accepts all obligations appertaining thereto; obviously, attendance on women in labour forms part of such duty, though it may not have been specifically referred to. As regards the fee that can be claimed from the parochial board, we hold that it is the same as that which holds here, and that is a fee varying from 10s. 6d. to £2 2s., according to the nature and gravity of the case.

A. K. B. will find the information he requires in Barnes's *Lectures on Obstetric Operations*.

EDUCATION FOR ORPHAN DAUGHTERS OF MEDICAL MEN.

D. M. R. desires to know if there is any school where the orphan daughters of medical men are admitted at a reduced rate.

MR. J. WARNER WILLIAMS, Birmingham, states that he was present at Cambridge at the meeting of the Council of the Association for 1880-81; we regret that his name has not appeared in the list of members present, which was published in the JOURNAL of the 4th instant.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

EVIDENCE AT CORONERS' INQUESTS.

SIR,—On Monday morning last, I was subpœnaed to give evidence at the inquest to be held on "Morris and others", victims of the Nine Elms accident. On arriving, I inquired of the summoning officer whether I was wanted to give evidence on all the four deceased persons who had been under my observation at St. Thomas's. He replied, "You confine yourself to Morris and Lee; I have done the other two". I was rather surprised at the time, and that surprise was increased by reading in the papers the following morning that the officer had, after examination of the deceased persons, given evidence of the injuries received, and expressed his opinion that they were sufficient to cause death.—I am, sir, yours faithfully,

CHARLES BALLANCE, L.R.C.P.Lond., M.R.C.S.

St. Thomas's Hospital, September 22nd, 1880.

AN inquest was recently held at Mexborough, before Mr. Dossy Wightman, coroner, on the body of a young man named Dennis Greaves, aged 18, a watchmaker by trade, who met with his death, it was supposed, whilst holding his head from the railway carriage window, his head coming in contact with the girder of a tunnel. There was a lengthened inquiry, but, strange to say, the medical man (Dr. Sykes) who was summoned to the station, and saw the deceased within ten minutes of death, was not called, and no medical evidence was given beyond that supplied by the police-constable, who was interrogated, and gave his opinion as to the nature of the wounds and the cause of death; the coroner stating, in answer to an inquiry of one of the jurymen, that there would be no medical-witness, as there was no doubt of the cause of death.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. G. E. Wherry, Cambridge; Mr. Lawson Tait, Birmingham; Mr. T. King, Exeter; Dr. A. Rabagliati, Bradford; Dr. J. Langdon Down, London; Dr. J. MacVail, Kilmarnock; Mr. E. Haughton, London; Dr. Diver, Kenley; Mr. E. Crickmay, Laxfield; Mr. W. Pye, London; Dr. Fancourt Barnes, London; Dr. W. H. Broadbent, London; Mr. G. Eastes, London; Dr. J. Rogers, London; Mr. Lund, Manchester; Dr. Angus Macdonald, Edinburgh; Dr. Maclagan, Edinburgh; Dr. Aitken, Wooliston; Mr. Watkin Williams, Birmingham; Dr. A. Wise, London; Dr. E. H. Vinen, London; Dr. Kelch, Louisville; Our Dublin Correspondent; Dr. A. Harkin, Belfast; Dr. Bartlett, Somerset; Mr. A. Rae, Stonehouse, N.B.; Mr. Holloway, London; Dr. Crichton Browne, Dalbeattie; Our Edinburgh Correspondent; Dr. A. H. Hassall, London; Dr. W. M. Kelly, Taunton; Dr. G. T. Beatson, Glasgow; Dr. J. Mitchell, Carlisle; D. M. R.; Mr. J. A. Goodchild, Ealing; Dr. W. W. Ireland, Larbert; Dr. George Budd, Clifton; Dr. Sykes, Mexborough; Dr. Frank Davison, London; Dr. Gillespie, London; Dr. B. Ball, Paris; Mr. W. Taylor, London; Dr. Duffey, Dublin; Mr. John Postgate, Douglas; Common Sense; Dr. W. G. Coombs, Winford; Mr. Richard Graveley, Chailey; A Provincial Member; Mr. Ingpen, London: Dr. Munro Scott; Professor Bentley, London; Mr. Daniel Bradley, Dudley; Dr. F. William Smith, Leamington; Dr. W. Ingram Keir, Melksham; Mr. J. Adam Watson, Chudleigh; Dr. H. A. Allbutt, Leeds; Dr. Thomas Lyle, Birmingham; Mr. Alfred P. Watkins, Worcester; Mr. H. Y. Pitts, Liverpool; Dr. McKendrick, Glasgow; M.B., M.A., Shangai, Chhina; F.R.C.S.Eng. Exam.; Dr. F. Clarke, Tunbridge Wells; Mr. T. Sadler, Barnsley; Mr. W. A. Harrison, Maryport; Mr. W. P. Wright, Chesterfield; Mr. R. C. Harrison, London; Dr. W. Donovan, Whitwick; Dr. E. H. Sieveking, London; Mr. G. W. Potter, London; etc.

BOOKS, ETC., RECEIVED.

Diseases of Women. By J. J. Reynolds, M.R.C.S.Eng. London: J. and A. Churchill. 1880.

On Removal of the Entire Tongue. By Edward Lund, F.R.C.S. London: J. and A. Churchill. 1880.

On Atrophy of the Stomach, and on the Nervous Affections of the Digestive Organs. By S. Fenwick, M.D. London: J. and A. Churchill. 1880.

The Ocean as a Health-Resort, for the use of Tourists and Invalids. By W. S. Wilson, L.R.C.P. London: J. and A. Churchill. 1880.

The Science and Practice of Midwifery. By W. S. Playfair, M.D. Vols. i and ii Third Edition. London: Smith, Elder, and Co., 15, Waterloo Place, S.W.

Scale of Charges for Advertisements in the "British Medical Journal".

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Post-Office Orders should be made payable to Mr. Francis Fowke, at the West Central Post-Office, High Holborn. Small amounts may be sent in postage stamps.

Agent for the Advertising Department in France: J. ASTIER, 67 Rue Caumartin, Paris.

REMARKS
ON THE
BALEARIC ISLANDS AS A HEALTH-RESORT.

By HENRY BENNET, M.D.,
Formerly Obstetric Physician to the Royal Free Hospital, etc.

On the 30th of April, 1877, I left Mentone, to carry out a long-cherished wish, the exploration of the Balearic Islands, five in number—Majorca, Minorca, and Ivica, and two small ones—situated near the coast of Spain. These islands are said to be much frequented by the Spanish for the treatment of chronic diseases of the lungs, but are little, if at all, known as health-resorts to the rest of Europe.

The usual ports of embarkation for Palma, the capital and principal seaport of Majorca, the largest island, are Barcelona and Valentia. Barcelona is reached from Marseilles, either by sea, or by the railway that skirts the French coast, and, crossing the Pyrenees, near Perpignan, now arrives at that city without a break.

I reached Barcelona on the 4th of May, and the next day caught a bad sore-throat, owing to the presence of a cold dry snow-wind descending from the Pyrenees, some forty miles to the north. I lost it whilst in the balmy temperature of the Balearic Islands, to succumb again, at the end of May, at Saragossa, from the same cause, a north wind descending from the still snow-covered Pyrenees. I may add, that I have a susceptibility to catarrh of the aërial mucous membranes, but had not experienced at Mentone atmospheric conditions calculated to bring it into play since the previous month of January.

From what I saw and experienced during the month of May, in fine sunny weather, whilst travelling in the elevated plains of Spain, at some distance from the south base of the Pyrenees, I can only conclude that these regions are dangerous to invalids in spring, and probably in winter. The Pyrenees, sloping gradually into Spain, as is seen on the map, the cold dry winds, from their snow-covered summits, rush down their slopes as water rushes down the roof of a house, unfavourably modifying the climate. As north winds reign in Europe during the greater part of winter, the atmospheric condition I found in May must exist during the greater part of the winter, that is, north winds from snow-covered mountains. I think I am therefore warranted in concluding that Barcelona may be eliminated from the list of winter health-resorts for persons suffering from chronic chest-disease. It is in the same position as regards the Pyrenees as are Milan and Turin with regard to the Alps, too far for these mountains to afford shelter; and it has not a shield of mountains immediately behind it, like Genoa.

I left Barcelona for Palma on the 4th of May, at 4 P.M., in a large and well found steamer, which arrived at its destination the next morning, after a peaceful navigation of fourteen hours. Palma is a large medieval city of 50,000 inhabitants, formerly very dirty, now very clean, owing to the energy and despotic will of a recent mayor. In four years, he transformed it from a filthy southern den into a clean orderly city, which can be advantageously compared with any northern town.

Majorca is situated 107 miles S.E. from the mouth of the Ebro, the nearest Spanish coast, 171 miles from Algiers, and about the same from the French coast. The Balearic Islands contain an area of about 1,753 square miles, with a population of 289,000. Majorca, by far the largest island, contains 1,386 square miles, and a population of 200,000. It has the form of an irregular quadrilateral. Its greatest length, from east to west, is sixty-four miles; and its greatest breadth, from north to south, is forty-eight miles. On its northern shore, there is a range of mountains rising from 1,000 to 5,000 feet, with a depth of from ten to fifteen miles, which protects the island considerably from north winds. By their condensation of watery vapour and cloud, these mountains explain the heavy rains which often fall when the temperature lowers, with north-east and north-west winds, in autumn, winter, and spring. There is a smaller and lower block of mountains in the south-east of the island, which performs the same office with respect to the south and south-west moist sea-borne winds. The rest of the island is a plain, with gentle elevations and rocky protuberances.

The Balearic Islands are not only politically, but geologically, dependent on Spain. They continue the Sierra Morena and the great promontory which advances into the sea south of the province of Valentia. The north-east mountain-range is a secondary lias formation, on which are superposed a series of chalk formations, green neocomian sandstone, chalks, and nummulitic limestone. The chalk strata constitute the highest elevations of the island: Puiz Torella, 1,463 *mètres;* Puiz Major, 1,115 *mètres;* Puiz de Galatzo, 989 *mètres.* The plain is occupied by a tertiary building limestone, alternating with thin layers of blue clay, covered, at the outer circumference of the island, by alluvian soils.

The soil which lies on the plain is not deep, the rocky bones of the tertiary limestone coming through at every step; but it is fertile, and every handful is cultivated. The population is large for the area—laborious, dependent entirely on agriculture for existence; so every patch of earth is cultivated, in and out of the rocks, in crevices, in depressions, everywhere. There is a general growth of old olive, carouba, and almond trees, and of vines, with cereals underneath and between the trees.

There are no rivers—merely torrent-beds—full only at the time of the torrential rains, which occur principally at the autumnal and vernal equinoxes, but sometimes also in mid-winter; they are dry in summer. The great amount of rain that falls in a short space of time, as in the tropics, is evidenced by the torrent-beds on the sides, and at the base of the mountain-ridges. They are full of large rocks torn from the mountain, and borne along by the irresistible power of immense masses of water. The water requirements of the inhabitants in summer are principally met by the storage of water in large underground reservoirs, as in Malta. These reservoirs date principally from the time of the Moors, who formerly occupied these islands. There are some salt-water marshes near Alcudia, on the north-eastern side of the island; but they are not extensive. I have found everywhere in the Mediterranean that salt-water marshes are not so deleterious as fresh water. The rest of the island, in May, when I was there, was as dry as a highway-road in mid-summer in England; there was not a vestige of water or of marsh-vegetation to be seen.

Such a climate is favourable to cereal cultivation. Cereals get their roots well into the ground, and make a good growth with the assistance of the spring rains, and then can perfect the grain without a shower. The harvest takes place in the month of May or in the beginning of June. In England, exceptionally dry summers are always favourable to the grain-crops; in the Mediterranean climate, grain is seldom or ever damaged by moisture, as there is no rain after April. By the middle or end of June, the harvest is over, the ground is dry, herbaceous plants are withered up, and a period of intense torrid heat without rain begins; in these regions, it is the period of nature's rest. Heat does for vegetation in the Mediterranean in the summer (July and August) what cold does in the north of Europe in winter. It is the period of the year most inimical to the health of man, even to that of the natives of the country.

The above description of Majorca and of its climate is a fair specimen of the local climatic and vegetative conditions which obtain in most, if not all, the islands of the Mediterranean, with slight differences referable to geological formation and to position, north or south, east or west. The facts thus briefly enunciated give a clue to the influence of climate on health, affording a good and unerring guide.

The spring in Majorca is most delightful. Such I found it in May; mild, even warm, balmy, with fresh pleasant nights, like fine mid-summer weather in England when not too hot. I was told that April was equally fine, as I have found it in every other Mediterranean island that I have visited—Sardinia, Corsica, Sicily, Corfu, etc. The temperature varies from fifty to sixty degrees at night, from sixty to seventy-five degrees in the daytime, according to the date. The islands are perfectly healthy at that period of the year. Intermittent fever has not commenced, and there is no other climatic influence at work antagonistic to health. April and May are the two healthiest and pleasantest months of the year, as they are likewise all over the Mediterranean basin. It is the best time to visit these islands. I was told that October and November are equally cool and pleasant as to climate, barring the possibility of heavy rains falling and lasting several days. The immunity from what is called malarial fever, however, is not so decided in the autumn. The summer influences which give rise to it, be they vegetable germs or mere chill, or both, appear to linger on in autumn, all over the Mediterranean. Thus, except on the north shores, early November is a safer epoch than early October for travellers and invalids to begin their travels or residence. Even on the north shores of the Mediterranean, the last ten days of October is quite soon enough to arrive. Invalids, especially, should neither come too soon to the Mediterranean, nor leave too soon. They should settle down towards the end of October, and not leave the Mediterranean region for the north until the middle of May.

Between spring and autumn comes the summer, which is very hot and

dry in Majorca, nearly as much so as on the coast of Spain (Valentia, Murcia, Alicante), or as on the shores of Africa (Algiers, Oran). Then intermittent or malaria fever develops itself all over the island, both in the towns and in the country; in the dry rocky plains as well as in the few marshy districts. I was told, however, that in the latter the cases are more numerous and more severe. The experience of Majorca and of the other Balearic islands illustrates what I have found to be the case all over the Mediterranean area, both on the islands and on the shores, viz., that intermittent fever can and does occur, independently of the existence of marshes or of alluvial soil, under the mere influence of extreme heat. Mere exposure to even a slight lowering of temperature at night, or of a cold wind in the daytime, produces intermittent fever all over the Mediterranean area; on the mountain sides, as in dry, arid, rocky plains, and that in the absence of marsh exhalations, provided the human body has previously been for some time exposed to great heat. How is the bacillus malariæ generated in such cases?

From all that I heard on the spot, from a careful study of the vegetation, and from what I have read, I do not consider that the climate of Majorca can be considered an exceptionally favourable one in winter. The mountain range, on the northern shore, running from north-east to south-west, does not thoroughly protect the island from north-west or north-east winds—the more so as its altitude is not very great. The altitude is, however, sufficiently great to condense clouds and to give rise to abundant rains, accompaninied by storms of wind. Except the orange trees, there is no botanical evidence in the islands of perfect immunity from winter cold, such as we find at Malaga, at Mentone, and on the more sheltered regions of the Riviera. The orange and lemon trees are, almost without exception, confined to the bottom of a deep crater-like valley in Majorca (that of Soller), and to a narrow valley-crevice, or geological fault, in Minorca. At the bottom of these pits they are thoroughly sheltered from every wind that blows, winter and summer. None are seen elsewhere.

All islands are exposed to winter winds, but the Balearic Islands must be more especially so exposed. Occupying as they do the north-east corner of the Mediterranean, they are exposed in winter to cold north-west winds from the snow-covered Pyrenees, and to cold north-east winds from the snow-covered mountains of the South of France and of Switzerland. The collision of these cold north winds in winter with warm moist south-west and south-east marine winds, no doubt renders the Balearic Islands a battle-field. On this battle-field, they usually fight it out many times in the course of the winter.

The above geographical conditions explain the fact of tropical rains falling in Majorca, in moist winters, about the autumn and spring equinoxes. Sometimes, these rains are so heavy as to devastate the country. In the fifteenth century, 1,600 houses were destroyed by the inundations, and 5,000 people were drowned. In 1850, an all but equally disastrous inundation occurred—not, however, causing the death of so many people. The average annual rainfall, however, is small, and does not amount to more than 380 *millimètres*, less than that at Valentia, where it is 400 *millimètres* (about 16 inches). Some years none, or scarcely any, falls—as in 1847 and in 1849, when there was a terrible drought. The rainfall in Minorca is said to be greater than in Majorca.

The Province of Murcia, in Spain, is even drier than that of Valentia. It is, I believe, the driest region in Europe; and yet, last autumn, the rains were so heavy that terrible inundations occurred, occasioning great loss of life. This I can easily understand, for I myself have seen there many houses built in the very bed of the torrents and rivers, as if water were an unknown element to consider. No such rains had occurred in Murcia since the year 1600—that is, for nearly three hundred years. In the Balearic Islands, owing to their marine situation, even when it does not rain, the air is always moist.

In this latter sense, these islands enjoy the usual advantages of island climates in the Mediterranen. The temperature is more equable, and there is not the sudden variation in temperature between day and night that obtains on the shores, and especially on the north shores, of that sea.

The vegetation of these islands is that of the Mediterranean islands in general. The principal tree (covering the mountain sides up to an elevation of 2,000 feet) is the pinus halapensis; as elsewhere, there is the usual brushwood of cistus, pistacia lentiscus, myrtle, juniper, etc., with no alpine, or even sub-alpine, vegetation. It is too warm even on the summits of the mountains.

Ivica, which I had not time to visit (twenty-three miles long by twelve broad; population 11,000), appears to be merely a series of arid hills, partly covered with Aleppo pine trees, and with the usual brushwood (the Corsican maquis).

The annual temperature of Palma, according to Weyler, deduced from five years' observation, 1849-1853, is 18.25° Cent. (60 Fahr.); that of the Algerine coast not being quite so high, and that of Valentia being rather higher. The thermometer only once descended to the freezing-point (32° Fahr.) in these five years. Snow falls very rarely on the plains, and melts as it falls. The minimum temperature is reached in February. The mean winter medium is about 46° Fahr. (7.7° Cent.)—the same as at Mentone. The maximum reached in August is 92° Fahr.; at Valentia, it is 97° Fahr.

Minorca is situated to the west of Majorca, separated by a straight about twenty-five miles in width. It is a much smaller island, thirty-three miles in length, thirteen miles in width at the widest part. It lies from north-west to south-east, and has an area of three hundred square miles. It presents the character of a rocky undulating plain, with a central ridge of hills attaining an elevation of 1,500 feet at the highest point (Monte Toro). There is a large town (Port Mahon), with a splendid port—one of the finest in the world—formed by a crack or fault in the geological formation. This port and the island were occupied by the English during the greater part of the last century, and were the Mediterranean centre of our naval and maritime power in the Mediterranean before we took Malta. Many essays and works were written about Minorca and about its pathology during that time.

The pathology of the Balearic Islands is very similar to that of the islands and large towns of the Mediterranean in general, both in the past and in the present. Palma has been a populous town for centuries. In the middle ages, it used to be ravaged by the plague, three, four, or five times each century. In 1653, 406 houses remained uninhabited in Palma, the occupants having all died of this pestilence; 2,198 men died out of 3,015 attacked; 3,293 women out of 5,797; 3,981 children out of 4,634. Since then, plague has disappeared, but there have been all but equally serious epidemics of malignant fevers. An epidemic of malignant sore-throat (diphtheria?) occurred in 1741, which carried off the sufferers in a few hours. Yellow fever reigned in 1821, and made great ravages. Cholera morbus appeared at Port Mahon in 1833 and in 1844. From thence, it reached Majorca, where three hundred persons died in a fortnight.

I mention these facts to show that the health-history of Palma has been the same in the past as that of Malaga, Barcelona, Marseilles. However healthy the position of a southern city may be, even when, like Palma, built all but in the middle of the sea, on a declivity, open to all the winds that blow, free from any external source of contamination, it may be a pestilential residence. If the laws of town-hygiene are neglected, if the streets are narrow and defiled by dirt and refuse, if the drainage is left to fester, all the pestilences to which the human race is subject run riot and reign supreme. They keep destroying life constantly, but imperceptibly; and every now and then they assume the epidemic form, and sweep off the population by wholesale.

Palma, and also Port Mahon, are now better prepared, however, to meet pestilence than formerly. I found them both exquisitely clean, swept, whitewashed, and brushed until scarcely a speck of dirt could be seen or found in either. As I have already stated, Palma has been recently regenerated, cleansed, transformed, by a vigorous "tyrannical" mayor. Having first secured the assistance of his town council, he made a vigorous and successful crusade against all the dirt-habits of the south, pulling down houses, forbidding people to sit in the streets in the southern way, forbidding mendicity, and by fifty other measures improving the sanitary state of the city. There is one point, however, respecting which he has not succeeded in modifying the convictions and habits of his fellow-citizens, if I may judge by the state of the hotel in which I resided—the first in the place—and also by that of several other houses which I casually visited.

In Southern Europe, the entire population seem to be ignorant of the fact that the fermentation of human fæcal accumulations, especially in hot weather, generates pestilential gases, which give rise to putrid or diphtherical sore-throats, to typhoid fever, and to other serious diseases. The closets are constantly built in the very centre of inhabited houses, leading to large cesspools, without traps or precautions of any kind. Consequently, the houses are constantly permeated with gases offensive to the smell, indicating the danger. Such was the case in the Palma hotel I inhabited. I could only get rid of the smell in my bedroom by leaving the window wide open day and night. I was asked on my arrival to contribute to the funeral expenses of a young commercial traveller who had died the day previous of "fever" after a few days' illness. His death appeared to me very suspicious, and I wrote to the authorities communicating my sentiments on the matter. Such was the state of houses in cities in the middle ages, no doubt, and this must have been one of the principal factors in town unhealthiness and mortality.

In our times, the diseases that reign in the Balearic Islands are those of similar regions of the Mediterranean—intermittent fever, rheumatism, catarrhal fever, typhoid, diarrhœa, dysentery, etc. Pulmonary con-

sumption is said not to be uncommon in Palma. It is the same in all the large close towns of the Mediterranean, no doubt principally from defective ventilation. Night air is feared all over the Mediterranean, and windows are shut at sunset only to be opened next day. Intermittent fever, as I have stated, is very common in summer and in autumn in every region of these islands—in Minorca, which is a mere rock, without a rivulet or a marsh, as in Majorca—quite irrespective of marshes of any description. This fact explains the climate of Cyprus, and its assumed unhealthiness. Both islands, Cyprus and Majorca, have the same kind of climate: what may be called the Mediterranean climate. A large body of troops disembarked in midsummer in Majorca, and located on the healthiest and driest plains, and then treated as if they were at Aldershot, would have the same fate that our troops had in Cyprus. I never could understand how or why our army medical men, knowing, as they must do, from their experience of Malta and Corfu, the natural history of the Mediterranean climate, could have allowed such a foolish irrational step to be taken, without at least making a formal protest.



The conclusions at which I arrived, after a careful survey of the two principal islands of the Balearic group, are, that they cannot be recommended to invalids as winter residences. The climate is mild and moist in winter, it is true, which would agree with some forms of chronic disease. It is as mild and moist, apparently, as that of Algiers; but the winds are too constant and too vehement, and the storms and rains, when they occur, are too violent in the winter seasons. The mountain range on the north-west is not sufficiently high or wide to exhaust these storms coming from the north, and to protect the island from their influence. Indeed, there appears to me to be no condition that makes these islands preferable to the mainland of Malaga, Muria, Elche, Alicante, Valentia (see my work on the Mediterranean, chapter ix, Spain). I must add that there is no accommodation whatever for invalids. The inns at Palma are simply vile, and there is no other refuge for them in this large city. Invalids appear to be neither wanted nor cared for. The Spanish invalids must be taken in by friends and relations, for I failed to discover any place to which they could go. Out of Palma, in the numerous villages, there is simply no good accommodation to be found. Port Mahon, it is true, does contain a decent *posada* or inn. It was so long in the possession of the English that, like Corfu, it still shows many of the evidences of our civilisation. But there is nothing in Minorca to attract the stranger, except the mildness of its climate, the facilities its long beautiful port gives for boating, and a fine old cathedral.

The Balearic Islands, in conclusion, seem to me merely suited for a spring tour in April or May, such as I made. Then they are truly delightful, and the tour, allowing for bad accommodation, was to me a most enjoyable and fascinating one. For further information respecting these islands, I would refer to the appendix of the third edition of my work on the *Treatment of Consumption*, to the work I have quoted by Fernando Weyler, *Topografia Physico Medicale des Iles Baleare, Palma*, 1854 if it can be obtained, which I failed to do—and to M. George Sand's *Un Hiver à Palma*. Although merely a literary production, the latter work gives a most graphic, and no doubt a true, description of the winter climate of Palma, and of the island in general, as also of the difficulties of social and material life.

ON THE INFLUENCE OF ALTITUDE WITH REFERENCE TO THE TREATMENT OF PULMONARY DISEASE.*

By WILLIAM MARCET, M.D., F.R.S.

THE following communication may be divided under three heads.

1. The effects usually produced on a person in good health on ascending high mountains.

2. The influence of altitude in disease, with especial reference to pulmonary affections.

3. The influence of altitude upon respiration as accounting, in a great measure, for the beneficial effects of high stations in some cases of phthisis.

When, from a low altitude, approaching that of the sea-level, a walk is taken over high cliffs or a neighbouring hill, a sensation of easy breathing is experienced, the body appears to feel lighter, and a state of general vigour and comfort ensues. If a mountain a few thousand feet high be ascended, the sensations experienced on low hills are intensified, the breathing becomes fuller, and a pleasurable excitement from the pure state of the atmosphere, united to Alpine scenery, well repays the fatigue of the climb. Seven or eight thousand feet in the Alps appear to be the limit which those accustomed to mountaineering usually attain with perfect comfort; above that height, the respiration, in the sitting posture, begins to indicate infrequency, although in an unconscious way; the breathing also becomes deeper, and an unpleasant nervous discomfort is often induced, productive of fatigue, and interfering with sleep at night. At ten or eleven thousand feet, the cold from the low temperature of the atmosphere, and increased evaporation from the skin and lungs, begins to be seriously felt; mostly at night, when no amount of blankets can keep the body warm. After a chilly restless night, an attack of mountain sickness is not unlikely to set in at three or four o'clock in the morning; and, although attended with considerable distress, resembling very much that of sea-sickness, the attack may have passed off altogether in time for a fairly early start for some higher altitude. I need not add that those who are in good training for mountain excursions can rise to a very great height without inconvenience, or any degree of ill-health.

A sojourn of eight days in succession, in 1875, on the well known pass of St. Theodule (10,899 feet), another of three days, this last summer, at 11,050 feet (Col Sen Gèant), and excursions to much greater heights, have afforded me many excellent opportunities of observing the influence of altitude on health. It is singular that the power of digesting food should often fail at a considerable elevation above the sea; as a rule, tourists eat little; their guides have a large share of their provisions to fall back upon, and to that they usually do not fail to do justice. It is not that the appetite is at fault, but, after partaking of very little food, there is no desire for more; and the food taken is often

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digested but slowly and with difficulty. I conclude, from my own experience, that milk, coffee, tea, bread and cheese, chocolate, and dried fruit, are about the best articles of food at great altitudes, and a great deal of physical work can be done upon them; it is remarkable that such a diet is precisely that which Dr. Edward Smith has found experimentally, to yield most carbonic acid in the body. After living some days on such a short allowance of food, and returning into the plains or valleys, where good hotels are to be found, it is wonderful how keen an appetite is felt, and how much can be eaten and digested with the greatest ease. A stay of a few days at an altitude of about 11,000 feet in the Alps, is productive of fatigue and debility, with an undefinable state of discomfort; there is a peculiar harshness of the air breathed, and a great desire to return into lower altitudes. This I fully experienced at St. Theodule, and I believe my guide, although more accustomed than I was to such a kind of life, was not sorry when the time came to move downwards. The feeling of comfort after descending only a thousand feet was most marked, and the relief to the respiration very positive. A similar grateful sensation was experienced after a stay of three weeks on the Peak of Teneriffe; but it was due in this case not only to the increased density of the air as we progressed downwards, but also to the greater atmospheric humidity. After living under a nearly tropical sun, we entered the zone of trade-wind clouds which surrounds the peak up to between five and six thousand feet, and has a thickness of about 2,300 feet; the sensation on losing sight of the sun, and breathing the damp fog in a denser atmosphere, was exceedingly refreshing.

On rising above the sea, less and less oxygen is held in a given bulk of air, although remaining the same relatively to the nitrogen; and the atmosphere becomes, as a rule, colder and drier, the dryness being, of course, especially conspicuous in fine weather. The air also contains a smaller proportion of carbonic acid, and is freer from organic germs productive of fermentation and putrefaction. On the other hand, the sun becomes more and more powerful, as it passes through a smaller thickness of the atmosphere before reaching the earth, and a thinner layer of atmospheric moisture, the latter absorbing the sun's heat very readily.

The amount of carbonic acid in the atmosphere at increasing altitudes is an important circumstance to notice. Not long ago, it was thought that there was rather more carbonic acid in the atmosphere at an altitude of six or seven thousand feet than at the sea-level; recent experiments, however, by M. Truchot, have shown that such is not the case, and that the carbonic acid in the air undergoes a somewhat rapid reduction at increasing altitudes; thus, at an altitude of 1,296 feet, he found 3.13 parts of carbonic acid in 10,000 of air; and, at 2,056 feet, its proportion had fallen to 1.72 in 10,000. I have myself been surprised on various occasions on noticing to what a comparatively small extent air precipitates a solution of hydrate of barium at ten or eleven thousand feet high. While I was engaged experimenting on the Col St. Theodule (10,899 feet), a pool of glacier-water freely exposed to the atmosphere was found to be absolutely free from carbonic acid, but perhaps the temperature of the water may have had something to do with the circumstance. The presence of a comparatively small proportion of carbonic acid in the air breathed on high mountains must be beneficial to health in cases of diseased lungs. The air breathed is certainly the more pure on that account, although, with healthy people living at the sea-level, and in the midst of a luxuriant vegetation, the amount of that gas which they inhale is perfectly consistent with health. If an excess of carbonic acid in the atmosphere, beyond its normal proportion, is known to be injurious where a disposition exist to consumption, it is but natural to conclude that, the smaller the amount of that gas in the air breathed, the more likely will it be to agree with such patients. The fact that the entire vegetation at Davos is concealed under a thick coating of snow throughout the winter, must assist in keeping the proportion of carbonic acid in the air breathed very low indeed.

As to the organic germs in the atmosphere, from Dr. Tyndall's experiments, they may be considered absent, or nearly so, in the atmosphere of such a place as Davos, except, of course, inside or in the immediate proximity of a dwelling.

The heat of the solar rays, as previously stated, is much greater on the mountains than at the sea-level; thus the sun may act with great power through an atmosphere which is nearly freezing. The air itself absorbs but little heat; and at Davos, as soon as the direct rays of the sun are hidden, either by a passing cloud or the shade of some other object, an immediate transition from great heat to a piercing cold is often experienced. On the Peak of Teneriffe, under the twenty-eighth degree of north latitude, Mr. Piazzi Smyth, the well known astronomer, has reckoned that the temperature of the direct sun-rays at 9,000 feet amounts to no less than 212°, or the boiling point of water at the sea-side. I have seen, on that very mountain, water left in a plate on the hot sand in the evening, to be frozen next morning into a solid mass of ice.

The intensity of the sun's light on stations situated at about 5,000 feet above the sea is a circumstance also well worth taking into account. The brightness of the sun's light is certainly one of the great attractions of the Riviera, and no doubt but this is an important feature of a climate for consumptive invalids. There are direct experiments bearing on this subject. Moleschott, in 1855, observed that light had a distinct influence on the production of carbonic acid in animals, and he concludes from his inquiry: 1. That frogs of similar weights, and in equal periods of time, exhale from one-twelfth to one-quarter more carbonic acid when breathing under the influence of light than while in the dark, so long as the temperature remains the same or varies but slightly; 2. That the production of carbonic acid is greater and greater in a direct ratio with the increase of the light to which the animals are submitted; 3. That the influence of light towards an increase of the amount of carbonic acid expired acts partly through the eyes, partly through the skin. The excess, however, of heat and light at great altitudes, especially when the earth is covered with snow, may be productive of ill-health; and people wintering on mountain stations should be warned against the glare of the sun, lest their eyes should become affected from this cause. Snow-blindness in the high Alps is not uncommon, and I had an opportunity of seeing a severe case of this painful affection at Chamounix not long ago.

The Influence of Altitude on Health. — It is well known that a moderate altitude exerts a bracing or tonic influence on health; and this applies, not only to the air of mountains, but to that of places raised but a few hundred feet above a patient's dwelling. I have had many opportunities of testing the beneficial influence of the hills skirting the Mediterranean coast, and have obtained excellent results by sending cases of phthisis with acute symptoms from the sea-level either to the hills at the back of Nice, or to the picturesque slopes rising near Cannes. These stations, if on the top of a hill or a raised plateau, are rather colder than the seaside, but they are somewhat warmer if situated on a slope facing the south. It is quite remarkable what benefit intractable cases of hæmoptysis, for instance, often derive from such a change. The continued influence throughout a whole winter of a high station, such as Davos, must be considered to some extent as different from that resulting from a stay of a few days only in such a place. Experience certainly shows that any prolonged strain of the functions of the body must prove objectionable. Those who are born in the mountains, and have never left them, are in their normal condition under light mountain air, and it will be a strain on their functions to take up a residence near the sea-level. A long-continued stay on high mountains is well known to be productive, for the inhabitants of the plains, of exhaustion, debility, loss of energy, and want of reaction against external influences. Dr. Lombard, Dr. Jourdamiet, and M. Paul Bert, who are well qualified to express an opinion on the influence of mountain climate, bear out this view. I have been told by the monks of the Great St. Bernard (8,115 feet) that, although they are all young, strong, and healthy, and indeed men selected for the work, most of them are obliged to leave, after a residence of one or two years, from ill-health and exhaustion, and most, if not all, of them lose their energy more or less.

The Influence of Altitude on Disease, with especial reference to Pulmonary Affections.—There is abundant evidence to show that phthisis is nearly unknown amongst the inhabitants of altitudes of 5,000 or 6,000 feet, and higher—a fact, the explanation of which will be found, I think, in the last portion of the present communication. They are subject, however, to other diseases, and can hardly be considered, I should say, as living so long and healthy an existence as the inhabitants of the plains, who, moreover, enjoy more comforts, and have, as a rule, better food.

Inflammatory diseases are more frequent amongst the inhabitants of the mountains than those of the plains; and Lombard remarks that, in the highest towns in Europe, nobody can be found who has not suffered repeatedly from what Dr. Albert of Briançon calls "inflammatory fever without any local affection" (*sans localisation*), ending with perspiration, loaded urine, and a slight eruption at the lips. Bronchitis, asthma, emphysema, pneumonia, pleuropneumonia, and pleurisy are amongst the most frequent diseases met with in mountain towns and villages, such as those situated on the high plateau of the Engadine in Switzerland. At Chamounix, about one-fifth of the death-rate is said to be owing to pneumonia.

Rheumatic affections are very common amongst mountaineers in northern latitudes, although nearly unknown, according to Dr. Tschudi, on the high plateaus of Peru. Dr. Lombard considers rheumatism as mostly prevalent under a climate free from extremes of cold or heat. My own experience is quite in accordance with this observation; and I

well recollect, when engaged with the out-patients of the Westminster Hospital, that, in the spring of the year, cases of pulmonary affections, frequent in winter, fell off rapidly, and were replaced by rheumatic affections.

The stomach is not unlikely to suffer after a prolonged stay above six or seven thousand feet: the St. Bernard monks complained much to me of gastric symptoms. Under the tropics, diarrhœa and dysentery prevail in mountainous regions; and, according to Lombard, they form, together with affections of the liver, about one-sixth of the total number of deaths.

Hæmoptysis certainly appears checked by removal from the plains into the mountains. It is remarkable that inflammations of the lungs and air-passages should be so prevalent in high regions, although the reverse be the case with phthisis; a circumstance appearing to show that there is a greater difference between tubercular disease and inflammation of the lungs than is usually supposed. Are we also to conclude that, above 5,000 feet, pneumonia, although common, does not run the same course as it often does in the plains, and yields no caseous deposit likely to soften down and give rise to a cavern?

If pulmonary inflammation be common in mountainous districts, it is not so on the Riviera and Mediterranean coast; people live there under the full atmospheric pressure, and winter in a comparatively warm genial climate; breathing is carried on quietly and regularly, and every precaution is taken to avoid the cold air, which is usually limited to the early morning and after sunset. Hence there is no excitement of the pulmonary circulation, and no increase of cold in the pulmonary organs, from evaporation of moisture from the air-passages. The consequence is, that those who suffer from bronchitis in England, when the cold weather and fogs begin in autumn, experience great relief on the Riviera and Mediterranean coast. So far, the difference between the influence of mountain air and the Mediterranean climate is most clearly defined. We now come to the main point of the present communication, namely:

The Influence of Altitude upon Respiration as accounting in a great measure for the Beneficial Effects of High Stations in some Cases of Phthisis.—On first undertaking, in 1875, an experimental inquiry on the influence of altitude upon respiration, I little anticipated obtaining a result which was likely to throw much light on the influence of high winter stations on the progress of phthisis. My first paper on the subject was published in the *Proceedings of the Royal Society* for 1878, and a second in 1879. My experimental stations were situated, at the following altitudes, in Switzerland: Yvoie (near Geneva), 1,230 feet; the Great St. Bernard, 8,115 feet; the Reffel (Zermatt), 8,428 feet; the St. Theodule Pass, 10,899 feet; the summit of the Breithorn, 13,685 feet; and in the Island of Teneriffe, 7,090 feet; on the Peak of Teneriffe, 10,720 feet. My present object is to limit myself to those results which bear on the subject of the present communication.

The first point is the increased bulk of air breathed, under low barometrical pressure, in order to supply the necessary amount of oxygen to the lungs. The following were the results obtained.

Air Expired per Minute.

	Air actually Expired per Minute.	Air Expired per Minute reduced to Freezing-point and Seaside Pressure.	
Alps.			
Altitudes.	*Litres.*	*Litres.*	Temp.
1,230 feet	5.66	5.14	57.
8,115 ,,	6.05	4.42	43.7
8,428 ,,	6.50	4.62	52.4
10,899 ,,	5.83	4.16	36.2
13,685 ,,	7.94	4.65	34.9
Teneriffe.			
Seaside	6.41	5.24	—
7,090 feet	7.62	5.47	—
10,700 ,,	5.47	4.11	—
11,745 ,,	8.4	4.64	

It is seen, therefore, that the volume of air breathed does not increase exactly in the same ratio as the atmospheric pressure falls, although there is an approximation to such a change; but the amount or weight of air or oxygen inhaled shows a decided tendency to diminish as altitude increases. This is seen in the Teneriffe experiments more distinctly than in those undertaken in the Alps; but, in the latter series, the mean of the experiments at the high stations yields 4.65 *litres* (reduced) of air expired per minute; while 5.14 *litres* are expired at the lowest station, the difference amounting to 9.5 per cent. In the case of the Teneriffe experiments, a similar calculation gives, oddly enough, exactly the same reduction. Now, 9.5 per cent., or nearly one-tenth, less oxygen taken into the lungs constitutes a very great change in the function of respiration. It would appear, at first sight, that a fall in the amount of carbonic acid expired at increasing altitudes might be expected, as less oxygen is taken in. I have shown, however, that, far from this being the case, there is critically an increased amount of carbonic acid expired by a person as he rises above the sea in the Alps, the extreme extent in my case amounting to 15 per cent., at an altitude of 13,685 feet. My experiments on the island of Teneriffe show that near the tropics, and probably also between them, the amount of carbonic acid expired cannot be considered as increasing as the atmospheric pressure falls; the difference between my results, under the two latitudes, being obviously due to the temperature of the air, which is high and nearly uniform on the Island and Peak of Teneriffe, while it falls considerably at high altitudes in the Alps. It may therefore be concluded that, as a tourist rises on the Alps (by tourist is meant an inhabitant of the plains who finds himself under new physiological conditions in the mountains), and while in the sitting posture and remaining perfectly quiet, he will take in a smaller weight of air than he usually does, and give out more carbonic acid. If such be the case, the same weight of carbonic acid will require the inhalation of less oxygen high up in the Alps than at the sea-level. On the island of Teneriffe, although there is no particularly marked increase of carbonic acid expired high up on the Peak, still, as the air breathed undergoes a positive reduction, the same remark will hold good—namely, that on the higher stations the carbonic acid expired will require, comparatively, the inhalation of a smaller quantity of oxygen. The following is a table showing the proportions of air expired corresponding to the expiration of one *gramme* of carbonic acid, both in the Alps and at Teneriffe.

Altitude.	Temperature of the Air.	Carbonic Acid Expired.	*Litres* of Air Expired Reduced.	
The Alps.				
1,230 feet	57.3 deg. Fahr.	1 *gramme*	1.36	
8,115 ,,	43.7 ,, ,,	1 ,,	1.14	Mean at and above 8,115 feet, 1.102.
8,428 ,,	52.4 ,, ,,	1 ,,	1.14	
10,899 ,,	36.2 ,, ,,	1 ,,	1.16	
13,685 ,,	34.9 ,, ,,	1 ,,	1.03	
Teneriffe.				
Seaside	75 ,, ,,	1 ,,	1.24	
7,090 feet	63.6 ,, ,,	1 ,,	1.13	Mean at and above 7,090 feet, 1.143.
10,700 ,,	64.2 ,, ,,	1 ,,	1.11	
11,745 ,,	64.0 ,, ,,	1 ,,	1.26	

Nothing can be clearer than the result I have obtained. In the Alps, the experiments made, at altitudes varying from 8,111 feet to 13,685 feet, show that the mean amount of air expired at such altitudes corresponding to one *gramme* of carbonic acid amounts to 1.105 *litres*; while at 1,230 feet, in the neighbourhood of the Alps, the volume of air expired for one *gramme* of carbonic acid amounts to 1.36 *litres*, the difference being, therefore, 19 per cent. It may therefore be said that 19 per cent. less air (in weight) was required to make one *gramme* of carbonic acid in the body at these altitudes than at 1,230 feet.

On the Peak of Teneriffe, the expiration of 1.143 *litres* of air (reduced), at altitudes varying from 7,090 to 11,745 feet, corresponds to one *gramme* of carbonic acid; while, at the seaside, the volume of air expired, for the same weight of carbonic acid, is 1.24 *litres*, giving 8.8 per cent. less air for one *gramme* of carbonic acid at the high stations than at the seaside.

These results, obtained from a great number of experiments, at altitudes varying considerably, and under different latitudes, certainly show that the inhalation of a smaller weight of air is required for a similar degree of animal combustion on the mountains than near the sea-level; or, in other words—

The air breathed finds its way more readily through the pulmonary tissue into the blood at a certain altitude than nearer to the sea-level: and this law applies equally to various latitudes, although less marked in the South.—This phenomenon must be intimately connected with the influence of mountain stations on consumption; the increased readiness with which the oxygen of the air finds its way through the pulmonary tissue into the blood being clearly opposed to the progress of tubercular disease. It is also apparently this same circumstance which makes consumption so rare amongst the inhabitants of places situated at certain altitudes above the sea.

Bequests, etc., to Medical Charities.—Mr. Peregrine Hogg Purvis, of Winchmore Hill, bequeathed £100 each to the Earlswood Asylum for Idiots, the British Home for Incurables, the Metropolitan Free Hospital, the Royal Free Hospital, the City of London Hospital for Diseases of the Chest, and Dr. Laseron's Deaconesses' Institution and Training Hospital at Tottenham.

ON THE WINTER CLIMATE OF SAN REMO.*

By ARTHUR HILL HASSALL, M.D.,

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THE past winter season, extending from November 1st, 1879, to April 30th, 1880, was one of exceptional severity, both in England and in the Riviera. I propose, therefore, in the present communication, to give some precise meteorological data illustrative of the weather at San Remo, and, by inference, along the Riviera generally, during that period. It should be remarked, however, that the value and interest of the observations about to be recorded are by no means limited to the one season only—since they embrace some novel particulars, illustrating still more clearly the characteristics of the climate.

I may state that my observations were taken with Negretti and Zambra's best instruments, corrected at the Royal Kew Observatory; these were suspended in a box, furnished with a double roof, and louvred on all sides so as to admit the air freely, but to break to some extent the force of the wind; this was placed in the shade, to the north, at an elevation of about forty-eight feet above the sea, thirty above the ground, so as to be unaffected by radiation, and at a distance of about five hundred feet from the sea. The observations were taken thrice daily, at 9 A.M., 3 P.M., and 9 P.M., and the minimum and maximum readings were also recorded; they embrace not only the temperature at three periods of the day—the day maximum and the night minimum—but the sun-heat, the number of sunshining days, the duration of sunshine, the number of days and hours on which rain fell, the amount of the rainfall, the relative humidity of the air, the temperature of the sea, and many other particulars.

The mean monthly temperature of the six months constituting the season, the mean day range of temperature, the mean maxima and minima, and the mean for the whole season, are shown in the following table.

TABLE I.—*Mean Monthly North-Shade Temperature.*

	9 A.M.	3 P.M.	9 P.M.	Mean Monthly.	Mean Day Range.	Greatest Day Difference.	Mean Night Minimum.	Mean Day Maximum.	Mean of Maxima & Minima.
November	54.60	56.00	51.40	53.50	6.8	13.4	48.40	59.40	53.90
December	47.80	48.00	42.20	45.20	8.3	13.1	39.20	51.80	45.50
January	48.00	52.10	44.60	47.54	7.8	14.0	40.70	53.30	47.00
February	50.67	56.69	48.55	51.50	5.8	11.5	45.61	57.31	51.46
March	54.70	58.70	51.40	55.00	5.1	8.7	47.70	60.10	53.90
April	61.70	61.70	57.30	59.30	4.3	10.0	52.80	64.10	58.40
Mean of Season	51.[illegible]	55.20	49.14	52.00	6.3	11.8	45.7*	57.0*	51.70

* Differences between the 9 A.M. and maxima readings.

The mean temperature for the whole season, deduced from the three daily readings, was 52.000; and from the maxima and minima readings, 51.70.

The preceding observations are fully confirmed by those taken at the Official Meteorological Observatory in San Remo, as will appear by an examination of the subjoined table.

TABLE II.—*Mean Monthly Temperature at the Meteorological Observatory at San Remo.*

	9 A.M.	3 P.M.	9 P.M.	Mean Monthly.	Mean Night Minimum.	Mean Day Maximum.	Mean of Minima & Maxima.
November	[illegible]	57.0	51.3	53.9	47.6	59.7	53.6
December	[illegible]	51.[illegible]	44.0	46.7	40.4	53.4	46.9
January	[illegible]	[illegible]	46.4	48.6	41.2	55.2	48.2
February	[illegible]	56.8	50.3	[illegible]	47.1	58.6	52.8
March	55.5	[illegible]	53.3	56.3	48.8	62.3	55.6
April	[illegible]	63.6	[illegible]	60.3	53.5	66.1	59.8
Mean	[illegible]	[illegible]	50.4	53.1	46.4	59.2	52.8

According to the above table, the mean temperature for the whole season, deduced from the three daily readings, is 53.1, and, from the maxima and minima readings, 52.8—being in the one case exactly 1.1° and in the other 0.1° Fahr. higher than my own readings.

From an examination of Table No. I, it appears: 1. That December and January were unusually cold months, but, notwithstanding this, that the average temperature of the whole season, as deduced from the three daily readings—namely, 52.00°—was rather above the average of the nine winter seasons ending April 1873: namely, 51.55°, as recorded in my work on *San Remo and the Western Riviera*: 2. That the mean day range of temperature was extremely limited, it varying between 6.3° and 8.3°; while the limit of the greatest day difference was also extremely moderate, it ranging between 8.8° and 14.0°.

It further appears, from my meteorological journal, that the temperature fell slightly below the freezing-point five times in December and once in January, the greatest degree of frost occurring on the night of December 9th, when the thermometer stood at 27.9°. On several other occasions the temperature approached the freezing-point, and on the ground and in exposed situations it even froze; and, of course, high up the valleys and on the hill and mountain tops, the cold reached several degrees of frost—so much so, that the lemon-trees in some situations were injured. On December 1st, snow fell to a depth of something under two inches, and it did not disappear until about 11 o'clock on the following day, and, in northerly exposures, it remained for a still longer period. This was a very unusual occurrence, both as to the quantity of snow that fell and the time it remained unmelted. Ordinarily, the falls of snow in and near San Remo are of the slightest description, and the flakes melt almost as fast as they fall. It is, however, by no means an uncommon circumstance to see the mountains surrounding the San Remo amphitheatre, above the limits of the olive-clad hills, more or less covered with snow, and this sometimes remains for two or three days consecutively, or even more.

The mean north shade temperature, therefore, for the six winter months of the past season, was 52.0°; but it should be remembered that people do not live in the north shade, nor even in a south shade, although the temperature of this last would be considerably higher, as shown by Table III.

TABLE III.—*South-Shade Temperature.*

	9 A.M.	3 P.M.	9 P.M.
January	47.5	53.0	45.1
February	52.[illegible]	56.[illegible]	47.[illegible]
March	56.7	58.3	51.5
April	60.1	61.8	56.4
Mean	54.3	57.3	50.4

The mean of the corresponding months in the north shade was 52.6° at 9 A.M., 57.1° at 3 P.M., and 50.3° at 9 P.M.—thus making a difference of 2° in favour of the south shade; but this difference would have been more considerable had it not been for the circumstance that the box containing the instruments was somewhat too freely exposed to the winds from the sea.

So far from living in the shade, most persons in winter, especially invalids, court the sun, and are out only during the middle of the day. The mean temperature to which they would be exposed when out of doors, therefore, would rather approximate to the mean of the 3 o'clock observations—namely, 55.8°. Table IV will be found to embrace the more important particulars relative to the heat of the sun, the number of sunshiny days, and the duration of sunshine for the six months composing the season.

TABLE IV.—*Sun-heat and Sunshine.*

	Maximum Sun-heat.	Average Sun-heat.	Days of Sunshine.	Hours of Sunshine.	Possible Sunshine.	Mean Daily Sunshine.
				h. m.	h. m.	h. m.
November	—	—	24	[illegible]	[illegible]	7.58
December	120.3	113.0	28	[illegible]	[illegible]	[illegible].57
January	125.0	114.3	[illegible]	[illegible]	[illegible].4	7.4
February	135.6	118.5	27	264.14	[illegible]	7.40
March	135.4	123.1	29	264.14	363.38	9.10
April	140.1	129.7	[illegible]	[illegible]	398.13	7.57
Mean	133.[illegible]	119.72	[illegible].0	[illegible]	[illegible]	[illegible]

From the foregoing table, it appears that the average sun-heat for the season, as recorded by Negretti's solar radiation thermometer, was 119.72; the mean maximum sun-heat, 133.08; and the number of sunshiny days, 166—thus leaving only sixteen days during the whole six months on which the sun did not shine: that it shone for 1,330 hours out of a possible sunshine of about 1,891 hours, equal to no less than eight hours per day, excluding only the sixteen days above referred to. This table tells in the strongest manner in favour of the climate of San Remo.

* Paper read in the Section of Medicine at the Annual Meeting of the British Medical Association, August [illegible].

I now pass on to consider the facts relative to the rain, rainfall, and relative humidity of the atmosphere at San Remo. Various particulars in relation to these points are clearly exhibited in Table V.

TABLE V.—*Rain and Rainfall.*

	Days of Day Rain.	Hours of Day Rain.	Rainfall.	Mean Relative Humidity.	Highest Humidity.	Lowest Humidity.	
		h. m.	Inches.				
November ..	6	31.30	2.40	65.6	94.4	44.2	Strong N.W., W., and N.E. winds.
December	3	20.00	1.65	58.7	88.1	33.3	Strong N.E. wind.
January	1	.10	.05	63.2	84.6	44.2	Strong N.E. wind.
February	5	27.00	2.70	74.0	95.7	53.1	
March	3	3.00	.20	75.0	88.6	47.7	Strong N.E. wind.
April	9	35.30	3.30	70.6	84.0	50.6	S.E. gale.
	27	117.10	10.26	67.8			

Observations.—When only a few drops of rain fell, and the quantity was too small to be measured, they were not included. There were three days in November and three in February when this occurred. The figures of the rainfall are calculated from the register of the Observatory at San Remo.

It thus appears that there were but twenty-seven days on which a measurable quantity of rain fell; that the period during which it actually descended embraced only 117 hours, between 9 A.M. and 9 P.M.; and that the total rainfall amounted to but little over ten inches; further, that the mean relative humidity of the air for the whole season certainly did not exceed 67.8°, if it were as much. Thus I find that there is very considerable difference between my observations relative to the dryness of the atmosphere and those taken at the Observatory at San Remo. According to the observations at the latter place, the mean monthly humidity was as follows: for November, 60.5°; December, 46.0°; January, 54.9°; February, 66.3; March, 62.8°; April, 66.4°—the mean of the whole season being 59.5°, against my mean of 67.8°. This difference is to be explained, I believe, by the instruments at the Observatory being placed very high above the ground, and even above surrounding vegetation—namely, at an elevation of sixty-four feet.

But there is still another element to be taken into consideraton, as exercising an important influence on the climate of San Remo, and, indeed, of the Riviera generally—namely, the temperature of the Mediterranean Sea itself. The more important particulars in reference to this subject are exhibited in Table VI.

TABLE VI.—*Sea Temperature.*

	Mean Temperature.	Highest Temperature.	Lowest Temperature.	Mean Temperature of Air.	Sea Warmer than Air.	Greatest Difference.
	9 A.M.	9 A.M.	9 A.M.	9 A.M.	9 A.M.	9 A.M.
November	60.2	63.2	58.8	52.9	7.3	19.6
December	53.8	56.4	51.6	43.5	10.3	18.4
January	52.8	54.6	52.1	45.5	7.3	16.4
February	53.8	55.0	53.2	53.0	.2	7
March	55.2	56.2	52.1	55.2	.0	6.1
April	57.4	60.4	55.7	54.9	2.5	8.8†

* In this month, the sea was 2.5° colder than the air.
† The air was on one occasion during this month 8.8° warmer than the sea at 9 A.M.

It is thus seen that the sea was considerably warmer than the air at 9 in the morning during the whole winter season, with the exception of a very few days only, the difference in some cases amounting to nearly 20°; and hence, that its influence must be very considerable in increasing and equalising the temperature of the air, especially during the night. Indeed, so warm is the sea at San Remo that there is scarcely a day during the whole winter when bathing, to a healthy Englishman, would not be agreeable, and for the most part beneficial.

It thus appears that the climate of San Remo, during the winter season of 1879-80, was rather above the usual average temperature; that it was very bright and sunny; that there were very few days on which rain fell; that the air was, on the whole, dry, but not excessively or undesirably so—in fact, that it possessed all those conditions and qualities of climate which have placed San Remo in the foremost rank amongst health-resorts. During the ensuing winter season, I propose not merely to resume my meteorological observations, but to extend them, so as to include some further particulars. Although much statistical information has been collected illustrative of the climate of San Remo and the Western Riviera, yet the subject is by no means complete; and some of the observations made and recorded are open to the objection that they have not been taken on the best, or indeed on any uniform system.

THE WATERING-PLACES OF THE AUVERGNE: SAINT NECTAIRE AND LA BOURBOULE.*

By A. RABAGLIATI, M.A., M.D.,
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SAINT Nectaire and La Bourboule, the places to which I wish to direct attention in this communication, are situated on the southern border of the district already referred to, the Mont Dore lying between them. Both St. Nectaire and La Bourboule are highly recommended for the treatment of scrofula or struma, and for what the French medical men are fond of calling "lymphatism", the description of which I give here in the words of Dr. Dumas Aubergier, medical inspector of the mineral waters of St. Nectaire Le Haut and St. Nectaire Le Bas.

"Among children", he says, "there is often observed a state intermediate between health and disease; a state in which the circulation, the secretions, the respiration, present nothing abnormal; and yet the life is subject to certain disorders. There is noticed a full belly, and the limbs are developed slightly in comparison with the head and the body. The gait is often slow or uncertain. Fatigue is very easily induced. At other times, the excretions are passed involuntarily, that of the urine in particular. From these symptoms, we can often recognise a lymphatic constitution, or the precursive signs of rachitism." The invention of the term "lymphatism" seems to indicate the opinion that it is in the lymphatic glands and ducts that the origin of the state above described is to be found. Certain it is that, in this condition, the glands tend to become affected. But they are not by any means alone in the indications of weakness and disease, for these are shared along with them by the bones, joints, skin, teeth, and sense organs—the tissues, in short, formed from the outer or serous layers of the embryo. Among the surgical out-patients of the Bradford Infirmary, about one-third of the applicants for relief suffer from some form of strumous or scrofulous affection, a fact which gave the treatment of these intractable, chronic, and generally subacute cases a special interest.

Saint Nectaire consists of two villages separated from one another by about half a mile, and called respectively the high and the low. The former is the one at which I stayed, though I visited the other, and inspected the establishment and springs. Hardly anything can be more charming than the situation of St. Nectaire Le Haut. It is about 2,400 feet above sea-level (latitude about 46° N.), and yet vines grow all along the hillsides, so fertile is the soil, and so genial the sun. The vines are not so fine as those in the valley at Clermont, still less are they equal to the luxuriant spreading runners of the Italian peninsular; but still they are very fair vines. The village is hardly more than a name, for it contains very few houses on the hill-top, and these only poor hovels; while the sanitary condition is as atrocious as it is usually found in French villages. The chief hotel is, however, well appointed, well drained, not expensive, well patronised by cheerful and often aristocratic visitors, and beautifully situated on the south face of the Mont Cornadore, which shelters it from the north. To the west is a large hill covered with pine-woods, among which are laid out pretty walks, with seats in shady places. South-east from the hotel is a small hill, surmounted by a Byzantine church dating from the sixth century, though the oldest part of the present structure dates only from the eleventh century. Beyond the church is the village. If the visitor cares to make the easy ascent of the Mont Cornadore, which he can do in from fifteen to twenty minutes through the pine trees, he can have a magnificent view of the Pic de Sancy and the neighbouring hills, of the ancient Château de Murols, of the Puy de Tartaret, and the Gorge d'Enfer, while he can almost hear the ripple of the Couze, as it winds along its cheerful way to join the Allier.

The Establishment is an appanage of the hotel, to the enterprise of whose proprietor, M. Versepuy-Mandon, it in fact owes its existence. It is built of whitish-yellow stone like the hotel itself, and presents a very tasteful appearance. The central portion forms a kind of hall, having a glass roof, and furnished with plants. On to this hall open the thirty *cabinets de bain*, arranged in the usual manner, with large baths and douches, hot and cold, similarly to the method employed at the Mont Dore. The medical man arranges, of course, as to the duration, temperature, etc., of the bath in each case. There is at St. Nectaire no *salle d'aspiration*.

The waters of St. Nectaire le Haut are obtained from two principal springs: that of the Mont Cornadore, furnishing about 79,000 *litres* in twenty-four hours, while that of the Rocher supplies 15,000 *litres*. The former has a temperature of about 41° C. (106° F.), and the latter of 43° C. (110.6° F.). Besides the bath service, there are, at Saint

* Continued from page 44.

Nectaire le Haut, arrangements for foot-baths, for douches, and for baths of carbonic acid gas, and apparatus for pulverisation by means of douches for the eye, the larynx, and various other parts. The analysis of the chief spring at the Mont Cornadore is given below, along with the analysis of the Source Rouge, which, it will be observed, contains rather more than a quarter of a *gramme* of bicarbonate of lithia to the *litre* (about 1¾ gr. to 16 oz.*). The presence of lithia has been supposed to render this spring very suitable for the treatment of the gouty diathesis.

The waters of Saint Nectaire le Bas, as appears from the table given below, do not differ very much in composition from those of Saint Nectaire le Haut. They are more highly mineralised than the Mont Cornadore spring, but not so highly as the small Source Rouge. The waters of low St. Nectaire were more frequented, it is said, by the Romans, than those of high St. Nectaire; and at the former we find springs still named Bains Romains, in memory of the time when the Romans visited them.

There are two principal springs at Saint Nectaire le Bas, that of Boette, and that named Mandon. The constituents are here given, after the analysis of M. Lefort and others.

Analyses of the Waters of Saint Nectaire.

	Saint Nectaire le haut.		Saint Nectaire le bas.	
Name of Spring.....	Mt. Cornadore	Source Rouge,	Boette	Mandon
Temperature	42° C., = 107.6° F.	used for drinking.	40.9 C., = 105.62° F.	37.5° C., = 99.5° F.
Substances:	*Grammes* to *Litre.*	*Grammes* to *Litre.*	*Grammes* to *Litre.*	*Grammes* to *Litre.*
Free carbonic acid ..	[illegible]	1.7142	0.8600	1.5308
Chloride of sodium ..	2.1464	[illegible]	2.7633	2.4142
Iodide of sodium	Traces	—		
Bicarbonate of soda ..	2.0001	2.7007	1.9511	2.0881
,, lime ..	[illegible]	[illegible]	0.6590	0.7060
,, potash	0.0646	Traces	0.0471	[illegible]
Bicarbonate of magnesia	[illegible]	[illegible]	0.4681	0.4805
Bicarbonate of protoxide of iron ..	[illegible]	[illegible]	[illegible]	0.0097
Bicarbonate of lithia ..	,,	[illegible]	,,	,,
Sulphate of soda	[illegible]	0.1864	0.1709	0.1781
Sulphate of strontia ..	[illegible]		[illegible]	0.0070
Sulphate of lime and baryta	,,	0.0029	,,	,,
Arseniate of soda	Traces	Strong Traces	Traces	Traces
Phosphate of soda....	,,	,,	,,	,,
Borate of soda	,,	,,	,,	,,
Alumina	[illegible]	[illegible]	0.0270	0.0205
Silicic acid	0.1044	[illegible]	0.1128	0.1036
Organic bituminous matters	Traces	Traces	Traces	Traces
Totals	[illegible]	8.6318	[illegible]	7.5808

From this analysis, it will be seen that these waters may be described as natural alkaline thermal waters, whose properties must be mainly dependent on the comparatively large quantities of bicarbonate and chloride of sodium they contain. When I was at Saint Nectaire in July 1879, people were much excited by the analysis of the water of a new spring called the Source Mercurielle du Rocher au Mont Cornadore. This spring contains, it is said, .0088 *grammes* of silver, mercury, and arsenic together in the *litre*, or .0616 grains to 16 oz. The excitement arose from the hope that the presence of the mercury might make the water valuable in the treatment of syphilis. It is not ascertained in what form the mercury exists in the water. A good deal will depend on this, but a tumblerful of the water would contain about one-sixtieth of a grain of corrosive sublimate or biniodide of mercury, a respectable dose, which could hardly fail to be useful in suitable cases.

The physiological effects of the waters of Saint Nectaire are the following. When drunk, even in small quantities, the water is generally heavy; it is alterative and constipating. But, after a while, if the bather continues the use of the water, and increases the doses daily, he finds his constipation soon replaced by diarrhœa, which sometimes becomes so severe as to compel him to cease taking the water. These effects are no doubt due to the sulphate of soda and to the magnesia contained in the spring, although it is remarkable how small a quantity (about 1 gramme in the litre, or about 3 grains of bicarbonate of magnesia in 16 oz.) of these salts can act in the way in which natural mineral waters, when compared with the very much larger doses which would have to be given, were the salts mixed in the laboratory of the pharmacist. Attention has already been drawn to this fact by Sir Henry Thompson, among others. The quantities of sulphate of soda and of magnesian salts contained in the Saint Nectaire waters are, however, very much smaller than those found in the waters more usually ordered as laxatives, such as Friedrichshalle and Carlsbad. This point will be referred to further on.

Before proceeding to the therapeutic indications for the use of the waters of Saint Nectaire, I will say something about the composition of those of La Bourboule, and then take the therapeutic indications for both places together. La Bourboule lies about four miles further down the Dordogne than the Mont Dore, and at a considerably lower altitude (3,000 feet) above sea-level. It is, therefore, considerably warmer than the Mont Dore, the temperature rarely falling below 55° Fahr., while it often reaches 85° Fahr.; but it is also less beautifully situated than either the Mont Dore or Saint Nectaire, presenting a somewhat untidy appearance, owing to the number of unfinished buildings in course of construction for hotels, lodging-houses, etc. The village is well sheltered by the neighbouring mountains from the north and west, and has a good southern and eastern exposure. The bathing establishment is large and commodious, and public gardens are being laid out behind it, which will much add to the amenities of the village. The arrangement of the baths is similar to those of the Mont Dore and Saint Nectaire. There are four principal springs at La Bourboule, of which the hypothetical composition is here given.

Name of the Spring..	Perrière.	Sedaiges.	Fenestre No. 1.	Fenestre No. 2.
Temperature	At the surface of the water, 133.7° F. At the bottom of the well, 140.18° F.	At the surface of the water, 113.9° F. At the bottom of the well, 138.92° F.	66.38° F.	66.56° F.
Substances:	*Grammes* to *Litre.*	*Grammes* to *Litre.*	*Grammes* to *Litre.*	*Grammes* to *Litre.*
Metallic arsenic.. .. or	0.0[illegible]705	[illegible]	[illegible]	0.00104
Arsenious acid ..... or	[illegible]	[illegible]	[illegible]	0.00159
Arseniate of soda	0.02847	[illegible]	[illegible]	[illegible]
Free carbonic acid ..	0.0518	[illegible]	[illegible]	[illegible]
Chloride of sodium ..	2.8406	[illegible]	[illegible]	[illegible]
,, potassium	[illegible]	[illegible]	[illegible]	[illegible]
,, lithium ..	Trace	Traces	Traces	Traces
,, magnesium	[illegible]	[illegible]	,,	,,
Bicarbonate of soda ..	[illegible]	[illegible]	[illegible]	[illegible]
Bicarbonate of lime ..	[illegible]	[illegible]	0.0205	0.0234
Bicarbonate of magnesia	,,	,,	0.0125	0.0197
Bicarbonate of protoxide of iron	,,	,,	0.0125	0.0197
Sulphate of soda	0.2084	[illegible]	[illegible]	[illegible]
Peroxide of iron..	[illegible]	[illegible]	[illegible]	0.0374
Silicic acid ...	0.1200	[illegible]	[illegible]	[illegible]
Alumina and organic matters	Traces	Traces	Traces	Traces
Total salts to *litre* ..	[illegible]	[illegible]	[illegible]	[illegible]

It will be observed that the first constituent of the water of La Bourboule is arsenic, to which the first place has been accorded because it is considered the most important. If it exist in the form of arseniate of soda, which is possible, the .028475 *grammes* to the *litre* would be represented by .199325 grains to sixteen ounces avoirdupois, or say one-fifth of a grain, or one-sixtieth of a grain to the ounce. The arseniate of soda is highly esteemed on the Continent, though little used here. The French medical men say it is much less irritating than the arseniate of potash, which is the basis of Fowler's solution. As each of the small tumblers in use for drinking the waters contains about a quarter of a pint, about one-twentieth of a grain of the salt will be so administered at each dose; and it will be readily seen that three such doses daily may exert a very powerful influence in susceptible persons, and particularly on children.

Physiological Action of the Waters of La Bourboule.—Taken internally, these waters cause a sensation of warmth in the stomach, and alter and much diminish the appetite. The stomach feels full, and the intestines become torpid; and there is constipation. In spite of this, however, patients do not lose flesh, while many even increase in weight. The systemic circulation is much excited, almost to feverishness; and, under the influence of the excitement conveyed to the capillary circulation, the skin becomes dry and harsh, any rose-spots on the face becoming deeper in colour; and itchiness of the skin becomes almost intolerable.

The respiratory tracts are also excited; there is dryness of the throat, which gives place to a painful constriction of the muscles of the larynx; there is a diminution of the bronchial secretion, followed by a fatiguing cough without expectoration; and there may even be hæmoptysis, epistaxis, or metrorrhagia, which may compel a cessation of the treatment. The excitement of the nervous system is shown by diminution of sleep, and in the need felt for exercise, the contractility of the muscles of locomotion being much increased. In short, the general physiological effect of these waters may be described as excitant.

For purposes of comparison, I have put down here the quantities of the principal salts contained in some of the best known foreign springs.

Alkaline Waters.

	Sod. Bicarb. Grains.	Sod. Sulph. Grains.	Mag. Sulph. Grains.
[illegible]	..	....	....
Vals (M. [illegible])	..	....	.... —

Saline Springs.

[illegible]	..	..	..	..	43	..	
Pullna	..	..	..	....	1[illegible]	. .	93
M[illegible] (K[illegible])	.	..	..	.	3[illegible]4	. .	-
[illegible]	.	..	..	. .	50	....	
Franzensbad ..	..	..	..	....	4	....	-

From this it appears that, while the waters of La Bourboule and Saint Nectaire may both be classed among the alkaline waters, the quantities of bicarbonate of soda they contain are much less than those contained in the Vichy and Vals waters. The quantities of sulphate of soda and of magnesian compounds contained in them are also very much smaller than those contained in saline springs like Pullna, Freidrichshalle, etc.

Therapeutic Indications.—As the waters of Saint Nectaire and La Bourboule are both used for the treatment of similar affections, we may consider their uses together. The superior richness in arsenic of the springs of La Bourboule gives its waters a wider range of efficacy in the treatment of skin-affections; and, mainly because those of Saint Nectaire contain less of this substance, they are more suitable for children of tender years. The chief class of affections for which both sets of waters are employed is that termed scrofulous. French writers divide these affections into three classes: that already referred to under the name of lymphatism; that which they term scrofula; and, lastly, chloro-anæmia. By scrofula they mean hypertrophy of the glands, with or without ulceration, otorrhœa, ozœna, caries, necrosis, coxalgia, and some affections of the skin. By chloro-anæmia they mean what is called chlorosis with us—a condition in which there is very scanty menstruation, sometimes complete suppression, often preceded by menorrhagia, and sometimes alternating with that condition. For the treatment of this state, the Source Rouge at Saint Nectaire is much recommended; and, as it is a ferruginous water, we have no difficulty in understanding its efficacy in this direction. Crowds of scrofulous children go annually to Saint Nectaire, and may be recognised by their stunted growth, large heads, broad flat expanded noses, thick lips, and pale complexions; or they may actually have ganglionic enlargements about the neck, or disease of the bones or joints. Such children, if properly treated, derive great benefit from the course at Saint Nectaire; but it is a course which requires careful supervision and no small skill on the part of the medical attendant. There can be no doubt that the system of warm baths, and the drinking of waters containing bicarbonate and chloride of sodium, exerts a very powerful resolvent action upon the tissues, and may also prove very exhaustive to children of tender years; and, in point of fact, the diarrhœa which sometimes ensues after the preliminary constipation, with the weakening sweats which accompany it, require very careful management, and often involve the cessation for a time of the whole treatment. The skill of the doctor is shown in avoiding these disadvantages by not pushing the treatment too far, especially at the commencement. Some doctors think it proper to induce this exhaustive condition, which is frequently accompanied by feverishness at the commencement of the treatment; but even these do not recommend such a course in the case of children, to whom it is obviously unsuited.

After the full description which has been given of the mode in which the waters are applied at the Mont Dore, I need do no more than say that all the methods of application there used, except the use of the *salle a'aspiration*, are also followed at Saint Nectaire and La Bourboule. Under the application of a fine jet of mineral water frequently repeated, ganglionic enlargements, if in the first stage, and before suppuration has commenced, may be seen gradually to resolve, and finally to disappear. The process by which this is effected is interesting. Each tumour formed by one or more enlarged ganglia appears to divide into two almost equal parts; each of these again into two smaller portions; this process continuing in smaller and smaller subdivisions, until finally the whole growth disappears. This complete disappearance may not be effected during the actual course of treatment; but, once started, it continues very often until the cure is effected after the patient has left the watering-place. As is well known, the water-jet may be a very powerful application, whose use, therefore, requires a good deal of skill. It may be so strong as even to perforate the skin of the patient; and there are some tender skins which can scarcely tolerate it in any circumstances. It is in these cases that the process known as *pulverisation* is so useful. In this mode of application, a burnished metal surface is introduced between the jet and the surface on which it is desired to play the spray; or a finer or coarser sieve may be interposed, and the jet directed against it. In either case, the coarse jet is broken up into a fine spray or powder, and so made to impinge much less forcibly against the part affected. The jet itself may be used for the treatment of ganglionic enlargements about the neck, or for chronic synovitis in the knee or other of the larger joints; but when scrofulous affections of the eye are to be treated, or those sluggish ulcerations of the skin to be seen in strumous children, the jet is too powerful, and the pulverisation is much more appropriate. Under this application, chronic inflammatory affections of the eyes, tinea ciliaris, conjunctivitis, blepharitis, and keratitis, which may long have resisted other treatment, are speedily relieved. Numerous cases are detailed by Dr. Dumas Aubergier; but space does not admit of their quotation here. The impingement of the spray against the eye seems to stimulate the inflammation; and, profiting by what I witnessed at Saint Nectaire last year, I have been able quickly to overcome what had been a very intractable and prolonged case of keratitis in a strumous subject. As showing that the mode of application may be as important as the composition of the water with which the eye is douched, I may say that the spray with which I treated the eye in question consisted of half a grain of sulphate of zinc to the ounce of water, and was the very same application which had been used for weeks before as a lavement without any apparent benefit. When the jet is applied to the ulceration of the skin found in strumous children, it acts as a stimulus or spur (or, as the French writers expressively term it, as a *coup de fouet*) to the sluggish inflammation, which soon takes on more healthy action. In the case of chronic synovitis then, alternation of strapping with the jet or pulverisation ought to prove an useful combination of remedies; but I have not yet had the opportunity of putting this mode of treatment into operation, though I have found it very useful in strumous ulceration of the skin.

In the treatment of rheumatism, the waters of Saint Nectaire are very efficacious. Among children, heart-disease as a complication of rheumatism is quite as common as among adults, and the statements made concerning the power of these waters over such affections are certainly remarkable. Thus M. Vernière writes, after describing the anxiety felt by him at the advent of such cases, and his hopelessness of benefiting them: "Later, it was not without astonishment that I saw these patients become less oppressed in breathing, and the heart's action becoming stronger and more regular." "I have seen", he says, "the harshest murmurs gradually becoming softer, and sometimes even disappearing; the size of the heart itself, determined with the greatest care by percussion, lessening considerably; and the area of the field of dulness growing less. *I have no longer any doubt on this point; I have positively determined it.*" This is a striking statement; but it is corroborated by other authorities—*e.g.*, Dr. Raymond, Dr. Pipet, etc. Rheumatic neuralgia also is, as a rule, much benefited by this treatment.

In the treatment of some of the diseases of women, Saint Nectaire enjoys a high reputation. Leucorrhœa, amenorrhœa, dysmenorrhœa, thickening of the cervix, with or without ulceration, and, finally, sterility (which, of course, may be dependent on these or other causes), are all successfully treated there. The course of treatment in these cases may be described as general and local. General treatment ought not to be neglected, and consists in drinking the water; in tepid baths; douches over the whole body, on the back, and on the inside of the thighs and the lower limbs. In addition, baths of carbonic acid gas are of much use in these affections; and at Saint Nectaire the gas used for this purpose is collected over the surface of the bubbling water in a large iron vessel like a gasometer, from which the gas is run off in pipes to fill the baths. Carbonic acid gas induces a feeling of heat in the parts to which it is applied, particularly if the skin is thin or has a rich nervous supply. There is a feeling of formication, with momentary and local anæsthesia, followed by perspiration. The therapeutical effects are excitant of nerves and vessels; sedative of pain, particularly of that which has its seat in the neck or body of the uterus; antiseptic; chemical, decomposing the phosphates and urates which form the basis of some vesical calculi; and, finally, stimulant of the appetite. The effects in uterine affections are to relieve pain, which it does in a very remarkable manner; and resolvent of thickenings about the neck or body of the uterus, and of chronic ovaritis. It is even

asserted that ovarian cysts have been cured by these means; but, without attaching too much importance to this statement, it is at least possible that ovarian tumours may thus be prevented in the earliest stage. Locally, douches and injections are freely used, and with the best results. In overcoming sterility, the effects are so remarkable as to have given to one of the springs the name of *Source des Garçons*.

For scrofulous affections of the skin, the arsenical waters of La Bourboule are in high favour. Eczema, pityriasis, psoriasis, all yield to their curative influences, particularly the scrofulous and rheumatic forms of these diseases.

As in the case of the Mont Dore and other similar watering-places, some of the beneficial results experienced by bathers are no doubt attributable to the change of air and scene, to the beautiful scenery and the pleasant outdoor life; but, after due allowance has been made for all of these concomitant advantages, I think I have said enough to show that the course of treatment at Saint Nectaire and La Bourboule is specially valuable in rheumatic affections, and in the treatment of scrofula in its various manifestations in the lymphatics, the bones and joints, the sense-organs, the skin, and the uterus and its annexes.

NOTES ON THE MINERAL WATERS AND CLIMATE OF SPA.*

By LITTON FORBES, M.D., Resident Physician.

SINCE the middle of the sixteenth century, the chalybeate springs of Spa have enjoyed the reputation of being therapeutically some of the most valuable in Europe. In the eighteenth century, they were more frequented than perhaps any others, and formed a centre round which a large share of the wealth and fashion of the Continent used to meet. Of later years, this has, to a certain extent, ceased to be the case. The abolition of gambling has considerably diminished the number, while it has improved the quality, of the visitors who annually resort to Spa. Those who come now, come, as a rule, mainly in search of health. They live temperately and moderately, and rarely fail to derive considerable and permanent benefit from their sojourn at these springs. No mineral waters, perhaps, in suitable and properly selected cases, are capable of effecting so much good in such a short space of time as those of Spa. But to do this the cases must, in the first place, be such as require a tonic course of treatment; and, in the second, that treatment must be carried out, both on the part of the patient and the physician, with judgment and discrimination. The physiological action of the various chalybeate springs of Spa is by no means identical. No greater error, indeed, can be made, than that of treating in a routine way, and without attention to individual peculiarities, even those cases in which Spa waters are pre-eminently suitable. Each case must be treated on its own merits; and it is in the choice of the particular spring, and in the mode in which its waters are prescribed, that the special skill and local knowledge of the practitioners is chiefly shown.

Comparing Spa with two well known, and at present fashionable, watering-places—Schwalbach and St. Moritz—we are at once struck by the much larger amount of iron which is held in solution in the springs of Spa. Thus the two Pouhon springs of Spa contain respectively three times more iron than the Stahlbrunnen and Weinbrunnen of Schwalbach, and from six to eight times as much as the Paracelsus spring of St. Moritz. But, while thus rich in the actual amount of chalybeate matter which they contain, they are still more rich in the quantity they contain proportionately to other ingredients, such as the earthy and alkaline salts. Thus, taking the series of the alkaline bicarbonates, we find that, representing the amount contained in the two Pouhon springs just mentioned by the numbers 1.8 and 5.9, the amount contained in the Weinbrunnen of Schwalbach would be represented by 12.1, and that in the Paracelsus of St. Moritz by 16.9. On the other hand, the amount of free carbonic acid is slightly in favour of Schwalbach, and St. Moritz as compared with Spa, viz., for the first, 27.1; for the second, 33.6; and for the Pouhon of Spa, 25.5. It is this richness in iron, both actually and relatively, which constitutes at once the chief virtue and the chief drawback in the Spa waters. It is this which, in suitable cases, makes their action rapid and beneficial, and which in unsuitable cases rapidly aggravates the patient's symptoms. Consequently, there are few waters which require more care in their administration than those of Spa, and few also in which a satisfactory result can be so speedily and confidently promised when once they have been found to be in harmony with the patient's requirements and temperament.

It would be impossible to give, even briefly, a sketch of the various morbid conditions for which the waters of Spa have from time to time been vaunted as almost specifics. Such indiscriminate praise is entirely at variance with the severe and scientific methods of modern medicine; and, moreover, utterly defeats its own object. It causes annoyance to the physician, intense disappointment to the patient, and brings unmerited censure on a really valuable therapeutic agent. I will, therefore, state at the outset what I venture to consider as distinct contra-indications to the use of the Spa waters. Every year, patients come to these springs, frequently without having obtained any medical advice whatever as regards their choice of a spa, stay here some days, and depart considerably worse than when they arrived. As a rule, such patients belong to one of two classes; they are either plethoric subjects, with a tendency to attacks of acute gout, and a threatening of cerebral or other congestions; or they are phthisical patients, with abundant hæmoptysis and a well marked hectic condition. In the first class of invalids, the state of chronic congestion in which many of their internal organs are is increased; in the second, the stomach is quite unable to absorb or assimilate the amount of iron in the waters, the heart's action is deranged and accelerated, and a fresh burst of hæmorrhage is often the result. Invalids belonging to either of these two categories should not visit Spa for the purpose of drinking its waters, although they may, with perfect safety and even benefit, resort to the mineral baths, or enjoy the bracing mountain-air of the high table-land of the Ardennes, on which Spa is situated. There are, however, in addition to these two classes, a large number of invalids who come hither, to whom, on their first arrival, the waters cannot be at once ordered with advantage. Among such, I may mention women at the epoch of the menopause, who suffer from more or less abdominal congestion, with palpitation of the heart or frequent headaches. In these cases, a week or so of preliminary exercise and careful dieting, together with the use of baths, will frequently be sufficient to enable them to assimilate the waters, from which they will eventually derive much benefit. There is also another set of cases which require very careful treatment. They are met with chiefly, though not entirely, in girls or young married women in whom the nervous system is in extreme disorder, and in a state of unstable equilibrium. Such persons are the victims of intense irritability, in which every organ of the body, the stomach included, shares. These patients frequently find it impossible, during the early days of their sojourn at Spa, to assimilate the waters; and it is worse than useless in such cases to press them. Tepid mineral baths, with or without graduated douches, often prove very beneficial. They calm the peculiar condition of nervous irritability present, and thereby prove quite as efficacious as the chalybeate waters, which, moreover, can generally be had recourse to with still further advantage at a later period.

On the other hand, the mineral waters of Spa are pre-eminently indicated in that large group of diseases which may be classed under the heading of anæmia. There may be anæmia from nervous exhaustion, anæmia as a direct result of the physiological insufficiency of any organ or group of organs, and anæmia from excessive or deficient secretion or excretion, either locally or generally. This anæmic or spanæmic type of disease is one which has assumed increased importance in recent times, and is more or less intimately connected with the growth and development of modern civilisation, especially in the great centres of population and industry. Anæmia is a symptom daily becoming more common, at least among the patients who resort to these springs. Tonic treatment is now undoubtedly often required where, one or two generations ago, depletion would have been as imperatively called for. It is in these cases of what I will venture to call "vital weakness", with or without localised or functional lesions, that the Spa waters are eminently beneficial. It matters not, apparently, whether the spanæmia present be due to a disordered condition of the chylopoietic viscera or of the uterus, of the lungs or of the nervous system, or whether it be dependent on some subtle change in the constitution of the vital fluids themselves, apart from any appreciable local manifestations. Whatever the cause be, the result of the use of these waters in this great subclass of disease is apparently always the same, namely, temporary or permanent improvement.

Among the various forms of anæmia, there is one to which I would wish to draw especial attention; I mean climatic anæmia. Perhaps no class of cases derive so much benefit, and in so short a time, from the ferruginous waters of Spa as this. I have lately had under my care an English lady, whose health had been completely broken by a prolonged residence in the moist and relaxing climate of Brazil. After taking the waters for one week, a marked improvement was visible. In this case, they agreed better than they sometimes do; nevertheless, in the form of anæmia referred to, their action would appear almost that of a specific. I have seen the greatest benefit from their use among persons whose health had been undermined by long residence in tropical and

unhealthy climates, such as parts of India, South America, and China. In women, this climatic anæmia is frequently associated with disordered uterine function, and it is just in such cases that the waters of Spa are particularly applicable.

As regards the climate of Spa, it is essentially a mountain climate. The town itself is situated at an altitude of about 1,000 feet above the sea, while the neighbouring hills range in height from 500 to 800 feet more. The season commences in May, and terminates in October. The best time for persons with delicate chests to arrive at Spa is between June and September. Before and after that date, there is a chilliness in the morning and evening air which is not without danger. At times, the rainfall is considerable, even in summer, and is generally accompanied with wind and more or less piercing cold. During the continuance of such weather, invalids should not venture out to any of the more distant springs, but either cease the use of the waters altogether for a day or two, or confine themselves to those in the town. The general salubrity of Spa is now beyond question. The town is singularly free from all diseases of a zymotic type. Whatever its sanitary condition may have been in the past, it is now at least beyond reproach. The natural position of the town on a hill facilitates drainage, while the civic authorities have adopted, so far as appeared called for, all the most modern hygienic improvements. Typhoid fever has been for several years unknown; while, during the cholera epidemic of 1866, when the neighbouring towns of Verviers and Liège suffered severely, not even a sporadic case occurred in Spa.

CLINICAL MEMORANDA.

TREMORS IN A CHILD RESEMBLING PARALYSIS AGITANS.

THE following case may possibly prove of interest to some of your readers.

Mrs. C. consulted me in the early part of this year about her son, aged eight years, who, she informed me, was troubled with "shivers", after which he became hot and flushed, and perspired; the whole attack did not last longer than half an hour, but returned almost daily, and the child seemed perfectly well in the intervals. I could detect nothing wrong with the child, except that he had an occasional nervous twitching of the mouth and eyelids when spoken to, which he was supposed to have copied from a sister, two years older, who had recently been under my care for similar twitchings of the face and slight chorea. I was also informed that the lad had complained of pains about his body like rheumatism.

The "shivers" lasted so short a time that I had no opportunities of observing the lad in one of his attacks until some three months had elapsed, during which time they returned very regularly, except for a period of four weeks which he spent away from home at the sea-side. On his return the old symptoms reappeared, and soon became so severe that the parents were enabled to call me in time to see for myself. I found that the so-called "shiver" was a tremor of the muscles of the arms and legs, exactly resembling the movements of paralysis agitans, attended with slight subsultus tendinum. The lad was perfectly conscious, and kept his fingers clasped together to try and restrain the to-and-fro movements of his arms that occurred when his hands were loosed. When asked to carry either hand to his mouth, or to pick up any small article, he did so without any of the jerking, irregular movements observed in chorea, though the tremor still continued. His legs were kept a little apart, apparently to keep his knees from knocking together. There was no perceptible loss of muscular power in his grasp. The lad was flushed and perspiring, possibly from the muscular exertion. The tremors continued for four days almost without intermission, except when sleep was induced by chloral hydrate. There was no perceptibly disordered state of the primæ viæ, and anthelmintics brought to light no worms as a cause of reflex irritation. I ordered a bland nutritious diet, interdicting tea and coffee, prescribed the saccharated carbonate of iron, five grains to be taken twice daily after food, and five grains of chloral hydrate at bedtime, to induce sleep. I also recommended the use of the constant current, by means of a Pulvermacher's chain of 120 links for an hour daily. After the expiration of four days, the child went without his daily tremor. Since then he has had no return, though the slight twitch of the eyelid is still noticeable at times. I am still continuing the treatment, for fear of a relapse, with the exception of the chloral at night, though the child has been free from any sign of a tremor for some weeks. I might add that the only noticeable point in the family history is gout, with which the father is much troubled.

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REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

TWO CASES OF THORACIC ANEURISM.

(Under the care of Dr. THEODORE WILLIAMS.)

Reported by F. P. WIGHTWICK, M.R.C.S., Clinical Assistant.

ALFRED J., aged 40, married, an engine-fitter, was admitted into Wallace Ward on July 20th, 1880. He had had good health, with the exception of measles and small-pox, until sixteen months previous to admission. From that date his health had gradually been failing, and he found it more and more difficult to continue his usual occupation, which necessitated considerable physical exertion. He could not attribute his illness to any distinct cause. His chief complaint had been shortness of breath on exertion. On examination, there was moderate dulness in the front of the thorax, limited above by the first interspace, and continuous below with the cardiac dulness, extending to the left as far as a line drawn vertically from the centre of the clavicle, and bounded to the right by a similar vertical line, distant a quarter of an inch beyond the middle of the sternum. No pulsation or prominence was visible over this area, but a marked heaving impulse could be distinguished at the thin end of the stethoscope when the broad end was applied to the chest. Between the second and third ribs, near to the sternum, the respiratory murmur was of a tubular character. Posteriorly, over a space lying between the left scapula and vertebral column, and corresponding to the fourth, fifth, and sixth vertebræ, the respiration was also tubular. No *bruit* was audible. He complained of severe pain passing from the ensiform cartilage to the angle of the left scapula, of a heavy burning nature; and had slight cough, without expectoration. There was some hoarseness and loss of the musical quality of the voice. There was no dysphagia. The pupils were both greatly but equally contracted. No difference could be distinguished between the character of the two pulses, the number being 72; temperature, 98.8° Fahr. His urine was normal. He was treated by means of rest, and with ten-grain doses of iodide of potassium three times a day. He continued much in the same condition till August 11th, when he desired to go home, feeling, he said, "quite well".

August 19th, 7.30 A.M. While getting out of bed, he suddenly fell back, and immediately brought up about two and a half pints of blood. This he distinctly vomited, and in a manner so different from that usual in fatal hæmoptysis, that it led to the suspicion, on the part of Mr. Wightwick, that the aneurism had opened into the œsophagus. There were marked symptoms of collapse. 11.30 A.M. He had much rallied, but shortly after he vomited nearly another pint of blood, consisting mainly of large clots, and smelling strongly of the gastric juice. He lingered for three days, complaining only of nausea and thirst, and taking considerable quantities of beef-tea and milk, without the slightest dysphagia.

August 22nd, 2 P.M. A small quantity of bright blood welled up in his mouth; he seemed to try to vomit without having the strength to do so, and rapidly sank.

On *post mortem* examination, the stomach and upper part of the intestine contained blood; in the stomach the blood had formed a large clot, continued upwards into the œsophagus. Both lungs were fully inflated and anæmic. A good deal of œdema was found in the posterior portions. Nothing abnormal was noticed in the air-tubes, with the exception of a small patch of greenish discoloration, apparently due to incipient sloughing in the mucous surface of the left bronchus, slightly below the bifurcation. The walls of the heart were thin in proportion to the cavities, which were rather enlarged. The valves were normal. The first portion of the aorta was uniformly dilated, and showed numerous raised patches of soft atheroma. The pulmonary artery was dilated, but apparently not diseased. At the junction of the third portion of the arch with the descending aorta, a large orifice led the way into a good sized oblong aneurism, which lay parallel to, and to the right of, the thoracic aorta. The length of the aneurism was between four and five inches; its diameter between two and a half and three inches. Six of the dorsal vertebræ were deeply eroded, and their cancellous tissue lay bare at the bottom of the sac; the remaining sides of the sac possessed true arterial walls. No coagulum was found in the

aneurism. Sloughing ulceration had taken place through the posterior wall of the œsophagus, and the anterior mucous surface of the same was undergoing similar destruction. The perforation through the posterior wall was larger than a sixpence, but it was masked by the presence of a slough. The liver was normal. The kidneys were lardaceous.

Samuel T., aged 56, married, a shoemaker, was admitted into Campbell Ward on May 11th, 1880. He had had fair health, with the exception of winter cough, till three years ago. From that date, without any obvious cause, he had gradually been failing. On examination, there was an area of dulness, limited above by the upper border of the costo-sternal articulation of the second rib, and continuous below with the cardiac dulness, which was somewhat increased towards the right. The dulness was limited to the left by the mid-mammary line, and to the right by the median line. There was no abnormal prominence of the chest walls. A loud purring murmur was most distinctly audible at the second costo-sternal articulation. The murmur was also audible in the carotids, and over nearly the whole of the posterior surface of the chest, especially to the right of the spinal column, as far as three inches outwards, and extended nearly to the last rib. Some crepitation and wheezing sounds were heard at the posterior bases, and tubular sounds above the left scapula. He complained of severe pain over the cardiac region, which was of a twofold nature—a dull, heavy continuous pain, and a more acute one of paroxysmal nature. His breathing was short, and he had frequent short paroxysmal cough, of decided stridulous character; his voice also was whispering and hoarse. Laryngoscopic examination showed the left vocal cord to be fixed. There was a marked difference in the character of the two pulses—the right being full and strong, the left exceedingly weak and compressible; number of pulsations 98; temperature normal. Urine normal. Pupils equal. He was treated chiefly with iodide of potassium, in doses varying from five to eight grains, three times a day, and nitrite of amyl for inhalation. The latter drug, in doses of five minims, inhaled twice a day, appeared greatly to relieve the paroxysmal pain during the first eight weeks of treatment, but lately had but slight effect. Nitro-glycerine was tried with negative results. He has now been under treatment over four months, and is gradually becoming weaker. His cough and breathing are more troublesome; his voice of a more brassy character. The area of dulness has increased in an upward direction; and the murmur is, if anything, more audible than when he was admitted. The impulse, however, is diminished. There is loud tracheal breathing as low as the third rib. He is thus steadily losing strength and spirits—the latter fact being well depicted on a face which now shows a very care-worn expression.

Remarks by Dr. Theodore Williams.—In the first case, the cause of the disease may be traced to the man's occupation, which involved exposure to a heated atmosphere and great strain on the heart and arteries. The form of the aneurism, its extent and close relations with the œsophagus, into which it eventually burst, render the absence of dysphagia most remarkable and difficult of explanation. At one time it appeared likely that the aneurism would open through the chest-wall. The contracted state of the pupils, which is the very reverse of the usual condition—namely, dilatation of the pupil on the same side as the tumour—was curious; and can only be explained by the existence of pressure on the sympathetic, only sufficient to cause irritation, and not enough to give rise to paralysis of the ganglia.

In the second case, the stooping posture of the occupation might have been a cause of the disease, but only to a limited extent; but the interest chiefly attaches to the growth of the tumour and the presence of great pain. The aneurism undoubtedly involves the ascending and transverse portions of the arch; but, on the patient's admission, only the left recurrent laryngeal nerve seemed to be pressed on, as evidenced by the stridor of voice and cough, and the paralysis of the left vocal cord. The appearance of tracheal sounds in the first and second interspaces showed pressure on the left bronchus; and the increase of dulness indicated extension in an upward direction. The tumour grew rapidly.

The presence of anginal or paroxysmal pain in cases of aneurism is not very common, and probably was more connected with a cardiac neurosis than with the aneurism itself.

In neither case could it be said that the various drugs employed exercised any marked influence on the course of the disease.

THE annual meeting of the Medical Prayer Union will be held at Freemasons' Tavern, Great Queen Street, on Tuesday, October 26th, at 7.30 P.M., when F. Le Gros Clarke, Esq., F.R.S., will preside. The object of the Union is to promote Christian intercourse among members and students of the medical profession. Further information can be obtained of the Secretary, 4, Endell Street, St. Giles, W.C.

REVIEWS AND NOTICES.

LA MEDITERRANEE: LA RIVIERA DE GÊNES ET MENTON, COMME CLIMATS D'HIVER ET DE PRINTEMPS. Par JACQUES HENRI BENNET, Bachelor es Lettres et es Sciences de la Sorbonne, M.D., Paris, etc. Paris: Asselin et Cie. 1880.

LA CORSE ET LA SARDAIGNE ETUDE DE VOYAGE ET DE CLIMATOLOGIE PAR LE MÊME AUTEUR. ASSELIN. Paris.

DR. HENRY BENNET has two sides to his nationality, just as he has two careers in his life, two specialities in his profession, and two houses in the year. Educated in Nancy, a literary graduate of the Sorbonne, and a Doctor of Medicine of the famous University of Paris, for several years a distinguished interne of the hospitals of Paris, he was already well advanced in the career which leads to fame in that capital, before he was tempted, by favouring circumstances and newly acquired family ties, to settle in London. He brought thither extended knowledge, exact modes of teaching and investigating, and that new instrument of precision, the speculum, up to his day unknown in English practice. He founded a new school of uterine pathology, diagnosis, and practice, of which his classical treatise on Inflammation of the Uterus, its Neck and Appendages, published in 1848, was the fullest exposition. Active and even virulent opposition only accentuated the propriety of his methods, the correctness of his views, and the success of his treatment; and a great practice and leading position early crowned his useful labours. Almost at the moment, indeed within forty-eight hours, we believe, of the offer of an important gynæcological service of forty beds, he was seized with pulmonary hæmorrhage; accepting the position of invalid, he quitted England in search of climate, and resolved to sacrifice the present in hope of a future convalescence. With equal courage, intelligence, and force of character, he succeeded not only in establishing for himself new conditions of life, favourable to the restoration of pulmonary soundness, but studied so effectually the littoral of the Mediterranean, as to have found in Mentone conditions peculiarly favourable to the winter residence of pulmonary, renal, and arthritic invalids; and to have become the leader of a great colony, and "*fundator urbis*". Mentone is mainly his work; and the books by which he has made it famous are recognised as being not the mere guide-books of a local physician, who finds in his watering-place the *summum bonum* of life, the shield against all disease, and the medicine for all sufferings; they are judicious, moderate, discriminating, and trustworthy. Combining, for many years, winter practice at Mentone with consulting practice in London during the summer, Dr. Bennet led for years a double life; his contact during the winter with the flower of the profession in two capitals serving to keep fresh the habits of observation, the healthy scepticism, the inquiring study, which vitalise the medical labours of those who are seated in the great centres of life, study, and practice; while the six months of Mentonese life added a new kind of experience, for there the physician sees much of "our failures"; those of whom physicians despair, sometimes prematurely, sometimes all too late; those who are entrusted with tardy modesty to natural influence of sun, and sea, and balmy winter airs, or who, with illogical temerity, are told to trust everything to climate, as unwisely as they had previously trusted everything to drugs. Here the physician learns how much of "the physiology of nutrition"—one of our author's most useful and popular books—how much the mere selection of climates, and how much medication can do, to aid or to arrest nature, according as she seems disposed to help the patient to live, or to hurry him to his grave. The impartial review which Dr. Bennet has made of the Mediterranean, of the Genevese, Riviera, Mentone, Italy, Corfu, Greece, Corsica, Sicily, Sardinia, Malta, Algeria, Tunis, Smyrna, Asia Minor, Biarritz, and Arcachon, has long been famous for its careful and intelligent detail and review of facts. Physician, geologist, meteorologist, and an enthusiastic botanist, he has known how to fill artistically the large canvas which he has occupied gradually with successive sketches from the life and on the spot. We are glad to see the French version, for it is much more than a translation of the fifth edition of the English work. Written literally by the hand of the author, who is as much a French as he is an English physician, it is full of new sallies and added details, and has even gained, we think, in picturesqueness and in precision in the course of being rewritten in French. Since Dr. Bennet recently resigned his summer practice in London, to enjoy more fully his well-earned repose, and has confined himself exclusively to his winter practice at Mentone, he has been able to give more time to literary work; and this book is an acceptable first-fruit of his learned leisure, which will be of great advantage to Mentone, and valuable to continental physicians.

THE OCEAN AS A HEALTH-RESORT: A HANDBOOK OF PRACTICAL INFORMATION AS TO SEA-VOYAGES, FOR THE USE OF TOURISTS AND INVALIDS. By WILLIAM S. WILSON, L.R.C.P. London. With a Chart showing the Ocean-Routes, and illustrating the Physical Geography of the Sea. London: J. and A. Churchill. 1880.

IN the course of voyages to the Australian colonies, Dr. WILSON has collected a considerable amount of information very useful to invalids and travellers who desire to avail themselves of the invigorating influences of a sea-voyage, especially on that route. He has in this volume furnished details which will be extremely useful in guiding such persons in the choice of an outfit, the determination of their route, the selection of a ship, the mode of spending their time in land-travel in those colonies, and the management of their health on ship and on land. The book is mainly devoted to an account of the Atlantic voyage to Australia; but very wisely he has added details which will prove to be useful to those who select other destinations and other routes. In the first chapter, "On the Curative Effects of the Ocean Climate", he refers especially to the conditions of tubercular and scrofulous disease which are most likely to be benefited by a long sea-journey, and does not blink the inconveniences and disadvantages which must be faced by those who adopt this as a means of dealing with acute or advanced forms of disease. On the other hand, he rates, as we think, by no means too highly, the benefits derivable from a sea-journey to those who are suffering from earlier or more chronic affections either of the respiratory organs or of the joints or glands. The invalid or the convalescent, the wearied or exhausted man of business, may choose at will the beautiful West Indian islands of the Atlantic, which had such a charm for Charles Kingsley, who has known how to make his enthusiasm contagious. Either November, December, January, or February may be selected for the visit; and the tour may either be limited to St. Thomas or Barbadoes, or be prolonged at will by trips to the various groups of islands, the Windward Islands, Cuba, or even the adjacents ports of Mexico and Central America. St. Thomas, Dr. Wilson warns his invalids to avoid, as being seldom free from risk. The West Indian voyage is not very suitable to pulmonary invalids, however, or to persons suffering from physical weakness; the climate being hardly sufficiently good, and the fatigue of landing at numerous ports considerable. The journey to the Brazils, from Rio de Janeiro to England, is painted in glowing colours by Kidder and Fletcher, and probably has greater advantages, as being more restful, and, on the whole, if the traveller reaches Janeiro in the cold months, ending with a capital climate. It must, of course, however, not be forgotten that December corresponds to our June; the minimum temperature being 70 deg. In July, however—the coldest month—the maximum is 79 deg., and the minimum 66 deg., the mean being 73.5 deg. But here also epidemics of yellow fever are not unfrequent—solicited by the continuous filth and sanitary neglect of successive generations of dwellers in the towns; and at such times Rio and its vicinity are to be avoided. Monte Video and Buenos Ayres are cooler, and are said to be "almost entirely free from fever". The long sea-voyage to Australia round the Cape of Good Hope is, however, that which is "emphatically the invalid's route", for whom prolonged maritime sanitation is prescribed; and of this journey, the preparations for it, the means of overcoming some of its discomforts, of profiting by its advantages, and selecting its various opportunities of change of destination and land-location, Dr. Wilson gives a very intelligent and trustworthy account.

As to seasons for starting on the various sea-trips, Dr. Wilson reminds his reader of the discrimination needed according to destination. Visitors to Egypt, Malta, Algiers, Gibraltar, India, will, of course, desire to reach there during the cooler months. To these he gives little advice. We would recommend them to leave England between October and February, and to travel by the comfortable, well-ventilated, cleanly, and well-found ships of the British India Line, of which Gray, Dawes, and Co., of Austin Friars, are the agents. The short journeys can be performed at pleasure in from four weeks to three months. A Christmas holiday to either of these places is most inspiring, health-giving, restful, and restorative. The Londoner can drive down in his brougham to the docks, transfer his baggage quietly and without fatigue or bustle to the steamer, or send it down by his servant. He steps on board; and, until he arrives, say, in thirteen or fourteen days, at Port Said, his life is one long holiday. A couple of days have taken him out of the fogs, wet, smoke, din, and fatigues of the town and its inclement climate—cruelly exaggerated in all its worst features by the perverse ingenuity of man, in pouring out into it millions of tons of carbon, sulphurous acid, and a variety of other destructive organic and inorganic fumes and powders—he reaches the pure air, the equal climate, the invigorating out-door life, the pleasant repose, the inability to work which make the charm of sea-travelling; and the blue Mediterranean, as it laves the shores of Spain and Africa, tempts him to idleness, and speaks of a source of inspiration and of kinds of beauty which are shut out from the town-dweller. At Malta or Gibraltar, he feels the heat of a sun which has long since deserted the British Isles; and the semioriental garb of the population, the semitropical fruits and vegetables, the colour, the bearing, the language of the people, afford the basis of visions which anticipate fully the realisation of his dreams which await him on Eastern soil. We cannot follow him to Ismailia, Cairo, Thebes, the Nile, the Pyramids, Luxor, but all are within his reach in a two months' holiday from London in the winter season. It is profanation to compare such a vacation with the two months spent at a petty watering-place in England, France, or Germany. Probably few people realise how greatly the facilities for distant vacations have multiplied, and how inexpensively and delightfully health may be sought by a winter holiday spent in such a way as we have indicated. The great lines of steamers which connect us with the summer climates of the East and of the South are multiplying in number and improving in quality every day.

We cannot follow Dr. Wilson further: every chapter would afford to a reviewer who knows his subject a theme for dissertation and for discussion. The book is useful to all who propose to go down to the sea, whether to sojourn long upon it, or to reach by its shorter routes the nearer countries which are bathed in sunshine while ours is clouded in mist, and to refresh mind and body by a holiday spent among the scenes which have been the theatre of the world's earlier history, the monuments which are the records of past greatness, and the highest types of grandeur and beauty. Even to landsmen, it brings a pleasant whiff of salt breeze to read the headings of the chapters: it is also a practically useful handbook, especially to those who are proposing to undertake the long routes to Australia.

CLIMATE AND MEDICAL TOPOGRAPHY IN THEIR RELATION TO THE DISEASE-DISTRIBUTION OF THE HIMALAYAN AND SUB-HIMALAYAN DISTRICTS OF BRITISH INDIA, WITH REASONS FOR ASSIGNING A MALARIOUS ORIGIN TO GOITRE AND SOME OTHER DISEASES. By F. N. MACNAMARA, M.D., F.R.G.S., Surgeon-Major (retired) Indian Medical Service, etc.

DR. MACNAMARA'S work is an important contribution to the pathology of the regions of India which he describes, and ought to be read and studied, not only by the profession in India, but by all those who are interested in the pathological questions which he discusses. It is founded on lengthened experience in India in positions of trust and importance, and on a minute and careful analysis of many valuable contributions to Indian pathology buried in blue books and in medical journals. Many of the more important regions and stations of Himalayan India are carefully described, geologically, meteorologically, and pathologically, and the pathological facts advanced are supported by numerous statistical tables given in full.

Throughout the thirty-one chapters of which the work is composed, Dr. Macnamara seldom loses sight of his subtitle: the malarious origin of goître. Dr. McClelland, in his sketch of the medical topography of Bengal (1859), advanced the opinion, founded on geological research and observation, that goître was limited to those Himalayan regions where the magnesian limestones, or strata derived from them, were found. This opinion had previously been advanced by M. Billiet, Bishop of Chambery, Piedmont, in the *Annal. of the Soc. Medico. Psychol.* (1853-4-5), and has subsequently been defended by Messrs. Grange, St. Lager, and Garrigou—French physicians. Dr. Macnamara appears to establish that this connection does not exist in India, and connects goître, not with water, the accepted opinion, but with malaria. Whatever may be the case in the Himalayan districts and subdistricts, the connection with malaria cannot be always traced in Europe, in the Pyrenees, the Alps, etc., as will be at once seen by consulting the numerous works that have been written on goître and on cretinism, its usual concomitant.

Dr. Macnamara adopts the fungoid theory of the origin of intermittent or malarial fevers. After discussing this theory as compared with that which attributes it to certain climatic influences, such as chill, acting on organisations prepared by heat and electrical conditions, he says (p. 49): "Finally, in support of the theory which assumes a special miasm as the cause of malaria, we have the history of epidemics of fevers of a distinctly malarious character, which from time to time invade parts of India, which cannot be accounted for by changes meteorological or telluric, by contagion or infection, and can only be attributed to the widespread development of some specific poison."

The meteorological or chill theory was ably supported some years ago by Surgeon-Major Oldham, also of the Indian Medical Service, in a work entitled *What is Malaria?* and is entertained by various modern pathologists. Dr. Macnamara accepts the fact that chill, change of temperature, wetting, surgical lesions, etc., are often followed by an

attack of fever in tropical climates, but adds that, in such cases, the economy is already poisoned by the malarial morbid poison, be it fungoid or chemical, and the chill and other influences are only the immediate final cause of the febrile explosion.

Dr. Macnamara alludes in a foot-note (p. 46) to the recent discoveries of Professor Edwin Klebs and Tommasi Crudeli of Rome. These physicians state, in a memoir presented to the Roman Academia dei Lincei, December 7th, 1879, that they have positively discovered in the soil of malarious regions a fungoid organism, to which they give the name of *bacillus malariæ*, which they have followed into the bodies of animals suffering from "paludism". A digest of this memoir will be found in a recent number of the Paris *Journal d'Hygiène*, September 23rd, 1880. Similar experiments were made with similar results, we believe, in Northern Italy some years ago.

Dr. Macnamara's work contains a wealth of information regarding cholera, dysentery, and all the diseases endemic in India. It aptly illustrates, also, the non-hygienic condition in which the natives live; and explains how it is that Europeans now live longer in India than they used to do, and enjoy better health. We will conclude this short notice with a few extracts illustrating the above points, regretting that space limits our extending them.

"As to the insanitary conditions which foster and propagate cholera, they abound throughout rural Bengal, and have been only partially dealt with in the better class of towns. Soil, water, and air, are contaminated by rapidly decaying animal and vegetable substances; the dwellings of the poor, sessile on the damp ground, are crowded, and if perchance clean within, are surrounded by dirt-heaps and dirt-pools. Clothing is deficient, often dirty. The food is largely composed of unwholesome material, such as raw acid fruits, decaying fish, new rice, and too generally is insufficient for the need of the body. As regards the water, there is a large and remarkable consensus of opinion amongst medical and other authorities, that impure water is the chief exciting cause of cholera. Then, want and ignorance, and carelessness or fatalism, result in neglect of precautions against disease; and almost throughout the country at certain seasons cholera discharges are dissipating in air, and water, and soil." (P. 129.)

"The city of Dacca, and the district, have alike been becoming more and more unhealthy, nor is this to be wondered at when the habits of the people are considered. The old villages become buried beneath the heaps of accumulated filth, which have been gradually increasing in the course of ages. The sanitary condition of all the towns and of the district generally is most disgraceful. Each village is worse than its neighbour in proportion to its age; a village newly settled on an open *chur* or plain is salubrious as a rule. It may be more liable to epidemics of small-pox and cholera, but it escapes the enervating malarious poisoning which older settlements suffer from. Bengalees are so thoughtless, and so ignorant of sanitary laws, that in their new houses they prepare the seeds for future disease. They raise their houses by digging irregular holes which become the household cesspool, privy, and tank. To protect their females from the eye of the stranger and to provide shade, they surround their plot of land with hedges, which, in the course of time, become forest trees. These trees generally bear fruit, become valuable, and are never thinned. As years roll on the villages become buried in the vegetation, malaria abounds, the inhabitants become enfeebled and unable to cope with the forest around them, an epidemic fever breaks out and the survivors emigrate to new land where similar habits are followed, and equally fatal epidemic ensue. Such is the true chronicle of a Bengali village.....Dr. Wise states that from personal enquiry and observation he has found the inhabitants of some villages dying off at the rate of from 19 to 27 per cent. per annum, and he believes that 20 per cent. of the children die before they arrive at the age of three years." (P. 146-7.)

"The water in the tanks, which are the most common source of drinking-water for the mass of the people of Lower Bengal, is in its best state (alas, in most instances, how very bad is that best!) in October. Thence onward, through the dry season, the water, as it concentrates by evaporation, progressively degenerates; while, on the first occurrence of the first heavy fall of rain, a flood of impurity, the 'dirt' accumulation of may be many months, upon gathering-grounds, which are often the foul precincts of a village, or the village itself, pours into the tank.....As these tanks are rarely or never cleaned out, the foul stuff which subsides coats the bottom and sides, and is in itself, independently of outside influences, a source of impurity." (P. 119.)

"It is worthy of note, continues Dr. Coates, how rapidly and decidedly dysentery, and indeed all chylopoietic disorders, have ceased to attack Europeans in this country. The old reckless exposure to sun and rain, the heavy tiffins, midnight suppers, and strong liquor-drinking, have ceased in proportion. Agues are getting rarer among them every day. They are better protected. Our women are less pale, thin, and lethargic, more muscular and firmer, more energetic, healthier, and happier, since croquet, badminton, and lawn-tennis, have given them some real out-door exercise; and, in going through Bengal, I find this healthy state to be in proportion to the prevalence of these games; and, where they do not exist, the old pallor and appearance of suffering and exhaustion are more or less present. Altogether, and even as it is, Europeans are freer from disease, longer lived, and healthier, than the great majority of the natives themselves.....Old Indians do not now retire broken down to die within the year. The irritable dyspeptic, with huge liver, yellow face, and attenuated *physique*, has ceased to be. In his stead, we have the veteran of forty years' service, strong and vigorous to work and to enjoy life for another quarter of a century. The degeneration of the careful Englishman in India has become the exception, and not the rule, as it was in former days." (P. 137.)

Such is the result of the application of the laws of hygiene to every-day life in tropical climates. Verily, we are progressing as a nation!

THE RIVIERA; SKETCHES OF THE HEALTH-RESORTS OF THE NORTH MEDITERRANEAN COAST OF FRANCE AND ITALY FROM HYÈRES TO SPEZIA, WITH CHAPTERS ON THE GENERAL METEOROLOGY OF THE DISTRICT, ITS MEDICAL ASPECT AND VALUE, ETC. By EDWARD I. SPARKS, M.A., B.M.Oxon., F.R.C.P., late Physician to the Skin-Department of Charing Cross Hospital, and to the Royal Infirmary for Children and Women, London. London: J. and A. Churchill, 1879.

WHEN, some five years ago, Dr. Sparks was compelled, in consequence of failing health, to withdraw from public appointments and practice in London, there was deep regret felt by all who knew his professional and private worth at the loss which it was feared the cause of scientific medicine would thereby sustain. But Dr. Sparks was not one to allow his self-imposed banishment to the shores of the Mediterranean to remain without benefit to his medical *confrères*. On the contrary, he has used his powers of observation and his opportunities at Mentone and the adjacent locality to such good purpose, that one of the best English works on the health-resorts of the Riviera—the book now under review—is from his pen. It was published about a year ago, and we owe our apologies to the author for the delay which has occurred in this notice of his work.

The opening chapters are devoted to the meteorology of the coast of the Mediterranean between Marseilles and Spezia, including the general features of the country, the meteorological peculiarities of its climate, its vegetation, and its medical aspect. The question of temperatures at Cannes and Nice, compared with temperatures at London for the six winter months is discussed, with the result of showing that, during those months, an average excess of temperature in the Riviera of about 9° Fahr. is experienced. The rainfall of the Riviera is concentrated in the occasional occurrence of three or four successive wet days, when it "pours"; thus, taken as a whole, the number of fine days throughout the year is much greater than in almost any other part of Europe. This, for invalids requiring plenty of fresh air, is a fact of very great importance. After the rainfall comes the question of winds, and the fall of temperature at sunset, both of which are fully discussed in their several bearings on health. Dr. Sparks deals with the unreasoning complaint that "it is not perpetual summer on the Riviera", and shows that, even in the worst winters, its disagreeables are not to be compared with those of England.

In Chapter II, the trees of the Riviera are described; the olive-tree and its products, the orange and lemon and their cultivation, the vine, the fig-tree, the delicate carouba, which is killed by a severe frost, and whose mere existence speaks forcibly of the mildness of the climate, the various species of pines, the eucalyptus, the date-palm, the fig, the Japanese medlar, and brief notices of some other plants, have about fifty pages devoted to their discussion.

In Chapter III, the medical aspect of the Riviera is considered; the expense of living, the diseases prevalent on the coast, the death-rate, the value of the climate as a remedial agent in phthisis and the other diseases for which travellers seek these southern shores, are all fully set forth. The varieties of phthisis most likely to be benefited, the cautions which patients newly arrived should exercise, and the length of time they should remain, receive full attention; as also do the other diseases, chronic bronchitis, asthma, chronic pneumonia and pleurisy, heart-disease, chronic rheumatism, albuminuria, cerebral affections, and nervous diseases, which severally contribute their quotas of patient-visitors to this health-resort.

The next chapter of thirty-four pages is occupied with practical and very useful remarks respecting the journey to the Riviera, the life of the invalid there, and hints on spending the summer.

The second half of the book begins with four chapters describing respectively Hyères, Cannes, Nice, and Mentone; one chapter being

devoted to each of these health-resorts of the French Riviera. In the three next chapters, the characteristics of those of the Western Italian Riviera, viz., Bordighera, San Remo, with Alassio, Pegli, and Cornigliano (all three grouped in one chapter) are fully particularised. Two more chapters on towns of the Eastern Italian Riviera, viz., Nervi and Rapollo, and Spezia, close this portion of the book, which is full of interesting information to all whom it may concern. There is an appendix containing a description of the winter of 1878-79 on the Riviera, and some meteorological tables for Marseilles, whilst a full index completes the work.

It is, of course, no disparagement to Dr. Sparks' book to say that he has availed himself largely and discriminatingly of the extended studies and published experience of Dr. Henry Bennet, the medical founder of Mentone, as well as of all the other best sources.

OUR HOME IN CYPRUS. By Mrs. SCOTT STEVENSON. 1 vol., 8vo.
SIX MONTHS IN ASCENSION. By Mrs. GILL. 1 vol., 12mo.

NEITHER of the above works has any scientific pretension. They merely assume to be what they really are, careful descriptions of the islands of Cyprus and of Ascension, by lady writers who accompanied their husbands professionally occupied. At the same time, the portraiture of these islands, so remote from one another, so different in every respect, is so faithful, evidently so true to nature, that the man of science, be he a geologist, a meteorologist, or a pathologist, can easily fill up the canvas.

Mrs. STEVENSON spent a year in the north mountain regions of Cyprus with her husband, an officer, having judicial duties. Her account of all she saw brings out vividly before the mind's eye the lovely Mediterranean island, with its mountains and plains, its towns and villages. Any pathologist knowing Malta, Sardinia, or Corsica pathologically, could, guided by Mrs. Stevenson's descriptions alone, have told the English Government when to land the troops in the island, and where to locate them winter or summer, so as to avoid disease. The work is a most readable and interesting one.

Ascension is an island about twenty-four miles in circumference, rising, as a huge block of lava, out of the depths of the south Atlantic, a few degrees from the equator, midway between Africa and America. It is a mere mass of cinders, the remnant of an extinct submarine volcano. After reading Mrs. GILL'S charming book, we feel as if we had spent the six months with her and her husband on the island, watching every night the planet Mars, as a preliminary to the observation of its apposition on September 5th, 1877; for such was Mr. Gill's astronomical mission.

Both these ladies illustrate, without even suspecting it, the fact that educated women are capable of all and any intellectual work that can be put upon them. These books also illustrate the great powers of observation that women undoubtedly possess. They may be said to indicate the way in which women's work should be directed. It is a question whether they are not more adapted by nature for studies that require minute attention and observation, than for those that demand "generalisation".

NOTES ON BOOKS.

A Lecture on the Preservation of Health. By MICHAEL T. SADLER, M.D.Lond. Pp. 32. Barnsley: J. E. Vero. 1880.—*Hints on Health.* By RICHARD PARAMORE. Pp. 34. London: Lakeman and Sons. 1880.—These two pamphlets reach us much about the same time, and both aim at the same end—to teach the populace the best means of preserving health, and of keeping a sound mind in a sound body. The important subject of diet comes in for a chief share of the attention of both lecturers, and each has some sound hints for his auditors on the practical application of the principles of digestion. The popularisation of knowledge such as is conveyed in pamphlets like these cannot fail to be of the highest value to the community at large; and, with the view of enlightening the public on a subject upon which they are so grossly and culpably ignorant, we should be glad to see lectures of the kind given by Messrs. Sadler and Paramore delivered by medical men in all parts of the country.

THE HIGH DEATH-RATE AT PRESTON.—At a meeting of the Town Council on Thursday, there was a long discussion on the exceptionally high death-rate in the town. It was stated that, four years ago, over 400 unsanitary houses were closed by the committee, and now others were being closed. The mortality chiefly arose in parts of Old Preston, where buildings had been erected with little regard to sanitary matters. The inspectors were ordered to make an examination of and report upon every house in the town.

REPORTS OF SOCIETIES.

VICTORIAN BRANCH.

APRIL 16TH, 1880.

On Some Therapeutic Uses of Iodoform.—Dr. HENRY M. O'HARA read a paper on this subject. He said that during his voyage from London to Melbourne he treated six cases of soft chancre in sailors by dusting the sores, night and morning, with powdered iodoform. Five of the six healed rapidly and no ill effects followed; but the sixth case, a strumous-looking man of twenty-six, showed symptoms of bubo. Dr. O'Hara therefore stopped the treatment, and put him on black wash and iodide of potassium. This treatment failing, he again ordered the local application of iodoform, and in eight days the sores took on a healthy action and began to heal. On undertaking the duties of out-door surgeon to the Alfred Hospital, he introduced iodoform, and kept a record of the cases treated with it during twelve months. During that period, he prescribed it in 40 cases of chancre, in 32 of chronic indolent ulcer (principally the so-called varicose ulcer), in 3 cases of ozœna, and in several cases of ringworm. Of the 40 cases of chancre, 31 reported themselves cured. The average duration was eighteen days. Two patients returned with sore-throat and secondary symptoms, and the remaining seven were lost sight of. This gives an average of 77 per cent. absolutely cured. Of these 31, 21 were simply treated by the topical application of the drug in an ethereal solution; the other ten not healing so rapidly, took one grain in pills, three times a day, of iodoform. Of the 32 chronic cases, 23 were in women, and 9 in men. In every case, there was a varicose condition of the veins of the leg, and Dr. O'Hara prescribed iodoform ointment (twenty grains to the ounce) and a bandage. Of these 32, 26 healed rapidly (some were of very old standing), but 6 defied the iodoform at first; and, having strapped them for a short time, he again tried iodoform, when four of them healed; the other two he lost sight of. It was only in the chronic indolent ulcer that iodoform acted so beneficially. On inflamed surfaces, it increased the inflammation, and acted as a violent irritant. The same result was found in the case of chancres. In ringworm, Dr. O'Hara was very much disappointed with the results of his experiment; and, of 12 cases, he had in all to fall back upon chrysophanic acid. In conclusion, Dr. O'Hara pointed out that iodoform was quick in its action and gave no pain—in the majority of cases, he found its local application sufficient; and that it was very portable, being prescribed in pills which could be carried about by the patient. He had found Mr. Hill's method of painting the chancre with an ethereal solution the easiest and most cleanly. To the ulcer, an ointment made with vaseline did very well; and a pill of one grain, with extract of gentian, was a convenient form for administration.—Dr. JAMIESON had used iodoform in painful glandular swellings. At first, it seemed rather to aggravate the swelling, but afterwards it afforded much relief. In fissure of the rectum, too, he had employed it with benefit; also in indolent ulcers, ozæna, and inflamed and swollen testicle.—Dr. STEWART had found that the smell could be concealed by mixing it with oil of peppermint or the balsam of Peru.—The PRESIDENT (Mr. GILLBEE) asked if the employment of iodoform in syphilis would prevent tertiary symptoms. He had never been able to assure a patient that constitutional effects would not follow, even when the primary sores had healed readily.—Dr. ADAM had found iodoform useful in sarcinous vomiting.—Dr. HENRY said that his experience satisfied him that iodoform had a valuable influence in controlling tertiary syphilis, especially when the mucous tissues were involved. Its chemical formula, resembling that of chloroform (*e.g.*, $CH Cl_3$, $CH I_3$), had suggested an explanation of its anæsthetic properties in cancer and other like painful affections. One convenient mode of employing it was in combination with collodion.—Dr. O'HARA, in reply, believed it had a prophylactic influence in reference to the constitutional effects of syphilis. He concurred with Dr. Jamieson that it greatly relieved the pain of enlarged glands. He had had no experience of its effect in fissure of the rectum; but, in a bubo he had opened, it certainly rendered unnecessary the slitting up of the sore. In some cases of tertiary syphilis accompanied by iritis, the improvement under its use was very marked. In none of the cases of primary syphilis which he had treated in the Alfred Hospital had constitutional symptoms shown themselves.

DR. FITZGIBBON died on September 20th, at his residence, Rosscarbery, county Cork, aged thirty-four. Deceased was medical officer of Rosscarbery Dispensary District, and died from typhus fever, which he contracted in the discharge of his medical duties. The death is reported of Dr. Howlett, resident medical superintendent of Carlow District Lunatic Asylum, which occurred on the 22nd ult.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 2ND, 1880.

WINTER HOLIDAYS AND FOREIGN HEALTH-RESORTS.

THE Indian summer, with all its glories of foliage colour, has arrived across the Atlantic. With us, the equinoctial gales and rains, the harbingers of winter, have commenced, and the thermometer has notably fallen. Many invalids are preparing to leave our "Atlantic Isles". They are those who, having succumbed to the inroads of disease during the spring and summer, are presumed to require change of climate for the coming winter; and those who, alarmed at the severity of last winter, now purpose abandoning our shores for milder and more sunny climes.

There are many, likewise, who, without being absolutely ill, are tired and wearied by the excitement and by the labours of active life; or who are bowed to the earth by affliction; and who wish to devote a part, at least, of the autumn and winter to the recovery of strength or of mental equilibrium.

All these various classes of intending emigrants are anxiously considering—with the assistance of their medical attendants, of their friends, and of the books which treat on the subject—to what part of the world they should direct their steps. Every year, as the facilities for locomotion increase, the band of winter emigrants grows larger. Every year, new books appear, describing the localities and climates inviting to winter sojourn; and each new work renders the task of choosing a winter residence more complicated, pourtraying as it does, in glowing colours, the part of the world of which it treats. A few careful generalisations may help our readers to make a selection for their patients, or for themselves, should they unfortunately require it.

A winter's migration on health-grounds may have in view marine life, or terrestrial life; in other words, the winter may have to be passed at sea or on land.

It is universally admitted that no air is so pure, not even the air at the top of a mountain many thousand feet high, as that which is breathed at a good distance from land on the deck of a vessel. There is no dust or pulverised manure to inhale, as in towns; no products of vegetable or animal decay, as in the country; no marsh emanations, no germ-laden fogs. Inside the ship it is, however, different. There may be filthy bilge-water, bad ventilation, and all the horrors of an unhealthy, badly drained, and badly ventilated house. All depends (as in houses) on the health management of the ship. The benefit derived during the day on deck may be lost during the night in a close, stuffy, pestilential cabin. The larger the ship, the easier it is to attend to all the sanitary rules necessary for the comfort of its inmates.

Until quite recent times, the long sea voyages to the West Indies, to Buenos Ayres, to the Cape of Good Hope, to India, to Australia, were all performed in sailing-vessels, and took from one to four months, according to distance. These were the journeys generally chosen for invalids, who lived, as it were, on the ocean for many months. As the vessel was to be the home, it was and is thought worth while to make oneself comfortable by securing a good-sized cabin all to oneself, and by laying in creature-comforts for the entire journey. On board steam-ships, more passengers are carried; room is more valuable; the cabins are necessarily smaller, and they nearly always contain several berths. There are still, however, sailing-vessels to all the localities named; and a real invalid, who goes to sea for the long sea voyage, will, we are inclined to believe, do well to continue the old tradition, and keep to sailing-vessels, choosing the largest he can find.

On all the lines named, there are now large splendid steamers that travel rapidly and safely, reaching their destination in half, or in less than half, the time employed by the sailing vessels. They offer every comfort and convenience that large well-appointed ships can afford at sea; but they have their disadvantages. As we have seen, the cabins are generally too small, and seldom have single berths—a very important feature, especially with consumptive patients, when the disease is far advanced. Such patients, if at sea, ought to be in a cabin alone—not only for their own sake, but for that of others. It is a pretty generally acknowledged fact, that, to breathe constantly in a confined and badly ventilated space, the same atmosphere as a person with softened tubercle and purulent cavities, is dangerous to the healthy, to whom the disease may be propagated.

The rapid travelling of these large steam-vessels is a disadvantage for those who go to sea for the sake of protracted navigation. They reach their destination too soon, and the changes of climate are too rapid. In the voyage to Australia, for instance, a few days after the departure from England, warm weather is reached; then hot weather, when the tropic has been passed; moist as well as hot weather, when the equatorial calms have been reached. As the vessel arrives near the southern limit of its navigation, in the Pacific Ocean, the temperature again becomes cold—Australia being reached in about forty-five days. All these extreme changes, within so short a period, are very trying to those who are really ill, and often do them more harm than the pure sea air can do them good. Australia, also, is reached in the middle of their summer; and at Melbourne and Sydney, where most invalids go, it is too hot. In Tasmania and New Zealand the climate is more like that of our own English summer, and should, consequently, be preferred. These long sea journeys, however, seem more suited to those who belong to the second category—to the tired and the weary—than to the really ill. The usual period for departure is October or November.

There is, however, an intermediate phase of sea-journeying, which is peculiarly tempting and extremely advantageous to those who, not being confirmed invalids, seek, in their winter or early spring migrations, mainly repose from anxieties, change from the cares of business, of professional or political life, confirmation of tottering health, and the pleasure of a winter holiday in a light sunny climate, with escape from London fogs, as a good exchange for a formal autumn vacation. The latter is rapidly yielding in popularity to a winter holiday in the East or the South. To all such wise and happy holiday-makers, a sea-trip—say, to Algiers or to Cairo, or, for bolder and stronger voyagers, to India—by one of the excellent lines of steamers, such as those of the British India or Peninsular and Oriental Steam-ship Companies, offers prospects of health, recreation, bodily renovation, mental repose, and intellectual and artistic delight—such as no autumn holiday can excel, or, as we think, equal. It has the great advantage of affording a period of rest and holiday in climates of great winter loveliness and mildness, and amid scenes of varied beauty and historic education, just at a moment when the great cities of England are apt to be wrapped in fog, deluged with cold rain, or bound in frost, or suffocated with carbon. The line of voyage runs through temperate zones of equable temperature, and with clear skies; the steamers are splendidly found, well manned and commanded, and afford all desirable comfort; and, whether the object be Egypt, Algiers, or Calcutta, a delightful climate and a pleasant land of travel may be depended on. The journey may be undertaken, according to the intended character and length of the journey, at any time from October till the end of February.

To the numerous invalids who purpose spending the winter on terra firma, at Madeira, Arcachon, Biarritz, or on the north or south shores of the Mediterranean, we would offer a few words of special advice.

Firstly, to be comfortable at any of these places, it costs pretty nearly as much as at any of our English watering-places, that is, from three to four guineas a week. It is possible to find hotels and pensions where less, say two guineas (seven *francs* a day), will cover the expense, but there is the same difference that there is in England between boarding and lodging at two guineas a week and doing the same at three or four. People broken in to Continental ways, who know how to arrange their living as students do in Paris, may get along for even less. But to do so, they must take a furnished room, hire an old woman to cook their breakfast, or cook it themselves, and dine at a second-class restaurant or eating-house. The generality of even poor English are much too helpless for that kind of thing. Then, in case of illness, there is to be considered the expense of nurses, who cost £12 a month, without counting food (ten *francs* a day), doctors, chemists, and all the unforeseen expenses connected with illness in a foreign land. In cheap hotels and pensions, the rooms are always very small, which renders ventilation impossible, for it is quite impossible to satisfactorily ventilate a small room, especially at night, without exposure to dangerously rapid currents of air. There is not space for the fresh air entering to diffuse itself without passing rapidly over the body, and occasioning chills. Such being the case, those who have very small means, and are not accustomed to battle with poverty, had better remain at home, and spend their winter in one of our health-resorts—Torquay, Penzance, Ventnor, Hastings, and the like—where they may manage to live hygienically on a small expenditure. There is no advantage to be got out of the south if life be unhygienic.

The numerous works now written on health-climates have a tendency to foster a delusion in the public mind, viz., that such and such a locality, such and such a climate, is a panacea for a certain class of diseases. According to this view, persons suffering from certain forms of illness have only to reach a given locality and climate to get well of their ailments through its agency alone. The result is that persons make the most desperate efforts to reach the desired climate, and then throw aside all medical direction and discipline, do just what they like, and expect to be restored to health through the mysterious influence of the climate.

We see the same tendency illustrated by the medical history of the French and German watering-places. Nearly every physician practising in these health-resorts writes a book, lauding his waters as a specific for certain (very numerous) diseases. The patient arrives with this idea: he comes to be cured of his disease by the waters of the locality, which must, however, be taken in a certain way, known only to the local doctors. If he does get well within the next few years, the honour goes to the water taken, it may be only for three or four weeks, and both patient and physician religiously believe that such is the case.

In reality, in most of the forms of chronic disease in which a change of winter climate is recommended, the principal object in view is to remove patients from our cold, raw, damp, foggy winter weather. It is desired to place them in conditions as similar as possible to those which obtain in a fine English summer, in order that life may be passed hygienically, under favourable conditions for health, and also for treatment. The medical management of any actual disease present should be continued just as it would be in Great Britain in July and August. Medical treatment is not thrown aside at home when summer arrives, in the hope that the fine weather will cure the disease. Nor should it be discarded abroad under the idea that change of climate alone suffices.

The land winter-resorts are probably the best for downright invalids, inasmuch as every phase of the sufferer's life can be regulated. Living in a good sized room, well ventilated day and night, in a good sunny, dry, but not too dry, climate, able to remain indoors in bad weather, to avoid wind, dust, and rain, to retire to rest and to rise at a given time all the winter through, the invalid is in the best possible condition for the treatment of his disease. There is probably no better climate in the world for the Anglo-Saxon race than that of England in the summer of an ordinary year. If a better climate be sought for in winter, probably the one that approaches the nearest to it, in the majority of cases, is the best for our race.

Intending emigrants on health-grounds should be warned not to endeavour to combine sight-seeing with health-seeking—an error often made. Sight-seeing should be left for healthier, sounder days. It often proves a fatal mistake to endeavour to combine the two.

The great facilities of Continental travel have had a tendency of late years to induce those who intend to spend the winter abroad to delay their departure too late. They think: "Why should we leave whilst the weather is so fine at home?" So they delay and delay until it breaks up, until they themselves have become ill, and cannot leave at all; or they start in bad, cold, rainy weather, fall ill on the road, and either do not reach their destination or reach it so ill that it takes weeks and months to recover.

Although rapid sea journeys through various latitudes, involving sudden extreme and repeated changes of climate in a short time, and although land-travelling for the sake of sight-seeing, are both to be condemned for those who are really ill, it is not so for those who are mainly suffering from overwork, and are weary in body or mind. A run to the West Indies, which can be done in two months, to the Brazils, or the Cape, or to India, which can be done in three months, or to Australia, which can be done in four, is admirably suited to many of such cases. It is becoming more and more the custom to thus disappear in autumn or in winter for two, three, or four months, in the search of health on this principle. To those who are tolerably good sailors—and many are good sailors on large steamers who are very bad ones on smaller vessels—nothing can be more conducive to the restoration of bodily or mental tone than these journeys round "part of the world", provided they are cautiously and discreetly carried out. Nearer home there are delightful trips through the Mediterranean to Gibraltar, Algiers, Cairo, *viâ* Suez and Ismailia, or to Syria, returning by Greece and Italy. More and more generally we are learning to work in England while the weather is fine and the environs of our cities full of rural attraction, and to take our foreign travel when climatic conditions are least favourable here, and may be most profitably exchanged for the happier influences of sunnier lands.

DEFICIENCIES IN OUR KNOWLEDGE OF ENGLISH RESORTS.

THE President of the Meteorological Society has recently taken occasion to make prominent public complaint at Exeter of our ignorance of the climates of our health-resorts. He complains, first, that we have no standard important work on the "merits and demerits" of all our mineral springs, seaside bathing places, and health-resorts; nothing to compare with Lombard's *Traité de Climatologie Médicale*, in three or more volumes; with Dr. von Graefe's *Jahrbucher für Deutschlands Heilquellen und Seebäder*; or with the sumptuous quarto published for several years in Paris with the title of *Album universel des Eaux Minerales, des Bains de Mer, et des Stations d'Hiver*.

Not one of these, however, comes up to his idea of what is required, or of what would pay to publish. He does not think that any one person is competent to write the book; for it would not be easy to name a person who would command universal respect as at once a physician, a water-analyst, a geologist, a meteorologist, a sanitary engineer, and a statistician. A proper, full, and true report upon such a place as Scarborough, for example, ought, he thinks, to contain data on all these heads, and it ought to give a map (with altitudes) of each town, on the scale of at least two inches to the mile, one or two views, details of the water-supply and drainage.

In order to carry out this scheme to its full extent, and to defray the cost of the perhaps half-a-dozen volumes which it would fill, he thinks, in the first place, everything should be done to suppress the personal element in the book. It might be brought out under the auspices of some public body, perhaps a committee comprising representatives of the leading medical, sanitary, and scientific societies would command the widest respect. There would be one editor-in-chief, and subeditors

for each of the branches already named; and every paragraph throughout the volume should be initialled, so that no responsibility be concealed. Mr. Jeligyer Symonds further suggested, as the preliminary basis of the publication, that an exhaustive series of questions (together with an explanatory note), should be sent to the official representative of each town—the mayor where there is one, whom failing, the chairman of the local board; or, in the absence of both, the leading medical practitioner. But these statements would merely serve as a basis; there must be a personal visit by an inspector appointed by the committee, and information must be collected from all possible sources. As regards the mineral waters, properly attested specimens should be taken of each, and all be analysed under the supervision of a single analyst, and the results published on a uniform system. He thinks the cost of this would be met by the ample advertising pages which would be offered (possibly by local competition).

Such a work as this would have a large sale. It would be a necessity for the consulting-physician, and would be of great interest to scientific men; well illustrated, and treating as it would do of many of the most beautiful spots in our country, it would find its way into the homes of the wealthy; and, as the standard authority upon the subject, it would make its way on the Continent, in our colonies, and in the United States.

As to the Climatology: Of course, one essential feature of the work is a full report on the climate of each health-resort. That is, however, Mr. Symonds declares, what scarcely anyone can give. This is a sweeping statement, which, of course, he must prove to be true. In 1867, in a little book (long since out of print), entitled *Rain; How, When, Where, and Why it is Measured*, Mr. Symonds wrote:

"It would be of immense benefit to the medical profession and the public at large to know, with truth and absolute impartiality, the relative climates of our various health-resorts, but at present very little is known. There are a host of local treatises on 'The Climate of Blankwater', etc., but they are mostly advocates of the place whence they take their title. We have also some general treatises on the subject; but they are necessarily based upon the returns made by persons interested in the popularity of the places in which they reside, and most of them have placed their instruments as well as they know how, but the result is diverse indeed. How, then, can the indications of their instruments be comparable? Moreover, there have been cases strongly indicating a desire to 'make things pleasant', by slight departures from impartiality in recording the observations, and hence (unjustly) there is a widespread want of confidence in returns from fashionable health-resorts. This should not be. Might it not be removed by the local authorities at each appropriating a small portion of open space to the erection of a set of meteorological instruments, properly verified and properly mounted, and having them regularly recorded by one or more persons? Let the book of observations be always open to public inspection; let whoever takes the observations add his initials; and let the instruments be always readily accessible on application. This proposal might cost each town £10 or so, not more, and it would soon confirm the accuracy of most of those, on all of whom the records of *some* have cast suspicion."

The great defects, he alleges, of the meteorological observations of bygone years arise from the fact that the importance of absolutely identical methods of observation and record was not fully realised, or at any rate was not acted upon. It may have been thought that with a staff of voluntary observers it was difficult to ensure absolute uniformity, and that if a paid observer breaks rules the matter is soon rectified, but when the observer buys all his instruments, and offers of his own free will to send copies of the observations he makes, it is less easy to obtain strict uniformity. At least, he supposes this must have been so, though his own experience of amateur observers is that they will do almost anything that they are asked. However, whatever may have been the cause, there is no denying the fact that absolutely rigorous identity in the mode of observation is of very recent date. But since getting a Royal Charter, proper offices and a paid staff, the Meteorological Society has been doing everything in its power towards ascertaining the precise characteristics of English climate. It has now between eighty and a hundred stations, with identical instruments, all mounted uniformly, all read at the same instant of local time, recorded and in every respect discussed upon a uniform system, all the instruments tested and verified, and every station visited by the society's inspector.

If we take the coast from the Thames to the Land's End, we find the following sea-bathing places without any records being sent to the society respecting their temperature or humidity:—Herne Bay, Westgate, Margate, Broadstairs, Deal, Dover, Folkestone, Sandgate, Hythe, Hastings, St. Leonards, Seaford, Brighton, Littlehampton, Bognor, Ryde, Sandown, Shanklin, Freshwater, Weymouth, Charmouth, Lyme Regis, Axmouth, Seaton, Exmouth, Dawlish, Looe, and Penzance. Twenty-eight places on the south coast alone, each doubtless possessing features different from every other, slight, probably, in some cases, as, for example, Littlehampton and Bognor, but extremely marked in others, as, for instance, Margate and Penzance; or, to take two nearer places, Ryde and Shanklin. It is clear, therefore, that there is ample room for collective and individual work in the useful direction which the President of the Meteorological Society points to.

AMERICA FOR PHTHISIS.

A LARGE yearly emigration of American consumptives takes place to European winter stations, although their own magnificent continent, with its mountain-ranges and extensive sea-board, offers a far greater choice of climates, inland and marine, high level and low level, warm and cold, than is to be found in Europe. To judge, however, by the number of pamphlets and books on American climates, there is no lack of energy on the part of the resident medical men in making known their respective health-resorts.

Commencing with low level stations, and starting from the west, there are, on the Pacific Coast of California, San Diego, Los Angelos, San José, and Santa Barbara, enjoying a mild, equable, and somewhat moist climate, due to the latitude and the Pacific influence.

Santa Barbara has, according to Dr. Dimmick,* a mean annual temperature of 61° Fahr., and a winter mean of 54° Fahr., with a difference between summer and winter of only 13°. The rainfall is 16 inches, the rainy days occurring during the winter season, and the average humidity percentage is 69. According to Mr. Culvertson, a resident of four years' standing, Santa Barbara is accessible by steamer from San Francisco in thirty-two hours; and here, taking the rainy season and the dry season, the foggy days and the windy days, there were not more than 20 out of the 365 in which an invalid may not enjoy a walk in the sunshine some part of the day. The summer season is, if anything, more pleasant than the winter, for the extreme heat is tempered by breezes from the Pacific. More bracing and less equable climates are to be found at Aikin in South Carolina, and at Ashville in North Carolina, 2,200 feet above sea level, or on Walden's Ridge in Eastern Tennessee, or among the Pine Forests of Georgia. In Florida, there are Palatka and St. Augustine, where the moist and sedative climate has been compared to that of Madeira, though meteorological observations show the latter to be far more equable. St. Paul's and Brainherd, Minnesota, are resorted to as types of a cold inland climate, with but little elevation (1,200 feet). According to Dr. Talbot Jones's figures,† the cold is extreme in winter, and there appears to be a good deal of wind; while the amount of rainfall and the number of rainy or snowy days are considerable, though the climate has the character of being dry and stimulating.

America is, however, chiefly famed for its high altitude climates, and the practice of treating consumption in high level stations originated in South America; for, long before the existence of Gorbersdorf and Davos, it was the custom of the Peruvians to send consumptives from

* *Santa Barbara.* By Dr. L. N. Dimmick.

† *The Value of Cold Climates in the Treatment of Pulmonary Consumption.* By Talbot Jones, M.D.

the coast-line to heights of 8,000 to 10,000 feet in the Andes, generally with signal relief to the sufferers.

North America, by reason of its being traversed from north to south by the Sierra Nevada and the Rocky Mountains, abounds in lofty plateaux of different altitudes, and situated in various latitudes; and here height has so much influence on climate, that it is found that to the east of the Rocky Mountains, and from Central Wyoming to Old Mexico, differences in temperature are due in a greater measure to altitude than to latitude, the isothermal lines running rather north and south than east and west.

As we ascend from the south, we come to the plain of the Anahuac, varying in height from 6,000 to 8,000 feet, where is situated the city of Mexico; northward lie the dry and arid plains of New Mexico and Arizone, where the cacti grow to the size of trees, and where, Dr. Denison predicts, will be found the extreme climatic remedy for American consumptives in winter, who are now without much hope anywhere.

It is, however, to the States of Colorado and Wyoming that we wish to draw special attention, as within their confines the Rocky Mountains reach their greatest heights in Mount Lincoln and Pike's Peak, and many of their valleys form the so-called beautiful parks, North Middle, Estes, and San Louis, in which are to be found numerous and rich mineral springs. The principal towns are Cheyenne, Denver, Colorado Springs, Santa Fè, and Pueblo, all of which are fast becoming resorts for consumptives.

The elevation of this region varies from 5,000 to 6,000 feet, and its climate possesses the characteristics of mountain districts. Dr. Denison's little work,* though written with, perhaps, too strong a flavour of local enthusiasm, furnishes many important details, and more carefully discusses the factors of mountain climates than any other work with which we are acquainted. He holds the peculiar climate to be due (1) to diminished humidity depending on rarefaction, the atmosphere containing a third of the humidity present at New Orleans, and half the percentage of Santa Barbara, the latter place being situated in much the same latitude; (2) "to diathermancy of the air, *i.e.*, the heating power of the sun's rays, or the difference in temperature between the sunshine and the shade"; this amounts at Denver to an average of 50° Fahr. Dr. Denison tried the experiment of placing three thermometers in pasteboard boxes with glass covers, and lined with black velvet, at three different elevations; and found that at Denver (5,200 feet) the difference was 72° Fahr.; at Alma (8,800 feet), it was 86° Fahr.; and at Mount Bross (13,400 feet) it amounted to 106° Fahr. He deduced the important law that "there is one degree greater difference between the temperature in sun and shade for each rise of 235 feet", and proved it by a table of comparison between the temperatures in sun and shade observed at a large number of heights.

This quality of diathermancy arises partly from the thinning of the atmosphere, and partly from the diminution of moisture in suspense; and to it may be referred some of the phenomena of radiation witnessed in the mountains, such as the rapid rise of temperature immediately after sunrise and the equally rapid fall after sunset.

It must be admitted that these observations, as far as they go, are of great interest; and, taken in combination with similar ones made at Davos, they suggest that specific climatic conditions exist at high altitudes apart from mere cold; and that, when invalids winter at Davos, "they probably do more than thereby reproduce, as regards cold and sunshine, the conditions of Archangel", as Dr. Henry Bennet strongly affirms. Further confirmation is, however, desirable from other mountain stations, such as the Andes or Himalayas, to make the theory well proven. Of the third condition, viz., increased electricity, which Dr. Denison claims for high altitudes, we cannot see that he has succeeded in proving its existence, and we much doubt whether the effect ascribed to this cause may not be found at low as well as at high levels. The physiological results of the Colorado climate appear to be similar to those of other mountainous regions, and consist of quickening of the circulation and respiration, as has been noted by Coindet in Mexico, where the French soldiers respired 19.6 times per minute, instead of 16 times as in France. The Mexicans themselves respire 30 per minute.

Statistics are furnished of 202 consumptives who passed 350 winters in Colorado; and, without going into tedious details, we may state that, compared with those of many other health-resorts, the figures are decidedly favourable; 69 per cent. were greatly or slightly improved; 22 per cent. showed favourable resistance to the disease; and in 20 per cent. "advance" and "extension" were noticed. The consumptive cases which appeared to do best were those of inflammatory origin, while for the catarrhal and chronic tubercular the results were unfavourable; and Dr. Denison considers that, for these forms, Colorado is contra-indicated. Cases of pulmonary hæmorrhage prosper, provided that cavities have not formed.

To insure the full advantages of the climate, a somewhat prolonged residence is necesssary; and an open-air life passed to a great extent in camping out and visiting the many beautiful districts of this region considerably improves the chances of recovery.

It might be worth the while of many English consumptives, especially in cases where the disease has an inflammatory origin, who have undertaken long sea-voyages, to try the Colorado district of North America.

* *Rocky Mountain Health-Resorts.* By Charles Denison, A.M., M.D.

DR. EDWARD DAVIES of Wrexham has been nominated, by the Lord-Lieutenant, as a Magistrate for the County of Denbigh.

WE are glad to hear that no fresh cases of typhoid fever have occurred at Wormwood Scrubbs Prison, and those under treatment, three in number, are doing well.

THE sudden death is announced of Dr. Wilms, from blood-poisoning, consequent on an accidental lesion during the performance of an operation.

THE Corporation of Windsor has been fined £5, and £5 5s. costs, for polluting the Thames by causing or allowing offensive and injurious matter to flow into the stream near the sewage-works.

"SCIENCE", the new American record of scientific progress, states that the Rev. W. H. Dallinger has consented to become Governor and Professor of Natural Sciences of Wesley College, Sheffield, U.S.A.

DURING the past twelve weeks of the current quarter, the death-rate in London has averaged 21.5 per 1,000, against 22.3 and 18.5 in the corresponding periods of 1878 and 1879.

IT is expected that Mr. Bellamy will perform the operation of excision of the scapula this day (Saturday), October 2nd, at 2 P.M., at Charing Cross Hospital.

A MILKSELLER has been sentenced to two months' hard labour for adulterating the milk he was sent to deliver, by adding large quantities of water to it on his way to his employer's customers. He was seen on one occasion to add as much as twenty quarts of water to eight quarts of milk.

IT appears from the revenue return that, in the year ending March 31st last, there had been a larger consumption of patent medicines than in the previous year. The stamp duty in the year 1879 was, net, £130,691 16s. 8½d, and up to March 1880, £133,668 15s. 7d.

THE Government have determined to appoint a commission to inquire into the question of gaol dietary in Ireland. The members of the commission are stated to be Dr. Grimshaw, Dr. McCabe, and Dr. Robert McDonnell.

IN pursuance of Sir Edmund Currie's recommendation at the last meeting of the Metropolitan Asylums Board, a Committee was appointed, at the last meeting of the Holborn Board of Guardians, to inspect the disused small-pox hospital at Hampstead, with a view to acquiring the building for workhouse purposes generally.

At a recent enquiry into a fever case at Hounslow it was stated, that some time ago, a fatal case of malignant scarlet fever took place in a crowded part of the town, and from want of a mortuary the body had to remain in a house full of people.

The medical officer of health for Sittingbourne reports that scarlet fever, which has been prevalent for a long time, has now disappeared, but diarrhœa has been very general, and during the last month nine deaths have been returned, all of infants of tender age.

A verdict of "manslaughter" has been returned against Charles Coutanche, for accelerating the death of his wife, aged nineteen, by giving her, in the course of two hours, several pills and doses of medicine prepared by himself, which he stated had been sent by a medical man.

Acting upon the recommendation of the churchwardens and overseers, the Lambeth Vestry has resolved upon applying for a faculty to remove certain gravestones in the Lambeth burial ground, and upon taking other steps with a view to forming the place into a recreation-ground for the parish, which is much needed.

At a public meeting held at Westgate-on-Sea on the 13th instant, a Committee was appointed, called the Westgate-on-Sea Sanitary Association, for the sanitary protection of the visitors and inhabitants of this rising health-resort. Professor Erasmus Wilson, F.R.S., was appointed Chairman of the Association; Mr. W. Q. Orchardson, R.A., Vice-Chairman; Mr. Arthur Flint, L.R.C.P., Honorary Secretary and Treasurer.

The death is announced of Mr. W. B. Whitmarsh, coroner for one of the divisions of Wilts, from an attack of apoplexy, in his eightieth year. Mr. Whitmarsh, at the time of his death, was the oldest coroner, both as to age and office, as he had held the post for fifty-three years. The office has descended from father to son for over three hundred years, and they have all been medical men. Dr. Michael Whitmarsh, who has held the position of deputy coroner for fifteen years, will probably be a candidate for the vacant office.—The death is also announced of Mr. David W. Heath, the Notts county coroner.

A congress on hygiene has lately been held at Hamburg. The hygiene of hospitals and public buildings, of shipping, the ventilation of private dwellings, and other similar subjects were discussed. Dr. Reincke delivered an address. A resolution, proposed by Dr. Rietschel of Dresden, was passed, to induce public authorities to study practically the ventilation of buildings; and another, by Dr. Prath of Dresden, that sanitary inspection should always take place by duly qualified officers. This session is the eighth of the Association, and about two hundred members were present.

The annual death-rate from diarrhœa last week was equal to 2.0 per 1000 in London, while it averaged 6.4 in the nineteen large towns, among which it ranged from 3.5 in Portsmouth and Plymouth to 9.0 in Salford, and 9.8 in Hull. The deaths referred to diarrhœa in London, which had declined from 348 to 214 in the six preceding weeks, further fell to 142 last week, but exceeded the corrected weekly average by 44. The 142 fatal cases included 97 of infants under one year of age, and 33 of children aged between one and five years. The deaths of two infants and of two adults, were referred to simple cholera and choleraic diarrhœa.

THE METROPOLITAN MEDICAL SOCIETIES.

The dates in October on which the opening meetings of the coming session of the London Medical Societies will take place are as follow: Obstetrical Society, Wednesday, 6th; Clinical, Friday, 8th; Hunterian, Wednesday, 13th; Medical, Monday, 18th; Pathological, Tuesday, 19th; Harveian, Thursday, 21st; and Medical and Chirurgical, Tuesday, 26th.

A HOSPITAL SUNDAY MEMORIAL.

Hospital Sunday, it is well known, originated in Birmingham, and Dr. Miller did more than any other man to promote its great success. Naturally and rightly, therefore, an influentially-attended meeting was held on Saturday afternoon, at the Mission Hall, Greenwich—Mr. James Soames, J.P., in the chair—to consider and decide if any and what steps should be taken to perpetuate the memory of Canon Miller as the founder of Hospital Sunday. In the course of a long discussion, it was stated that, at the present time, every hospital and dispensary throughout the country benefits by Hospital Sunday; that the movement had spread to the colonies, to India, and was now becoming general throughout America; that, in addition to the £30,000 distributed annually among metropolitan institutions, the villages contributed one-sixth of the whole income of one hundred and seventy cottage hospitals, or £15,000 during last year; and that the provincial medical institutions throughout the country were greatly dependent upon this annual collection for their maintenance. It was stated that 21 per cent., or more than one-fifth, of the income of the larger general hospitals (metropolitan and provincial) came from the Hospital Sunday collections. It was estimated that £120,000 at least was raised each year for the medical charities through the same agency. This large income had increased the efficiency of the whole of the medical charities by making it possible for the committees to spend more money upon nursing and hygienic arrangements. Hospital Sunday had probably done more good by the interest it had excited in the work of the hospitals than by the large sums which had been raised by its agency. There was, therefore, substantial ground for believing that, if these facts were brought to the notice of the hospital managers throughout the country, of the leading members of the medical profession, and of the Hospital Sunday committees, it would be found that there existed an unanimous desire to perpetuate the name of Canon Miller as the founder of Hospital Sunday. It was, therefore, decided to invite Mr. Henry C. Burdett, of the Greenwich Seamen's Hospital, who was one of the Honorary Secretaries of the movement in Birmingham, to allow his name to be associated with those of Mr. William Bristow, solicitor, and the Rev. D. Reith, M.A., as Honorary Secretaries of a fund to be raised for the purpose of establishing a Miller Memorial Hospital. The site of such a hospital was left for future consideration; but it was shown that no general hospital existed on the south side of the Thames between Gravesend and London. It was further resolved to communicate with the managers of all the medical institutions and of the Hospital Sunday committees throughout the country, and to invite the Press to make these facts widely known to ensure a national memorial. It was estimated that a sum of £5,000 would be required, and some £150 was subscribed at the meeting. The Honorary Secretaries were authorised to prepare and issue the necessary circulars and advertisements, and to receive subscriptions, which can be paid to the credit of the Miller Memorial Hospital Fund, at the London and County Bank, Greenwich, or at any of its branches.

MR. BRIGHT ON JUSTICE AND VACCINATION.

Mr. Benjamin Sharpe, of Middleton, Oldham, having written to Mr. Bright on the subject of vaccination, Mr. Bright replied: "I am sorry that the Government Vaccination Bill did not pass. It would have been a great relief, and was an eminently just measure." It is difficult to understand in what sense the word "just" is applied to a measure which proposed to retain compulsion of vaccination in principle and in practice, but to sell indulgences at a pound a head to those misguided parents who might prefer to expose their helpless infants to the perils of small-pox, and thus further to create foci of infection. It may be expedient to sell such indulgences from the point of view of some politicians; or it might be just to abolish compulsory vaccination, were not the evidence in favour of it overwhelming; but how can it be just to any to permit parents to evade, by a small money payment, a proceeding which science, reason, and the law declare to be important for the saving of their children's lives and for the welfare of the State. As a contrast, and by way of illustrating how much more directly slight im-

mediate perils influence the public mind than the far greater but more distant dangers of small-pox, we note in several of the papers a statement that "a very painful feeling has been caused at Upchurch, near Sittingbourne, where is a little colony of the sect known as Peculiar People, by the death of the child of one of these, named Lears, from diarrhœa. The child had been unwell for several days, but medical assistance was not summoned; deceased was simply anointed with oil, according to the regular principles. The coroner on Saturday requested a medical man to report upon the case." No sympathy is felt for the poor fanatic who, upon a strict misreading of Bible-texts, prefers ointment and prayers to compound chalk powder; but it is reserved entirely for the much more dangerous fanatics who will not admit that two and two make four, and who, blind alike to the teachings of history and of modern observation, would willingly render this country once more the seat of a desolating disease, of whose ravages the face of every tenth person in the street bore testimony half a century ago—survivors as they were of the vast cohorts of the slain.

MALEIRA.

WE understand that it is the intention of the Earl of Carnarvon to spend the forthcoming winter season in the more genial climate of the island of Madeira; and he will probably leave England for Funchal at the end of October. Madeira is rapidly reassuming its former place in public favour as a winter resort. After many trials of many climates, many invalids have failed to find a station which surpasses it in the facilities which it affords for living in the open air, under conditions of sunshine and temperature suitable to persons of sensitive temperament and generally impaired health. Dr. Grabham, F.R.C.P., who is the leading resident physician, has done much by his careful work on the *Climate of Madeira*, and by the confidence which he personally inspires in the profession in England, to restore the prosperity of the place. The journey to Madeira is, of course, now a much less serious matter than it was formerly, even to those who are bad sailors. The steamship service is excellent—so good that it was recently contemplated by Mr. Gladstone to make this his sea-trip, in lieu of the special journey round the Scotch coast, had not reasons of State intervened. The journey occupies, on an average, not more than four days from the South of England.

GUY'S HOSPITAL.

IT is significant that the mismanagement of the nursing and administrative departments of Guy's Hospital, which has been productive of such serious scandals, is attracting the interference of public bodies, even of a kind supposed to be usually apathetic and little likely to step out of their immediate sphere of official work. We reported last week the remonstrance of one board of guardians, addressed to the Treasurer and Governors of Guy's, on their monstrous support of the matron and "her system" against the wishes of the whole staff, and to this we have now to add that, at the last meeting of the St. Olave's Guardians, the clerk read a letter from Mr. Rendle, asking the Guardians to take some steps towards bringing about a better state of management at Guy's Hospital. Mr. Beresford thought that if the Board could succeed in attaining this object, they would be doing a great public benefit. The hospital was in such a state, that persons suffering from broken limbs might be taken there, kept waiting two or three hours, and then sent home without any attention. Mr. Smith stated that a committee had been appointed to try and arrange matters, and he did not think it would be well to memorialise until the result of their labours was known. Mr. Sharpe stated that the hospital had long been paralysed by internal dissensions. It was ultimately resolved that the Clerk should report to the Board what steps had been taken by other bodies. It is possible to carry the maxim that a man may do as he likes with his own beyond the limits of endurable injustice, and then public opinion is apt to express itself in such very disagreeable comments as the Guy's Hospital authorities have had to hear on all sides. It is most earnestly to be desired that Mr. Lushington may soon feel that his dignity as a Treasurer has been sufficiently propitiated by the death of Louisa Morgan and the holocaust of scandals which has been offered before it, and that he may come to think that the medical staff are as likely to be well informed on the subject of nursing as the Treasurer.

THE STATE OF PARIS.

A TERRIBLE accident is announced from Paris, by which five men, who had gone down into a sewer to remove some obstruction in it, were killed instantaneously by noxious gases. This event has attracted revived attention to the whole question of the pestilential odours with which Paris is at present afflicted. A committee to inquire into the whole matter has been appointed by the Conseil d'Hygiène, and will sit on Friday next, when they will consider the report of M. Besançon, the secretary, on the best method to be adopted for the destruction of the sewer-gases before they can produce a dreaded outburst of epidemic disease. The Academy of Sciences, with a view to ascertain whether the odours emanate from the ground forming the foundation of the streets, has analysed a quantity of the earth. The soil, which is quite black, was subjected to frequent washings; and, after elimination of the rubbish, it was found to consist of about eight and a half parts of crystallised sulphur to one and a half of coal-tar; the latter element originating in the constant escape of gas from the subterranean tubes. The ground was found to be also permeated with oxidised iron derived from the constant wearing away of the metal substances, such as horses' shoes and carriage-wheels against the roadways. It has, therefore, been conclusively proved that there is no source of danger in the soil of the city itself; and the stifling smells which prevail must be traced to another origin.

PROLONGED FASTING.

A CASE is reported by Dr. J. C. Noyes of Oshkosh, Wisconsin (*Med. and Surg. Jour.*), of forty-five days' fasting. When seen at the end of that time by Dr. Noyes, the patient, who had been sick for a long time, was considerably emaciated, with paralysis of the lower extremities, loss of voice, and partial dementia. The man's age was thirty-four; pulse, 56; respiration, 12; temperature, 94° Fahr. He had taken no food for forty-five days, and no water during the last nineteen days, except to rinse the mouth. He had been unable to swallow at all during the latter period. The diagnosis could not be made with certainty.

PROFESSIONAL EXEMPTION FROM JURIES.

THE dentists are beginning to experience one of the advantages of being a registered body of professional men, regulated by Act of Parliament. They are claiming and obtaining exemption from serving on juries. The first case is reported from Dorchester. At the County Petty Sessions, Dorchester, on Saturday, three dentists of Weymouth were returned as jurymen, and they all claimed exemption under the Dentists Act. The Clerk of the Peace for Dorset had expressed the opinion that they were all liable to serve; but the Mayor, on a careful consideration of the law, struck out the names of all the three dentists ruling that, under the Act referred to, they were not liable.

PAYING PATIENTS IN ST. THOMAS'S HOSPITAL.

THE Board of Charity Commissioners for England and Wales have given public notice that an order has been made by them establishing a scheme authorising the admission into St. Thomas's Hospital of patients upon terms of payment. This scheme provides that during a period of ten years the Governors may admit into the hospital, and may provide for the maintenance and treatment therein of patients, in consideration of payments at a daily rate, as follow:—A number of patients not exceeding forty-one at a daily rate of not less than eight shillings, and a further number of patients not exceeding fifty-two at a daily rate of not less than three shillings. The Governors may expend a sum not exceeding £500 out of the current income of the hospital in providing any fittings and furniture which may be necessary for the reception of the said patients, and may make such rules and regulations, not inconsistent with the order of the Charity Commissioners, for the admission, maintenance, treatment, and discharge of the said patients. The scheme further provides

that the period as before limited for the admission of the said patients may be extended, while the number of, and rates of payment to be made by the said patients may be varied from time to time by the Governors, with the sanction of the Charity Commissioners.

GUY'S HOSPITAL SCHOOL.

THE *conversazione*, which was to have taken place this (Friday) evening, is for the present postponed; it will probably take place in the course of the session. At the wisdom of this arrangement in the present juncture, no one will probably be disposed to cavil. One of our contemporaries, in a note on Guy's Hospital, ventures on a prediction which does not appear to be at all justified by the present state of affairs. It says: "The medical student who enters there this time will do so in the assurance that he must subjugate himself throughout his ward experiences to the authority of the nursing staff." The fact is, that the students' work in the wards has not hitherto been interfered with, the protests of the staff having been respected so far, and the treasurer having given repeated assurances that the students' opportunities should be the same as heretofore. Things would perhaps have been different in this respect had the staff accepted quietly the innovations the treasurer and matron desired to make; but, though the struggle has been a long one, the firmness with which the staff have maintained their ground, and the real advances they have made, ought to show that students are safe in their hands. Students entering now will, of course, have little or nothing to do with the wards for two years; and it is not at all likely, whether the matron goes or not, that she will be allowed to interfere with the students.

INFANT MORTALITY AT HUDDERSFIELD.

As in most large centres of population, the hot weather of August had an appreciable effect in heightening the infantile mortality of Huddersfield for that month. Of the total number of 134 deaths, 45, or nearly 34 per cent., and at the high annual rate of 7.2 per 1,000 persons living at all ages, occurred in children under one year of age; while 22, or 16 per cent., were in children between the ages of one and five years. From diarrhœa alone there were 14 deaths, 11 of which were those of children under ten years of age, and 8 of infants of less than one year. Dr. Cameron regards the hot weather as the exciting cause of the disease, and remarks that the more densely populated parts of the borough generally suffered the most.

THE MEDICAL LEGISLATION OF THE SESSION.

IT may be interesting to the profession to learn that during the late session of Parliament no Acts were passed that affected their interests to any appreciable extent. Before Lord Beaconsfield astonished the country by dissolving Parliament, there seemed a considerable prospect of important legislation this year on medical and sanitary matters; for, in addition to the three Medical Act Amendment Bills of Dr. Lush, Mr. Arthur Mills, and Lord George Hamilton, and the Medical Appointment Bill of Mr. Errington, there was Mr. Sclater-Booth's Noxious Gases Bill (rechristened the Alkali Acts Amendment Bill), and the Home Secretary's Water Bill. The dissolution, however, swept all of these away, and none of them was brought up again in the new Parliament. Leaving out of consideration such Bills as Mr. Firth's for establishing a municipality for London, Mr. Dillwyn's Lunacy Law Amendment Bill, Sir Harcourt Johnstone's Bill for the Repeal of the Contagious Diseases Acts, and Mr. Meldon's Medical Charities (Ireland) Bill, all of which were dropped or withdrawn, the only ones needing notice are Mr. Dodson's Vaccination Bill, the Census Bills, and Mr. Meldon's Births and Deaths Registration (Ireland) Bill. The fate of the first of these we need hardly again report. Viewed at once with the strongest disfavour by the whole profession and the more enlightened of our legislators, it was quietly dropped by the Government early in August, and will, in all probability, never be heard of again. The Census Bills, making provision for the usual decennial numbering of the people next year, and the Registration of Irish Births and Deaths Bill, assimilating the practice in Ireland to that in England, received the Royal assent; but their provisions need no extended comment at our hands. Next session, it may be hoped that the record of medical and sanitary legislation accomplished will be much larger and more satisfactory than that for the present year.

MILK FOR THE NURSERY.

THE Municipal Council of Paris, has, according to the *Globe*, just determined on a very important hygienic experiment. It is about to set up a nursery in connection with its hospital, for the purpose of carefully testing the relative values of different kinds of milk in the rearing of children. Stables are to be attached to the nursery, and various kinds of animals usually depended on for the feeding of young children are to be kept under the healthiest conditions, and their milk is to be supplied of course perfectly fresh and pure, and on a system calculated to test rigorously the respective advantages of the different kinds. The importance of this matter is very great; as there can be no doubt that vast numbers of infant lives are annually lost by the rough-and-ready feeding on anything that goes under the name of milk to which so many hand-fed infants are subjected. At the International Hygienic Congress held in Paris about a year ago, some curious facts were made known bearing on the perils of hand feeding. Children nursed by their mothers, it was stated, died only at the rate of 8.28 per 100. Among those fed by hand the average was 51 per 100. Children entrusted to nurses throve just in proportion as they were fed in the natural manner, and the nurses were subject to intelligent supervision. When the nursing was under medical and parental supervision about 18 per 100 was the rate of mortality; when the children were taken away from the home of the parents, but nursed naturally, the mortality was about 22 per cent. When, however, hand-feeding by nurses away from the parents of children was resorted to, deaths varied from 24 to 75 and even 90 per cent. What can be done by intelligent care was shown in the case of infants among whom 24 per cent. was the death-rate, which, however, fell to 12 and even 9 per cent. when children of the same class were taken under the supervision of a society for the protection of infant life. The experiment, which is to determine the best kind of milk as a substitute for the natural food of infancy, ought to be a very valuable one in its results.

THE HEALTH OF PARIS.

DR. BERTILLON, in his return of the mortality of Paris for the week ending September 23rd, reports an increase over the preceding week of 54 deaths, 935 instead of 881. This increase in a population of two millions would be scarcely worth notice, if a part of it were not owing to small-pox. The epidemiologists of Paris predict an increase of this disease as winter approaches; Dr. Bertillon, therefore, makes an earnest appeal to the civil population to get themselves vaccinated or revaccinated. He points out that, in the military part of the population, in which vaccination is compulsory, not one death from small-pox has occurred, whilst the excess above the ordinary deaths in the civil population during the last twelve months has been about two thousand. Typhoid fever is also distressingly prevalent; but the garrison of Paris, which generally contributes a large contingent to this malady, does not now seem to be more prone to its attacks than the civilians of the city.

THE CHARGE AGAINST THE EASTBOURNE CONVALESCENT HOME.

ON Monday last, at the Mansion House, the Committee of Distribution of the Hospital Sunday Fund met to consider the case of the All Saints' Convalescent Home at Eastbourne, the award of £500 to which institution was withheld by a resolution of the council of the fund in consequence of a statement by Dr. Glover, a member of the council, that the religious teaching of the institution was turned to proselytising purposes. The committee present included Alderman Sir Sydney Waterlow, M.P., who presided, Mr. Samuel Morley, M.P., Sir E. H. Currie, Mr. Alderman M'Arthur, M.P., Mr. Thomson Hankey, Mr. Jervoise Smith, Mr. Thomas Turner, late Treasurer of Guy's Hospital, Dr. Sedgwick Saunders, and Mr. H. N. Custance, the Secretary. The deliberations of the committee lasted some considerable time. Dr.

Glover, who had made the original complaint, was present, and reiterated his statement that a Nonconformist patient, sent to the home for the recovery of her health, had been invited to attend the Confessional; had received a manual of prayer, inculcating a like doctrine, called "The Guide to Heaven", which was edited by the Rev. Canon Carter, of Clewer; and had been told that John Wesley, the founder of her sect, was not to be believed in. A large deputation from the home attended, headed by Mr. Robert Few, the Rev. E. Ibbetson, the chaplain, and others, and they stated that the complaint in question was over four years old; that the then chaplain, who had erred in that respect from ignorance of the rules, had long since resigned; that the institution in its religious aspect was under the whole control and supervision of the bishop of the diocese; and that all the books and teaching used at the hospital were under that prelate's guidance. Sir Sydney Waterlow and the Distribution Committee appeared unanimously to consider that a secular fund like the Hospital Sunday Fund, which received money from all denominations for the care of the sick poor of every creed, had no right to meddle with the religious teaching at the hospitals and homes as long as the patients were well treated in a surgical and medical sense. The point was, however, raised, that the Eastbourne Home had not such a managing committee as would bring them within the rules of the Hospital Sunday Fund. After much deliberation, the committee unanimously came to the following determination: "This committee, having heard the statement made by Dr. Glover with reference to his complaint against the Eastbourne Convalescent Home, and having been attended by a deputation from that institution, is of opinion, for the following reasons, that the grant originally recommended by them should be confirmed: First, that the complaint made by Dr. Glover referred to facts which occurred at the end of 1876, and which have been entirely disapproved of by the present acting authorities; and, secondly, that although, as admitted by the deputation, the hospital has not hitherto been managed by a committee of the character contemplated by the fourth rule of the Hospital Sunday Fund, but has been controlled by trustees, the hospital authorities have now promised to appoint a properly constituted committee." This resolution will be submitted to the council for confirmation next Tuesday.

THE MASSACHUSETTS BOARD OF HEALTH.

A MEDICAL contemporary is singularly misinformed when it refers to the change which has recently come over the Massachusetts Board of Health as one of "transformation" merely, and when it speaks of the old Board's reappearing "in a more influential form" as the new State Board of Health, Lunacy, and Charity. The actual facts tell an exactly opposite tale. For something like eleven years, the old Board of Health worked energetically and manfully, often against very great odds, in improving the sanitary state of Massachusetts, and in collecting information on sanitary subjects. Its reports have long been known and admired as standard books of reference, and a mere glance at the index of the final report shows the multiplicity and variety of subjects dealt with in them. The Board consisted of seven members, one of whom was the secretary, a salaried officer, but having an independent vote, as any other member. Two physicians, one lawyer, one engineer, and two business men, with this secretary, composed it. The Board met quarterly, or as often as necessary, and summarily, efficiently, and harmoniously laboured for the objects for which it was appointed. Last year, for political and supposed economical reasons, the boards of health and of charities were both abolished, and one board, entitled the Board of Health, Lunacy, and Charity, was substituted for them. The care of the charities of the State occupies nearly the whole time of the monthly meeting of the new board, and would prevent almost any sanitary work if the board had not committed that portion of its duty to the care of three members of the former board, who now virtually constitute the whole Board of Health. But even this is not strictly correct, because all the doings of the three departments of health, lunacy, and charity must be reported, discussed, and perhaps set aside by the full board. Dr. Bowditch, one of the ablest sanitarians in the States, and an active member of the old Board, has resigned his position on the new Board, as a solemn protest against the "grotesque, unstatesmanlike conglomeration of diverse duties of work, wholly inconsistent with each other", which it exhibits. So glaring and mischievous an instance of retrograde legislation has not been witnessed for some years; and it is to be hoped that the State will see fit to restore the old Board to its former high position before its influence has entirely faded away.

DEATH FROM CHLOROFORM.

AN inquest was held last week before Dr. Diplock, at the West London Hospital, on the body of James Edward Gelleff, aged 42. The case was one of epulis of the upper jaw, and chloroform, with the patient's consent, was administered by Mr. Johnston, the house-physician, in the unavoidable absence of the chloroformist. The patient had just come under the influence of about two drachms of the anæsthetic, when the heart's action suddenly stopped. Artificial respiration was immediately employed, and the tongue drawn forward. These measures were persevered with for one hour, during which time the galvanic battery was applied to the cardiac region, and atropin injected hypodermically, but all to no purpose. The patient showed no signs of rallying. Mr. Johnston made a *post mortem* examination of the body, and found a fatty degeneration of the heart. The coroner said there did not appear to have been any carelessness, and a slight fatty degeneration of the heart could not have been detected. The jury returned a verdict of "Death from syncope during the administration of chloroform".

THE MADRAS GOVERNMENT LYING-IN HOSPITAL.

THE annual medical report of this institution for 1879 shows at a glance how well the hospital must be ordered, and what a benefit it must be to the poor of Madras. During the year, 1,587 women received treatment in the hospital. Of this number, 1,568 were delivered in the wards; 17 were brought to the hospital immediately after their delivery; and 2 died undelivered. The classification adopted is that of Denman; and, in the various tables which are given, every particular will be found that is of interest to the scientific accoucheur. The total number of deaths was forty-eight, of which two occurred before delivery; the remaining forty-six cases show a mortality of 1 in 34.4, or 29.07 per *mille*. This high death-rate is chiefly due to the unusual proportion of morbid labours. Nearly 27 per cent. of the cases treated were of this description; and many of them had either been grossly neglected or maltreated before they were brought to the hospital, so that the patients had hardly a chance of recovery. In the appendix, details are given of all the fatal cases. During the year, twelve European and seven native pupils have obtained diplomas as midwives; and there were, when the report was made, nine European and twelve native pupils under instruction.

THE VENTILATION OF POLICE-COURT CELLS.

DR. COLLIER, the medical officer of health, presented a report to the Fulham Board of Works of an official inspection of the Hammersmith police-court, in consequence of a complaint at an inquest held in Clerkenwell Prison. It appeared that there were only five cells for the reception of all the prisoners taken to that court, each containing an area of 481 cubic feet, which was not more than sufficient accommodation for two persons, though at times eight prisoners were confined in one cell. There was not any ventilation, except a small iron grating over the door, which was quite inadequate for the purpose. The amount of air in cubic feet allowed under the Prison Regulations was not less than two hundred for each prisoner, which Dr. Collier remarked was singular, inasmuch as prisoners, after they were convicted, were provided with better accommodation than was given at a time when they were supposed to be innocent. The report also referred to the "strong room", which contained an area of 6,655 cubic feet, and was used at times for the reception of twenty-four prisoners and sixty constables. Such an amount of overcrowding was highly prejudicial to health. The report next re-

ferred to the construction of the court, which Dr. Collier stated was quite inadequate for the purpose for which it was used. On one day, there were three hundred and fifty persons present, and he was of opinion that the atmosphere of the court, which was ventilated at the roof, was highly prejudicial to those who were constantly exposed to it. It was resolved to send a copy of the report to the Home Secretary of State.

FEVER AND SCHOOLS.

AT an inquest recently held by Dr. Hardwicke on the body of a child who died from scarlet fever in Islington, it transpired that a sister of deceased had previously suffered from that disease, and immediately after convalescence had been permitted to attend a Board school. The coroner very properly remarked upon the danger thus occasioned to other children; and in returning a verdict of "Death from natural causes", the jury expressed an opinion that when scarlet fever prevailed in a house, the children should not be allowed to attend school. This is a subject to which we have repeatedly called attention, and is one calling for special regulations on the part of school managers, and vigilance from School Board visitors.

OVARIOTOMY IN ITALY.

WE are indebted to Dr. Peruzzi of Lugo for a reprint of an important article from the *Raccoglitore Medico* on the second hundred series of cases of ovariotomy in Italy. In 1878, he published the first series of one hundred cases, when, as he says, although the operation had become recognised as legitimate, it had not become an ordinary surgical operation. Now, he says, its legitimacy is never questioned, only its justification in any individual case. It required nineteen years to complete the first series of one hundred; but the second hundred has been completed in less than three years. In the first one hundred cases, there were sixty-three deaths; in the second series, the deaths were reduced to thirty-six. The operators were forty in number; the largest number, eleven, fell to Dr. Marzolo of Padua; the next, nine, to Dr. Peruzzi himself. Twenty of the operators had only one case each. In addition to the one hundred cases of complete ovariotomy, there were ten of incomplete or partial operations, with eight deaths and only two recoveries. In seventy-four of the one hundred cases, the antiseptic details of the Listerian method were adopted. Of these, twenty-four died. Of the twenty-six operations performed without these precautions, twelve died. In twenty-seven cases, drainage was adopted, with the result of fourteen recoveries; but Dr. Peruzzi observes that it was only adopted in the more severe cases. With regard to the treatment of the pedicle, he says it remains to be settled. There can be no doubt as to the ligature being the best form of intraperitoneal treatment in cases of short broad pedicles; but in long and slender pedicles, the present ordinary practice is still the clamp. On going through the very interesting table of this second series of one hundred cases, which Dr. Peruzzi has so carefully compiled, we find only seventeen cases treated by the clamp, the result being thirteen recoveries and four deaths—a smaller mortality than that of the ligature cases. Surgeons of all nations are greatly indebted to Dr. Peruzzi for the scrupulous care he has taken to enrich our literature with all the facts which can be gathered together to lay the foundation for a complete and reliable history of ovariotomy in Italy.

THE DISTRIBUTION OF SMALL-POX BY LETTER-CARRIERS.

AN important illustration of the way in which small-pox may be spread by postmen came before the Lambeth Vestry at its last meeting. The matter was brought before the vestry by the Sanitary Committee on the report of the medical officer, who, visiting a case of small-pox, discovered that the husband of the patient, a letter-carrier, was pursuing his official duties, whilst at the same time acting as nurse to his wife. Some linen had also been received by the wife from some neighbours to be washed, without any intimation that there was small-pox in the house, the result being that two children took the infection. After some discussion as to the best course to be adopted in dealing with the matter, it was agreed that a letter be sent to the man, pointing out that he had rendered himself liable to be prosecuted. We cannot help thinking that the recommendation of one of the members of the vestry, that the superintendent postmaster of the district should be made aware of the facts, was the right course to pursue in the interest of the public health.

BABY FARMING.

MR. WM. CARTER held an inquest last week, on the body of a male child, aged seven months, without name. Charlotte Bridges, a single woman, said she received the child on the evening of March 11th last, from a man giving a name, William Lonsdale, which she now found to be false. At that time she received the sum of £15 to adopt the child, the man then promising to find the baby clothes and medical expenses, and to furnish other sums for its support, but nothing had been sent until Monday last, when she received five shillings in stamps from a Mrs. Langton, who had had the child under her care for a short time. When it was brought to her, the child was said to be 13 days' old, and was suffering from ophthalmia. She took it to a local practitioner, and also to St. Thomas's Hospital, where it was treated for consumption of the bowels, but she had latterly discontinued her visits, as the child got no better. She fed it from a bottle with condensed milk, and also gave it "spoon food". On Tuesday morning last, she washed the child at six o'clock, and laid it in a crib with a bottle by its side; he then appearing in his usual condition of health. Early in the afternoon she became alarmed at the child's condition and found it was dead. She then went for Dr. Chabot. She received the child through an advertisement in a local newspaper. She had no information as to its parentage. Dr. Chabot stated that on Tuesday, when called in, he found the child had been dead some hours. In his opinion death was due to diarrhœa, induced by improper and injudicious feeding. The jury returned a verdict of natural death from diarrhœa. The woman Bridges said she had previously had the care of two children, both of whom had died. She would take no more—which in the interest of the infant population is perhaps a fortunate resolve.

THE SANITARY CONDITION OF SEAFORTS.

THE United States Government has invited the maritime powers of the world to an International Sanitary Conference, to be held in Washington on January 1st, 1881, with a view to the adoption of a system of notification of the actual sanitary condition of the ports under the jurisdiction of the respective powers, and the vessels sailing from those ports.

HORSE-RIDING.

THAT the outside of a horse is the best thing in the world for the inside of a man is a therapeutic dictum often ascribed to Lord Palmerston, but probably of much earlier paternity. It is one which evidently finds great acceptance among London doctors, if we may judge from the number of medical men of high degree who may be seen in Rotten Row between 8 and 10 A.M., some of them palpably bent on self-preservation rather than enjoyment, and clearly not adopting the outside place from motives of unfettered choice. Dr. Frank Hamilton aims at enlarging the recognised field of usefulness of equestrian exercise, by bringing forward evidence in its favour in the treatment of chronic cystitis and other chronic inflammations. In a paper read before the New York Academy of Medicine, he reports that, in August 1875, he was consulted by G., aged 63, for chronic cystitis. The patient had always been of temperate habits, except in tobacco. He had for a long time worked extremely hard, neglecting his health. A year before consulting the physician, he had been obliged to cease work on account of cystitis. He tried many remedies, with no success. When seen by Dr. Hamilton, he was emaciated and weak. He had to pass his urine every half hour or hour, and at times suffered intense pain in the bladder. Appetite and digestion were impaired. He had no stone nor enlarged prostate. His urine contained about twenty-five per cent. of pus with renal casts. He was advised to drink flaxseed-tea for its

aperient and diuretic effect, to take a hot bath every night, and to ride horseback every day. The flaxseed-tea was soon given up, as it disturbed digestion. The hot baths were soon discontinued. The plan of horseback-riding was at first protested against, as the least jolting gave him great pain. It was, however, undertaken. At first, the horse was walked very slowly. At the end of a month, he was able to ride two miles. At the end of two months, the pus had disappeared from the urine; and, in six months, he was completely well. Dr. Hamilton said that this was not the only case which he had seen benefited by the same kind of treatment. A physician of the City of New York had suffered for a long time from chronic cystitis and pyelitis. Medicines and rest had been faithfully tried, but with no effect. He finally began drinking flaxseed-tea, and riding horseback. He was completely cured, but ascribed some of the good to the flaxseed-tea. Another physician with whom he was acquainted had suffered in the same way, and had been cured in much the same manner, though in this case the patient had driven in a carriage more than he had ridden.

A NEW PRESERVATIVE FLUID.

MR. WICKERSHEIMER, of the University of Berlin, has invented a fluid for the preparation of animal and vegetable tissues, which surpasses anything hitherto known in its power of preserving the colour, form, and elasticity of specimens treated with it. Some details are given in the *Glasgow Medical Journal*, and specimens, showing the uses of the fluid, were displayed by Schacht of Houndsditch in the annual museum of the British Medical Association last month at Cambridge. The fluid is either injected into the veins of the body to be preserved, or the entire object is immersed in it. After being taken out of the fluid and dried, the elasticity of the tissue and flexibility of the joints are secured. In skeletons thus prepared, the most complicated movements can be executed, such as those of the chest, larynx, and other parts concerned in the mechanism of breathing. Lungs thus prepared may, even after years, be inflated by means of bellows; they swell to ten times their size in the collapsed state, the lobes become distinct, the brown colour changes gradually into red, and the whole organ appears as if taken from a fresh body. Sections of delicate tissues, morbid formations which have been removed by operation, will appear after months as if in a fresh state. The Prussian Government has purchased this valuable discovery, and the Minister of Instruction has published it in his official organ for the benefit of the scientific world. The formula for the preparation of the fluid is as follows. In 3,000 *grammes* of boiling water, dissolve alum 100 *grammes*, common salt 25 *grammes*, saltpetre 12 *grammes*, carbonate of potash 60 *grammes*, arsenious acid 10 *grammes*. After cooling and filtering, add to every 10 *litres* of the solution 4 *litres* of glycerine and 1 *litre* of methylic alcohol. The method of application differs according to the nature of the objects to be preserved. Anatomical preparations that are to be preserved dry are immersed in the fluid from six to twelve days, according to their size, then taken out and dried in the open air. Hollow organs, such as the lungs, etc., must be filled with the preserving fluid, then placed in a vessel containing the same liquid, and afterwards distended with air and dried. Small animals, such as crabs, beetles, lizards, frogs, etc., if the natural colours are to be preserved unchanged, are not to be dried, but put immediately into the preparation. The same fluid may be used for the purpose of preserving human bodies during transportation, or even for more permanent embalming.

HYDROPHOBIA IN PARIS.

IN a paper read before the French Academy of Medicine, on the 31st ultimo, M. Leblanc gave some remarkable statistics, showing the diminution of hydrophobia in Paris since more stringent police regulations on the subject had been enforced. In 1878, there were 613 cases of hydrophobia reported; in 1879, there were 285, or less than a half. The number of persons bitten was 67 in 1879, as against 103 in 1878, and only 12 deaths from the disease were heard of, instead of 24 in 1878. The same improvement is manifested in the number of animals bitten, which fell to 314 in 1879 from 485 in 1878. For the first eight months of the present year, the statistics are equally satisfactory—only 127 cases being reported in animals, and 2 in man. The measures by which this gratifying result has been gained are summed up by M. Leblanc as follows: 1. The seizure and slaughter of dogs found wandering in the city, and its precincts, without a collar bearing the name and address of their master. 2. Energetic search for all cases of madness in dogs; and the strict enforcement of a decree of the Minister of Agriculture and Commerce ordering all animals bitten, or suspected to have been bitten, to be killed. 3. Distribution of instructions by the Council of Health, indicating the symptoms of the malady and the steps to be taken in case of a bite. 4. Prosecution of the owners of dogs who leave them without collars, and of those whose dogs have bitten people. It may be worth consideration whether the enforcement of some such regulations as these might not have a good effect in diminishing the number of cases of hydrophobia in England.

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 18th, it appears that the death-rate in the eight principal towns was 20.3 per 1,000 of estimated population. This rate is 3.4 above that for the corresponding week of last year, and 2.1 above that for the previous week of the present year. The lowest mortality was recorded in Dundee—viz., 14.4 per 1,000; and the highest in Perth—viz., 39.0 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 6.6 per 1,000, or 1.4 above the rate of last week. In Edinburgh and Glasgow, there was a considerable increase in the number of deaths from scarlet fever. Acute diseases of the chest caused 61 deaths, or one more than last week. The mean temperature was 54.5°, being 2.6° under that of the week immediately preceding, and 0.6° above that of the corresponding week of last year.

ELECTION OF PROFESSORS AT ANDERSON'S COLLEGE.

AT a special meeting of the trustees of Anderson's College, held on September 27th, the election of Professors to the Chairs of Natural Philosophy and the Institutes of Medicine took place. For the former, there were fourteen candidates—Mr. James Blyth of Edinburgh being the successful one. For the Chair of Institutes of Medicine, there were two candidates—Dr. John Barlow, Muirhead Demonstrator of Physiology in the University of Glasgow; and Dr. Gilbert Campbell—but, intimation having been given of the withdrawal of the application of the latter gentleman, Dr. Barlow was unanimously appointed.

THE CRYPTOGAMIC SOCIETY OF SCOTLAND.

THE sixth annual conference of the above Society, which takes place this year in Glasgow, was opened on the evening of September 27th by a meeting of the members, when Dr. Stirton of Glasgow (the President) occupied the chair, and delivered the inaugural address. Several other important papers were also read. Most excellent arrangements have been made in every way to promote the success of the conference. In addition to the business and scientific meetings, there are excursions to places of interest in the vicinity of the city; and there has also been brought together a remarkable exhibition of cryptogamic, or flowerless, plants—including mushrooms and their allies, ferns, mosses, lichens, and sea-weeds.

THE FORTHCOMING SOCIAL SCIENCE CONGRESS AT EDINBURGH.

ON Wednesday, October 6th, the Social Science Congress will open in Edinburgh. The meeting promises to be a very successful one, and full details of the plan of meeting and other matters will be found in the local newspapers. The Health Department is under the presidency of Dr. John Beddoe, whose address will be delivered on Saturday morning. The following subjects have been set down for discussion in the Health Department. 1. What are the best areas for sanitary pur-

poses, and how far should there be a revision of the mode of electing and continuing the services of the officers under the Public Health Acts? 2. What is the best mode of amending the present laws with reference to existing buildings, and also of improving their sanitary condition, so as to render them more healthy, having due regard to economical considerations? 3. What are the means which should be adopted for the prevention of pollution of streams, without undue interference with industrial operations, and for the preservation of pure sources of water-supply?

PREVALENCE OF FEVER IN GLASGOW.

AT the meeting of the Town Council, held on September 27th, it was reported by the Sanitary Committee that there had been such a large increase of fever, enteric and scarlet, that the Hospital at Belvidere could not receive all the cases. There are at present in the Fever Hospital 396 patients, being an increase of 60 within a fortnight. The Hospitals' Committee were empowered to make full provision for the additional accommodation required. In a discussion as to the regulations for milk-supply, noticed in the JOURNAL of last week, there was a very general feeling in favour of the rules, considering the great increase in the number of cases of fever.

GLASGOW SCIENCE LECTURES.

IT has been arranged that Professor Tyndall will deliver, on October 26th, the opening lecture of the above series for the ensuing winter season. The course promises to be a very interesting one; and among the names of the lecturers to follow, we notice the names of Professor Bell Pettigrew of St. Andrew's, and the Rev. Dr. Haughton of Dublin.

A PATIENT POISONED IN THE GREENOCK INFIRMARY.

ANOTHER of those unfortunate, but, we think, preventable, cases of poisoning by misadventure has just occurred in the above institution, leading to the death of a patient. One of the Infirmary nurses, who was in attendance on an American seaman suffering from bronchitis, gave him what she took to be a dose of the ordinary black-draught. It was soon found that the unfortunate man had had administered to him a quantity of carbolic acid, and, notwithstanding medical assistance, he expired in about an hour after taking it.

IRELAND.

A LUNATIC named Curry committed suicide by hanging himself last week in the Armagh District Lunatic Asylum. Deceased was only two months an inmate of the asylum.

ROYAL UNIVERSITY OF IRELAND.

THE Senate of this University met last June, and appointed a committee to prepare a scheme of education and endowment; and there will be another meeting early in October to receive the report of the committee. It is rumoured that the proposed scheme will be found untenable, and that the Government will hardly agree to the large sum of money expected by the committee for endowment purposes.

CORK FEVER HOSPITAL.

THE committee of management, in accordance with the promise recently given, held an inquiry on the 24th ult. into the general management of this institution. The proceedings were private, but it is stated that a searching inquiry took place into all the matters connected with the hospital, which were disclosed at the recent public investigation.

HEALTH OF CORK.

DURING the four weeks ending September 11th, the births amounted to 163, and the deaths to 138, of which 16 were due to infectious diseases, and 18 were infants under one year. The annual death-rate per 1,000 gave a total ratio of mortality of 22.81; from infectious diseases, 2.63; from general diseases, 20.10; and a birth-rate of 26.94. These returns clearly indicate that the general health of the city is in a satisfactory condition, especially with reference to the comparative immunity from infectious disease.

THE LECTURE SYSTEM IN MEDICAL EDUCATION.

THE President of the Queen's College, Galway, in his recent report for the past session, refers to the special attention which is at present directed to the question of the value of lectures in medical education. He states that, in his college, a daily roll-call has always been in force in every class; and that class-examinations are frequently held. A daily class-examination is held in the class of anatomical demonstrations, and one weekly in physiology; and no credit is given for attendance when deficient preparation for lecture, or deficient study of the subject, is shown by the student. The class-certificate thus shows not merely the payment of a fee and the entry of a name on the class-roll, but is a guarantee of continuous study of the subject on the part of the student during the entire session. He desires to direct attention to this prominent and essential feature of the Queen's College system, for the reason that, while a reform of the well-known abuses of the lecture system has been only partially secured by changes in the rules of a small number of medical institutions, the system of roll-call and class-examinations adopted in the college has avoided the evil from the beginning.

ALLEGED ILL-TREATMENT OF A PAUPER INMATE OF THE WATERFORD WORKHOUSE.

AN inquest was held last week on the body of a man named Power, who died in the idiot ward of the workhouse, and whose death, it was alleged, was accelerated by exposure. It appeared that the deceased was admitted on September 6th; on the 16th was attacked with choleraic diarrhœa; and at twelve o'clock the same day was found in a state of exhaustion in a room at the rear of the wards. The ward-master, it was stated, had him removed outside to the workhouse grounds, where he was left lying, with bare feet and head, on a piece of quilt, for four hours. To add to the cruelty, one of the nurses, whilst thus exposed, brought out a bucket of water and a whitewash-brush, and began to clean the unfortunate creature, saturating his clothes during the proceeding. He was then carried to the idiot ward, and died twenty hours afterwards; during which time, it was alleged, neither the master, medical officer, nor any attendant visited him. A verdict of death accelerated by exposure was returned by the jury at the inquest; but the guardians have very properly requested the Local Government Board to hold a sworn inquiry into the circumstances connected with the death of Power and the shocking treatment he received.

WALSALL.—This report consists almost exclusively of statistics, and is unduly brief on many points of interest in the sanitary history of the year. The death-rate is stated to be 22.22, as against 22.11 in 1878; but, as no allowance has been made for the deaths occurring in the public institutions of the borough, this figure cannot be regarded as strictly accurate. The extreme severity of the winter, both at the beginning and end of the year, produced an excessive amount of chest-affections, which largely swelled the death-rate. The total number of deaths from zymotic diseases was 170, or 80 less than in the previous year. This diminution was principally due to the lessened mortality from scarlatina, and partly to the fewer deaths from typhoid fever and diarrhœa. Dr. Maclachlan states that the explanation of the scarlatina mortality is to be found in the ignorance of many parents with respect to the nature of the disease, and to the recklessness with which children just recovering from it are admitted into schools, or otherwise allowed to spread the infection. It is surprising, however, to read on the same page that, notwithstanding the large fatality from scarlatina (90 deaths), the infectious hospital for the borough has, apparently with the Medical officer's approval, remained unopened during a two years' epidemic of the disease.

MEDICAL SCHOOLS AND HOSPITALS IN IRELAND.

THE delay which has occurred in the publication of the following notices of the Medical Schools of Ireland has been caused by the difficulty of obtaining replies to the inquiries addressed to the bodies in question.

SCHOOL OF PHYSIC IN IRELAND.—This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, and the Professor of Medical Jurisprudence, being appointed by the latter. The staff is as follows: Regius Professor of Physic, Dr. Alfred Hudson; Regius Professor of Surgery, Dr. W. Colles; University Professor of Anatomy and Surgery, Dr. Macalister, Tu., Th., S., 1; University Professor of Chemistry, Dr. J. E. Reynolds, Tu., Th., S., 2; University Professor of Botany, Dr. E. P. Wright, M., Tu., W., S., 1 (summer); Professor of Surgery in Trinity College, Dr. E. H. Bennett, M., W., F., 1; University Anatomist, Dr. T. Little, Tu., Th., S., 12; Professor of Comparative Anatomy, Dr. A. Macalister, M., Tu., W., S., 4 (summer); Erasmus Smith's Professor of Natural Philosophy, Rev. John Leslie, M.A., M., W., F., 2; University Lecturer in Operative Surgery, Dr. R. G. Butcher; King's Professor of Institutes of Medicine, Dr. J. M. Purser, M., W., F., 12; and Practical Histology two days a week in summer; King's Professor of Practice of Medicine, Dr. W. Moore, Tu., Th., S., 3; King's Professor of Materia Medica and Pharmacy, Dr. Aquilla Smith, W., Th., F., S., 12 (summer); King's Professor of Midwifery, Sir E. B. Sinclair, M., W., F., 4; and Demonstrations, Th., F., 4 (summer); Professor of Medical Jurisprudence, Dr. R. Travers, M., W., Th., F., 2 (summer).

The Winter Session commences on October 1st by the opening of the Dissecting Room. Lectures commence a month later. The Winter Courses consist of fifty-six Lectures each. Attendance on at least forty-two Lectures in each Course is required. The Summer Session commences April 1st. The Courses (Botany, Institutes of Medicine, Comparative Anatomy, Materia Medica, and Medical Jurisprudence) consist of forty Lectures each, attendance on at least thirty of which is required. The Courses of Practical Histology and Practical Chemistry consist of twenty-six and thirty-six demonstrations respectively.

The Dissecting Room is open from sunrise to sunset, under the superintendence of Professor Macalister; by whom, and by the University Anatomist and four Demonstrators, instruction is given daily. The new Laboratory of Practical Histology and Physiology is under the direction of Professor Purser. Students can enter for the study of Pathological Histology at any time; and a complete course of instruction in Animal Histology is given in the summer. The four Chemical Laboratories are open daily, under the supervision of Professor Reynolds, assisted by Mr. Early, Demonstrator. Professor Bennett gives a complete course of Demonstrations in Operative Surgery during the summer session. Practical Botany is taught in the Botanic Garden and the Herbarium by Professor Wright.

The Museums of Anatomy and Zoology, of Pathology, of Materia Medica, and of Midwifery; and of Botany, are open to the students of the School of Physic.

Scholarships, Prizes, etc.—Two Medical Scholarships, value of each £40, are awarded annually. A Medical Travelling Prize and a Surgical Travelling Prize, value of each £100, are also awarded. The Professor of Chemistry gives Prizes amounting to £10; and the Professor of Botany Prizes amounting to £5.

Fees.—For Anatomy, Medicine, Practice of Medicine, Materia Medica, Midwifery, Medical Jurisprudence, Institutes of Medicine, Obstetric Medicine and Surgery (at Sir P. Dun's Hospital), Ophthalmic Surgery (at St. Mark's Hospital), each £3 3s.; Demonstrations and Dissections, each year, £8 8s.; Surgery, £2 2s.; Chemistry, £1 11s. 6d.; Practical Chemistry, £2 12s. 6d. Students dissecting during the fourth year pay £2 2s.

SCHOOL OF SURGERY: ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Introductory Lecture will be delivered on Monday, October 25th, at one o'clock, by Mr. Swanzy. The Dissecting Room will open on October 1st.—*Winter Session:* Anatomy and Physiology, Dr. Mapother, M., W., F., S., 3; Descriptive Anatomy, Dr. Bevan and Mr. Thornley Stoker, daily, except Saturday, 12; Surgery, Mr. J. Stannus Hughes and Mr. Stokes, Tu., Th., S., 1; Practice of Medicine, Dr. James Little, M., W., F., 1; Chemistry, Dr. Cameron, Tu., Th., S., 2; Midwifery and Gynæcology, Dr. Roe, Tu., Th., S., 3. Lectures on Comparative Anatomy will be delivered during the winter. Practical Instruction in Operative Surgery will be given as part of the surgical course. The Professor of Chemistry receives operating pupils into the chemical laboratory. The dissecting-rooms open from October 1st, and are available from 8 A.M. to 10 P.M. during the session. The dissections are under the direction of the professors of anatomy, assisted by five demonstrators.—*Summer Session*, commencing April 1st, 1881: Materia Medica, Mr. Macnamara; Medical Jurisprudence, Dr. Davy; Botany, Dr. Minchin; Practical Chemistry, Dr. Cameron; Midwifery and Gynæcology, Dr. Roe; Hygiene, Dr. Cameron; Ophthalmic and Aural Surgery, Mr. Swanzy.

The fee for each course of lectures is £3 3s., excepting Descriptive Anatomy, which is £8 8s.; Practical Chemistry, which is £5 5s.; and Ophthalmic and Aural Surgery and Hygiene, which are free. Composition fee for all lectures and dissections for the Diploma in Surgery, £56 17s. 6d. All fees for lectures are to be paid to Mr. John Brennen, at the College.

ADELAIDE MEDICAL AND SURGICAL HOSPITALS.—Consulting Obstetric Surgeon, Dr. Lombe Atthill. Physicians, Dr. Henry H. Head. Dr. James Little. Physician and Pathologist, Dr. Walter G. Smith. Surgeons, Dr. John K. Barton, Mr. B. Wills Richardson, Dr. Kendal Franks. Obstetric Surgeon, Dr. R. D. Purefoy. Ophthalmic and Aural Surgeon, Mr. H. R. Swanzy. Dental Surgeon, Dr. R. T. Stack.

Fee for nine months' hospital attendance, £12 12s.; six months, £8 8s.; summer three months, £5 5s.

There are wards for infants and children, and there is a large detached fever hospital. Special hours are devoted to Clinical Instruction in the Diseases peculiar to Women, and in the Diseases of the Eye, Ear, Throat, and Skin; and students are individually instructed in the use of the Stethoscope, Ophthalmoscope, and Microscope, in its application to Clinical Medicine. Three resident pupils are selected half yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery, will be awarded.

Further particulars may be obtained from Mr. Richardson, 22, Ely Place; or any of the other members of the medical staff.

CARMICHAEL COLLEGE OF MEDICINE.—The Dissecting Rooms will be open on October 1st. Lectures will commence on November 2nd. The following are the Courses.—*Winter Session:* Medicine, Dr. J. W. Moore, M., W., and F., 12; Surgery, Dr. J. K. Barton and Dr. A. H. Corley, T., Th., and S., 12; Systemic Anatomy, Dr. F. Heuston, three times weekly; Practical Anatomy, Dr. J. L. Stoney, daily, except Sat., 1; Physiology, Dr. Reuben J. Harvey, daily, except Sat., 2; Midwifery, Dr. W. B. Jennings and Dr. A. V. Macan, M., W., and F., 3; Chemistry, Dr. C. R. C. Tichborne, T. Th., and S., 3; Ophthalmic Surgery, Dr. C. E. Fitzgerald, W., 1.—*Summer Session*, 1881: Botany, Dr. McNab, M., W., F., 11; Pathology, Dr. S. Woodhouse, T., Th., S., 11; Materia Medica, Dr. Duffey, M., W., F., 12; Practical Chemistry, Dr. Tichborne, T., Th., and S., 1.30; Forensic Medicine, Mr. Auchinleck, M., W., and F., 1; Practical Histology, Dr. Harvey, daily, except Sat., 4. There are ten Anatomical Demonstrators, who superintend the dissections. The Physiological Department comprises a Histology Room, a room for Physiological Chemistry, and one for Physiological apparatus. The Museum comprises a valuable collection of Anatomical and Pathological preparations. There is also an extensive Museum of Materia Medica.—Fees, for each course of lectures, £3 3s.; for each course Practical Instruction (except Practical Physiology, £3 3s.), £5 5s. A second practical course can be attended for £2 2s., if no certificate be required. The fee for Ophthalmic Surgery is £2 2s. if a certificate be required. Perpetual Pupils, paying £58 5s. 6d. in two instalments, can attend all the lectures required by the Royal College of Surgeons of Ireland. Systemic Anatomy is free, if no certificate be required. The Carmichael and Mayne Scholarships, each £15 in value, and class and special Prizes to the value of £67, are awarded annually. For further information, apply to Dr. Woodhouse, 10, Lower Fitzwilliam Street.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.—*Winter Session:* The dissecting-rooms will be opened on October 1st. The lectures will commence on Monday, November 3rd, at 3 o'clock P.M., when the inaugural address will be delivered by Dr. Nixon. Anatomy and Physiology (Human and Comparative), by Dr. T. Hayden and Dr. Cryan, M., Tu., W., Th., and F., 12; Anatomical Demonstrations, by the Professors of Anatomy and Physiology, same days, 1; Chemistry, by Dr. J. Campbell, M., W., and F., 2; Surgery, by Mr. P. J. Hayes, M., W., and F., 3; Medicine, by Dr. R. D. Lyons, T., Th., and S., 3; Midwifery, by Dr. J. A. Byrne, T., Th., and S., 2; Demonstrations in Dissecting-rooms, by Mr. Coppinger, Mr. W. J. Carroll, Mr. J. M. Redmond, and Mr. M. J. Kehoe. *Summer Session*, 1879: Practical Chemistry, by Dr. John Campbell, M., T., W., and F., 12 to 4 P.M.;

Materia Medica and Therapeutics, by Dr. F. J. B. Quinlan, M., T., W., and Th., 1; Medical Jurisprudence, by Dr. S. M. Macswiney, M., T., W., and Th., 12; Botany, by Dr. G. Sigerson, M., T., Th., and S., 2; Pathology and Pathological Anatomy, by Dr. R. D. Lyons; Ophthalmology, T. and Th., 3; Natural Philosophy (Meteorology), by the Rev. Gerald Molloy, D.D., T., Th., and S., 11.

The school is within a few minutes' walk of the principal hospitals of the city. It includes an extensive and complete chemical laboratory, and well supplied students' library.

Tutorial classes in the several departments of the medical curriculum are held daily.

Fees.—The fee for each course is £3 3s., except Dissections and Practical Chemistry, for each of which the fee is £5 5s.; and Pathology, Ophthalmology, and Natural Philosophy, which are free. A reduction of one-sixth is made to perpetual pupils paying the entire of their fees in advance, or in two instalments at the commencement of the first and of the second years of study. The cost of all lectures and classes required for the diploma of the Royal College of Surgeons in Ireland is £68 5s., or to perpetual pupils, £56 17s. 6d.; for the Royal College of Surgeons in England £50 8s.; of Edinburgh, £47 5s.

Prizes.—At the termination of the winter and of the summer sessions respectively, public examinations will be held in each class, and a prize of £3 3s. will be offered for competition amongst students who shall have diligently attended at least three-fourths of the lectures in the class of the current session. The Gold Medal will be awarded at the end of the winter session, in the following combined subjects, viz., Practice of Medicine, Surgery, and Midwifery, including the Diseases of Women and Children. At the termination of the summer session, the University Exhibition, value £20, will be awarded for the best answering in Practical Chemistry, Materia Medica, and Medical Jurisprudence combined. The examination in both is by printed questions.

Further particulars may be learned from the Registrar, Professor Campbell, 161, Rathgar Road; or at the School of Medicine, Cecilia Street.

COOMBE LYING-IN HOSPITAL.—Master, Dr. G. H. Kidd. Deputy-Master, Dr. W. Roe. Assistants, Dr. S. R. Mason, Dr. W. C. Neville. The hospital contains sixty-five beds, in two divisions, one devoted to Midwifery, and the other to Diseases of Women. Students can enter for six months at any period of the year. Clinical Instruction is given daily, and Lectures are delivered on the more important cases. Two paid Pupil Midwifery Assistants, and one Clinical Clerk, are selected half-yearly from among the pupils. Certificates of attendance are accepted by the Examining Boards; and the diploma of the Hospital is recognised by the Irish Local Government Board as a qualification in Midwifery. *Fees:* extern pupils, £8 8s.; intern pupils, £18 18s. Particulars may be learned on application to the Registrar of the Hospital.

LEDWICH'S SCHOOL OF ANATOMY AND SURGERY.—The lectures will be delivered by the following teachers. Anatomy, Surgical and Descriptive: Mr. T. P. Mason, Mr. A. R. Glanville, Mr. M. A. Ward, Mr. C. H. Robinson, Mr. F. A. Nixon, and Mr. E. Ledwich, at 1 P.M. Anatomy, Physiological and Pathological: Dr. T. P. Mason, Mr. M. A. Ward, and Mr. T. Mason, five days weekly, at 12 o'clock. Surgery: Mr. J. H. Wharton and Mr. J. E. Kelly. Medicine: Dr. Arthur W. Foot. Midwifery: Dr. S. R. Mason. Chemistry and Natural Philosophy: Dr. E. Lapper. Practical Chemistry: Dr. Lapper. Ophthalmic and Aural Surgery; Mr. A. H. Benson. Institutes of Medicine: Mr. E. Ledwich. Materia Medica: Mr. Purefoy. Forensic Medicine and Hygiene; Dr. Robert Travers. Anatomical Demonstrations, daily. A course of operations to be performed by the students, under the superintendence of the lecturer (subjects, etc., included), £5 5s.

The dissecting-rooms will open on October 1st. During the summer session, there will be lectures on Midwifery, Chemistry, Materia Medica, Botany, and Forensic Medicine.

There are endowments in favour of students, subject to the conditions prescribed by the founder, in the following departments: two in Anatomy and Physiology, two in Materia Anatomy, two in Practical Anatomy, and one in Surgery. The usual prizes in the other departments will be awarded at the termination of the session.

The school is connected by its teachers with six hospitals, five of which are medical and surgical, and one for midwifery and diseases of women and children.

QUEEN'S COLLEGE, BELFAST.—The following courses are delivered. Anatomy and Physiology, Dr. P. Redfern, M., T., W., Th., F., 2; Medicine, Dr. James Cuming, M., T., W., Th., 4; Surgery, Dr. A. Gordon, M., T., W., Th., 1; Materia Medica, Dr. J. Seaton Reid, M., T., W., Th., 4; Midwifery, Dr. R. F. Dill, M., T., W., Th., 3 (summer), Chemistry, Dr. Letts, M., T., W., Th., F., 3; Medical Jurisprudence, Dr. J. F. Hodges, M., T., W., Th., 2 (summer); Zoology, Dr. R. O. Cunningham, M., T., W., F., 1; Botany, Dr. Cunningham, M., T., W., Th., F., 11 (summer).

The Clinical Laboratory is open from 9 till 3; on Saturdays, 9 till noon. Anatomical Demonstrations are given on the first five days of the week; and Dissections are carried on daily.

Fees.—Medical Jurisprudence, Chemistry, Materia Medica, Medicine, Surgery, Midwifery, and Botany, each £2; reattendance on same course, half fee; Practical Chemistry and Practical Anatomy, each course, £3; Anatomy and Physiology, first course, £3; each subsequent course, £2. Eight Junior Scholarships, of the value of £24 each, are awarded annually, after examination, to students of the Faculty of Medicine; two being awarded for each of the four years of study. Clinical instruction is given at the Belfast General Hospital.

QUEEN'S COLLEGE, CORK,—The following courses of lectures are given. Anatomy and Physiology, Dr. J. J. Charles, daily, 1; Medicine, Dr. D. C. O'Connor, M., W., S., 12; Surgery, Dr. W. K. Tanner; Materia Medica, Dr. M. O'Keefe, T., Th., 3; S., 12; Midwifery, Dr. H. Macnaughton Jones, T., Th., S., 4; Medical Jurisprudence, Dr. O'Keefe, M., F., 3; and Mr. M. S. O'Shaughnessy; Natural Philosophy, Mr. J. England; Chemistry and Practical Chemistry, Dr. M. Simpson, M., W., F.; Zoology and Botany, Mr. A. L. Adams, M., W., F.; Logic, Mr. G. S. Read.

The building in which the Medical School is located is provided with a large, well-lighted, and well-ventilated dissecting-room, with Physiological and Toxicological Laboratories, Materia Medica, Anatomical and Pathological Museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed Physical and Chemical Laboratories, and a large Natural History Museum in the adjoining building; and part of the College ground is laid out as a Botanic Garden. The College Library is open daily to students of the school.

Fees.—For Practical Anatomy and Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 for first course, and £2 for subsequent course. Other Medical Classes, £2 each course. Eight scholarships (value £25 each), as well as several exhibitions and class prizes, are awarded every year to the most deserving students.

Clinical instruction is given at the North and South Infirmaries and Lying-in Hospitals; students can also attend the Mercy Hospital, the Maternity, the Children's Hospital, and the Ophthalmic and Aural Hospital. Fee for Clinical Lectures and attendance at either the North or South Infirmary, £8 8s. for twelve months; £5 5s. for six months; at the Lying-in Hospital and the Maternity, each £3 3s. The attendance at the Ophthalmic and Aural Hospital is free to students of the College.

A course of Clinical Lectures will be delivered on Tuesdays, Thursdays, and Saturdays during the first three months of each winter session in the Cork District Lunatic Asylum, by Dr. Eames, Resident Medical Superintendent. The fee is £3 3s.

QUEEN'S COLLEGE, GALWAY.—*Professors:* Anatomy and Physiology, Dr. J. P. Pye, M., T., W., Th., F., 3; Medicine, Dr. J. L. Lynham, T., Th., S., 2; Surgery, Dr. J. V. Browne, M., W., F., 11; Materia Medica, Dr. N. W. Colahan, T., Th., S., 2; Medical Jurisprudence, Dr. R. J. Kinkead, M., W., F., 12; Midwifery and Gynæcology, Dr. R. J. Kinkead, M., W., F., 2; Chemistry, Dr. T. H. Rowney, M., W., F., S., 12; Practical Chemistry, Dr. T. H. Rowney, M., W., F., 2; Botany and Zoology, Dr. A. G. Melville; Modern Languages, Dr. C. Geisler. The College Library is open daily to students; also the Museums of Human and Comparative Anatomy, of Physiological Instruments, of Pathology, of Materia Medica, of Natural History, of Chemistry, and of Natural Philosophy; and the Montgomery Obstetric Collection.

Prizes.—Attached are eight scholarships of the value of £25 each; four exhibitions of the value of £12 each; two exhibitions of the value of £10 each; and sessional prizes in each of the subjects of the curriculum are awarded annually. The Clinical Board will award two silver medals to the students who pass the best examination on cases treated in Hospital, and the subject of Clinical Lectures.

Clinical Lectures are delivered on Tuesdays and Fridays, and practical teaching at the bedside on other days of the week, at the Galway County Infirmary and the Galway Town Hospital.

Fees.—Matriculation, first year, 10s.; each subsequent year, 5s.; Anatomy and Physiology, first course, £3; each subsequent course, £2; Practical Anatomy, Practical Chemistry, and Surgery, each course, £3; other courses, £1 each for course extending over one term only; £2 for each course extending over more than one; and £1 for each subsequent attendance on the same. Clinical Instruction, six months, £4 4s.; Resident Clerkship, six months, £15 15s.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.—Physicians: Dr. J. T. Banks, Dr. B. G. M'Dowel, Dr. S. Gordon, Dr. R. D. Lyons; Assistant-Physician and Pathologist: Dr. Reuben J. Harvey; Consulting Obstetric Surgeon: Dr. G. H. Kidd; Surgeons: Dr. William Stokes, Dr. William Thomson, Dr. W. Thornley Stoker, Dr. Anthony H. Corley; Ophthalmic Surgeon: Dr. Charles E. Fitzgerald; Dental Surgeon: Mr. W. B. Pearsall.

These hospitals contain 312 beds; 110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases.

There will be a distinct Course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A Course of Practical Instruction in Ophthalmic Surgery will be given; fee, £3 3s. Practical Pharmacy is taught under the superintendence of the apothecary of the hospitals. A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine or Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

The Richmond Lunatic Asylum, containing over 1,000 patients, adjoins these hospitals, affording every facility for the study of mental diseases. The hospitals are visited at 9 o'clock by the physicians and surgeons on alternate days. Two Clinical Lectures are delivered in each week, in addition to the usual bedside Clinical Instruction, which is given daily by the physicians and surgeons.

Fees: For the winter and summer session, £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident Clinical Clerks, 20 guineas for the winter session; 15 guineas for the summer term (from May to October), including certificate of attendance, furnished apartments, fuel, light, attendance, etc.

ROTUNDA HOSPITALS.—Master, Dr. Lombe Atthill; Assistant Physicians, Dr. A. Horne, and Dr. A. Duke; Pathologist, Dr. G. F. Duffey.

This Institution consists of two distinct Hospitals, namely, the Lying-in-Hospital, for labour cases, and the Auxiliary Hospital, for patients suffering from uterine and ovarian disease. There is also a large extern maternity in connection with the Hospital, and a Dispensary for Diseases of Women.

An Obstetrical Museum, containing upwards of 500 preparations, is attached to the Hospital.

Clinical Instruction in Midwifery and the Diseases of Women is given daily; and Lectures are delivered regularly during the Session on these subjects.

The Diploma from this Hospital is granted to pupils after six months' attendance, and on their passing an examination. It is recognised by the Local Government Board in Ireland, as a qualification in Midwifery.

Accommodation is provided for a limited number of Intern Pupils.

Fees.—Intern Pupils: six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s. Extern Pupils: six months, £10 10s.; three months, £6 6s.

SIR PATRICK DUN'S HOSPITAL.—Consulting-Physician, Dr. A. Hudson; Consulting-Surgeon, Dr. W. Colles; Clinical Physicians, Dr. J. M. Purser, Dr. W. Moore, Dr. Aquilla Smith; Midwifery Physician, Dr. E. B. Sinclair; Clinical Surgeons, Dr. A. Macalister, Dr. E. H. Bennett, Dr. T. E. Little; University Lecturer in Operative Surgery, Dr. R. G. Butcher.

The physician on duty visits the wards, with his class, at 9 A.M. on Mondays, Wednesdays, and Fridays; and the surgeon on duty, with his class, at 9 A.M. on Tuesdays, Thursdays, and Saturdays. The Hospital Dispensary is open from 9 to 4 daily.

The payment of £12 12s. to the hospital entitles the student to hospital attendance and clinical teaching during the winter and summer sessions. For the winter session alone, the fee is £8 8s.; for the summer alone, £5 5s. For twelve months' instruction in Practical Midwifery, students of Trinity College, £3 3s.; other students, £6 6s. Ophthalmic lectures are delivered at St. Mark's Hospital; fee for three months, £3. Silver clinical medals in Medicine and in Surgery are awarded to the students who shall pass the best examinations on the Medical and Surgical cases treated in the hospital during the year.

Candidates for the office of Resident Pupil are requested to forward their applications before 1st May and 1st November.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:
NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the office of the Association, 161A, Strand, London, on Wednesday, the 13th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 14th, 1880.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held at the King's Head Hotel, Barnard Castle, on Tuesday, October 5th, at 3 P.M.; G. B. MORGAN, Esq., President, in the chair. The following papers have been promised.

1. Dr. G. S. Brady: Two Cases of Trichinosis.
2. Dr. Philipson: On Glosso-Labio-Laryngeal Paralysis.
3. The President: On the Power which we possess of aiding in Temperance Reform.
4. Dr. Adamson: Case of Ostitis of Tibia.

Dinner will take place at the King's Head Hotel, at 5.30 P.M. Charge, six shillings and sixpence, exclusive of wine. Gentlemen who intend to be present are requested to intimate their intention on or before Monday, October 4th.

T. W. BARRON, *Honorary Secretary.*

10, Old Elvet, Durham, September 27th, 1880.

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 21st, at a quarter-past five o'clock. The following question has been settled by the Council as the one on which members should be invited to express their opinion at the said meeting after dinner: "What, in your opinion, is the best method to be adopted by the Profession, the Public, and the Sanitary Authorities, in order to check the spread of Infectious Diseases?"

Members having any communication to bring before the meeting are requested to send notice of its title to the Honorary Secretary; they will further oblige by informing him, before the day of meeting, if they purpose being at the dinner.

Dinner, 5s. a head, exclusive of wine.

W. M. KELLY, M.D., *Honorary Secretary.*

SHROPSHIRE AND MID-WALES BRANCH.

THE annual meeting of the above Branch will be held at the Salop Infirmary, on Tuesday, October 19th, at 2.30 P.M. (and not on the 12th, as previously stated).

The annual dinner will take place at the Lion Hotel, at five o'clock precisely.

Members intending to read papers, or bring forward subjects for discussion, are requested to communicate with

HENRY NELSON EDWARDS, *Honorary Secretary.*

SOUTH MIDLAND BRANCH.

THE autumnal meeting of the above Branch will be held at the George Hotel, Luton, Beds, at half-past two o'clock on Thursday, October 7th. Luncheon at half-past one. Tickets, 3s. 6d. each, exclusive of wine.

G. F. KIRBY SMITH, *Honorary Secretary.*

EAST ANGLIAN BRANCH.

THE annual meeting of this Branch will be held at Lowestoft on Friday, October 8th, FRANCIS S. WORTHINGTON, Esq., Senior Surgeon Lowestoft Hospital, President-elect.

Programme of Proceedings.—12 P.M. General meeting; President's Address.—2 P.M. Luncheon at Royal Hotel; tickets, 5s., exclusive of

wine.—3.30 P.M. General meeting for reading and discussion of papers.—5 P.M. The President and Mrs. Worthington, At Home.

The following papers have been promised.

1. The President: Perforation of Vermiform Appendix.

2. T. E. Amyot, Esq. (Diss): Extensive Lumbar Thoracic Abscess in a Child, with Necropsy.

3. W. Cadge, Esq. (Norwich): A Case of Traumatic Cerebral Abscess.

4. W. M. Crowfoot, M.D. (Beccles): Notes on three cases of Operation for Ovarian Disease.

5. E. G. Barnes, M.D. (Eye): On Concealed Accidental Hæmorrhage, with cases.

6. W. A. Elliston, M.D. (Ipswich): A Case of Vesico-Vaginal Fistula, with Laceration of Os and Cervix Uteri.

J. B. PITT, M.D., Norwich, } *Honorary Secretaries.*
W. A. ELLISTON, M.D., Ipswich, }

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

A MEETING of this District was held at the Town Hall, Folkestone, on Thursday, September 23rd, at three o'clock; Dr. FITZGERALD of Folkestone in the Chair.

The resignation of the Honorary Secretary, Mr. W. Knight Treves, was received with regret, and he was thanked for his past services. Mr. W. Whitehead Reid of Canterbury was unanimously elected Honorary Secretary in his place.

The following papers were read:

1. A Case of Imperforate Rectum. By Dr. Thomas Eastes.

2. Specialities in General Practice. By Mr. Tyson, F.R.C.S.

3. Some of the Evils arising from Enlarged Tonsils. Mr. Knight Treves, F.R.C.S.

The members afterwards dined at the West Cliff Hotel.

HOSPITAL AND DISPENSARY MANAGEMENT.

HOME HOSPITALS.

THE following are the regulations adopted by the Home Hospitals Association for paying patients for the management of their homes, with a view to the satisfactory regulation of the relations of the patients to their medical advisers. They have been put in force at Fitzroy House, Fitzroy Square, the first of the homes in question recently opened. They were drawn with the aid of leading consulting physicians and surgeons and general practitioners; and, as establishing a new precedent likely to be fruitful, seem to deserve record.

PROFESSIONAL ATTENDANCE—1. Every patient at Fitzroy House shall be attended by his own professional adviser. 2. The medical attendant of any person residing at Fitzroy House shall have access to his patient at all times that he may consider necessary, subject to such regulations as have been made for the general conduct and order of the establishment. 3. The medical attendant shall be considered responsible for the professional care of his patient. 4. The medical attendant shall provide for such professional assistance as may be required during his absence, notifying such arrangements to the lady-superintendent, so that she may be prepared to act in case of emergency. 5. The medical attendant shall give his directions for the management and nursing of the case to the lady-superintendent; such directions to be in writing so far as possible. 6. In the event of a person being admitted who is affected with any infectious or contagious disease, the medical attendant, with the lady-superintendent, will make immediate arrangements for the removal of any such case. 7. To meet the case of those persons who are unprovided with a professional attendant, the medical board of reference, at the request of the managing committee, have prepared an Alphabetical List, containing the names and addresses of professional gentlemen within an easy distance of Fitzroy House. This list may be obtained from the lady-superintendent on application. No official of the association will be permitted to attempt to influence the choice of the patient in selecting a medical attendant from this list. 8. The professional attendant shall be regarded as the patient's private medical adviser, in all arrangements respecting fees, etc. The Association will not hold themselves responsible for the fees of the medical attendant. 9. In case of accident or emergency not provided for by the foregoing rules, the lady-superintendent shall send for one of the gentlemen named on the alphabetical list, and make such other arrangements for its reception as may be necessary.

GENERAL CONDITIONS.—1. In case of any professional difficulty arising respecting a patient at Fitzroy House, the managing committee will refer such dispute to the medical board of reference, whose decision shall be final. 2. The managing committee reserve to themselves the right of refusing to admit or to retain any person as an inmate of Fitzroy House without giving any reason for such a decision. All persons will be admitted on the condition that they are liable to be removed from the house at any time by the committee.

PATIENTS.—1. The association will receive patients of both sexes. Persons suffering from epilepsy, lunacy, or diseases of an infectious or contagious nature, are ineligible. Incurable cases, and those of long standing which admit only of temporary alleviation, are not regarded in general as suitable subjects for admission, the chief object being to afford substantial medical and surgical relief to as large a number as possible. 2. In any case of disease about which the committee are in doubt as to whether it shall be admitted to treatment, they shall refer the matter to the medical board of reference, whose decision shall be final. 3. All payments shall be made in advance. Patients suffering from acute disease shall pay the cost of 14 days' maintenance, or one month's maintenance if the case be of a chronic character. Those patients who elect to stay beyond the date paid for in advance must renew their payments within three days of the time their previous payment would expire. 4. Before admission the patient or his friends will be required to fill in a form of application, to be obtained from the secretary. No applicant can be admitted without an order from the secretary, stating the time at which the patient can be received. All expenses in bringing or removing the patient shall be borne by his or her friends. 5. When a patient leaves Fitzroy House, the balance of all moneys which may be due shall be returned to him. The days of entering and leaving will each be charged for as a separate day. Every patient must pay for at least a week's residence. 6. No person except the medical attendant shall speak of the health of any patient in the institution in the presence of such patient, or of any other inmate of the establishment. 7. If after admission any patient is suspected of being affected with an infectious or contagious disease, the lady-superintendent shall communicate with the medical attendant, that arrangements may be made for the immediate removal of such case under proper safeguards. 8. There shall be a regular diet system for the patients, but this scale may be modified at the written request of the professional attendant. When patients believe that particular articles are necessary for them, they will mention this to their medical attendant, and he will order the same if he think necessary. 9. Patients are permitted to see their friends in the institution, at all reasonable hours, subject to such restrictions as the medical attendant in charge of each case may deem necessary. 10. No patient is allowed to bring into the institution, or to use, any article of food or drink, without permission. 11. Patients are not allowed to smoke in the house, except in the smoking-room provided for that purpose. 12. Any article of furniture injured or destroyed will be charged at the cost price. 13 The lady-superintendent, in the absence of the medical attendant, is charged with the duty of enforcing the observance of the rules. 14. Any patient disobeying the regulations, or continuing to do so after being remonstrated with, shall be subject to the forfeiture of the balance of his week's payment, and to removal from the house. 15. It shall be the duty of the lady-superintendent to decide for each patient the room and bed he or she shall occupy and to change the same from time to time as occasion may require, but subject always in this respect to the orders and wishes of the medical attendant under whose charge the patient may be. 16. Patients are requested, in the event of their suffering from any inattention or incivility on the part of the nurses or attendants, or of any annoyance on the part of a fellow-patient, to complain to the lady-superintendent, whose duty it is to prevent a recurrence of the evil complained of. Should that not be effectual, they are desired to address a letter to the Honorary Secretary of the association. 17. All officials of the association are strictly forbidden to receive money from the inmates; and the latter are earnestly requested never to insult the former by any departure from this rule.

THE INDIAN DISPENSARY SYSTEM.

IN his report on the charitable dispensaries under the Government of Bengal for the year 1879, Dr. A. J. Payne, the newly appointed Surgeon-General, makes some very pithy and weighty remarks, which are worth notice, upon the question of the extension of Indian dispensaries. Chronicling the addition of seven to the number of the Bengal dispensaries, which already largely exceeded the number existing in any other province of India, Dr. Payne observes that, while systematic inspection has improved the official aspect of the institutions, closer insight has revealed much in their essential aspects giving an unfavourable impression of the benefits conferred by outlying dispensaries on the classes for whom they are intended. As regards the institutions that Government has been induced to support by local representations, there is evidence that they have originated too often in the desire of richer men to obtain, for their families and dependents, medical treatment at a

nominal cost; or for themselves formal recognition as public benefactors. That the medicines supplied by Government for the poor are shared by the rich, is a fact that has been often indicated in official reports in oblique or general terms; but those who have witnessed these things say plainly that, in many a village dispensary, the sick peasant is treated with cheap drugs from the bazaar, while the English medicines go to the houses of the richer classes. The minute inquiries of the Sanitary Commissioner on his tours confirm this evidence. In some cases, no sooner has a dispensary been established, than the interest of the committee has ceased, and the management has been left to the native doctor. Promises of support and guarantee bonds have been forgotten, with the necessities of the poor that were prominent in words before. Subscribers have refused to pay, frankly declaring that they had expected to receive gratuitous medicine. When a dispute has arisen, or a judicial inquiry has gone below the surface of things, there has been evidence of the same abuse of charity and misappropriation of Government provision. How far the poor have really benefited by the dispensaries, Dr. Payne is not prepared to say, "as the returns are not true"; but the table submitted by him shows that, "even accepting the figures as they stand, if all the district dispensaries of Bengal were closed at once, not one per cent. of the rightful recipients of charity would feel that they had gone". Remarks like these, coming from a responsible Government official, deserve the very fullest consideration; and that there is something radically wrong in the system of these dispensaries seems beyond a doubt. Certain it is, that the growing number of such institutions is by no means a matter for congratulation. A few well-ordered dispensaries in selected places would be infinitely better than scattering broadcast over a province a pretence of medical charity. Evidently the question which presses for consideration now is, in the words of Dr. Payne, "whether it is not advisable so to enforce existing bonds and pledges as to expedite the closure of a large number of these abortive charities, and to use all available means and efforts to make the remainder useful". And the importance of action in this direction is seen when Dr. Payne expresses the opinion that one-third of the existing total in Bengal is a maximum estimate of the number of dispensaries which fulfil the intention of Government towards the people—that proportion including the best private foundations, which receive nothing from the Government.

SPECIAL CORRESPONDENCE.

MANCHESTER.

Two large additional wards have recently been opened at the Infirmary, in the wing formerly occupied by the out-patients and dispensary departments, these latter having been transferred some few months back to a new building specially erected for their accommodation in the rear of the main structure. The new wards are airy, light, and well ventilated by means of "Tobins". The closets, bathrooms, and lavatories are placed in turrets built out from the hospital proper; and throughout the arrangements the architect has done his best to graft the more urgent of modern sanitary requirements upon the old and badly constructed building. Part of the patients have been transferred from the unsightly wooden huts which have so long disfigured the centre of the city; and it is hoped that within a short time the alterations and reconstruction of the Infirmary will have so far advanced as to allow the demolishing of the greater part of these long-standing eyesores.

Recently Dr. Thorne Thorne has been making a very minute investigation into the working and arrangements of the Fever Hospital here, as well as of those of the neighbouring boroughs—being part of a general inquiry now being undertaken by the Local Government Board as to the accommodation for the reception and treatment of infectious diseases throughout the country.

At the time the charter was about to be granted to our new University, considerable capital was attempted to be made, by those who opposed the granting of power to confer medical degrees, out of the fact that Owens College at that time occupied so low a position in the percentage of men passed at the Royal College of Surgeons. It is satisfactory to find, in the list just published, that at the primary examination Owens College stands first in the kingdom; and at the pass it takes a satisfactory position also.

At the present time, an industrial and sanitary exhibition is being held at Pomona Gardens, under the auspices of the Manchester and Salford Sanitary Association, with the view of bringing into more general use the many and various inventions and improvements that have from time to time been made for the better hygienic construction, etc., of our dwelling-houses. In addition, lectures are given upon cookery, and practical demonstrations arranged, with cookery competitions; the food, when cooked, serving as entertainment to the inmates of the boys' refuge.

CORRESPONDENCE.

MOUNTAIN-AIR IN PHTHISIS.

SIR,—I find in the JOURNAL for September 18th a letter from Dr. Alfred Wise, which purports to contain an answer to some remarks upon mountain altitudes in phthisis, published upon July 17th. In those remarks, I fully admitted that the mean humidity was as low at Davos as at Cannes. If it be lower, as Dr. Wise says, then it will be a disadvantage to patients newly arrived from our damp climate. At Cannes itself, newcomers often suffer from irritation caused by the extreme dryness, and do better at Mentone or San Remo.

The "number of stoves sufficient to warm an Arctic temperature", mentioned by Dr. Wise, will not commend itself favourably to those who send patients abroad in the winter, to obviate the need of confinement in rooms warmed by fire-places. Confinement in a stove-heated apartment is probably the most pernicious condition to which a phthisical patient can be subjected.

I am acquainted with several cases in which disordered digestion has prevented invalids from supporting low temperatures, both at Davos and elsewhere. At Davos, an attempt had usually been made to obviate the difficulty by administering large quantities of stimulants. The ultimate result of this treatment may be imagined. Dr. Crothers, who has spent two winters at Davos, has recently given some much needed information. It is the first which we have received from a medical man, whose experience has been sufficient to enable him to speak with confidence, and it is neither depreciatory nor unduly enthusiastic. Dr. Arthur Hill Hassall, who tried the climate for his own benefit, has a very unfavourable opinion of it, as has also Dr. Sparks of Mentone; whilst Dr. J. H. Bennet has proved that the Swiss physicians confine their patients to levels of two or three thousand feet, on account of the increased risk of hæmorrhage at higher altitudes.

It is undeniable that well-selected cases will do better at higher altitudes than at low ones, if proper precautions be taken, but risks are proportionately increased, and the greatest care ought to be taken, not to send unsuitable cases, as once installed at Davos, there is often no retreat if ill results follow. Roads are often almost impassible, or, if passible, the journey to a milder climate is attended with the gravest risks.

My former letter was written to draw attention to the fact that no English medical man with sufficient personal knowledge of the place had yet reported upon it. Dr. Crothers has already in a measure supplied that want, and the profession will look forward with interest to further information on the subject from Dr. Wise at some future date.—Your obedient servant,

J. A. GOODCHILD.

Heathfield House, Ealing, Sept. 21st, 1880.

THE SEASON FOR ALGIERS.

SIR,—As the season is now approaching when many of my fellow practitioners are sending their patients to winter in the south, I venture to trespass upon your valuable space to utter a word of warning to them to be chary of sending invalids out to Algiers before the end of October, as the heat is often so excessive there up to quite the end of that month, that every year I see great harm done by too early an arrival in that health resort.—Yours faithfully,

W. THOMSON, M.D.

Spa, Belgium, September 28.

HISTORY OF OVARIOTOMY.

SIR,—As Dr. Clay persists in the statement that I visited him in 1857, after my positive denial, and my assertion that I never saw him before 1863, I must ask you to publish the following note which my old friend Dr. Noble has just sent to me.—I am, sir, yours, etc.

T. SPENCER WELLS.

Upper Grosvenor Street, September 27th, 1880.

"258, Oxford Road, Manchester, September 26th, 1880.

"MY DEAR WELLS,—I think I can settle the dispute regarding the date of your visit to Manchester, to witness Dr. Clay's operation. Having kept a journal uninterruptedly since boyhood, except when prevented by sickness, I have referred to the same under date March 19th, 1863, and find an entry of which I extract the following portion.

"'After dinner went into Clay's, seeing Spencer Wells, who was over for the operation.'

"If you like you may make any use you deem expedient of this fact; and I shall be happy to let Dr. Clay, or any one deputed by him, inspect the entry in question.

"I may add that at the date in question, Dr. Clay was my next-door neighbour, and I went in in consequence of a message from him that, if I would step in, I should have the pleasure of seeing an old friend—meaning yourself.—Yours very faithfully, "DANIEL NOBLE.

"Spencer Wells, Esq."

SIR,—I have referred to the chapter in Dr. Peaslee's work to which Dr. Clay refers us, and I cannot see that he at all shakes the position I have advanced, that before Mr. Wells's early operations influenced professional opinion, say before 1860, ovariotomy was not received by our profession, either in this or in any other country, as a legitimate surgical operation—and on turning to the first page of Dr. Peaslee's book I find this dedication:—To the memory of Ephraim M'Dowell, M.D., the father of ovariotomy, and to Thomas Spencer Wells, Esq., the greatest of ovariotomists, this volume is respectfully dedicated.—I am, sir, yours, etc., AUCTOR.

THE BIRMINGHAM AND MIDLAND EYE HOSPITAL.

SIR,—I have to thank Mr. Lawson Tait for reminding me that about eighteen years ago I had the honour of holding two professional offices under the local authorities; if I had almost forgotten it, it was not from want of appreciation of the advantages I received. In this discussion, they are most valuable to me, for they enable me to understand the corporation policy thoroughly.

It appears from Mr. Tait's letter, that I have unintentionally misstated the statistical results of his hospital; if so, I much regret it. I had reason to believe that my authority was very good, but Mr. Tait's is a better; and I sincerely congratulate him. As to the other parts of his letter, I beg leave to be allowed to adhere to my opinions; I believe that I am quite right; and, as a trustee to the Birmingham Eye Hospital, I shall continue to the best of my ability to uphold its interests.

I am, sir, yours obediently,

Birmingham, September 28th, 1880. J. VOSE SOLOMON.

THE FINANCIAL RESULTS OF THE PROVIDENT SYSTEM.

SIR,—Although the question raised by Dr. Fairlie Clarke's letter has been already ably treated by my colleague, Mr. Bunn, I have such a deep sense of the importance of the issue both to my own class and to the medical profession, that I crave permission to add a few words. It will be a good day for both when the working class and the medical profession really understand each other.

The statistics asked for by Dr. Clarke are not to be had. While it is possible, and even easy, to say what would be received from five hundred dispensary members at a given rate of subscription, it is next to impossible to ascertain what an equal number of non-members of equal social position paid for medical aid during a given period. But, even if these data could be procured, they would be worthless, for an obvious reason. The dispensary system seeks to separate the cost of drugs, etc. (an ever-varying amount) from the professional remuneration, while the doctors, who attend the lower-middle and working classes, invariably make a consolidated charge for medicine and attendance combined, so that, even if we assume for argument's sake that the total amount paid by the two groups could be ascertained, comparison would still be impossible.

The evil of non-payment for their services endured by the profession at the hands of a large portion of the wage-earning class can only be satisfactorily met by an extended and respectably conducted system of medical assurance. So far as the medical profession is concerned, provident dispensaries do more than merely divert payments into a fresh channel. They really largely create a new source of revenue. I mean that they cause the respectable and qualified practitioner to obtain large sums which, but for the dispensary, would be expended in some of the following ways. 1st. With cheap and unqualified practitioners. 2nd. With a large class of chemists who break the law by treating the simpler ailments. 3rd. In the purchase of patent medicines, often worthless or positively deleterious. It must also be remembered, that a large class, who would willingly join a dispensary, would not, if deprived of that opportunity, pay doctors' bills, but would avail themselves of the debasing medical charity, so justly deprecated by the profession.

Medical men are too much disposed to look at the matter with one eye shut. They fancy they see a prospective cheapening of their services, but refuse to see what is patent to others, a multiplex competition which makes successful medical insurance impossible, otherwise than at low rates of payment. The effect of this in the provinces has been to drive provident men into a species of war with the profession, and to provoke them to accomplish a good object in spite of, instead of in accordance with, medical men. The result has been dispensaries with a single doctor, exclusively engaged taking (and largely taking) away the practice of those who opposed their establishment, and for whom they might have been an organising agency. Thus in several large provincial towns, institutions of the provident dispensary class may be found, providing skilled attendance, medicine, and all necessary aid, at a less charge than a combination of doctors demanded for professional advice alone, while the members of the combination have now the cold comfort of seeing the substance lost in an attempt to grasp the shadow.

C. J. RADLEY, Member of the A.O.F., and of the Council of the Metropolitan Provident Medical Association.

London, September 28th.

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

SIR,—In the JOURNAL of September 25th, Mr. Holt states that he has not replied to my criticisms on his operation, as he considers I am "perfectly incompetent to form any opinion as to the value of the operation and its results", as my experience was limited to a few cases. When I state that I was for five years attached to the Westminster Hospital as Demonstrator of, and afterwards Lecturer on, Anatomy, and that I witnessed the operations performed by Mr. Holt and his colleagues, I am afraid your readers will not accept his explanation. They certainly convinced me, in the most unequivocal way, that the operation was not "free from every danger", as stated by Mr. Holt in his book. On looking over a list I have of deaths after the operation, I find I have credited Westminster Hospital with five deaths, one only of which was, I believe, published. When Mr. Wood stated that he had seen two fatal cases at King's College Hospital, he forgot to mention that Mr. Henry Smith had had a death, and Sir W. Fergusson one also, I believe; at all events, that great surgeon abandoned the operation on account of its fatal results. Mr. Christopher Heath had proved that, even in his able hands, the rate of mortality following Mr. Holt's operation was more than double that of internal urethrotomy as practised by his colleagues.

As regards the permanent results of the operation, I can state, from a personal examination of patients in hospital and private practice, years after they had been operated on by Sir H. Thompson, Mr. Holt, Mr. B. Hill, Mr. Heath, and the late Mr. J. D. Hill, that the tough, irregular, often non-dilatable, cicatrices following Mr. Holt's operation, contrasted very unfavourably with the soft, supple, dilatable, splices inserted by internal urethrotomy in the hands of Sir H. Thompson.

London, September 28th. W. F. TEEVAN.

OBITUARY.

HENRY FRANCIS BURDETT, M.R.C.S., OF BIRMINGHAM.

WE regret to record the death of Mr. Henry Francis Burdett, which occurred at his country residence, Knowle, Warwickshire, after an illness of several months, on August 22nd. He was born, in 1815, at Gilmorton, Leicestershire, of which parish his father, the late Rev. D. J. Burdett, M.A., was rector. Educated at Uppingham School, and choosing medicine for his profession, he was, after the fashion of the time, apprenticed to the late Mr. Morgan of Lichfield. Having completed his curriculum at University College, London, he became a licentiate of the Apothecaries' Society in 1836, and in the following year he was admitted a member of the Royal College of Surgeons. Shortly after obtaining his diplomas, he commenced practice in Birmingham. In his earlier days, he devoted himself with zeal to his profession, working with untiring energy in club and general practice; and his labour secured for his later years a handsome competence. His quiet and retiring disposition kept him from taking a prominent part in public or professional work. Those who knew him well will remember that, "without abuse, he bore the grand old name of gentleman".

JOHN STIRLING, M.D., DEPUTY INSPECTOR-GENERAL.

WE much regret to record the death of Deputy Inspector-General John Stirling. He was born in London in 1816. His father was a surgeon in the Royal Navy, but he retired early, and practised many years in Halifax, Nova Scotia. Dr. John Stirling, when a student, was dis[illegible] for [illegible] He was educated at the Royal Infirmary, Edinburgh; and afterwards held for some

time the post of house-surgeon. He was then appointed Resident Medical Officer to the Lying-in Hospital, where he studied midwifery and diseases of women under the late Sir James Simpson. In 1840, he entered the Royal Navy as assistant-surgeon, and went out with the Niger expedition; and in consequence of his experience in this quarter of the globe, he was again sent out in 1845 to the Coast of Africa on exploring service. He afterwards served on the Mediterranean station, and was present at the blockade of the Piræus. In 1850, he was sent to the South-East Coast of America; and in 1852, he was surgeon to H.M.S. *Fury*. The cholera was then raging at Balkh, and the disease attacked a large fleet of transports. In the emergency, Dr. Stirling volunteered his services, and by his devotion and courage he won the admiration of both officers and men. During the siege of Sebastopol, he served on board the *Queen*. He was subsequently Staff-Surgeon to the Naval Hospital at the Cape of Good Hope; and his last appointment was to the Plymouth Hospital. In 1870, he was raised to the rank of Deputy Inspector-General of Hospitals and Fleets. Dr. Stirling was an able surgeon, and his kind and generous nature gained the esteem of all who knew him. He died at Southsea on August 30th, 1880.

MILITARY AND NAVAL MEDICAL SERVICES.

NAVAL MEDICAL SERVICE.—The following appointments have recently been made. Deputy Inspector-General John Cotton, M.D., to Plymouth Hospital. Fleet-Surgeons: A. Turnbull, M.D., to the *Bacchante*; G. Maclear, to the *Duke of Wellington*, for Haslar Hospital; Staff-Surgeons: Thomas S. Burnett, to the *Valiant*; Robert Turner, to the *Duke of Wellington*, for the *Victory*; Thomas L. Horner, and Robert Grant, to the *Duke of Wellington*, in lieu of surgeons; W. H. Stewart, to the *Cleopatra*. Surgeons: Jephson J. Connell, to the *Cleopatra*; M. F. Ryan, to the *Valiant*; George M. Cuffe, to Haslar Hospital; W. Pearson, to the Royal Marine Artillery.

FLEET SURGEON HENRY FEGAN, C.B. (1874), has been promoted to the rank of deputy inspector-general of hospitals and fleets, with seniority of the 11th September, 1880. Dr. Fegan served at the Royal Naval Hospital, Hong Kong, 1857-60 (China Medal). Specially recommended for promotion for valuable services in the *Rodney* in 1868; in medical charge of expedition in occupation of Yang Chow (mentioned in despatches); senior medical officer in charge of Naval Brigade during Ashantee war (mentioned in several despatches, C.B., promoted, Ashantee medal, Coomassie clasp); senior medical officer in Congo Expedition of 1875 and Niger Expedition of 1876 (mentioned in despatches.

THE *Broad Arrow* states that the third and last part of the Shepherd Memorial has now been completed, being the memorial brass erected in the chapel of the Royal Victoria Hospital, Netley. The inscription runs:—"In memory of Peter Shepherd, M.B., University of Aberdeen, Surgeon-Major, Her Majesty's Army, born at Lochiel, Cushnie, Aberdeenshire, 25th August, 1841, who sacrificed his own life at the battle of Isandhlwana, Zululand, 22nd January, 1879, in the endeavour to save the life of a wounded comrade. Erected by his brother officers and friends." This with the memorial marble tablet erected in the parish church at Lochiel, Cushnie, and the annual gold medal for surgery, presented to the University of Aberdeen, completes the memorial, the carrying out of which reflects great credit on the working committee: Major F. Duncan, R.A., Dr. Robert Farquharson, M.P., T. Keith Angus, Esq., Captain L. M. Carmichael, 5th Lancers, and Deputy Surgeon-General W. Snell.

THE SANITARY COMMISSIONERSHIP OF INDIA.

SIR,—The occasion chosen for abolishing the appointment of Sanitary Commissioner with the Government of India seems very inappropriate. This act might convey the impression that such a radical improvement had been effected in the health of the European troops in whose interest the appointment was first instituted, that the services of a special officer are no longer required to watch over it. Such an impression would be entirely wrong. No such improvement has been effected. In 1864, when the Sanitary Commission was first established, the death-rate of the European troops in Bengal was 71·1 per 1000. In 1878, the last year for which the information is available, it was 21·63 per 1000. The results for 1879 are, it is to be feared, very much more unsatisfactory. Such are the general results for the whole Bengal Presidency; but if we turn to the details for particular stations, we shall be shocked at the terrible amount of sickness and mortality that still prevail. Thus, in 1877, in the quiet station of Jullundur, the death-rate was 51; Sangor, 59; Morar, 73; and at Fyzabad, no less than 79 per 1000. It would be quite a mistake, then, to suppose that there is no longer a wide field open for sanitary improvement. But perhaps the reasons for abolishing the Sanitary Commissionership were, that the Government considered that the appointment was useless. It may have been said—What is the use of keeping up a costly appointment which has shown, after an experience of sixteen years, that it is incapable of effecting any substantial reduction in the death-rate of the troops? But this conclusion would be altogether erroneous. Dr. Cunningham's reports have done this signal service, that they have shown clearly that very nearly half of the total deaths of the troops, are due to three of the most easily preventable of all diseases, namely, cholera, typhoid fever, and dysentery. Of the total of 1212 deaths in the European army in India in 1870, cholera caused 296; typhoid 268; and dysentery, 96; or altogether 592 out of 1212. Thus by abolishing the causes of these three diseases, the death-rate of the troops would be reduced nearly one-half. Dr. Cunningham has not had time, apparently, to make an exhaustive inquiry into the causation of disease at different stations. His reports are limited to mere expositions of numerical results, without reference to the causes of results. But the time has now come for taking up systematically the investigation of the causes of sickness in each station, on the plan which has been pursued for many years with remarkable success in England, by the Medical Inspectors of the local Government Board. One single example will show how important it is that such an investigation should be made. In olden days Jullundur was one of the healthiest stations in India; and for the last year it has been one of the most unhealthy, and this change in its condition has coincided with the erection of barracks, on which a vast outlay was incurred. These barracks were first occupied in 1872, and between that year and 1878 the occupants of them have suffered from three severe epidemics, viz., in 1872, cholera and typhoid; 1875, typhoid; 1878, dysentery and typhoid. It is very singular, too, that while the occupants of the new barracks have been unhealthy, the artillery, who continue to occupy the old style of barracks, remain in the enjoyment of the good health of old times. The death rate per 1000 of the two bodies is shown in juxtaposition as follows.

	1872.	1875.	1878.
European Infantry, new barracks	31.3	104.75	66.28
Artillery, old barracks.....	14.29	6.25	5.99

I feel satisfied that if this remarkable case were studied with the same exhaustive thoroughness as has been brought to bear for some years on the study of epidemic outbreaks in England, a flood of light would be thrown on the causes of disease, not in this particular instance only, but in all other stations where dysentery, cholera, typhoid fever prevail. But the very moment, when problems of this kind were pressing on for solution, has been chosen for abolishing the appointment of Sanitary Commissioner altogether.

SCEPTIC.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL RELIEF AT CAMBRIDGE.

SIR,—In your report of the recent committee meeting of the Cambridge Board of Guardians to take into consideration the question of medical relief, and ascertain from the medical officers whether they were desirous of the introduction of the dispensary system, you state that, "on being thus applied to, the medical officers, with one honourable exception, Dr. Ingle, refused the offer of the committee to find all medicines, etc., for them, alleging as their reason that, after what took place during the holding of the meeting of the British Medical Association at Cambridge, it might be regarded as an admission that they had been guilty of neglect". As one of the medical officers referred to, and present at the committee meeting, I beg to say that I not only did not oppose the offer of the guardians to establish a dispensary for Cambridge, but advocated (as I have always done) the introduction of the system, believing, from practical experience elsewhere, that it would prove a boon both to myself and colleagues, as well as to our patients.

As regards the statement that the committee were requested by us to recommend an increase of our stipends, I will only say that such assertion (like many others in the report furnished to you) is utterly at variance with facts, as no such application was, either directly or indirectly, made by any of us.—I am, sir, etc.,

Cambridge, September 27th, 1880. J. BUCKENHAM, L.R.C.P.Ed.

SIR,—I feel that I may trust to your recognition of the "Audi alteram partem" principle to correct three statements in the article in your issue of the 25th instant. 1. Mr. Buckenham is the medical officer who should have been named as "the honourable exception". The words that you immediately quote, "that, after what took place during the holding of the meeting of the British Medical Association in Cambridge, it might be regarded as an admission that they have been guilty of neglect", were my own. 2. The committee have not offered to establish a dispensary. They met to consider if it were practicable, and the result of that meeting was to postpone further consideration of the matter for the present. I do not think a different course would have been taken now, even if the medical officers had been favourable. 3. We did not request that the committee should recommend an increase of our stipends. So far as I know, neither directly or indirectly, has any application of the kind been made. I do not say that there are no reasons to justify a reconsideration and increase of the salaries, but simply that we have not made a "request for an augmentation of our stipends" in any form whatever. There are other mistakes in your paper, which respect for your space prevents me alluding to.—Yours obediently,

ROBERT N. INGLE.

SALARIES OF HEALTH-OFFICERS.

THE Ashford (East Kent) Local Board have been for some time in difficulty with regard to the appointment of a medical officer of health for their district, and their parsimony has had the effect of depriving them of the services of such an official for a whole year. It appears that, on the resignation of the former officer, a gentleman was appointed who was a Poor-law medical officer, and thus under the control of the Local Government Board. That body refused to sanction the appointment of this gentleman at the paltry salary proposed (£20); and the local board thereupon secured the services of a new arrival in the district, Mr. Phelps, at the same salary. Mr. Phelps was not made acquainted at the time with the views of the Local Government Board as to the inadequacy of the salary; but, on learning this, he at once and very properly wrote to decline the office. This greatly roused the ire of the local board, and some of the members made very strong and entirely uncalled for observations on Mr. Phelps's refusal. After much discus-

sion, the board, heedless of the warning of the clerk that the Act of Parliament made it compulsory upon them to appoint a medical officer, resolved unanimously that the appointment should remain in abeyance; a proposal that they should join the East Kent combination, in which Ashford is locally situate, being evidently regarded with strong disfavour. It remains to be seen whether the Local Government Board will allow the present deadlock to continue any longer.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

CARNARVONSHIRE.—The report of Mr. Rees upon this county combination of sanitary districts shows it to be progressing with sanitary improvements with as much speed as can, perhaps, be expected. Certain of the schemes which have been projected having come to nothing, and the removal of refuse seems generally to be too lax; but, on the whole, the sanitary authorities seem to be alive to their duties. The general death-rate of the district was 20.3 per 1,000, or 1.4 less than the rate for 1878. In the urban and rural portions of the district, the rates were respectively 1.8 and 1.3 below the general rate for 1878. The infant mortality, though it is much higher than it should be, improves year by year. The deaths from zymotic diseases show a marked rate of decrease. In 1877, these deaths amounted to 389; in 1878, they dropped to 321; and in 1879, to 211. Dr. Rees's single meagre table does not permit of the number of deaths from each zymotic to be readily given; but it may be stated that there was, during the year, but one epidemic of an unusually serious character, that of scarlet fever at Bangor and its vicinity, which lasted with intermissions over the greater part of the year. Epidemics of a less serious character made their appearance in certain other places, two of diphtheria having been specially investigated by Dr. Airy of the Local Government Board. Considering the isolated position of the villages where the epidemics occurred, and the consequent readiness with which the movements of those attacked could be traced, it is somewhat disappointing to learn that nothing could be made out as to the causation of either epidemic, except that each was preceded by some cases of apparently mild sore-throat. Dr. Rees strongly urges the importance of early information being given of each case of infectious disease as it occurs, of the compulsory closing of schools during epidemics, and of the provision of hospitals. The rising watering-place of Llandudno has already taken to itself power to require notice of all cases of infectious disease to be given to the health department; but Dr. Rees does not state how the local Act works, nor what number of cases were reported during the part of 1879 during which the Act was in operation. It would be interesting and valuable to have these particulars in future annual reports.

STURMINSTER RURAL DISTRICT.—Mr. Comyns Leach, whilst confessing to an uninteresting report from a sanitary point of view, nevertheless contrives to give a good deal of useful information in his yearly statement to the authority. During the year, the births registered were 176, as compared with 187 in 1878 and 209 in 1877. The death-rate on the estimated population was at the satisfactorily low figure of 15.7 per 1,000—the lowest in the district since the passing of the Public Health Act. Of the 176 deaths, 36 were registered as dying under five years of age, and 75 at the age of sixty years and upwards; leaving 65 only as the number of deaths between these ages. The infantile mortality was very low, and the group of zymotic diseases was only represented by two deaths from diarrhœa and one from whooping-cough. Consumption caused more than a quarter of the deaths registered between the ages of five and sixty—a mortality of which Mr. Leach appreciates the full significance. Pointing out that "damp dwellings, unhealthy surroundings, and overcrowding, are, without doubt, amongst the most formidable factors in the origin of consumption", he says that the improved drainage and ventilation of dwellings, and an increased cottage accommodation, are some of the most pressing wants of the district.

WEST KENT.—The last report of Dr. Baylis sustains the high character of his previous reports, and is at once full, interesting, and concise. During 1879, there were 2,549 deaths in the districts combined, or 50 less than the actual number of 1878, and 79 less than the average of the previous five years. The prolonged lowness of temperature which ushered in and closed the year, caused the deaths at the two extremes of age to exceed the average. In spite, however, of the increased infantile mortality, and the low birth-rate of the year, the proportion of deaths under one year only reached 116 per 1,000 of the births. The zymotic deaths were less in number than in any year since the combination was formed. Their total number in 1879 was 265, or 145 under the corrected average of the previous five years. Owing to the proximity and intimate connection of the district with the metropolis, it is always more or less exposed to the infections of the latter. Thus we find that nearly all the cases of small-pox in the district were last year, as in former years, imported from London. It is significant that, with one exception, an invariable success has attended Dr. Baylis's efforts to limit the spread of the disease beyond the actual cases attacked or infected at the time of its discovery. Measles caused 24 deaths, and scarlatina 17 deaths; both below the average. Diphtheria caused 21 deaths, 7 being in one family at Trotterscliffe (see Vol. II, 1879, p. 827). The number of deaths from fevers (21) was the lowest of any during the preceding five years. Diarrhœa caused 46 deaths, or little more than half its usual average. The only zymotic disease that exceeded the average was whooping-cough, which caused 74 deaths, and for which Dr. Baylis considers compulsory notification of infectious disease to be peculiarly necessary. There was a slight increase in the deaths from the constitutional group of diseases, and an increase of 45 in local diseases. Developmental diseases also show an increased mortality. We are glad to chronicle the establishment of an infectious hospital at Tunbridge, and the continued success of the economical and well managed institution at Sevenoaks.

CAMBRIDGE.—The Sanitary Authority of Cambridge would appear to be slowly moving forward through the persistent advice of Dr. Anningson. The mortality statistics for 1879 show, indeed, more satisfactory results than those of 1878; but Dr. Anningson rightly deprecates too much reliance being placed upon this fact. The total number of deaths in the district last year was 611, or 51 fewer than in 1878, and equal to a rate of 18.0 per 1,000. Notwithstanding an apparent increase in the population, the total number of births registered has materially declined during 1877-9—a fact for which the medical officer has at present no satisfactory solution. Zymotic diseases were considerably less fatal, the decrease being due chiefly to the almost total absence of summer diarrhœa. Enteric fever caused six deaths, as against twelve in 1878; and it is curious to observe that one death was registered from "typhus fever" (?). Scarlatina was a little more fatal than usual, and the mortality from whooping-cough was the same as in the preceding year. Diseases of the respiratory organs (exclusive of phthisis) caused 118 deaths, a continued increase upon the two or three previous years. A disinfecting stove has been purchased, and other sanitary improvements adopted; but, until the Artisans' and Labourers' Dwellings Act is set in motion at Cambridge, the condition of the lower class houses will remain a grave source of danger.

COCKERMOUTH RURAL.—The greater part of this report is taken up with a lengthy exposition of Dr. Ward's theory, that poisoning of the house-atmosphere by excremental emanations is a fruitful cause of the fatality of diseases which are not usually regarded as being in such intimate relation with filth as Dr. Ward contends. Thus, in addition to cases of typhoid fever, scarlet fever, measles, whooping-cough, and purpura, he adduces cases of tubercular disease, consumption, hydrocephalus, inflammation of the brain, and diseases of the respiratory organs, which he considers to have been in intimate relation with this filth-influence. He says: "In a large percentage of fatal lung-affections, filth-influence, as from adjacent stable, byre, pigstye, or privy, or from some sewer, or from the keeping of house-pets, such as a number of cage-birds, has assisted in the production of a culmination of evil from which the system has succumbed." The same remarks he would apply to many cases of fatal inflammation of the lungs or of bronchitis in adults, and to many of the fatal wasting diseases of childhood. The evil influence of filth in any form is well known and amply recognised; but it may be doubted whether it has so many ramifications as Dr. Ward would ascribe to it. For the rest, there is not much to chronicle in the report. Epidemics of whooping-cough and measles tended very materially to swell the zymotic death-rate. During the year, the number of births and deaths registered was 982 and 475, equal to rates of 36.9 and 17.8 per 1,000. The percentage of illegitimate to total births shows a fractional decline for the whole district; but, in the Cockermouth subdistrict, there is a considerable increase The number of uncertified deaths is still high (10.1 per cent. of the whole). Dr. Ward's very careful and laboriously compiled tables deserve a word of praise.

A SUMMONS was on Saturday applied for, at the Marlborough St. Police-Court, against a Miss Houghton, practising as a "healing clairvoyante" and spirit medium, for obtaining 2s. 6d. for pills, which she pretended had been spiritualistically prescribed for a person suffering from neuralgia, which turned out to be formed of sugar only. The summons was granted. So much is there in a name. The pills were apparently homœopathic globules; and, had this incautious person invoked the name of Hahnemann only, and spoken mysteriously of potentising by dilution, and dynamising by trituration, she might have risen to much honour and profit.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 23rd, 1880.

Charles Henry Fowler, East Kirkby, Lincolnshire.
Pherszesha, M. Hakim, Bombay.
Nanabhoy, C. Mody, Bombay.
George C. Steele Perkins, Exeter.
Robert Smith Wallace, Arnold, Notts.

The following gentleman also on the same day passed his Primary Professional Examination.

Edward Seaton Cockell, Guy's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

BALLATER PAROCHIAL BOARD—Medical Practitioner. Salary, £35 per annum. Applications, with testimonials, to the Inspector of the Poor, on or before October 4th.

BETHLEM HOSPITAL.—Two Resident Medical Students. Applications, with testimonials, before October 9th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum, with furnished apartments, etc. Applications, with testimonials, to the Secretary on or before October 13th.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Surgeon. Applications, etc., to the Honorary Secretary not later than October 5th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, before October 10th.

*GREAT NORTHERN HOSPITAL—Physician for Out-Patients. Applications, with testimonials, on or before October 30th.

*HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST—Resident Clinical Assistant. Applications, with testimonials, on or before October 9th.

KINSALE UNION.—Medical Officer for Courcey's Dispensary District. Salary, £100 per annum, exclusive of sanitary, registration, and vaccination fees. Election on 11th instant.

*NORTH-WEST LONDON HOSPITAL—Surgeon. Applications, with testimonials, to the Secretary not later than October 12th.

*PENZANCE UNION—Medical Officer and Public Vaccinator for No. 4 District. Salary, as Medical Officer, £35 per annum, with vaccination fees. Applications, with testimonials, etc., on or before October 5th.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY—Resident Medical Officer. Salary, £130 per annum, with furnished apartments, etc. Applications, with testimonials, to the Secretary on or before October 15th.

*ROYAL FREE HOSPITAL—Senior Resident Medical Officer. Salary, £104, with board and residence. Applications, with testimonials, on or before October 20th.

*ROYAL SOUTH HANTS INFIRMARY, Southampton.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before October 23rd.

WESTERN GENERAL DISPENSARY—Honorary Physician. Applications, with testimonials, to the Secretary, on or before October 11th.

*WESTMINSTER HOSPITAL—House-Surgeon. Applications to the Secretary not later than October 5th.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary before October 4th.

*WHITECHAPEL UNION—Assistant Medical Officer of the Infirmary. Salary, £150 per annum, with furnished apartments, coals, gas, and washing. Applications, with testimonials, not later than October 11th.

WORCESTER GENERAL INFIRMARY—Third Physician. Applications, with testimonials, to the Secretary not later than October 13th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CALLCOTT, J. T., M.B., appointed Deputy Medical Superintendent to the Durham County Asylum.

HARDY, J. G., L.R.C.P., appointed Junior Assistant Medical Officer to the Durham County Asylum.

*NAPIER, A. D. Leith, M.D., C.M., appointed Certifying Factory Surgeon for Dunbar and district, *vice* J. S. Cowan, M.D., deceased.

RUTHERFORD, R. L., L.K.Q.C.P., appointed Senior Assistant Medical Officer to the Durham County Asylum.

POOR-LAW MEDICAL APPOINTMENTS.

*CLARKE, Arthur, M.R.C.S., appointed Medical Officer to the No. 4 District of the Wells Union, Somersetshire; also Medical Officer of Health to the Street Sanitary Authority, *vice* E. W. Paul, M.K.Q.C.P., resigned.

PRICE, R. G., appointed Medical Officer, Public Vaccinator, and Medical Officer of Health to the Ystradyfodwg Union, *vice* Watkin Rhys, M.R.C.S.Eng., deceased.

ROWNTREE, W. G., M.R.C.S.Eng., appointed Medical Officer to the Barnsbury District of the Islington Union, *vice* A. D. Harston, M.&F.R.C.S.Eng., resigned.

TICEHURST, Charles S., M.R.C.P.Ed., appointed Medical Officer and Public Vaccinator, No. 2 District, Petersfield Union, and Surgeon to Petersfield Union Infirmary, *vice* T. Moore, F.R.C.S.Eng., resigned.

TODD, M. Stanley, L.R.C.S.I., appointed Medical Officer and Public Vaccinator to No. 3 District of the Abingdon Union.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

TICEHURST, Charles S., M.R.C.P.Ed., appointed Medical Officer of Health Petersfield Rural District, for three years, *vice* T. Moore, F.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

NAPIER.—At 3, Royal Terrace, Crosshill, Glasgow, on 28th September, the wife of Dr. A. Napier-a son.

THE West Norfolk and Lynn Hospital has received a legacy of £100 from the late Daniel Gurney, Esq., of North Runeton, Lynn.

BEQUESTS, ETC., TO MEDICAL CHARITIES.—The British Home for Incurables has become entitled to £500 under the will of Mrs. Rebecca Sharpley of Stockwell. Mr. John Crouch has given £200 towards the Seaside Branch of the Metropolitan Convalescent Hospital at Bexhill.

QUEBEC EDUCATIONAL INSTITUTION.—The autumn term of the Quebec Institute for Evening Classes will commence at 18, Baker Street, Portman Square, on Monday next, October 4th. Students will be prepared for the matriculation University of London January examination by graduates of the University, and for the first and second B.Sc. and preliminary scientific examinations.

THE *Friend of India* (1880), quoting from official returns, states that the recent mortality in Bengal and some other prisons reached the astounding rate of 25 per cent. *per annum*. In the Andaman Islands convict establishment, the death-rate was nearly 7 per cent. These rates are admitted to be exceptional. But in the previous year they were, even in the Andaman, about 5 per cent. In the British convict and other prisons, the annual death-rate is little more than 1 per cent. on the total. As to floggings, in the Amraoti gaol (Hyderabad district), with an average strength of 411 males, there were 333 floggings.

PUBLIC HEALTH.—During last week, 3,993 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 24 deaths annually in every 1,000 persons living. The annual death-rate was 21 in Edinburgh, 18 in Glasgow, and 38 in Dublin. The annual rates of mortality in the twenty English towns were as follow: London, 21; Plymouth, 22; Oldham, 22; Birmingham, 22; Brighton, 22; Portsmouth, 23; Bristol, 24; Wolverhampton, 25; Sheffield, 26; Manchester, 26; Bradford, 26; Leeds, 27; Nottingham, 27; Newcastle-upon-Tyne, 28; Salford, 31; Leicester, 32; Liverpool, 33; Sunderland, 35; Hull, 36; and the highest rate, 38, in Norwich. The annual death-rate from the seven principal zymotic diseases averaged 6.3 per 1,000 in the twenty towns, and ranged from 3.5 and 3.7 in Plymouth and London, to 12.6 and 17.0 in Salford and Norwich. Scarlet fever showed the largest proportional fatality in Norwich, Sunderland, and Bristol. The deaths referred to fever (principally enteric) showed a further increase upon recent weekly numbers, and showed the highest death-rate in Salford, Leeds, Portsmouth, and Norwich. In London, 1,441 deaths were registered, which exceeded the average by 104, and gave an annual death-rate of 20.5. The 1,441 deaths included 5 from small-pox, 10 from measles, 48 from scarlet fever, 13 from diphtheria, 24 from whooping-cough, 16 from different forms of fever, and 142 from diarrhœa—being altogether 258 zymotic deaths, which were one above the average, and were equal to an annual rate of 3.7 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 124 and 153 in the two preceding weeks, further rose last week to 174, but were 4 below the corrected weekly average; 107 were attributed to bronchitis, and 41 to pneumonia. Different forms of violence caused 38 deaths; 30 were the result of negligence or accident, including 12 from fractures and contusions, 2 from burns and scalds, 4 from drowning, one from eating poisonous wild berries, and 6 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 56.4°, and 0.2° above the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 9.4 miles per hour, which was 1.6 below the average. Rain fell on two days of the week, to the aggregate amount of 0.19 of an inch. The duration of registered bright sunshine in the week was equal to 23 per cent. of its possible duration. The recorded amount of ozone was considerably below the average during the week.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M. Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M. Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M. London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY .... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 2; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Specimens: Dr. Poole (Sidcup) will show a girl with Double Congenital Dislocation of the Hips. Paper: Professor Stephenson (Aberdeen), "On the Rotatory Action of the Forceps"; and other communications.

FRIDAY.—Clinical Society of London, 8.30 P.M. Surgeon-Major Curran, "Case of Mutilation of the Face by a Bear"; Dr. Gowers, "A Family affected with [illegible] Ataxy"; Mr. Spencer Watson, "A Case of Eyeball Tension treated by [illegible]"; Dr. Stephen Mackenzie, "A Case of Elephantiasis of the Leg treated by Elastic Bandaging"; Dr. Lees and Mr. Bedlamy, "A Case of Traumatic Epilepsy treated by Trephining".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C.; those concerning business matters, to the Office of the Journal, 161, Strand, W.C.; and those to be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS of communications of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS who have not yet been answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SCOTCH MEASURES.

SIR,—In your comments upon the drunken scene which preceded the fatal occurrence near the village of Glenlaice on the 2nd of April last, which I have seen quoted in several provincial newspapers, you have been unwittingly betrayed into an exaggeration which gives to it a more revolting character than the actual circumstances, in themselves sufficiently sad, would warrant. In Scotland, as in England, publicans are now required to use only the imperial measures; and it was of these—not the obsolete Scotch measures—that the witnesses in the murder trial spoke. Instead, therefore, of having between them, as you calculate, at least three quart bottles of whiskey, the quantity actually drunk by the four farm-labourers was variously stated at one-and-a-half and two imperial pints. The confusion would very easily arise from a statement incidentally made by one of the witnesses, that half-a-pint was "rather more than a bottle"; but he either could not have understood the question addressed to him, or the learned judge and he must have been thinking of different sized bottles. That he could not refer to the quart bottle, and that the various witnesses spoke of imperial pints, is clear from the price mentioned. The supper of each member of the company cost only a shilling; the price of two gills of whiskey such as they would purchase.—Yours, etc., W. DICKIE.

Kirkowens Street, Dumfries, September 27th, 1880.

THE DEGREE OF M.D. (ST. ANDREW'S).

SIR,—In connection with your "Educational number" and the kindred subject of medical degrees, I would be obliged if you would insert the following observations in the Journal of this day instant, or as early thereafter as may be convenient.

It is of the greatest consequence that every young man entering the medical profession should be properly instructed as to the course he ought to take in order to attain the end he has in view. That end, generally, is the possession of at least a legal qualification to enable him to live by his profession. If, however, by any mischance, a young man should begin his student life in such a way as is not likely to lead to his procuring a respectable medical degree, he is almost certain, if he live long enough, to discover his mistake, and to regret, probably for life, that he had not followed a different course. Many practitioners, who have not a medical degree, although very anxious to possess that advantage and honour, find it difficult, if not impossible, to secure their object in that respect. And it is highly probable that, for many years to come, many young practitioners will be commencing and pursuing their professional career without a degree, and who will by-and-by become fired with a laudable ambition to obtain one. For such, the University of St. Andrew's affords opportunity, so far, of gratifying, their wish. But why should the authorities of this ancient seat of learning be limited so as to be able to grant medical degrees in any one year to only ten practitioners? A little consideration will show that this is a very anomalous state of things, and calls loudly for rectification. It is easy to see that there are limits placed beforehand on the number who can possibly comply with the conditions required for obtaining the degree. There is, first of all, the fact that a candidate must be at least forty years of age. Then, it sometimes happens, after an applicant has been put on the list of candidates, that one or more years may elapse ere an opportunity of examination is afforded. Again, the records of our profession abundantly and too surely and sadly prove that many practitioners never reach the stipulated age. It is highly probable that many practitioners, who have attained the age of forty years, may not have time, money, inclination, convenience, or ability, to prepare for and obtain a degree. Of late years, many get the degree of M.D. in due course, after having got M.B.; and this arrangement may continue for a long time to come. It appears to me that, when these things are taken into account, all candidates who fulfil the necessary preliminary conditions should be admitted to examination, and should obtain the degree or be rejected, according as they succeed or fail in satisfying the examiners. Last spring, according to the *Glasgow Herald* of April 30th, 1880, thirteen candidates passed the examinations. These would all have graduated but for the absurd limitation to ten in any one year. The extra three who then acquitted themselves to the satisfaction of the examiners, will not graduate till 1881; and so it is manifest that only seven more can obtain the degree next year.

It is very natural for the authorities of St. Andrew's to pass not fewer than ten every year. In order to make sure of this, more than that number are generally selected, and invited to appear for examination. If only ten were so selected and invited, one or more of them might, from some unavoidable cause, not be able to appear, and so a serious loss to the funds of the University would be the result. If more than ten are examined, as happened this year, much inconvenience to one or more of the candidates is the inevitable consequence.

Much more might be said on this subject; but surely enough has been advanced to show the need there is of abolishing this limitation, with its tantalising and pre[illegible] entanglements. This could be all the more safely done, seeing that the General Council of Medical Education and Registration have decided to resume their visitation of examinations.—Yours truly, POLACRA.

September 27th, 1880.

SIR, I shall be obliged if any of your readers will kindly answer the following queries. 1. How long prior to the examination is it necessary for candidates over forty years of age to apply for admission to the M.D. degree of St. Andrew's? 2. What works it would be advisable particularly to read in the interim? 3. Having been for some time abroad and so away from any centre of study, the name and address of a few private teacher in London from whom I might derive the benefit of a three or six months' course of private study prior to my going in for the examination? Answers to the above queries, and any further hints respecting the character of the examinations, will be thankfully received by your obedient servant,

F.R.C.S.Eng.(Exam.)

CONTINENTAL PRACTICE.

SIR, Having lately obtained my double diplomas, I am anxious to visit the Continent prior to settling down either in England or one of the Colonies. Could you, or any of your readers, tell me where I can obtain particulars of the courses of study and examinations required for the medical degree at any of the Continental universities; and also how I can find out what would be required of me in order to settle in practice in a "strange land"? I know of no work on the subject, and should feel much obliged to anyone for the information.—Yours truly,

Duke Leigh, Oldham. DOCTOR QUAM.

The required details will be found in the Educational number of the Year-Book, which is chiefly occupied with details of the Continental and Colonial schools and universities.

THE USE OF MILK-WHITE GAS GLOBES.

SIR,—It has been suggested to me that the continued use of the milk-white or opal globes now commonly used for gas lights, will eventually cause colour-blindness. Can any of your numerous readers, who have made the diseases of the eye their special study, give any information on the subject? I am, sir, yours obediently,

Dudley, September 18th, 1880. DANIEL BRADLEY, L.R.C.P.Edin.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

MOUNTAIN ASH.

SIR,—Your correspondent, seeking information respecting "Mountain ash", will find a concise account of the plant itself, which is familiarly known as the "rowan-tree", its constituents, and its medical action and uses, in *The National Dispensatory; containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognised in the Pharmacopœias of the United States and Great Britain*, by Alfred Stille, M.D., LL.D., and John M. Maisch, Ph.D., 1879, p. 1,208. (J. and A. Churchill.) It is alleged that "the unripe fruit and the bark of the mountain ash and its European congeners are extremely astringent, and are used in infusions, decoctions, and poultices, to constringe relaxed parts, as the throat, anus, and vagina, and internally to check diarrhœa, etc."

In addition to tannin and a bitter principle, amygdalin, which is present in bitter almonds to the amount of from one to three per cent., and to a less amount in other plants belonging to the same and to closely allied natural orders, has also been obtained from the bark and buds of the mountain ash.—I am, etc.,

12, Park Place, Upper Baker Street. WILLIAM SEDGWICK.

SIR,—A correspondent, "L.R.C.P.Ed.", asks for information in your columns respecting the "mountain ash", which is a common tree in this hilly neighbourhood, and about which I can tell him something, though I lay no claim to being one of the "more learned", to whom he specially appeals.

Parkinson, in his *Theater of Plants*, says the fraxinus (ash) "is distinguished into a taller and a lower sort, or, as with us, into the tame and the wilde sort"; the latter of these is the ὀρεομελία = Fraxinus montana of Theophrastus, which Mathiolus and others called Sorbus Sylvestris, or Sorbus aucuparia, "because that boyes and fowlers use the berries as baites to catch blackebirds, thrushes, etc. (aucupari, to go a-fowling)". "We", he adds, "in English call it, in some places, wilde ash; in others, and that more generally, the quickentree." "But there is nothing extant that is certaine concerning the wild ash in any ancient or moderne writer that I can finde, neither can I give you anything by magistrall experience." Parkinson further tells us that the quickentree groweth seldom to any great height; at the end of its branches come forth white flowers in a reasonable great tuft, or umbell, smelling pretty, and sweete; after which follow small round berries, greene at the first, and darke red when they are through ripe, of an unpleasant taste, ready to provoke casting if one eate many of them", "the wood being of a browner colour than the ash."

In the *Botanical and Medical Dictionary* (Green), we are informed that the fraxinus excelsior (common ash-tree) is not to be confounded, as some have done, with the mountain ash, which is totally different from it; the epithet being applied because of the loftiness of the trunk ("excelsior"), that of "mountain" because of the loftiness of the situation the tree delights in.

The quickentree or sorbus (mountain ash) was formerly considered an object of great veneration, and often, at this day, a stump of it is found in some old burying-place, or near the circle of a Druid temple, whose rites it formerly invested with its sacred shade. This is the "roan" tree, about which, in North Britain, superstitious persons still believe that any small part of it carried about them will prove a sovereign charm against all the effects of enchantment and witchcraft. Gerarde calls it the wild ash; Evelyn the quickbeam, wild sorb, or witchen. Withering and Lightfoot say that the berries, dried and reduced to powder, make wholesome bread, and that an ardent spirit of a fine flavour may be distilled from them in small quantities. The poor people in Wales infuse the berries in water, and drink the liquid, which is acid and like perry. Blackbirds and thrushes are so fond of the fruit that they devour it before it is properly ripe.

Coles, in his *Paradise of Plants* (1650), says: "The leaves of the wild ash boiled in wine are good against the paines in the sides, the stoppings of the liver, and asswageth the bellies of those which have the tympany or dropsy." About the seed, "which is singular good against the biting of the viper, adder, or any other venemous beast", he quotes the quaint hexameter: *Fraxineum semen cum Bacchi vere bibendum est.*

Hoping that these particulars may be of some interest or use to your querist of last week, I am, sir, faithfully yours, W. T. FERNIE, M.D.

Great Malvern, September 27th, 1880.

SIR,—A correspondent asks for information about mountain ash. I presume he refers to Fraxinus excelsior, nat. ord. Oleaceæ (olive order), the bark of which was at one time believed to have febrifuge properties similar to cinchona. The leaves, dried, pulverised, and infused, were given in half-ounce doses as a purgative; and in smaller doses were supposed to be of value in rheumatism and rheumatic gout. For the latter purpose, a drachm of the leaves were gathered in June, dried, pulverised, and infused in a pint of boiling water, and allowed to stand till cold. After straining, the dose was a teacupful twice a day. I am not aware that it is ever used now. Fraxinus ornus and Fraxinus rotundifolia, belonging to the same natural order, supply manna, which is the well known laxative. The mountain ash, nat. order Rosaceæ, suborder Pomcæ, is not a medicinal plant.—Yours, etc.,

6, Seymour Street, W. PERCY BOULTON, M.D.

SIR,—In answer to your correspondent "L.R.C.P.Edin., L.S.A.London", relative to mountain ash, I beg to inform him that the sorbus acuparia (mountain ash) is a small European tree of the family rosacea, distinguished by its pennate leaves somewhat resembling the ash, and by its beautiful clusters of scarlet fruit, about as large as peas, which cause it to be cultivated in gardens and ornamental grounds. The fruit contains a peculiar kind of sugar, called "sorbin", susceptible of the vinous fermentation, and an alcoholic drink has been prepared from them. They have been used in scurvy, and in an infusion as a remedy in hæmorrhoids and strangury.—Yours, etc., S. SPRATLY, M.D.

Rock Ferry, Birkenhead.

SIR,—It does not require a very learned reader to answer the simple question of your correspondent signing himself "L.R.C.P.Ed., L.S.A.Lond." He and his friends certainly are not deeply read, otherwise they might have turned to Christison on *Poisons*—[illegible] edition [illegible] 1845, and at page [illegible] they will find a description of "mountain ash". Again, on pages [illegible] and 137 of Withering's *British Plants*, edited by William Macgillivray, A.M., M.D., they will also find a description of "mountain ash". A little searching of books would have prevented the exposure of so much ignorance. Trusting you will excuse my taking up your valuable space, I remain, yours obediently, F. T. BARKWAY, M.R.C.S.Eng., L.S.A.

Grove House, Lavenham, Suffolk, September 27th, 1880.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

THE notice of the curriculum of this School of Medicine in the Educational number of the BRITISH MEDICAL JOURNAL represents the teaching of Midwifery and Diseases of Women as consisting only of a three months' summer course. In reality, it is a winter course of a hundred lectures, the council of the Liverpool School of Medicine being of opinion that a subject of such great practical importance to the student needs to be taught as fully and carefully as Medicine or Surgery.

HOUSE-SURGEONCIES AT METROPOLITAN HOSPITALS.

SIR,—Might I ask attention to the following? I made inquiries recently at St. Bartholomew's Hospital as to the chances of a student becoming house-surgeon. I found that four house-surgeons are appointed every year for a twelvemonth. At least a hundred students enter annually, and if a fourth of this number are anxious to obtain the post, ten years must elapse before the last four, under ordinary circumstances, can obtain their wish. At most hospitals, I believe, six months is the usual term of the house-surgeon's office; and, considering the arduous duties of such a post in London, this seems long enough, without holidays, to test the endurance of most men. I have heard that the medical staff are unanimous in recommending six months; but the treasurer, who is not a medical man, objects, and this settles the question for the present. The majority of the industrious students have no possibility of obtaining the life-long advantages which such an office confers. There have been so many improvements in this great hospital recently, and so much is being done even now for the education and comfort of the students, that I am certain such a simple matter could be arranged so that the students and the public would be equally benefited.—I am, sir, yours, etc., C.

A certificate giving the cause of death as "collary fantem," was recently sent to the Philadelphia Board of Health. Investigation proved the author of the certificate to have been a graduate of the famous Dr. Buchanan's college.

QUININE PRODUCTION IN INDIA.

THE *Pall Mall Gazette* says that the experiments begun ten or twelve years ago for naturalizing in certain parts of India the best varieties of the Cinchona or Peruvian bark tree have been attended with the most remarkable success, and with beneficial effects still more remarkable. In the treatment of the fevers and other forms of disease endemic in India the employment of quinine has always been a chief means of cure and of prevention. But the increasing demand had raised the cost of the imported drug to a point which rendered its use impossible to millions and tens of millions of the poorer classes of India. Hence it occurred to a few of the more enterprising spirits in the Indian Government that vigorous efforts should be made to acclimatise the cinchona tree itself in certain districts of India and in Ceylon. The experiments have been entirely successful and there are now in various stages of growth, probably millions of cinchona plants, already yielding the Peruvian bark so plentifully and so perfectly, that the price of quinine has fallen in Ceylon, and other parts, to about two rupees (3s. 6d.) the ounce, and to 50 cents the ounce for preparations of a diluted strength; and there is the strongest possibility, amounting to certainty, that in six or seven years the Indian production of quinine will be so large, and the price so low that it will become a considerable article of export; bearing in mind that every fall in price means extending use in India in the cure and prevention of fever and disease, and therefore the cure and prevention of want and suffering among the poorest class of the native population.

CHLOROFORM VERSUS ETHER.

SIR,—In this day's JOURNAL, you allude to "the serious responsibility that rests on those who continue to employ chloroform in preference to ether" or nitrous oxide. As the BRITISH MEDICAL JOURNAL is much read by the general public, and extracts from it quoted in the daily newspapers, the probable result of such articles will be that a coroner's jury will bring in a verdict of manslaughter against some surgeon who in the future may be unfortunate in a case in which chloroform has been given. Judging (if I may) from the large number of cases in both hospital and private practice in which chloroform is daily administered, I should say that the general opinion of the profession is not so entirely in favour of ether as you imagine. What proof is there that chloroform is more fatal than ether? Certainly there are more deaths from the former than the latter, but then it is equally certain that chloroform is given in an immense majority of cases. What is wanted are genuine statistics, extending over some years, and including a large number (some thousands) of cases of the administration of each, with the proportionate percentage of deaths.

Nitrous oxide, everyone will allow, is the proper anæsthetic for the extraction of teeth, but it should not be given a second time without an interval of some hours; and the short time the patient is under its influence is sometimes an objection to its use.

I believe that chloroform has advantages in some cases, and ether in others; and that each has its class of cases in which it ought to be given in preference to the other. Chloroform is pleasanter to the patient, and does not annoy the operator by its smell; it also produces complete muscular relaxation—often a very important point (as in reduction of dislocations, hernia, etc.). Ether is unpleasant to inhale, and patients, as a rule, struggle more and take longer to get under its influence. There is never the relaxation of muscular tissue (as under chloroform), and very frequently complete rigidity of the muscles. The smell is, to the operator (especially if there be much struggling), very annoying. On the other hand, it has a decidedly stimulating effect, and its use is indicated in all cases where there is cardiac debility. Sickness I have found to follow both nearly equally. I maintain therefore, that, both being useful, it must in every case be left to the surgeon to choose which he thinks the fittest; and that, having done so, he should not afterwards be told he should only have used ether. If ether, and ether only, should be used, I hope you will kindly favour the profession with the statistics on which you found your opinion, as I am sure that every surgeon is only actuated by the desire to do the best he can for the patients that come under his treatment. I am, sir yours truly, JOHN WOODMAN, F.R.C.S.(by Exam.),

Exeter, August 28th, 1880. Consulting Surgeon Exeter Dispensary.

BINAURAL STETHOSCOPES.

SIR,—I should feel greatly obliged if some of my professional brethren would advise me as to the last kind of binaural stethoscope, as those generally in the market are only fit for the consulting-room, being too bulky for the pocket, besides being very expensive.—Yours truly, PHYSICIAN.

CREMATION.

SIR,—Would you kindly tell me how I can procure a copy of the *Transactions of the Cremation Society*, and also give me the name of any good work on the subject.—Believe me, faithfully yours, EDWARD A. WRIGHT, M.D.

New North Road, Huddersfield, September 26th, 1880.

* The *Transactions of the Cremation Society* are published by Messrs. Smith, Elder, and Co., 15, Waterloo Place, S.W.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

VACCINATION TREPHINES.

SIR,—In reply to "Medicus", I beg to say that Coxeter's instrument is not similar to the "vaccinator" trephine of Dr. Warlomont. It may be procured from Mr. Coxeter, the surgical instrument maker. The price is, I think, about 10s. The special advantage of this "vaccinator" over others of the same kind is its weight, which saves the necessity of much pressure on the arm in making the rotatory movement.—Your obedient servant, G. P.

HYSTERICAL ANÆSTHESIA.

SIR,—In the discussion at the Cambridge meeting, Section A, upon this question, the members who met to offer and discuss each other's views seem to have resigned themselves to a condition of hopelessness as to any good result, each one looking to the other for light, but the answer returned all round being "Can't". Nor was any attempt made to compare anæsthesia, and its opposite hyperæsthesia, in the "hysterical" with similar degrees of sensibility in ordinary states of health and disease, for the purpose of setting up some standard for comparison or reference in the varying degrees of nervous sensitiveness. I suppose this varying sensitiveness could be pretty accurately determined by a simply arranged æsthesiometer; and I suspect we should find the amount or power of sensibility to vary, not only in different individuals, but in the same individuals. Now, if we could imagine an æsthesiometer constructed with a self-recording arrangement, which could mark for a period of time the degree of one's nervous sensitiveness, or "æsthesia", I suppose we might expect to find as much variation as in the self-registering barometers, thermometers, or atmospheric electrometers—the latter, probably, the most analogous. At whatever degree the nervous sensitiveness stands, we have a margin of control. For instance, certain notes are so high in pitch that we cannot hear them; but some will hear higher notes than others; and a person on some occasions will hear higher notes than at other times. Very high notes, like those produced by the scratching of a pencil on a slate, the piercing note of the bat, produce a peculiar deafening spasm in some ears; and very low notes, like the double C of an organ, has the same effect upon others, causing the most uncomfortable sensations while the notes last. Is this analogous to, or could it be classed under, hysterical anæsthesia? I think numerous daily samples of it can be found in persons not otherwise candidates for Salpêtrière, as well as samples of the opposite kind of under-sensitiveness or anæsthesia. The indifference or unconsciousness of soldiers to injuries and wounds in battles, of football-players in the excitement of a scrimmage, of persons under the influence of mesmerism or fright, are samples of anæsthesia. Will these states come under the term of hysterical anæsthesia? Are we to judge of them by the same standards, reason about them in the same way, and apply the same logic to them as to the manifestations of Salpêtrière? Or is it that a patient once classified or admitted into the Circean circle must not be judged by the same tests, reasoned about by the same logic as other phenomena; in fact, resile from the natural to the supernatural? The discussion, by ignoring manifestations of a similar kind in any other subject than a Salpêtrière patient seemed to be tending in that way. We are all aware of the over-sensitiveness in certain conditions of the body; for instance, in that notable *mauvais quart d'heure* before a dinner-party, in anxious expectation, sudden and exciting disaster, the novelty and surprise of joy, in dyspeptic irritability, the over-sensitiveness of long suffering and confinement—is this to be classed with hysterical hyperæsthesia? On the other hand, the callousness produced by debauchery; the indifference to all around, sensation included, displayed by, say, a condemned criminal; the indifference to feeling, fostered by vanity, in the wearing of tight boots and stays; the abnegation of suffering in cases of the Indian tormented by his enemies; the fanatic at the stake—Will these manifestations be classed with the hysterical anæsthesia of a Salpêtrière? or are we to apply the natural or Baconian method of reasoning to one class of cases, and the logic of the spiritualists, the mesmerists, and the supernaturalists generally?

I remember being present when a Salpêtrière woman was exhibited before a provincial medical and chirurgical society, in whom, when plates of metals were applied to the subject blindfolded, the hemianæsthesia changed sides. It was stated that she was peculiarly sensitive to iron and steel (including tinned plate). At the close of the sitting, in which extraordinary precautions were taken by the exhibitor, assisted by an eminent professor of physiology, to prevent any collusion and deception, I put the question, asking if any observations had been made, whether the same transference of sensation and the other phenomena (such as anæmia after puncture) took place when she handled the same metals at other times, as her knife, fork, and spoon (the ordinary tinned iron spoon provided her in the hospital), or when she was using her needle, scissors, thimble (it was stated at the meeting, in describing her habits, that she spent much of her leisure in sewing), these being remarkably adapted, as I thought, for conducting the experiments. I also further asked if the promoters had satisfied themselves, during the sitting, that there were no metals about her body in the shape of ribs or "bones" in her corset; hooks and eyes, eyelets, pins, hairpins, about her dress; coins in her pockets; trinkets, such as ear-rings, etc.; and whether, if present, they affected the experiments; also, if the iron bedstead on which she lay in the hospital affected the hemianæsthesia; and, lastly, if the pins and needles applied to her arm to test the anæsthesia should not have produced the phenomenon of changing. I may also remark that the gentlemen engaged in manipulating the girl were close against her for considerable periods, and yet I did not see that they had taken the precaution to remove the watches, chains, trinkets, from their fronts; rings from their fingers, or the coins, penknives, and other articles from their pockets, which I feel sure must have influenced the result, if the plates applied, as I saw them, produced the alleged results. I forget now whether I was told that the metals applied specially for the purpose, and those applied inadvertently, did not produce the same results; it was somehow altogether different. With regard to the practitioners present, I found one set ranging themselves into a class which simply ridiculed the whole proceedings, requiring no argument to convince them of the absurdity of the exhibition; the other set giving in their unhesitating belief, and refusing to listen to any argument or evidence which carried doubt. Does this imply that the latter remove the phenomena from the province of reason, and arrange them under the head of faith in the supernatural? This question suggests another: Is "faith" allowed a province in the realm of [illegible] M.D.

[illegible]

M.D. is desirous of knowing what, in the experience of members of the British Medical Association, is the most effectual means of relieving that troublesome [illegible]

ADMINISTRATION OF BICHLORIDE OF METHYLENE.

SIR,—Could you, or any of your readers, kindly give me some information as to the best method of using "bichloride of methylene" as an anæsthetic? Should it be administered like chloroform, or with a spray, or how? Any enlightenment on this point will be gratefully received by yours, etc., ANÆSTHESIA.

Torquay, September 23rd, 1880.

MR. A. CLARK (Street).—The address of Messrs. H. and T. Kirby and Co. is 14, Newman Street, Oxford Street, London, W.

POOR-LAW MEDICAL RELIEF.

SIR,—Let me inform the Committee appointed at Cambridge that there are two classes of travellers in the drug trade. One class, the superior, wait on medical men. We have to pay more for our drugs. The other travellers attend to the wants of druggists, whom they supply at lower rates.—I am, sir, yours obediently,

Pershore, September 25th, 1880. SAMUEL W. SMITH, M.D.

CONTAGION FROM FLIES.

SIR,—It is a matter of common observation that an inevitable epidemic occurs amongst our common house-flies at about this time every year. A fungoid growth first of all covers the fly, and distends its body to an abnormal size; and, the insect becoming too weak to fly, fastens itself on to a window, wall, gas-pipe, or other convenient support, and there dies. The fungus then continues to spread, and covers the adjacent window, etc., within a circle of about half an inch radius. It would be of the greatest importance if we knew exactly what this disease or this fungus consisted of, and what are its effects on human beings. Is it not possible that some of our own epidemic diseases, so common at this season, may be either originated or, at least, propagated by this means? The flies get into all sorts of liquid and solid food, such as milk, butter, etc.; and, if they bear the germs of any zymotic disease, it would most certainly be communicated to us through this contaminated medium. The danger can be avoided, or, at least, mitigated, by the use of a piece of muslin, wetted with salt water to keep it moist, and thrown over every jug of milk, every dish of butter, pie, or meat that is not otherwise efficiently protected from these scavengers. Even if there be no actual danger from this source, it is very nasty to have flies in our food; and this alone should be a sufficient reason for adopting the simple remedy I have ventured to suggest, and which I constantly use myself.—Yours obediently, MUSCA.

DR. G. S. BRADY will find the prescription to which he refers in the BRITISH MEDICAL JOURNAL for July 24th of this year, at the foot of page 157.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Arthur Clark, Street; Mr. Conolly, Wood Green; Mr. A. W. Dalby, Torquay; Dr. F. P. Atkinson, Kingston-on-Thames; Dr. Thomas, Sheffield; Dr. C. T. Williams, London; Mr. Talfourd Ely, London; Mr. Eastes, London; Dr. F. Taylor, London; Professor Bentley, London; J. L. D.; Dr. W. Thomson, Belgium; E. J.; Our Edinburgh Correspondent; Mr. H. Philpot, London; Mr. G. S. Gamgee, Birmingham; Dr. F. C. Turner, London; Sir C. Trevelyan, Bart.; Dr. J. M. Wilson, Doncaster; Dr. E. T. Tibbits, Bradford; Mr. J. V. Solomon, Birmingham; Our Dublin Correspondent: Dr. Beatson, Glasgow; Mr. J. Buckenham, Cambridge; Mr. C. S. Ticehurst, Peterfield; Mr. T. Walker, Wakefield; Mr. W. Dickie, Dumfries; Mr. Holloway, London; Dr. R. N. Ingle, Cambridge; Dr. Percy Boulton, London; Dr. Wallace, Cardiff; Mr. C. D. Davis, London; Dr. J. Wright, Madeira; Dr. R. Bruce Low, Helmsley; Dr. J. Sinclair Coghill, Ventnor; Dr. A. G. Thomas, Newport; Dr. A. H. Hassall, London; Dr. E. A. Wright, Huddersfield; Dr. John McKendrick, Glagow; Dr. S. W. Smith, Pershore; Mr. F. F. Moore, Somerset; Mr. Thomas Leeds, London; Dr. A. D. Leith Napier, Dunbar; Mr. Llewellyn Thomas, London; Dr. Fairlie Clarke, Southborough; Mr. Bellamy, London; Mr. Ernest Buckell, Chichester: A. E., Lampeter; Dr. F. Barnes, London; Dr. Alfred Wise, London; Mr. Arthur Flint, Westgate-on-Sea; Dr. George S. Brady, Sunderland; Dr. J. W. Hunt, Wolverhampton; Dr. Fernie, Great Malvern; Mr. William Sedgwick, London; Mr. J. B. Ascher, Detroit; Mr. Herbert Lilley, Parkhurst; Dr. Horatio Donkin, London; Mr. Barkway, Lavenham; Dr. J. Magee Finny, Dublin, etc.

BOOKS, ETC., RECEIVED.

Handbook on the Diagnosis of Skin-Disease. By R. Liveing, M.D. London: Longmans and Co.

Anatomical Outlines. Parts III. and IV. London: Longmans, Green, and Co. 1880.

Disease of the Ear. By W. B. Dalby, M.D. Second Edition. London: J. and A. Churchill. 1880.

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INTRODUCTORY ADDRESS
ON
THE PURSUIT OF MEDICAL STUDIES AND PRACTICE.

Delivered at the opening of the Session 1880-81 *of the Liverpool Royal Infirmary School of Medicine.*

By A. T. H. WATERS, M.D., F.R.C.P.,
Lecturer on Medicine; Physician to the Royal Infirmary; etc.

It has been my fortune to have been connected with this school for five-and-twenty years, and yet this is only the second time that it has devolved on me to deliver an introductory address. The first occasion was in 1857, twenty-three years ago. It may seem strange that, with a staff of only thirteen lecturers, whose duty it is to deliver the address in rotation, so long an interval should have elapsed; but, in truth, during these twenty-three years many changes have occurred in our staff, and there have been many newcomers, whose services have been taxed for the annual addresses. These new appointments have been caused in some instances by death, but in large measure by resignations—resignations of men some of whom are still amongst us, still honorary members of our staff.

Having, therefore, been so long attached to the school, having watched its fortunes, having seen several generations of students pass through it, and having studied to the best of my ability their wants, I may perhaps be in a position to judge of the capabilities of the institution, and of the requirements of those who resort to it; and, in the few remarks which I feel it my duty to make, I wish that the experience I have had in connection with the school, in the practice of my profession, and as a teacher of medicine, may be rendered of service to those whom it is my privilege to address. And, as there may be some here who may be unaware of the scope of this school, let me observe that the student will find in it all the requirements of his medical education. The professional subjects—those which it is the function of a medical faculty to teach—are all taught here. The lectures and the teaching of the school are recognised by the various examining boards, and a student's education can be begun and completed in it. There is, however, one disadvantage under which the Liverpool student of medicine still labours—a disadvantage which, I am happy to say, is likely to be soon removed. I refer to the fact that those who are candidates for the degrees in medicine of the London University cannot obtain in Liverpool that instruction in one department of science—viz., experimental physics—which is necessary for them. There is no course of lectures given here on that subject such as is required by the university for its graduates; and thus our students, desirous of the distinctions of the university, are obliged to resort to some other educational centre for their instruction. This want, however, in common with other wants of a similar character, is likely to be soon supplied by the establishment in Liverpool of a College for Higher Education, to be called University College; and I cannot refrain from taking this opportunity of congratulating the city on the approaching realisation of a long-desired object. The establishment of the college will place Liverpool in its proper rank with Manchester, Leeds, Birmingham, Newcastle, and other towns, as an educational centre; and will, I am sure, not only redound to the credit of those who have contributed to found it, but be of the greatest possible benefit to the community at large.

I shall not attempt to guide you as to the manner in which you should study the various subjects which will be brought before you; I leave that for your individual lecturers. You will find these subjects numerous; and, when you come to consider the details of each subject, you will, perhaps, be disposed to think that it is beyond the power of any one mind to grasp them all; and you may feel disheartened at the difficulties of your task. But be not discouraged. The feeling is one which others have experienced; the difficulties are the same which others have encountered—the same which others have overcome; and you will overcome them. You will grapple with them as they present themselves. You will look forward to the goal which is the object of your aim and of your ambition; and you will gradually see the difficulties disappear, and the goal ultimately reached. It is quite true that, in the present day, there is a great multiplicity of detail in your various studies; that the known facts of every science are large, even as compared with what was the case five-and-twenty years ago; and that the examinations are of a more searching and stringent character. But, on the other hand, there are now greater facilities for acquiring knowledge; many subjects are more accurately known, and therefore more easily taught and understood; and I believe that to the industrious student of the present day, as to the industrious student of the past, no difficulty exists which energetic and persevering work will not overcome.

The life of the medical practitioner is beset not only with difficulties, but with dangers—dangers as real as those which meet the soldier on the field of battle. You may be called upon to minister to the sufferings of men struck down by some virulently contagious disease. You may have to face a danger of this kind unaided and alone; but you must never forget the obligations of your calling. You must never allow any personal feelings—any feelings of personal safety—to interfere with the strict performance of your duty. Your profession is essentially a catholic profession, and in the true catholic spirit must you follow it. No distinction of race, or clime, or people, or condition, must be allowed to influence your work. Wherever disease exists, there is the field of your labour.

Some of you may, perhaps, devote your lives to that department of medicine which relates to the maintenance of the public health and the prevention of disease, in contradistinction to its treatment and cure. No more important subject could engage your attention; no more useful field could you find for the exercise of your talents. The great prominence which is now being given to matters relating to sanitary science, and the appointment of medical officers of health throughout the country, are amongst the most promising features of the present day, and the most marked signs of advancing civilisation. Much, indeed, remains to be accomplished. Sanitary science is still in its infancy. Few are aware, except those who have given special attention to the subject, of the amount of suffering and the great mortality which are produced by strictly preventable diseases. It cannot be doubted that, in the future, preventive medicine—the science of public hygiene—will take a prominent place; and we may, perhaps, look forward to the time when the wisdom of our legislators shall recognise the importance of placing the whole matter under the direction and supervision of a special Minister of State.

Although I cannot dwell on the various subjects of your curriculum, I wish to say a few words on some of them. Amongst the most important of these, anatomy stands out prominently. It may be safely said that no man can become a sound or successful physician or surgeon without a knowledge of this science. It lies at the root of all your studies, and you will find in this school the amplest means and opportunities for acquiring a practical knowledge of it. The science of anatomy, in the ordinary sense of the term, may be said to be perfect. It is true, that, with regard to minute investigation, much may remain to be discovered; but, in reference to ordinary anatomy, our knowledge is complete. You will find the study of it, not only essential to you in order that you may pass your examinations, not only in reference to the study of disease and accidents, but also of the highest value as a training for the mind, and of the greatest importance to you in any original inquiries in which, as physicians or surgeons, you may hereafter engage. Physiology is another subject of special interest and importance to you. Unlike anatomy, it is an imperfect science. Still, much is known of the functions of the animal economy; and every year is rendering our knowledge more complete and precise. The study of physiology possesses a fascination which few others possess. It is daily becoming more generally taught in our schools; and the knowledge of it is, therefore, becoming more diffused. It is looked upon now as almost a necessary part of the education of both sexes. I consider this introduction of the study of physiology into our schools as of the highest importance. As a training for the mind, it is of great value; but, as inculcating a knowledge of facts which have the most direct bearing on the well-being of society, it cannot be too highly esteemed. To you, as practitioners of medicine, it is essential; for, if you would wish to estimate the amount of derangement which disease produces, you must know how far that derangement is a departure from the normal state. I am sure you will find in this school, and in the laboratory connected with it, every facility and encouragement for a careful study of the subject. To the labours of the physiologist, medicine and the world in general are greatly indebted, and it should be to you a source of satisfaction and encouragement that our own countrymen are amongst those who have contributed most largely to physiological science. It is to the untiring labour, the acute observation, and the immortal genius of Harvey that we owe our knowledge of the circulation of the blood—the greatest discovery ever made in connection with medicine and surgery; perhaps, indeed, the discovery which, of all others, has had the greatest influence on the well-being of the human race. It is to the researches and investigations of Bell and Marshall Hall that we are indebted for those discoveries on the nervous

system which have contributed so much to aid us in our diagnosis and treatment of disease; whilst some of the most profound generalisations, in other departments of physiology, are associated with the name of John Hunter—who has left behind him, in the Museum of the Royal College of Surgeons, one of the grandest monuments ever raised by a great worker. One other subject I must refer to, and that is chemistry. A knowledge of this science will aid you greatly in your study of physiology. It will help you to understand many of the phenomena of organic life, and will often guide you in the treatment of disease. But, gentlemen, I must pass on; and, if I omit other special subjects of your curriculum, it is not that I consider them unimportant, but that time fails me.

Whilst, however, I must not dwell any longer on the separate subjects of your course, there is one other matter to which I wish briefly to call your attention. The great object for which you come here is to learn how to recognise and treat disease—to learn how to be of practical use in the alleviation of human suffering. The public estimate our services, and will honour and reward us, in proportion as we are able to treat successfully their ailments. They do not stop to inquire how far we are skilled anatomists or able physiologists—how far we are good chemists or botanists—but how far we can, by the application of remedial measures, cure their diseases; and, therefore, although the sciences connected with medicine are of the highest importance, a knowledge of them alone will not make a physician or surgeon. It is, gentlemen, in the wards of your hospitals, at the bedside of the patients, that you can alone learn to recognise and treat disease; and there is too great a tendency, on the part of students, to neglect the clinical part of their work, and especially in the early days of their attendance at their hospitals. Although I do not advise you to allow anything materially to interfere with the study of those subjects which you must master in order to pass your primary examinations, I think that frequent visits to the wards, from the very commencement of your hospital practice, by familiarising you with the aspect of disease and the routine of practice, are of the highest importance, and will enable you, when you take the office of clinical clerk or dresser, to make more rapid progress in your study of symptoms than would otherwise be the case. I wish, gentlemen, I could tell you that, when you have gained a fair and adequate knowledge of the collateral branches of medicine, and whenever you have seen the principles which may be acquired from a study of them, applied in numerous cases by your teachers, you will find the practice of your profession easy. It is far otherwise. It calls for the exercise of the highest skill, and most careful discrimination. The science and art which you will have practically to apply are not only different from all others, but more difficult than any; and I should like to tell you, as briefly as I can, in what consists, in my opinion, this difficulty, as well as this difference. In the comparison which is often made between medicine and other sciences and arts, the peculiarities which characterise medicine are not sufficiently regarded. Those who are unacquainted with the difficulties which beset the progress of medicine are apt, I think, to imagine that the advances made in it are not commensurate with those which are made in other sciences. Now, let us for a moment consider this point; for I am one of those who believe that, in proportion to the difficulties which surround the investigation of medicine, the discoveries in medical science and the advances in medical art have been as great as those which have marked the history of any other science or art. I should wish to be in nowise misunderstood. I do not for a moment underestimate the difficulties which attend the investigations of the physical philosopher; and I admit most willingly, for instance, that the precision which characterises the labours of the chemist, and the exactitude with which the predictions of the astronomer are fulfilled, demonstrate the high degree of perfection to which their respective sciences have been brought. But the subjects to which medicine relates immeasurably transcend those of the physical philosopher. The investigation of the phenomena of life is surrounded by difficulties such as the physicist never meets with. The physician and the physicist can, up to a certain point, travel along the same road, and derive from their investigations the same definite conclusions; but, when a point is reached which would give to the chemist and the astronomer a final result, then the physician is only approaching his greatest difficulty. The unchangeable nature of inorganic matter gives rise to one unvarying result whenever inorganic matter is acted upon by the same cause. But organic matter is ever varying, ever unstable; and in that highly complex body which is the subject of the physician's operations, there are so many circumstances beyond the mere physical, so many varieties of individual constitution, so many peculiarities, so many influences of a mental or a moral nature, that it becomes a problem—very different to that which the chemist or the astronomer is called upon to decide—when the physician has to consider the effects which the same cause will produce on different persons, or on the same person at different times. Were the science of life as perfect as that of chemistry—were we even thoroughly acquainted with the laws which regulate diseased action—there would still remain great difficulties in the treatment of disease. We should still have to study the peculiarities of each individual, and carefully select the remedies appropriate to their case. And herein lies the great difficulty of therapeutics; but herein also lies its point of greatest interest. It is this which gives its great peculiarity to medicine—the ever varying condition of those who are subjects of the physician's care; the manifold phases which the same disease presents in different persons; and, lastly, but by no means least, the different effects which the same remedy may produce in different individuals, and in the same individual, at different times. And, in judging of the progress of medicine, these are circumstances which should always be taken into consideration; but they are circumstances such as can only be properly appreciated by those who are engaged in the difficult work of practical medicine.

You must not look to the mere pecuniary recompense of your profession, nor even the receipt of honours or distinctions, as the reward of your labours and the satisfaction of your lives. You must rather look for these in the grateful thanks of those to whom you may have rendered service, and especially in the thought that you are engaged in a beneficent work, that you have been instrumental in alleviating human suffering, and have endeavoured to advance human knowledge. In this must be your highest happiness, in this your greatest reward. And if you feel that to be occupied in such a work, to devote your energies to such a pursuit, is to live a life worth living, then, gentlemen, I offer you my most sincere congratulations on making choice of a profession which I have always deemed it a happiness to practise and a privilege to teach. It deals with interests only secondary to those which come within the province of the divine, and relate to the higher destinies of man. It will lead you to the study of subjects amongst the most elevating and interesting which the human mind can contemplate—life in all its varied phases, disease in all its varied forms. It will bring you into the closest and most intimate relations with your fellow-men. It will afford you the possibility of making, by your labours and researches, some discovery which shall confer inestimable benefits on mankind; and in its mere routine daily work it is capable of giving you satisfaction as great as that which any other calling can afford. The practice of your profession will give you a varied experience of human nature and of human life; but, on the whole, you will see the better side of both the one and the other. You will see much of human weakness, much of its shortcomings, much that is wrong; but, on the other hand, you will see much that is good and noble; and at times you will witness a self-sacrifice and devotion which will win your highest admiration. You will be brought into relation with all classes of society. You will be summoned to the mansions of the rich, and you will be called to the homes of the poor. You will become the trusted friends of many; the depositaries of family secrets; the welcome visitors wherever sickness is present. You will be careful not to forfeit the confidence placed in you. Never forget the character of your calling, and never, by any act of your own, give occasion for the shafts of malice or uncharitableness to be hurled at you, or, through you, at your profession. Consider that with you rests the responsibility of keeping its fair name honoured and untarnished. In the presence of sickness, let every faculty of your mind be concentrated on the great business of your life.

You, gentlemen, are entering on the study of your profession at a time when great activity is displayed in every department of it, and when, by a rigid system of induction, men are endeavouring to arrive at a knowledge of the truth. Just as we can point to improvements during the past five-and-twenty years, so, I doubt not, will you be able to speak of like improvements five-and-twenty years hence. The introduction into practice of various instruments of precision, which has characterised the last quarter of a century, has added materially to the powers of the physician to recognise and treat disease; and we can look forward with confidence to additional development in this direction, as well as to future researches and investigations for further improvement and advance. In connection with these researches and investigations, I trust will be found the names of some of those whom I now address. During the past few years, two of the great prizes offered for competition in the profession, the Astley Cooper Prize and the College of Surgeons Triennial Prize, have been awarded to a former pupil of this school, for investigations in the nervous system; and I would express a hope that his example may be followed, and that we may see the names of other students of our school in the list of distinguished prizemen.

In considering the advance in medicine which we may confidently look for, we cannot but feel how impossible it is to say from what department of human knowledge aid may come. There is nothing which

is foreign to medicine. There is no science or art which may not be looked upon as its handmaid. The valuable assistance which has been derived from the stethoscope, the microscope, the laryngoscope, the ophthalmoscope, and the thermometer, warrants us in believing that further development of instruments of a like kind will form a characteristic of the future; whilst the facts with which we are already acquainted with reference to the germ-origin of certain diseases leads us to hope that some grand generalisations and brilliant practical results will accrue from further researches. The application of the so-called antiseptic system, or Listerism, to the treatment of wounds, will make the present epoch memorable in the history of surgery; and, if further investigations should demonstrate the existence of specific organisms in connection with certain fevers, they may lead to the adoption of a method of prevention and cure, which will prove of inestimable benefit to the human race.

Gentlemen, it will be for you to continue the researches which are now being carried on in these various directions. Those of you who practise in this great city will have ample opportunities for scientific investigation and clinical inquiry; and, therefore, on such will rest a graver responsibility. But some of the best original work ever done, has been done under circumstances apparently the most unfavourable; and, therefore, let no man imagine that, although located far from the busy centres of intellectual or practical life, he may not, whatever be his calling, and especially if it be medicine, contribute something to the stock of human knowledge—*non nobis solum nati sumus*. And I would have you feel that there is a true nobility in work; that it is work which ennobles character, which sanctifies life; and, gentlemen, I will now conclude with the expression of a fervent hope that, in the work which you have undertaken, you may find a perennial source of satisfaction, and of pleasure; that the labours of the life of each of you may be crowned with success; and that, when the close of that life shall come, you may have the satisfaction of feeling that you have honestly endeavoured to perform your duty; and that, if you have not been able to attain to the eminence of those distinguished men who have shed a lustre on our profession, you have, at all events, striven to imitate their example and to follow in their steps.

HALIFAX COMBINATION.—In the preface to his report for 1879, Dr. Britton attempts to defend himself against the criticisms of those who have suggested that his reports would be better if written less disjointedly, and if they contained more as to the district as a whole. We cannot think that Dr. Britton has been successful in this attempt; and the sentence in which he winds up his argument is so curiously antagonistic to the usually accepted principle on which reports of officers of health are framed, that we feel it necessary to quote it in full. Says Dr. Britton: "Reports, to be valuable, must be of local interest mainly, as showing the advances in sanitation to those who, from their local knowledge, can see the benefits to be derived from the improvements effected; and the more interesting, and, consequently, the more valuable, they are to the localities to which they relate, the less of interest are they to those living at a distance, and to the public generally." We do not profess to understand this singular doctrine; but, were other officers of health to be guided by the principles which seem to actuate Dr. Britton, the contributions to our general stock of knowledge with respect to the causation and spread of disease, which officers of health in all parts of the kingdom are now making through their published reports, would absolutely cease, and the usefulness of the sanitary medical service of the country would thus be, to an important degree, impaired. Dr. Britton, true to his convictions, gives but little information in his report as to the prevailing epidemics of the year, or as to their relations with each other. He reports, however, that the health of the people generally was "wonderfully good", and that in the summer there was an almost total absence of diarrhœa amongst children. Scarlatina prevailed in many of the districts, and was very fatal at Brighouse and Rastrick, principally from sequelæ, such as dropsy and abscess. Dr. Britton accounts for this partly by the damp and chilly weather, and partly by too early exposure to cold. As in former epidemics, the schools were the most fruitful source of infection. Lung diseases were unusually prevalent and very fatal, and there was a striking number of deaths from heart-disease, due, as Dr. Britton, thinks, to the hard times and consequent anxiety and worry. The percentage of uncertified deaths is extremely high in many of the districts. The subject of the water-supply has continued to receive Dr. Britton's attention, and sixty-eight analyses were made during the year. The death-rate of the entire district is not given, nor do the tabular statements in the report enable the number of deaths in the district from various causes to be readily stated.

THOUGHTS
ON
IGNORANCE AND QUACKERY.

Being an Address delivered at Westminster Hospital Medical School, at the opening of the Session of 1880-81.

By H. DONKIN, M.B.Oxon., F.R.C.P.Lond.,
Senior Assistant-Physician to the Hospital, and Physician to the East London Hospital for Children.

GENTLEMEN,—Having undertaken, by the wish of my colleagues, the honourable charge of speaking to you on this the opening day of our medical year, I shall make no defence of the time-honoured institution of introductory lectures. That I now attempt, however unworthily, to address you, must be proof enough that I deem these occasions not unfitting for reflection on some of the many relations of our loved and laborious profession—a profession whose proper practice is based on knowledge that spreads its countless roots over the infinite field of nature.

I speak to you as a medical student to medical students, in the widest sense of the term, limiting it not to the few years—even for their purpose all too few—of the pre-examination period, which abler hands than mine have often treated. Our time for learning ends not here; to be capable and honest practitioners of medicine—the ostensible aim, I apprehend, of all, though often forgotten by many—we must remain its students as long as life shall last.

And, out of the many topics which might be chosen on which to address the student-practitioner at the beginning of his real life's work, I have taken to-day as one, though commonplace, yet not quite threadbare, the subject of the duty which he who would be a worthy professor of the art of medicine owes to society, not quite forgetting to consider a little the reciprocal attitude of society to the doctor; and, in reviewing our work from this point of view of duty, we may glance as we pass at some of the lures that turn us away therefrom, and some of the pitfalls into which we may unconsciously be cast.

It is, I think, the somewhat peculiar position of the practice of medicine, wherein so often duty and self-interest seem to clash, affording scope for the exercise of the highest as well as the lowest impulses, that justifies, as at least I hope, my choice of this subject. The man whose aim is the highest possible standard of excellence and honour in the knowledge and practice of medicine, is met, perhaps, with more serious lets and hindrances thereto than he of any other profession whatever. He, more than any, has to exercise, in the complexity of his relations, that fine taste, the heritage of the ages, which enables him to distinguish between the right and the wrong, and has constantly, while regarding his own necessary self-interest, to keep in view his bounden duty to his fellow-men. The doctor alone is paid for doing what all right-minded men would freely do for their fellows—all that is in their power. Part of the work of all of us is that of lessening human suffering; it is the doctor's proper work, and he is especially equipped for the task. Not only is he obviously skilled above all others to succour the body, but now, more than at any time, he may be able to minister even to the mind, at once a work more hopeful and a duty more binding in this day, when moral and natural science have met together, and physiology and psychology have kissed each other. Should we not all strive to do our share of such work as this? Do we not see an increasing number of those who do it, not greedy of reward, but because they must; because in the action itself they find their meed of pleasure? If we are all bound to shield our fellows, as far as may in us lie, from harm or death; to stay, for instance, a bleeding which might be fatal, or save a life from drowning, is not a doctor's obligation manifold, with his special skill, to do the like? And must we not regard a doctor, possessed of as deep and scientific a knowledge as possible of his profession, and intimately acquainted as he should be with human nature, as one pre-eminently bound to apply his pre-eminent power for the good of his fellows.

But we must look at this from another point of view, and one no less true. It is not quite spontaneously that men fill the responsible position of which I have spoken, nor is the desire of being the ministers of humanity the efficient cause of the making of medical men. The chief stimulus to the acquisition of the special knowledge that seems to add such a grave charge to its possessor, is not the love of its exercise, however strongly this may actuate many, but mainly its capability of being

of exchangeable value. Doctors, like most other things, exist because there is a demand for them, and are, as a rule, as absolutely dependent on, as they are or ought to be worthy of the hire which often but scantily and tardily repays their long expenditure of time and money and infinite labour on the attainment of that knowledge which is required of them. The doctor cannot exist without reward, though the tacit assumption that he can is too often made by thoughtless, selfish, and exacting men and women.

Now it is this double aspect of the doctor's position, on the one hand his necessary and indefeasible right to be paid, and better paid than he is, for the exercise of his special skill, and on the other his obvious duty, in common with all, to do what in him lies for his fellows, that has often struck me as placing our profession in a category by itself, loading it with difficulties of a most harassing kind, but at the same time perhaps suggesting a little explanation for some of the all too numerous sins of dishonest quackery, committed even in what public opinion might deem the "high places" of the profession.

On the one aspect of this position, on the obvious necessity and even duty of the medical man to regard duly his self-interest, I will not here enlarge; perhaps it is scarcely necessary. It is rather the derelictions from his duty to the world, both in the way of sins of omission and sins of commission, that strike us as we reflect on the obligations of the medical man to society. It is before all things true for us that, though we are men of business and have to work for our bread, we are first, at least potentially, the ablest and so the most responsible benefactors of the human race.

Clearly, our first duty is to endeavour to acquire the widest and deepest knowledge that is possible of the subject-matter with which we have in our work to deal. The wide and ever wider-growing field of study which modern science is opening to us, and rendering necessary to those who would keep in the front rank of medical knowledge, has been the valuable and fascinating text of so many addresses on many occasions by some of our ablest men, that I must ask you not to conclude that the meagreness of my speech on this head is any measure of its magnitude and importance. The progress of the sciences, and notably those of physiology and its complement pathology, on which we, as doctors, have largely to rely in that struggle against disease which forms such a weighty part of our duty, has of late years been so fruitful as largely to increase the responsibilities of those who elect to make the practice of medicine their life's work. The fulfilment of the obligation which binds us all to do our best, whether in the grave matter of forming an opinion—that highest work, as Hippocrates tells us, of the physician—or that which is of equal importance, of combating disease, is rendered daily harder by the ever-increasing array of discovered facts which must be mastered and taken into account. Time is too short for me to glance, however hurriedly, at the progress which has, even quite recently, been made in our means of detecting, and to some extent of alleviating disease; but I would refer you to the Address in Medicine delivered this summer by Dr. Bradbury at Cambridge, for an interesting sketch of what late research has added to our knowledge. The use alone of such instruments as those which show us the interior of the eye and of the larynx, not to speak of many other inventions, has given us valuable help; but has multiplied considerably the labour of those who desire that their work should be thoroughly done, and their opinions honestly given. It is your duty, then, to neglect no one of the sciences on which our art is founded, but to begin forthwith to study well, and hereafter strive to contribute in your place to that vast work on the institutes of medicine, which it is the glory of our time that earnest workers everywhere are writing now.

No less pressing a duty than this of eagerly availing ourselves of the latest lights of science, is that of keeping firm hold of, and endeavouring to make our own, the vast amount of knowledge accumulated during past ages, and handed down to us from the earlier great ones of our craft. Nay, rather will it always be the heaviest and largest part of our work. And I would ask your earnest attention to this, for, especially in these recent times, there is a danger in the fascination of new discoveries that the products of the less ordered, less definite, and less communicable, though no less valuable experience of the past, may be over lightly looked at, or altogether thrown aside. Progress along her every line of march numbers some base members in her retinue, nor is it only in the sphere of politics or of art that reaction does its temporarily baneful work. Such influence is not unfelt on the practice of medicine to-day. There is a danger, and no fancied one, of straying too far from the old well-trodden paths of laborious learning and personal clinical observation of facts long known and faithfully reported by the masters of old; and many, occupied wholly with what is new, neglect to make their own, and so quite fail to utilise the noble heritage of ancestral knowledge. Though it is not long since we have hailed with delight the aids to be derived from improved methods of investigation and more exact research, yet a danger has sprung up in the very wake of discovery, and the eyes of some seem dazzled by too exclusively gazing at the newest lights. We must beware of taking a too near-sighted or oblique view of the cases which come before us, and of missing salient points while over-rating the more minute. The unremitting and earnest study of disease at the bedside, seeing and recognising for ourselves the unnumbered signs of infinite import which, though known of old, are to the beginner ever new, must take the largest share in the work of those who would practise their profession aright. Honestly to do this, with the help of past observers, instead of wholly striving to put forth some new thing, irksome though it be to some, will have its own reward, and will work for good in more ways than one. Day after day utters new books, though not always new knowledge; and the work of those who have gone is either forgotten or reproduced, not always even then improved. We should perchance be spared some of the immoderate plague of crude and superfluous medical writing, were men more given to the study even of ancient works, and of those of the great departed moderns in their original form. And not only would literature be the gainer, but sound clinical knowledge would more abundantly flourish were the original writings of such men as Cullen, and of Bright in later days, and of some, too, whom we are proud to have amongst us now, to occupy more of our student time. Practical medicine would scarcely be the loser were a colder welcome given to the appearance of compendiums and bald abstracts of others' works, and a less price offered for the committal to memory of lifeless catalogues of facts, a labour through which it seems before all things necessary that he who would be highly examined must pass.

One other point I would urge you not to forget when practising your art on the living material which is its subject. Think not you have discharged all your duty when you have minutely examined the body according to the fullest lights of past knowledge and contemporary research. The terms mental and physical, as applied to the causes of disease, are still of practical descriptive value, though the line which separates their fields is often faint and wavy. It is the ignorance or forgetfulness of the fact that many very palpable maladies can be traced no further back in the chain of causation than to a link distinctly mental,—however subtly, as we may allow, some physical change may underlie it—that leads so many of us at the present day to commit the gravest errors of opinion and practice. Leaving out of sight some diseases well known and trenchantly marked out by clear-cut symptoms, which can be referred with the greatest probability to an origin other than confessedly physical, there are many less definite but troublous ailments which defy all treatment, while their emotional cause remains undiscovered by the ignorance or indolent incredulity of the doctor. On the one hand, such maladies are derided as shams, or on the other are put down, to the infinite hurt of the patient, to some condition existing only in the mind of the physician, to cover his escape from the unpleasant necessity of confessing his ignorance. I cannot here expand this subject; but I have known cases of patients who suffered from wasting and many symptoms of failing health, sent airily away, after a short interview with a doctor, to a distant country, with the false brand of "threatened consumption" upon them, to the great damage of their life's work and prospects, when their every ailment was due to a mental trouble, which a little insight and sympathy would have induced them to reveal, and which, by such revelation, might have been largely, if not wholly, dispelled. Inquiry into the mental condition and social surroundings of the patient who consults you, will often aid you in detecting the cause, and perhaps finding the remedy, for many a bodily affection, otherwise obscure in its origin, and rebellious to treatment. Remember when you are studying humanity to study it in its entirety, and call to mind not only the points of likeness, but the points of difference, between the individuals with whom you have to deal. Anatomy and physiology may teach you chiefly that which is common to every human subject; but there are subtle differences, of no mean import to the practical physician, which can only reveal themselves to the careful observer and sympathetic student of human character. Although there are many cases of disease so definitely marked that our treatment may be mainly directed thereto, unaffected by considerations of individuality and idiosyncrasy, the personal factor being almost eliminated by the common symptoms, yet we must far oftener acknowledge the truth of what Aristotle taught of old, and say, with a deeper meaning than that mighty thinker, "It is the individual, not the disease, that the physician has to treat." I would have you learn, as far as may be, the antecedents and life-history of those whom you may have to advise or treat, and strive to put yourself in others' places.

It is but a very small and meagre picture of the work you are bound to do that I have tried to sketch in outline for you: the work is, indeed, a life's work, to be attacked not only with continuous, but hearty, effort.

Is it to be wondered at, then, that so many fall short of the standard at which they ought to aim?

Yet the falling short of some is apparently attended by so much complacency and contentment, nay, often wears an aspect so gravely suspicious of conscious crime, that a few words of exposure and warning may be forgiven me.

Many, doubtless, who enter the profession of medicine are unable to grasp its scope, or see the import of its practice; and thus, more from ignorance and intellectual defect than from confessed carelessness, they occupy a position wherein, were the scales to fall from their eyes, the sins they commit and the duties they neglect would sorely smite their conscience. But these are not the only defaulters, and there are worse even than those who sink back appalled by the difficulties of their chosen work, and are content with but half performing it. The quack is not yet gone from amongst us; nay, rather, he lives and he flourishes, Protean in form, and chameleon-like in hue. These are they who turn aside from the path of that duty which their profession, in its true and highest meaning, involves, at the lure of those rewards which fall alike to the unjust and the just, if, indeed, they come not to the first of these in the richest profusion. Trading, and only trading, in the name of science and humanity, they desecrate the one and make sport of the other for their own ignoble ends, using the screen of distorted knowledge to hide their base but too successful endeavours to build a fortune out of the ignorance and superstition of the public whom they rob.

Of those vulgar and confessed quacks who are allowed by the Government and the press to deceive the people by their patents and advertisements, I will not speak, though their gain is gathered, not only from the obviously unlettered ranks, but from those whose wealth, if not education, renders them culpable in wilfully turning away from the light, and blindly encouraging the deceivers.

But of the class of outwardly respectable charlatans, I would say a few words; of those who, under various names, or, still more subtly, under no special name at all, profess to be the possessors of a system of therapeutics. It is the treatment of disease, which naturally, out of the many branches of medical study, most attracts the interest of the public, whose ear often he most readily gains who not only claims the best results, but professes the most seemingly perfect and definite method of procedure. It is not the place here for me to enlarge on the present impossibility of any ostensibly complete system of therapeutics being even approximately scientific, and by consequence, true. The knowledge of disease must be far advanced beyond its present limits before the most sanguine among us may dream of this; and many more requirements are there, of a perhaps impossible nature, to make that dream at all coherent. This view, I think, must be held by every honest and really thoughtful man; but nowhere do I know it to be more clearly or powerfully expressed than in an Address in Medicine given eight years ago at the British Medical Association, by one of our greatest philosopher-physicians, Dr. Wilks; an address which students of all ages would do well to read. I would go even further than this, and say there is no reason in nature, nor does science grant us right to claim, that we should look for our diseases to be "cured" at all. There is a widespread and world-old belief, that every disease has its remedy, if only the doctors could find it out; and this superstition, groundless as it is, has in some form or other influenced the mind of both the doctors and the patients of every age and every clime. The wish is father to this thought, which is no child of philosophy. Rather would I hold his attitude more rational who is surprised and thankful that so many of human nature's pains and ills can be stayed or relieved by medicine and other means from the rich store of our experience, than his who grumbles at the inefficiency of our art to dissipate them all. Men seem to look upon diseases as a series of separate existences, and drugs, past, present, and to come, as a parallel series of pre-ordained remedies; and believe that a time is coming, or has almost come, when the problem will be solved of making the one series properly dovetail into the other. Is not the term "opprobrium medicinæ", which so often, with a falsely humble, but really arrogant, implication, is scattered about the pages of medical writings, a proof of this? a term applied to those diseases which as yet even the quack scarce dares to affirm are curable. Not only the public, seemingly, but the doctors too, with difficulty unlearn the gratuitous doctrine of a pre-established harmony between drugs and disease.

A scientific notion of what disease is, and of man's place in nature, might go far to disabuse the people of this common superstition, born of their own undue self-importance, and fostered by those false prophets of medicine of whom I am speaking. Disease is not, in the main, a thing which may be destroyed, or nullified by some ready-made antidote; rather is it, to a large extent at least, an accident of development; a part of the common lot, of that degeneration and decay which is the inseparable accompaniment of the biological struggle for existence. Even if we could scientifically follow all morbid processes in their course, and our pathology were a completely written chapter, we might have none the more reason to hope for remedies for even a large proportion of our maladies. We may be able to moderate many diseases, and to cure some; but we may not thence infer, on whatever other grounds we may hope for advance, that we have a right to prophesy or profess a perfect system of treating them all. Our treatment as yet must chiefly remain, as all the best treatment has ever been, empirical; and they who hold this view will ever be more ready and able to welcome additions and aids to the therapeutic art, unhampered as they are by the trammels of preconceived and exclusive theories.

But this almost innate belief in the human right to be free from diseases, and the probability of there being remedies for all, furnishes an ample and fertile field for the impostures of those who claim to be the happy possessors of a system of therapeutics. This is the opportunity chosen by the various species of charlatans who, not only under the name of homœopathy, often but half-confessed or wholly denied, but under that of orthodox medicine, even in our very midst, wax fat and kick on the gains they gather from their patient dupes. The masses believe that all their pains and aches can be cured; but they can see no further back than the symptoms from which they suffer. And do we not find, in proportion to the loudness of the preaching of the curability of disease by drugs and fascinating systems of therapeutics, that symptoms are brought into strong relief, and that pathology, or the investigation of the causes which are behind the symptoms, is almost entirely ignored? Dr. Wilks, in the address I have already mentioned, says: "All quackery has for its basis science falsely so called; and it is because of this that uneducated persons are mostly influenced by those who purify the blood or put fresh vitality into the nerves. I may say, moreover, that all quack systems, as well as the worst methods within the pale of orthodoxy, proceed upon the plan of treating symptoms. The more closely a medical man adopts this method, wittingly or not, the nearer does he approach the charlatan."

The preaching falls upon willing ears. Surely the homœopath is wise in his generation. He saves his own brain-power by looking no further than the symptoms for the enemy he pretends to attack; and flatters the intellect, and so secures the confidence of his patient, by treating him on a system which he is only too ready to plausibly profess to explain. He has his reward, for he flourishes well.

I have said that even in our own ranks we find examples of more or less serious deflections from the paths of honourable duty, caused by the tempting success which public ignorance makes so easy. Many are the forms which the lying spirit assumes; and, though some of its work may not be powerful for harm, there is much of which the product is sad and hideous. And chief among these forms is that of exaggerated and perverted specialism, which, with a pseudo-scientific aspect, first falsely teaches and then fleeces the people. In ancient Egypt, before the dawning of science's true light, we learn from the Father of History that there were exclusive specialists in every place;* nor has this plague of Egypt been ever stamped out from our midst. Now, when science shows us the marvellous complexity of the human organism, and the intimate interdependence of all its systems is more apparent as our study becomes the closer, so that we are often at a loss to discover to what system, organ, or tissue, as the *fons et origo mali*, we should refer a disease,—now more than ever must the implied teaching be untrue, that the body can be studied piecemeal, now more than ever must the resulting practice be both bad and dishonest. That specialism within due limits must in the nature of things exist, considering the vast range of medical art, I do not for one moment deny; nor would I even decry it. Where special manual skill, attainable only by habit, is required, as in many departments of surgery, there must be specialists in practice, sometimes even in spite of themselves; and humanity would be much the worse off without them; and there are branches of practice not strictly surgical which seem in a manner naturally, and for manifold reasons, to crystallise out from the general mass and become both necessary and justifiable. Of strictly medical specialities, where the attention is limited to one organ or one narrow class of diseases, I would bid both the doctor and the patient beware; the risk to both is sufficiently obvious. But there is a peculiar danger to the public from some recent developments of specialism, a danger ironically enhanced by the perverted use of instruments of research of great intrinsic worth, of which I must speak before I close. The possibility of exploring parts of the body invisible to the unaided eye and beyond the patient's own power of observation, valuable and welcome

* There were doctors (says Herodotus, Book II. 84) for each disease, and that disease only. Every place was full of doctors, some for the eyes, some for the head, some for the teeth; others for the belly, and others for secret diseases.

as is the aid thereby given to scientific medicine, has perhaps been no unmixed benefit. May not this very possibility evoke sometimes from its lurking place, though we would hope but rarely, that evil spirit of designing quackery which sinks the profession in the trade of medicine, and tempt it to turn invention to its own base ends by forcing even the "regular" practitioner, whose body it too often inhabits, to raise a false alarm of a disease which he declares himself specially able to cure? And a fancy not over-fertile might picture a perhaps fabulous or professedly curable ailment of one organ of the body, exclusively treated by such perverted art, while fatal maladies are running their silent course in that same body, unrecognised, or, still worse, unreported by the "specially" skilled observer. Truly we must all deplore that ever the ark of science should be touched by such unholy hands.

Let me now dwell for a moment on some aspects of the attitude towards the doctor of the people at large, who, from their own deep ignorance of what science means and what the art of medicine can do, foster, if they do not create, those evils among us which with pain and shame we must acknowledge in order to destroy.

It may be said with truth that society itself is greatly answerable for those spurious specimens of the doctor who too frequently disgrace our ranks. The supply of this article is to a large extent a natural response to the demand made for it by the real ignorance but fancied knowledge of the public. The mystery which has always too much surrounded, and which still surrounds, the art of medicine—a mystery which is practically kept up even by those who plausibly pretend to enlighten, but really hoodwink their patients by explaining to them their "systems" of treatment—might to a great extent be dispelled, and the doctor and patient thereby meet together still more frequently than they do as honest and reasonable beings, were information more widely spread as to what the science and art of medicine really are, on what foundations they rest, and how far their scope extends. But, even in this later day, how common it is to find in all classes those who make light of the value of the severer and fundamental studies which form the very life and soul of medical science, and are generally impatient of the methods and results of accurate investigation. Much of this opposition to science is passive, and springs from simple ignorance; but society is more than sprinkled with members of a heterogeneous alliance of sectarians of almost every sort, whose chief bond of union seems to be the possession in a marked degree of the antiscientific bias. They cannot tolerate to be brought to the scientific grindstone of fact; and, disliking the trouble of sifting any matter to the bottom, they make capital out of, and boast of a false liberty of opinion. To the patronage of such as these is to be credited the extension and success of all the superficial, professedly philosophical, but really emotional systems and opinions of the day on matters which can properly be seen by the "dry light" of science alone; and the motley crew of antivivisectional, antivaccinational, homœopathic, spiritualistic, vegetarian, and total-abstaining fanatics has done the cause of honest work no little mischief. The cultus of the "fair virgin Truth" for her own sake is not yet wholly free from persecution. But to return to our own department of science. Do we not everywhere meet those who assume that they can do the preliminary work of diagnosing their own diseases and those of their friends; and, having satisfied themselves, in total ignorance of anatomy and physiology, of the organ which is at fault in their malady, choose straightway for their doctor the man whom they believe to be, but who far more often is not, specially skilled to treat it. Is it not this blind-eyed public who really manufactures the doctor for the kidney, and the heart, and the liver, and the lung; and offers a ready bait to those who know they can hide their own ignorance of their science, or their conscious disobedience to its precepts, by loudly proclaiming a peculiar knowledge of the professedly peccant part? Not only pity, then, is to be felt for those who become the helpless victims of the unscrupulous adventurers for whose very existence they are themselves so much to blame. Once more; from a superstitious and overweening belief in cut-and-dried systems of treatment, and the assumption that there is in almost every case a royal road from disease to health, if only they can find the key to its gate, the public is perhaps chiefly responsible for the greatly vaunted host of new and often useless, if not harmful, "remedies" which, sometimes with the venal stamp of medical authority, too often fill the advertising pages of prints, professional and lay alike. How many little systems, which "have their day and cease to be", would never see the light at all, were society at large to aid the profession, which, in the main, is both ready and willing to eschew all mystery, by taking the trouble to inform itself of the kind of work it should expect from the hands of its doctors! A little more enlightenment on these matters would, I apprehend, have an influence quite in the contrary direction to what the fears of many would lead them to believe. At the present day, the tendency is for the patient to take into his own hands what is often the most important step towards the treatment of his malady, by claiming the ability, ignorant though he be, to at least roughly detect its cause. But even a slight knowledge of the principles of physiology would reveal so clearly the complexity of the human organism, and the mutual connection of its parts, that most men would smile at their former temerity in looking so lightly at the task of detecting disease, and would be more than ever ready to cast the whole burden of investigation and treatment on the shoulders of those whose special work it is. A more wide-spread teaching of the elements of biological science would tend, I believe, largely to the benefit of the community, and would both purge and strengthen the ranks of our profession. If knowledge be sound and true, a little of it can never be a dangerous thing.

The increasing attention now being paid to the cultivation of natural science in our schools and universities gives a ground of hope for the future. The time may not be very distant when a sounder knowledge may go far towards dispelling the ignorant and almost superstitious credulity which still exists, and rendering impossible much of the quackery and mystery which as yet disfigure the profession of medicine. And, having at heart the improvement and refining of that profession itself which, with all its faults, we love so wisely and so well, we ought to look with pleasure on the help held out to it now by one at least of our ancient universities, and hope for new encouragement hereafter from the other. While recognising that the people generally stand specially in need of more of that light which science alone can give, we must acknowledge too that the ranks of our scientific profession would gather social strength, and grow in usefulness and influence, were it endowed with a wider general culture. To the attainment of such an end as this, fruitful alike for the profession and the people, it is in the power of our universities effectively to contribute by rendering it possible for at least the greater part, if not the whole, of the medical curriculum to be followed out during those years when most men are desirous of beginning to prepare for their special work in life. The due establishment of the faculty of medicine in our universities would not only furnish a grateful and fruitful soil for the higher intellectual and social culture which is their proper boast, but would confer a benefit, in its turn, on university life itself, by giving thereto an additional element of widest interest; and natural science would find a firmer basis and extend its operations further, strengthened by such an ally as medicine, from whose ranks so many of its students have been recruited.

I would speak but one more word. If I have seemed to overwantonly expose some plague-spots in our midst, or speak too strongly of our sins, I can say no more in extenuation than that I have felt as strongly; and should any of you, especially those who are to-day beginning your work among us, be aided by one word of mine to realise or call to mind afresh the arduous and manifold obligations of the life that you have chosen, I shall stand in need of no excuse.

FLACCIDITY OF THE IRIS IN DEATH.

In the last issue of the JOURNAL (September 25th, 1880) appears a communication from Dr. B. B. Joll, commenting on and recommending the presence of flaccidity of the iris as a test of real death. As with Dr. Joll, this was first brought under my notice by Sir William Jenner, and I have made numerous observations on this point; but unfortunately I am compelled to report that it is unreliable. I am unable to remember all the cases in which I have found this flaccidity present during life, but the following three cases have impressed themselves on my memory.

1. The case of a lad who became severely collapsed while under chloroform with a view to operation. He recovered.

2. The case of a lad who died within two days from purpura hæmorrhagica.

3. The case of a girl, which came under my notice a few days back. She was admitted under a colleague for anomalous cerebral symptoms; she suddenly stopped breathing, but life was prolonged for six hours by means of artificial respiration, which was continued till cardiac action ceased. The flaccidity was well marked in her case four hours before the pulse ceased to beat. *Post mortem.*—No morbid appearances were discovered beyond extreme distension of the cerebral ventricles. My friend Dr. John Mortimer, house physician to our General Hospital, informs me that he has not infrequently noticed the same condition of the iris in patients when well under the influence of chloroform. Of course in none of these cases is the flaccidity so well-marked as it is in those who have been dead some twenty hours or more; but it has been sufficiently distinct to destroy its importance as a medico-legal test.

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OBSTETRICAL KNOWLEDGE IN RELATION TO THE PRESENT STANDARD OF MEDICAL EDUCATION.*

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In the few minutes at my disposal for dealing with the important subject of which I have given notice, I shall endeavour to condense the remarks I have to make, embodying my ideas in some propositions, which may, I trust, meet with the approval of this Section.

I have for many years, as a teacher, felt the disproportion between the obstetric and gynæcological knowledge expected of the medical practitioner, even one of very ordinary attainments, and the opportunity of learning afforded to the student; and, further, the very inadequate requirements laid down in the curricula of the majority of the medical corporations to be met before a candidate obtains his licence to practise. I do not hesitate to assert that, taking into consideration the wide field of study embraced in, and the future responsibility attending, the practical application of this obstetrical and gynæcological training, our present system of teaching—estimated by the conditions under which candidates are admitted for degrees and diplomas, or for special licenses to practise midwifery—is very defective. If this be so, and I hope to convince you that it is so, now is the time when obstetric teachers in the different schools should announce the fact without hesitation, before impending changes are effected, so as to secure some alteration for the better, both in the practical and theoretical training of future practitioners, in this most important branch of their profession.

I thought that in no more fitting place could this subject be considered and discussed than in the Obstetrical Section of our Association, so that, if possible, an unanimous opinion might be expressed and placed on record which may have weight with the powers that be in the future consideration of the question. I am aware that our President (Dr. Playfair) has urged in forcible language elsewhere the necessity for change, and has pointed out the ludicrous impossibilities demanded and expected of obstetric teachers. And I am glad that I am so fortunate as to have his warm sympathy in denouncing their present insurmountable difficul-ties in the instruction of their pupils.

It is now well known that the Obstetrical Society of London recently memorialised the General Medical Council to extend the obstetric course in all cases to a period of six months; the General Medical Council in this, as in many other matters, prefers a course of "masterly inactivity", and declines to interfere.

It is needless for me to refer to the rapid strides made in all obstetrical knowledge during the last twenty-five years, nor am I disposed to occupy your time in proving that the gynæcology of to-day is practically a new science. This is not necessary. Yet it is important to consider what has been the corresponding advance in education. Of the licensing bodies in the United Kingdom, I find that seven are satisfied with certificates of attendance on a summer three months' course of lectures in midwifery; eight require a winter course; and some accept two summer courses in lieu of one winter. A winter course may consist of, at the outside, from seventy to one hundred lectures; a summer course of about fifty. A student is generally granted a certificate if he has attended two-thirds of a course—so that attendance on some thirty lectures will secure him a certificate in a summer, and about forty-five to sixty-five in a winter session. Analysing but imperfectly the matter to be discussed in a systematic course of obstetrics, and even excluding in great part the physiological and embryological studies, assuming that these are taught by the Professor of Physiology, still we may thus briefly group the subjects to be dwelt on, many of which have to be practically elucidated by diagrams, drawings on black-boards, and demonstrations, which involve the loss of much time at each lecture. I take, for example's sake, the brief syllabus of my own class in Queen's College, Cork: Lessons from the comparative anatomy of the pelvis; description of the pelvis, its axes, planes, curves; deformities of the pelvis; female organs of generation; menstruation; embryo; fœtus. Signs and symptoms and diseases of pregnancy; classification of labours; mechanism of labours; varieties of labour; complications of labour; obstetric operations; diseases of the puerperal period.

But an obstetric course is supposed to include (according to the medical corporations) lectures on diseases of women. Any one, with a very slight experience of gynæcological teaching, must know how absurd is any attempt to teach this branch in a partial manner; and how every step we advance in the teaching process depends on the successful expounding, both practically by diagrams and appliances in the theatre, and indeed clinically at the bedside, of all the complicated diseases of the female organs of generation, from the vulva to the ovaries, including the causes, symptoms, and results, etc., whether mechanical or pathological, which are associated with the thorough understanding of uterine displacements. Let it be remembered, that none of these subjects with which the physician is brought face to face in every-day practice is taught in any other course during his career. Can any course on gynæcology be looked upon as complete which does not embrace such a syllabus as the following vaginal affections; the uterus, its structure, axes, relations; methods of examination; demonstrations on instruments useful for diagnosis and treatment; discharges; inflammatory states; amenorrhœa; dysmenorrhœa; menorrhagia; sterility; climacteric epoch; pessaries; uterine displacements; perimetritis; parametritis; ovarian diseases; ovariotomy; affections of Fallopian tubes; extrauterine gestation; cancer; uterine tumours; polypi? I think not. I can speak from experience. In a course (not compulsory) of some seventy lectures, I devote twenty-four to the gynæcological and forty-six to the obstetrical portions respectively. I find that, condense as I may, I cannot do that justice to my subject which I would desire. To prove this, I accept a very simple test. I take up, say, two of the most popular and justly esteemed text-books of the day—that of our present President and the admirable work of Leishman; the former is more conveniently divided into two volumes. There are over eight hundred pages in both these text-books, and I hardly think there is a superfluous line in either of them, when we consider that, in almost every department of the obstetric art, the views of various other authorities have to be largely referred to. Take, for example, those of Matthews Duncan on the mechanism of labour and the etiology of hæmorrhage, and the admirable principles of Barnes in obstetric operations.

Now, if we turn to the gynæcological part: assume that I measure my duties to my class by the matter contained in either of the text-books used by its members—that of Barnes or Thomas—though it cannot be denied that men may gain acquaintance with the subject in some of the smaller treatises, I am supposed to impart a digest of the information contained in both of these treatises in twenty-four hours. How, I ask, are these two essential branches of the profession to be taught in a single summer or short winter course of lectures? It is manifestly absurd. I hold that it is something worse when we regard the important issues at stake, and the responsibilty of a teacher, in the face of modern advances in the obstetric art. But now I approach the most melancholy side of the picture—melancholy, I say, when we go back a century and a half, and find that, in the practical educational requirements of the art, we have advanced but little on the time of the illustrious Smellie; and certainly it does seem unaccountably strange that, in the country of Smellie, Hunter, and Denman, there should be, in the year 1880, any necessity for a protest, on the part of an obstetric teacher, against the utterly inadequate practical instruction now condoned. "Beyond a doubt", says an eminent Irish obstetrician (Dr. McClintock), in his memoirs of Smellie: "The true secret of Smellie's great success as a teacher was the fact, that, from the outset of his career, as such, he combined clinical with oral instruction." The manner in which our obstetric teachers are expected to continue clinical with oral instruction is expressed in the condition imposed, by some licensing bodies, on candidates for degrees and diplomas, viz.: attendance on any six cases of labour—that attendance to be effected, not necessarily in a hospital or maternity, or under the personal superintendence of a recognised teacher, but under any medical practitioner anywhere; so that, a candidate, seeing six natural cases of labour, after a superficial cram, or having undergone the sharpening effects of a brief grind, can become qualified to practise his art on any unfortunate woman, though he has never seen a case of instrumental delivery, convulsions or hæmorrhage, twins or version; and thus, doubly qualified, he may in his turn instruct some other aspirant for medical honours. Conceive such a contingency: a master teaching an art which he has never practised—a pupil imbibing his obstetric knowledge from so enlightened a source! He thus goes to his first case, in public or private practice, to learn, perhaps, at the risk of his patient's life or his own reputation. But worse must be told. I have known men to pass their final examination who never saw a case of labour. Certificates are, or, at any rate, were, not so difficult to purchase or obtain; and a medical friend's conscience could be found sufficiently elastic to stretch to the point of six cases—or, it may be, the candidate has so far diligently attended the cases as to see the careful application of a binder, or to witness the dressing of the baby. On this practical knowledge, he is registered as a person duly qualified to practise the art of mid-

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

wifery. These facts speak for themselves. It remains to ask: What special instruction in gynæcology is required before a candidate presents himself for his licence? Of all the qualifying bodies, but one requires a certificate of clinical instruction in diseases peculiar to women, viz., the College of Physicians of London. It is a fact that students may complete their course, and have never as much as looked through a speculum. This is not exaggeration. Nor is their practical acquaintance with uterine affections sufficiently tested at their final examinations, and, indeed, there are many difficulties in the way of this; but surely it is not too much to ask that students should be compelled, at some period of their course, to attend a hospital or some wards in a general hospital, or out-patient department specially devoted to the treatment of these diseases. It is not right to turn out to the public, each year, a number of men who do not even pretend to the most superficial acquaintance with the diseases peculiar to women. But the obstetric teachers, who, as the President told us yesterday in his address, have been admonished by the General Medical Council to be more particular in future, are supposed to teach their pupils something—be that something much or little—of the diseases peculiar to infant life. Can they do so? As a matter of fact, what instruction does the student receive in many schools at the present time, either in his school or college course, or clinically at the bedside, in the management of the child under two years of age? Yet, ask any practitioner of experience, and he will tell you, that the knowledge of such diseases, an acquaintance with the temperaments and ways of sick children, and the successful management of their little ailments, as it is the most certain road to a mother's heart, so is it a most likely avenue to success in professional life.

I feel that in thus expressing my views before this Section, I have simply done my duty as an obstetric teacher, and one alive to the responsibilities of his position. It may be comparatively easy for the lecturer to include a large field of study in his course, and to cram a great deal into a single lecture; it is quite another thing for even the most intelligent student to follow him. The condensed nutriment is difficult of absorption; and, let the mental digestion of his class be ever so perfect and convolutional secretion ever so active, the intellectual pabulum is too strong, and the ultimate result is a cerebral emesis of imperfectly digested matter.

I have only to remark, in conclusion, that it cannot be said of me that I approach this subject with the jaundiced eye of an obstetric teacher. The sphere in which I work forces me equally into other fields of labour than this; and in which, I may remark, I equally deplore the want of more special and exact instruction corresponding to the advances of medical science. Therefore, sir, I do not view the blot in our present educational scheme in exaggerated and distorted proportions, the result of some special obstetrical aberration of my mental vision. On the contrary, applying the test of the correlation of obstetrical knowledge and medical educational requirements, I fear the defect is on the side of those whose near point (as the ophthalmologist would say) has considerably receded, yet who are endeavouring to see things in the same light, and the same dimensions at the present day, as they did at a distance of twenty years past. It is the duty, I hold, of obstetric teachers to adjust their lenses so as that things may be to such individuals as they are - not as they were a quarter of a century hence.

PROPOSITIONS.

1. The efficient teaching of an obstetric class cannot be effected in a course of less than one hundred lectures. In schools where the winter session does not embrace this number of lectures, either an additional summer or winter course should be required before the candidate is permitted to present himself for his final examination; there being an understanding that the lectures on gynæcology are delivered as a distinct part of the course or courses attended by the candidate.

2. Attendance at [illegible] twenty cases of labour should be required of the candidate, before he is permitted to present himself for the final examination. These cases to be attended in some recognised hospital or maternity, under the supervision of a recognised teacher.

3. The candidate should be required to produce proof, by notes of cases or otherwise, that he has attended in the wards or extern department of a general hospital, or of a hospital specially devoted to the treatment of [illegible] department of a special hospital, [illegible] of the sexes.

AT the Southwark Registration Court, the claim of Dr. Wood, assistant medical officer at Bethlehem Hospital, has been disallowed on the [illegible] by virtue of his [illegible]. The revising barrister observed that the state of the law on the matter was anomalous. The claim of Dr. Savage, the head physician at Bethlehem Hospital, was [illegible].

RARE CASE OF OTITIS EXTERNA PARASITICA.

By ROBERT TORRANCE, L.R.C.P.Ed.,
Surgeon to the Throat and Ear Hospital, Newcastle-on-Tyne.

THE following case is communicated with the view of enabling us the more clearly to understand, and more successfully treat, certain cases of otitis externa; not many years, indeed, having passed since the profession became generally aware of the fact at all, that vegetable fungi were germinated in the auditory canal, and that they caused or aggravated inflammations of this part, and of the surface of the membrana tympani. The fungus here was discovered to be a species of *aspergillus*, which, as already known, is the parasite, in one of its varieties, most commonly found in the ear, and occurred in a young man having what might be called a scrofulous otorrhœa. It was not the primary disease, but a consequence of a diffuse otitis, which had been of such a mild character for several years as scarcely to have attracted his attention, especially as he had been told that the disease would "wear away", and that medical assistance was of no avail for it. The formation of the vegetable mould in his ear, had evidently been preceded by what I believed to be an eczema; at all events, some kind of an inflammation had first occurred which had loosened the epidermis, and when seen by me he was suffering from a sensation of fulness in the ear, with tinnitus aurium, vertigo, impairment of hearing, and pain, not severe, as in acute catarrh of the middle ear, but a dull heavy sensation in the part. The objective symptoms consisted in the adherence to the walls of the canal, and to the outer surface of the membrana tympani, of blackish flakes, nearly blocking up the whole of the passage, and which were mistaken by me at first for hard wax. The syringe, however, would not remove them; but the angular forceps, used under a good illumination by means of the otoscope, detached them, leaving the tissue beneath reddened and tender; and, when the microscope was called in, it made the diagnosis certain to be that of *Aspergillus nigricans*, consisting of its three essential parts: first, the mycelium, a dense network or pseudo-membrane of delicate fibres, which formed the groundwork or roots, as it were, from which the second part or fructifying portion (fertile hyphen) arose perpendicularly; and third, the free spores, which lay thickly strewn upon and in the mycelium. A portion of the specimen alluded to was planted upon lemon-peel, placed in a close vessel, at a constant temperature of 80° Fahr., when it gave, at the end of the third day, not, I must admit, a well developed growth of any form of *aspergillus*, but most distinct bastard specimens of it. The treatment was exceedingly simple, but very tedious. The loosened epidermis and flakes of mould were carefully removed every day by means of the forceps and syringe, the ear being well illuminated while the former was used, and the canal was frequently douched with warm water by means of Clark's douche. The canal was pencilled with nitrate of silver in strong solution, after the cleansing process was over, not for the purpose of destroying the fungus, but to subdue the inflammation of the integument. Several agents were used as parasiticides, but were not found to be very efficacious, as the next day the growth was found to be reproduced. The most specific amongst them was the hypochlorate of lime, which was used in the strength of two grains to the ounce of water; but, as is too often the case, all the aural symptoms were not relieved when the vegetable fungus had ceased to appear, though certainly the most troublesome symptoms were so, by the destruction of the parasite; but the inflammation continued long after the microscope had failed to find any traces of the mould in the auditory canal. Nevertheless, twenty-nine days after he came under treatment, he left me, with hearing distance for watch, right ear, $\frac{9\frac{1}{2}}{60}$, left ear, $\frac{14}{60}$. At eighteen feet distance, he could hear and carry on a conversation in the ordinary tone, with his face away from the speaker, and some weeks after he was said to be still improved. There is hardly a doubt that many cases of vegetable fungous growths in the ear are often mistaken by us for impacted cerumen and otitis externa diffusa. Since my attention has been called to the subject, I can recall several cases of very obstinate inflammation of the auditory canal which I now believe were cases of the growth of vegetable parasites in the part, none of which recovered from the affection, undoubtedly from not having used the specific parasiticide.

A NATIONAL conference of organisations for securing the repeal of the Contagious Diseases Acts was held at Birmingham yesterday. The Right Hon. J. Stansfeld, M.P., and a large number of influential gentlemen from all parts were present. Resolutions were passed recommending that, during the present recess, the work of the association should be mainly conducted by means of meetings and memorials to members of Parliament, and that no by-election should take place without an endeavour to secure the election and return of candidates pledged to vote for the repeal.

ABSTRACTS OF INTRODUCTORY ADDRESSES DELIVERED AT THE METROPOLITAN AND PROVINCIAL SCHOOLS.

On OCTOBER 1st, 1880.

ST. GEORGE'S HOSPITAL.

THE Introductory Lecture was delivered by Dr. JOHN CAVAFY, Assistant-Physician to the Hospital.

After referring to various changes in the staff, more especially to the loss sustained by the resignation of Mr. Pollock, the lecturer proceeded to consider the education of the general practitioner, premising that what he said had no reference to the training required of candidates for university degrees. There was, in the present day, a far greater unity between the various branches of the profession than was formerly the case; all received the same training, and the general practitioner simply possessed the advantage of being concerned with the whole of his profession. He had rapidly developed from the imperfect form of the old apothecary, and there might still be seen in him occasional traces of this earlier state—*e.g.*, the selling of medicines. But his general and professional education, and, consequently, his social position and influence, had improved enormously.

The training of the old apothecary was sketched, and it was shown that, so far as practice is concerned, he was not badly off; his knowledge, if limited, was thorough, or had been learnt in the best way, by constant practice. On contrasting the modern training of the general practitioner, we are struck by three things.

First, that he has been taught a number of sciences which did not exist in more than a rudimentary state in the old days; such as modern chemistry, physiology, histology, pathology, and morbid anatomy.

Secondly, that medicine, surgery, and their various subdivisions called specialties, had attained a very great development in recent times, which makes it extremely difficult for the modern student to master more than their rudiments.

Thirdly, that the *manner* of learning had of necessity changed, owing to the multiplicity of subjects; and much that was now learnt was learnt by reading only, and not by actual practice. This was really not knowledge at all, but information. "Knowledge is familiarity with things; information may be no more than a memory for words. Knowledge, once acquired, is fixed and permanent. Information is deciduous, and is often finally got rid of in the examination-room."

It is sometimes complained that the student of to-day has too little knowledge and too much information. That he may pass examinations and "do papers", and after all be singularly incompetent, even on rudimentary practical points. He may be a graduate in medicine of an university, and yet he may introduce a pessary into the rectum; he may have gained medals and prizes, and yet be unable to prescribe, to bandage, or to make a splint.

This unsatisfactory state of things is in a fair way of cessation. It is in part due to the short time now devoted to medical study, a time too largely taken up by the collateral sciences. About half of the four years now required is thus occupied, and the subjects which a new student has at once to attend to are so numerous, that he at first becomes simply bewildered. Various suggestions for alleviation have been made. It has been said, that we might abandon some subjects entirely; that we might teach others with less elaboration; or that instruction in certain topics might be removed to a period anterior to professional study. The Medical Council have supported the last-mentioned plan, which has been adopted by the College of Physicians. By the new regulations for their licence, it will be possible for a student to pass an examination in chemistry, physics, botany, materia medica, pharmacy, and osteology immediately after registration, on producing evidence that he has "received instruction" in these subjects. The student who can do this saves a great deal of time, and his mind is freed from strain, so that he can give himself entirely to anatomy and physiology.

As to the time and place at which the requisite "instruction" might be given, physics and chemistry, perhaps botany also, might be taught at school towards the end of scholastic life. This might be done without any very great encroachment on the usual classical teaching; and even if a little of this had to be given up, the loss would be more than counterbalanced by the gain. The remaining subjects were technical, and might be studied at a medical school, or through private tuition by a practitioner who dispensed; but it is to be hoped there will be no revival of the old system of apprenticeship; it is putting the cart before the horse, and is quite inapplicable to modern requirements. Botany and materia medica, however, and pharmacy in a lesser degree, have lost much of their importance. Botany had survived from the old days in which the doctor had to collect his own medicinal plants, and it was important that he should know their botanical characters. The number of plants, too, which were thought to possess medicinal properties was much greater than now. Within recent times, tormentilla, dulcamara, crocus, rhæas, had become extinct, and many others are slowly but surely passing into disuse without any obvious loss to therapeutics. But, although we use many drugs derived from the vegetable kingdom, we need only know their doses and actions. It is not more necessary for us to be acquainted with the plants from which they are prepared, than it is for a painter to know the precise origin of his pigments. Materia medica, again, is of use rather to the wholesale druggist, from whom the practitioner now buys what he wants. It is the former who ought to know that opium (for instance) "occurs in commerce in irregular lumps, weighing from four ounces to two pounds; enveloped in the remains of poppy leaves, and generally covered with the chaffy fruits of a species of ramex", and so on. All necessary knowledge of drugs may be acquired during the instruction in practical pharmacy, which will remain needful so long as doctors continue to dispense their own medicines; but this also is slowly but surely declining.

Anatomy had been charged with burdening the memory with a number of useless details; but no alteration was desirable in its teaching. Apart from its value as a mental discipline, it forms an organic whole; and no part could be omitted without serious damage to the whole fabric. We might as well omit the letters *x* and *z* in teaching the alphabet, because they occur infrequently and are sparingly used. Microscopical anatomy, however, might be much simplified; and it would be enough for a student to know the main points in the structure of the simple tissues and the more important organs.

Physiology, owing to its close relationship, or rather identity, with pathology (as pointed out by Dr. Michael Foster), should be taught as fully as possible under the present conditions. Without it, practical medicine would become a mere empirical routine. Some recent physiological researches, moreover, were of immediate practical importance, such as all that had been recently done in the pathology of contagion, splenic fever being selected as an example. The antiseptic treatment of wounds and operations was also entirely due to physiological methods of investigation and reasoning.

Science means accurate knowledge, and therefore it is impossible to have too much of it; but, unfortunately, in the greater part of medicine, inaccurate knowledge is inevitable, owing to the incompleteness of physiology and pathology, and we must depend upon clinical observation and experience. It is as true to-day as ever, that medicine (in the widest sense) can only be learnt by the actual observation of the sick, by constantly practising the use of the various instruments which have done so much for diagnosis. For the learning of medicine, the two years left after the primary examination is over are not enough, because a lifetime is not enough. It is, however, possible to master the elements of diagnosis or therapeutics sufficiently to make future experience bear fruit. There is no better way of teaching medicine than the method of Mr. Squeers: "When a boy knows a thing out of his book, he goes and does it." There is an absolute necessity for real knowledge as against information. This was well provided for by dresserships, clerkships, work in the wards and in the deadhouse; and it would be the student's own fault if he did not learn. It was the teacher's endeavour to furnish as true a conception of disease as possible, so that subsequently the practitioner should neither be at the mercy of every *ignis fatuus* which arises, nor wrapped in impenetrable scepticism and impervious to improvement.

Finally, it was pointed out that to learn as much medicine as possible was far more important than to be trained in the practice of secondary arts (such as "the routine duties of general practice" or "the art of dealing with patients"), over which a few months' professional life would give a sufficient mastery.

KING'S COLLEGE.

The medical session was opened by a public distribution of scholarships and prizes, presided over by Dr. GEORGE JOHNSON, F.R.S., who at the conclusion, delivered an address.

He began by congratulating the scholars and prizemen on their success, and exhorted them to consider this as an incentive to further and more prolonged exertion. It might fall to the lot of some of them, by industrious and sagacious research, to throw new light upon some of the obscure phenomena of disease, and to add to our means of prevention and of cure. The unsuccessful competitors where exhorted and encour-

aged to persevere, with the hope of better success in the future. Then, addressing specially those who were commencing their medical studies, and referring to the dangers and temptations of student life in London, he said that the best safeguard against these, next to those high principles and that sense of duty which it is hoped that all have had instilled into them at home and at school, is an immediate persevering application to their prescribed work. For mastering the numerous details and the underlying principles and laws of such sciences as anatomy, physiology, and chemistry, the ablest and most gifted student would find that he had not too much time to give. On the other hand, the dullest and least brilliant need not despair of a large measure of success if only he has inherited or acquired that essential qualification for the highest success in any great or useful calling, a habit of steady persevering industry. Every experienced teacher could point to many illustrations of the fable of the hare and the tortoise—the brilliant idler being outstripped in the race of life by the comparatively dull but plodding and steadily industrious man. The greatest works of so called genius, the most brilliant and successful productions of the painter, the musician, and the poet, have not been accomplished without long-continued and laborious study and practice. If, then, diligent study and continuous application are requisite for the attainment of success in these so-called fine arts, they are not less so for the acquirement of that knowledge and practical skill which are essential for the successful practice of medicine and surgery. The skill and the manual dexterity which enable the surgeon to perform successfully a difficult operation, guiding his knife safely amidst delicate tissues and vital organs, are not acquired without years of study and practice. Nor, again, is that knowledge of the physiological relationship between various tissues and organs—their action and reaction upon each other in health and in disease, which often enables an experienced observer to base a diagnosis on a single phenomenon, such as the character of the pulse, the peculiar throbbing of an artery, a patch of degeneration within the eye, the sound of the cough or voice, or the expression of the countenance—such knowledge is not to be acquired without long and patient clinical observation and study.

"One piece of advice", said the lecturer, "I am anxious to impress upon you, is this: whatever line of practice you may hereafter—whether by natural taste, by inherited opportunities, or by other favouring circumstances—be led to adopt, whether you become consulting physicians or surgeons, or general practitioners, or whether you take up some such important special department as obstetrics, the care and treatment of the insane, or ophthalmic or aural surgery, it would be an error and an evil for you too early to devote yourselves to the exclusive study and practice of any one department of medicine or surgery. The more general is your knowledge of disease and its treatment, the better qualified will you be to undertake successfully any special department of practice. Some of the best practitioners that I have the happiness to know are what are called general practitioners, men equally at home, and equally skilful, in setting a broken bone or conducting a patient safely through the crisis of a fever. These men are the trusted family advisers in all emergencies, and, while pre-eminently the friends of the poor, often associating on equal terms, as their intelligence and culture entitle them to do, with the best families in their neighbourhood. There are few positions in the profession of greater honour and usefulness than this. On the other hand, some of the worst and least trustworthy practitioners, although perhaps largely patronised by an undiscriminating public, have been men with an undeserved reputation in some small speciality. A large proportion of the public appear to adopt and act upon opinions with regard to special departments of practice the exact opposite to those which we believe to be true. Instead of assuming, as we do, that for a complete knowledge and successful treatment of any one class of diseases a practitioner must have a good general acquaintance with the whole range of pathology, they appear to suppose that skill and eminence in one department of practice imply ignorance of every other. The late Dr. Latham related the following anecdote to Sir Thomas Watson, from whom I heard it. Dr. Latham, as many of you are aware, was a very eminent, learned, and accomplished physician of St. Bartholomew's Hospital, but he had published more on the diseases of the heart and lungs than on any other subject. A patient of his, who had recently recovered from some pulmonary affection, one day said to him: 'I feel that, as regards my lungs, I am quite well, and now I think of going to consult Dr. Watson about my general health. To which Dr. Latham replied: 'Yes, I see—in your estimation then Dr. Watson is an architect, and me, I suppose, you look upon as a bell-hanger.' It is my wish, and I am sure that it is the desire of my colleagues, that all of you who are now entering upon, or who have already made some progress with, your training here, should aim at qualifying yourselves to be the architects, and not the mere bell-hangers of the profession. In the study, as in the practice, of any profession or calling, it is well to keep steadily in view a high standard of excellence, and by continued effort to endeavour to reach it.

"'We live by admiration, hope, and love,
And even as these are well and wisely fixed,
In dignity of being we ascend.'

In our great metropolitan Cathedral you have seen, or you may see, the impressive monument to Nelson, in which Britannia is represented pointing the upward gaze of two young midshipmen to the great admiral as a model to be admired and imitated. In like manner, and with a like intent, let me direct your attention to a former professor of medicine in this College, as, happily, a living example of a truly great physician. I refer, of course, to Sir Thomas Watson, as a man not only learned in the science and skilled in the practice of his profession, but also a gentleman in the fullest sense of the term, remarkable not less for courtesy and consideration uniformly shown to his professional brethren, than for the care and skill bestowed upon his patients. His published lectures, *On the Principles and Practice of Physic*, have for the last forty years instructed by their practical wisdom and charmed by their lucid and scholarly style. And now, at an age of more than four score years, he enjoys the well-earned and cheerfully rendered respect and esteem of the entire profession, and of all classes of the public, from the Sovereign downwards. He possesses 'that which should accompany old age—honour, love, obedience, troops of friends'. That, gentlemen, is the high standard of excellence towards which I would urge you all to strive, and to which it may be that, happily for yourselves and for mankind, some of you may attain."

LONDON HOSPITAL.

THE session was inaugurated by a *conversazione*, at which Dr. ANDREW CLARK delivered an Address to the assembled guests and students.

After gracefully alluding to the presence of ladies on the occasion, and welcoming all there in the name of the board and medical staff, Dr. Clark proceeded to briefly allude to the progress of the medical school. Thirty-six years ago, he said, just when he joined the hospital, the building in which they were now assembled was opened, the school being transferred from the old building at the east end of the hospital. In 1871, it was found necessary to enlarge the school buildings, and again this year, the requirements of teaching and the comfort and convenience of the students had rendered it necessary to add considerably to the building. Dr. Clark alluded to the great advantages possessed by the students in being attached to such a large hospital, and explained, in a manner suitable to the mixed audience, that the duty of a large hospital was not only the primary one of relieving the sick within its walls, but of advancing scientific knowledge for the good of future sufferers, and of training up a body of gentlemen for the medical profession who would be diffused over the country, and have committed into their hands the lives and health of numberless persons. Hence the hospital and medical college each supplemented the other. The college made the work done in the hospital scientific, and the hospital adjoining insured that the scientific teaching in the college was brought to practical test. Dr. Andrew Clark concluded by some words especially addressed to the students, sympathising with them in their full pulses of animal spirits and love of freedom, but assuring them that, in proportion as they exercised self-denial and bent earnestly to the task to which they had committed themselves, they would gain that satisfaction and reward which no worldly success could give, and no reverse of fortune could take away.

ST. MARY'S HOSPITAL.

THE Introductory Address was delivered by Mr. WALTER PYE, Assistant-Surgeon and Lecturer in Physiology.

After welcoming, in a few words, the old friends of the school who had met together to celebrate the beginning of another medical year, and those who were as yet strangers to their school and to their work, he warned the latter against entering the profession unless they were prepared to follow it for its own sake; and urged those whose motives for joining it were interested or unworthy, to give up the task now, before it was well begun. In discussing the prospects of those who honestly loved their work, he said that, while the getting of large incomes was the fortune of very few, still none could fail, except through their own fault, to earn money enough for comfortable subsistence. The prospects and standing of the profession, however, were not to be judged by a mere money standard; in the eyes of the outside public, its importance was being every year more recognised, and the social position of its members was steadily rising; this was not due to a better appreciation by the world outside of the higher aims of medicine, but to a steady improvement in the culture and education of medical men. The lowest standards, however, of previous education, he held were

not yet high enough nor broad enough; and he urged that a scientific education, which should be really preliminary to the professional education at the hospital schools, should be made compulsory for all, and that the schools themselves should be relieved from the necessity of teaching the elements of sciences which were only allied to medicine. He pointed out that, not only would this course leave the student free to give his whole attention to his proper work as soon as he came up to the hospital, but that the systematic cultivation of scientific habits of thought was of the greatest importance to medical men, even though, in after years, the actual details of what they had learnt did not remain in their memory. Men came up to the hospital, not to learn to be chemists or botanists, but to be doctors; but the latter they could not be, in the highest sense of the term, unless they had gone through a previous scientific training.

The course of study of a medical student seemed to be peculiar in this, that it grew steadily more and more pleasant, even more and more easy to pursue, as the student advanced in it. No argument was needed to prove that both naked-eye and microscopic anatomy were to be mastered, but he held that the study of physiology was even more essential, and he insisted on the importance of the progress of this branch of their work, on the progress of medicine, and on the necessity which lay upon all who hoped to advance their art, of studying it both normally and pathologically. He pointed out that medicine at the present day was advancing, not, as it had been for the last two hundred years, simply by accumulation of clinical experience, but by striving as far as possible to reduce its practice to the conditions of that of an exact science—to establish a new empiricism—and he said that, though the ideal end of this school of practitioners would never be reached, still, every step towards it was a step in the right direction, and that the only way in which advance could be made was by the earnest study of physiology. The progress in the way of exactness in medicine which had been made during the past years was real, and gave promise of an abundant harvest in the future. He strongly urged the junior students to get their first professional examination over as soon as possible, and, till that was done, not to attempt to do clinical work in the wards. That examination or those examinations over, the most enjoyable part of their student life lay before them. This was divided into work in the wards, as dressers or clinical clerks, and work in the out-patient rooms and casualty room. In the wards of the hospital, students were to recollect that the standard of illness was very high, and that those cases which looked commonplace by contrast with still more severe ones there, would be regarded as very serious ones indeed under any other conditions. He reminded them that the more common illnesses in the wards would be the ones they would most frequently see on leaving the hospital; and he urged them to take careful and continuous histories of all the patients they had to watch. When surgical dressers, also, they were advised to study to acquire habits of manual dexterity and mechanical ingenuity in dealing with the varying difficulties of their cases. He pointed out that, in the out-patient rooms, their work, and the lessons they had to learn from their patients, differed considerably from their experience in the hospital wards; in these latter, patients were put in the best possible condition for getting well; in the out-patient rooms, few of the really ill were able to receive the treatment they most required, namely, food, and rest in bed. These rooms, however, were the great school for the getting experience of illness, and of habits of rapid diagnosis and self-dependence; but they were to bear in mind that the treatment was generally a compromise, and not that which patients ought properly to have. He advised the students to haunt the hospital, to know its aspect at all hours of the day and of the night; but he reminded them that, during their life in London, they were not to neglect to cultivate their faculties in other directions. They were to recollect that they had to be, in the highest sense, men of the world, able to appreciate the cultured thoughts and words of others; and, in order to be able thus to get the best out of their life, they should not pass by those storehouses of literature and art, that nowhere were so large or so easily entered as in London.

He warned them against the use of books as means of getting that knowledge which should be learnt at the bedside; text-books should be merely used as means for sorting or pigeon-holing knowledge previously acquired, and the really original professional works should not be studied until the student was well established in the practical knowledge of disease.

In conclusion, he reminded the students that, in the case of St. Mary's, the school and hospital had one foundation, and could only exist together; they had common interests, common hopes and fears; and, while they could look back upon an unsullied past, they must not forget that the original scheme of the hospital exceeded by far its present size, and that its usefulness, both as a great charity and as a medical school, fell, from its limited accommodation, far short of what was required by the district in which it was placed, or designed by its founders. Their hopes for its enlarged prosperity in the future were high, and could not but be soon fulfilled, if they determined in the present to sustain its good name and good fame as they had received it, till the time came for them to hand it down stainless to their successors.

ST. THOMAS'S HOSPITAL.

THE opening Address was delivered by Dr. ORD, Dean of the Medical School, and Physician to the Hospital.

The lecture was devoted to the subject of medical education, chiefly from the point of view of the parent and the student, partly from the point of view of the medical school. Beginning with the question as to whether boys who were intended for the medical profession should pursue any special course of education while at school, the lecturer answered this question most decidedly in the negative. The use of a school education was to fit men for the general purposes of life, to train them to take their place in society. To this end, boys should be brought up in large schools with a healthy public opinion, in which, by their reaction on one another, they tended to acquire moral symmetry. Their studies should include the classics as well as modern languages, history, geography, mathematics, and natural philosophy. After a few words in defence of the classics, the lecturer proceeded to indicate the position to be occupied by natural sciences in the teaching of the boy. "Of two things I am certain: that they ought to form part of the school schedule, and that they ought to be taught without reference to the special use of any one of them in the particular direction of the path which the boy is to follow in his later life. They should be taught, on the contrary, for their general usefulness, so far and in such a way that the man may be able to apply them in the many conjunctions of life in which a knowledge of them can be helpful. So, for instance, that the man may be able to read his barometer or thermometer, may be able to judge of the quality of his instruments, may be able to see that they are in proper working order; that, for another instance, he may be able to avoid grave physiological errors in the management of his own health, in the sanitary regulation of his house and household—matters requiring elementary knowledge of chemistry, physiology, and physics; and, not a little, that he may be able, during the intervals of his statutory labours, to enjoy, in an intelligent manner, the manifold varieties of natural objects. To secure such kind of knowledge in this department, it is imperative that the teaching be practical, and that the boy make many of his own experiments. Teaching by books and diagrams only is as absurd a waste of time as it would be to try and make a boy read Virgil properly by giving him a grammar and a dictionary. The phenomenon must be seen, the apparatus handled. Let the boy make his own oxygen, learn to use his pneumatic trough, see the effects of rubbing his stick of sealing-wax with his silk necktie, dissect for himself the heart or eye of a sheep—all, of course, under skilled inspection; let him then be helped to reason on the laws or causes of what he has seen. Only in this way can the interest, without which no study can be healthily pursued, be excited. Who among us does not remember the infinite weariness and distaste inspired by the diagrams of his first botanical lecture? Yet many of us may have seen boys and children charmed by a talk over a few flowers gathered in a country walk, and pulled to pieces at some resting-place; may have seen their curiosity awakened, their interest attracted, as the parts of the flower were indicated and their uses explained; and may have watched these children go on to search for more flowers and to observe for themselves, or to return with eager questionings. There is much truth in these words of Goldsmith: 'Might natural philosophy be made their pastime in school, by this means it would in college become their amusement. At first, it would be sufficient if the instruments and the effects of their combination were only shown; the causes should be deferred to a maturer age, or to those times when natural curiosity prompts us to discover the wonders of nature.'

"There is one use of the studies of observation which offers opportunities, at present, in my opinion, much neglected, of establishing a sort of co-operation between them and the study of language. There was, when I was at school, a practice—still existing, and much countenanced by the authority of tradition—of making boys write essays and verses by way of exercising them in composition. From my school-days upwards, I have judged this practice to be both imperfect and fallacious. It has been condemned by Milton in such terms as these—as a 'preposterous exaction, forcing the empty wits of children to compose themes, verses, and orations, which are the acts of ripest judgment, and the final work of a head filled, by long reading and observation, with elegant maxims and copious invention'. He might have added that they are a premium and incentive to imposture and plagiarism in the many, while they thus distinctly foster abnormal deve-

lopment in the few. If we remember, what I believe all must admit, that description must follow and complete observation, we shall see that we have in these studies a valuable means of training boys in accuracy of language and simplicity of composition. Let boys be made to describe, in the fittest and fewest words, the natural processes or objects which they have been observing. Instead, then, of regarding what are called synonymous words as words having the same meaning, and to be used as the poets use them, according to the convenience of sound or rhythm, they will learn to attach to each word its own true meaning, and will come to see that in their word-painting they have a dozen various shades or tints, where their 'Gradus' would tend to make them believe that they had but one. I would rather have a boy write such descriptions of a mineral, a plant, or a phenomenon, as would give his reader a clear idea of it, than the most elegant essay on the beautiful, or the most polished set of verses.

"His school career finished, the prospective student should not at once proceed to a hospital, but spend some months in preparatory training. There are grave moral objections to the plunge from the restraint and supervision of school-life to the almost unrestricted freedom of a hospital. And there are great advantages in giving him now preliminary instruction in some of the elements of medical practice, and in science related thereto. A revival in a modified form of the old system of apprenticeship is advocated. The course to be taken by the student will vary according as (1) he proposes to go to Oxford or Cambridge for his degree; (2) to the University of London, in which case it is most desirable that he pass the preliminary scientific examination before entering the hospital; (3) or he propose to take only the diplomas of the London or other colleges. In any case, he should spend some time in a good chemical laboratory, and some time in learning practical pharmacy and dispensing, the latter either with a good general practitioner, or in a provincial hospital or infirmary.

"In relation to proper hospital study, the extent to which it is desirable that the London medical schools should teach the sciences preliminary to medicine requires discussion. It is probable that, though this work is fairly well done, it would be better done if some common college were established in which these subjects might be taught, as at Edinburgh, to large classes, the hospital schools restricting their teaching to pure medicine and surgery, with, perhaps, anatomy and physiology. As regards study in the wards and out-patient rooms, this must not commence until anatomy and physiology are fully mastered. In the beginning of and throughout this final study, the student must bear in mind the necessity of making himself practically acquainted with and skilled in the use of all means and instruments of investigation. These increase yearly in number and perfection, the scientific toys of one generation becoming the indispensable armaments of the next. With their aid, he will test and analyse the group of many symptoms presented by each case of disease, leaving, so far as he can know or suspect, no single symptom or possible condition unregarded. And then will come the use of his higher analytical power and judgment to give each symptom its due weight and real meaning, rejecting one by one the possibilities which may be indicated by separate symptoms, but are excluded by the whole group, until he has come to his diagnosis. In treatment as well as in diagnosis, he will need a large armament of instruments and drugs. According as his diagnosis shall have been accurate and profound, so will his treatment be rationally directed in the main to the removal of the ultimate causes of each disease. This is what he will begin to learn when he enters the wards; and, if he be true to himself, he will still be learning this when an old man."

UNIVERSITY COLLEGE.

The Medical Session was opened on Monday evening by an address delivered by Professor BURDON-SANDERSON, F.R.S., Jodrell Professor of Physiology. The occasion, he said, was a special one. It was rendered so by the opening of the new science wing, in which three departments of teaching which had hitherto suffered from want of space were provided for. It contained, first, laboratories for research and study in chemistry, which, when completed, would, as regards adaptation to their purpose, equal any in the kingdom; secondly, magnificent working rooms for the students of the Slade School of Fine Art, which, under Pointer and Legros, had already attained so high a reputation; and, lastly, but in relation to medicine not least, working rooms and museum for the teaching of the two great divisions of the science of biology, morphology and physiology. The lecture-room of last year was named the "Institutes of Medicine", but, although that name was retained, physiology is that without which medical science cannot exist. In providing, therefore, for the study of physiology a [illegible] not material

for cramming, but for genuine, quiet work, the council had done the best for the advancement of medical learning, and in the end for the advancement of medical practice. The subject on which he would address them was suggested by the occasion; it was, the motives and methods of medical study. He remarked that there are two equally noble dispositions of mind to which the profession of medicine is attractive, namely, the desire to lead a useful life—a life conducive to the happiness of others—and the desire to investigate the phenomena of nature, and to discover their order.

These two tendencies may be called the practical and the scientific. They are alike noble, because each is exclusive of selfishness, each furnishes a man with a motive above and beyond the immediate object of making a living. "If any of you", said Dr. Sanderson, "have chosen physic merely as a trade, I would say that you might have found others quite as honourable and more profitable, for medicine has been designated with much truth as 'la plus belle des professions, le plus mauvais des métiers'; but those who are actuated by either of the two motives I have named—those who are either, in their measure, seekers after truth, or whose desire it is to be helpful to their neighbours—may rest assured that they will not be disappointed.

"Let me first speak of the occupation of the doctor as a means of doing good. In this respect, there is no other calling like it. Some of us have rough work to do, and we may seem to do it in a rough way; for, in out-patient, in dispensary, in union practice, we have to come into contact with very rough people, with whom it is very difficult to sympathise; but, even here, we strive not to forget, even for a moment, that our patients are not mere numbers, but suffering men and women whom we are trying to help out of their sad calamities. It is, however, in private practice, and particularly in general practice, that the function of the doctor as a good-doer has its best exercise. It is the 'general practitioner' to whom, above all other men, the privilege is granted of really serving the sick. No one comes between him and his patient, by whom he is regarded not only as a healer, but also as an adviser in matters concerning his nearest interests. Such powers of good doing (or, if they are abused, of evil doing) are not entrusted to anyone else in the community. To some of those who are beginning the study of medicine to-day the possession of such a power is perhaps attractive. If so, you could not have a better motive in choosing your profession, provided that you do not forget the responsibility which it involves.

"But there is another motive for choosing the medical profession, one which has attracted to it some at least of its greatest ornaments. That motive is the love of science, the instinct of investigation; and I wish to show you that, to this instinct, the profession you have adopted offers the fullest satisfaction.

"Although medicine", he said, "as an art has grown by the slow accumulation of experience, it has, since it arrived at maturity, given birth to a science, the purpose of which is to investigate the origin and nature of disease. This science we call the science of medicine, or pathology. The problems which it offers possess interest enough to make them attractive to all truth-seekers—an interest which is increased rather than diminished by the fact that the amount of knowledge which as yet exists as to the way in which the human body is, and has been, acted on by its surroundings, so as to produce diseases, is very scanty. We may confidently hope that before another twenty years have passed there will be a great increase of this knowledge; for, at the present moment, the systematic investigation of the nature and causes of disease is being carried on with unprecedented activity, and we have the satisfaction of seeing even the darkest corners of the subject one after another made accessible to the 'dry light' of science. The cause which has determined this tendency to progress is not far to seek. Pathology is being carried forward by virtue of its association with other branches of physical science. To our predecessors of a generation or two ago, the notion that the suffering human body is subject to the same laws as those which regulate non-living matter, and that all our ailments are themselves the products of agencies which come within the cognisance of the chemist and physicist, seemed inadmissible and almost absurd. Now we have learnt that, in so far as we understand the processes of life, whether healthy or morbid, at all, we get at this understanding by comparing them with those better known processes which present themselves to our observation in the organic world.

"Recognising this, pathology has shaken herself free from the influence of those all-embracing, all-explaining medical theories which, up to the close of the first half of the present century, followed one another in continuous succession, and has substituted one theory, that of the constancy of nature; and by this means, has been admitted into the sisterhood of sciences, and has become a late participator in that im-

pulse forward which has affected every other branch of natural knowledge.

"It is from the lateness of its development that pathology derives the characters which chiefly distinguish it from the sciences with which it is most closely related. As yet, it can pretend to be little more than a system of problems or questions, of which the greater number still wait for answers. In looking forward to the future, we may be confident that these will eventually yield, not to the magic wand of genius, but to patient perseverance in those methods of observation and experiment which we are now employing.

"To men who possess the needful training and quality of mind, the field of labour which pathology offers has this advantage, that it is something like a newly colonised country, of which the yet virgin soil yields, for the same amount of labour, a more abundant return. We must not disguise from ourselves that the access to this field of labour is beset with some difficulties—amongst others, those very serious ones which arise from legislation hostile to science—but these are difficulties which may be overcome by those who have an earnest purpose. If there be one such here, *i.e.*, one man possessed of the scientific instinct, what I would say to him is, Do not think it necessary to go away from your profession in order to give full scope to your scientific aspirations. Do not think it necessary to become a botanist, a zoologist, an anthropologist, or even a physiologist (excepting in so far as physiology is a necessary introduction to other knowledge), but rather devote yourself to our own science, pathology—the science which owed its birth and up-bringing to the art of medicine, and will undoubtedly return to it, when in due time it arrives at maturity, all that it has received, with manifold interest.

The lecturer then proceeded under the second head, that of method, to set forth the principles which ought to guide the student in the selection of subjects of study. He earnestly impressed on his hearers the consideration that the "one thing needful" in medical education was neither the acquirement of scientific knowledge nor preparation for examinations, but preparation for the responsibilities of practice; and with that view gave an account of the system of instruction carried on in University College Hospital, by which the student was led, by successive practical lessons at the bedside, to observe and discriminate the signs of disease, to form a conclusion from them as to its nature, and finally to act for himself for the relief of the sufferer. "Every student", he said, "finds that from the moment that, having completed his studies in human anatomy and physiology, he becomes engaged in the wards of the hospital, he has very little time for other kinds of work, and that residue of time is subjected to still further diminution by the yearly increasing requirements of the examining boards, so that the final remainder of leisure available for real work outside the hospital is extremely small. This great evil I hope to see some day remedied. The precious years which immediately precede a man's entry on professional duty are far too valuable to be wasted in learning anything that he does not intend to retain. At this stage, therefore, a man should be allowed free scope in the regulation of his studies, subject to one obligation only, that of showing, when he presents himself for his qualification, that he is practically acquainted with his business."

The address concluded by a reference to the distinguished anatomist and physiologist, Dr. Sharpey, whose loss University College had had to deplore since the last occasion similar to the present. After giving a short account of the circumstances which had led the council of the university to invite Dr. Sharpey to take the chair of physiology now forty years ago, Dr. Sanderson dwelt more at length on his extraordinary success as a teacher, which he thought might be easily accounted for. Dr. Sharpey was a man of exceptional vigour both of body and mind. He had, previously to his appointment, trained himself by study in the schools of France, Italy, and Germany, and was already a practised teacher. In his knowledge of the literature and of the development of his subject he had no rival in England. His delivery, notwithstanding its complete lack of ornament, had a charm, which it seemed to owe to its being the spontaneous outflow of a mind overflowing with information, which it was a pleasure to him to communicate. If to that it be added that he had a singular faculty of entering into personal relations with his students, and adapting his expositions to their wants, it need not be matter of surprise that all who, in the long course of his professorship there, were his pupils regarded him as a perfect teacher. It was now six years since Dr. Sharpey, to the great loss of the students, resigned his chair. His failing sight and hearing rendered public duties irksome, but advancing age neither impaired his intellect nor deprived him of the almost youthful geniality of his nature. In University College his name would never be forgotten, for he had left there many memorials. Those who knew him valued most the recollection of what he was to them and the bright example of his well-spent life.

QUEEN'S COLLEGE, BIRMINGHAM.

THE winter term of Queen's College, Birmingham, was commenced October 4th by the usual Inaugural Address and the distribution of prizes, the address being delivered by Mr. T. H. BARTLEET, Surgeon to the General Hospital. The Rev. Canon Wilkinson presided.

In the course of his address the lecturer referred to the address delivered by Professor Huxley at the opening of the Mason College, and said that they who were so deeply interested in practical science would heartily welcome any new organisation for scientific teaching, and desire that no rivalry should exist between the two institutions, save that of which could do the most good. After Professor Huxley's profound, scholarly, and eloquent address, he might well be allowed to pass by the time-worn, though still important subjects of education, of medical politics, or economics, and address himself, as he felt duly bound, to his fellow-students of Queen's College, old and young; those *in statu pupillari*, and those who had graduated, not only in medicine, but in age and honours. He wished, therefore, to speed the going and welcome the coming students, to assure those who were leaving for fresh and important duties that the college would not forget them, or cease to take an interest in their progress. And he wished to assure those who were commencing that the zeal of the teachers was unabated, whilst their experience, both professional and social, was greater. The commencement of a medical session might well be a *dies nota* to them. Some of them would be springing at a bound from the position of pupilage to the greater freedom of college life; some might be closing that day the wholesome restraint of home ties. The very fact of tying themselves down to a special life work should induce serious thoughts—thoughts more serious when it entailed the responsibility of the life or death of others. He purposed briefly to show what they must expect and what they must not expect from the profession. They certainly must not expect wealth. To accumulate riches was not the lot of many in the medical profession. The prizes were few and of moderate value. A moderate competence might be obtained by a man who practised his profession competently, reputably, and honourably. During twenty years, whilst he had occasionally seen men attain a certain measure of success without deserving it, he had not seen a single instance of a deserving man failing ultimately to secure, at all events, a moderate degree of success. Nor must they expect to gain honours by those social positions and dignities usually attractive to men—the bench, the mayoralty, associations with the party in power, and real or unreal dignities of all kinds. In a busy manufacturing and commercial district wealth and distinction usually went together, and here, in addition, politics and position were inseparable. Members of the medical profession were usually not wealthy, and commonly had but little time to devote to work outside the profession—indeed, they had so much unpaid work to do that they rarely were, at all events, allowed any of the distinctions which were the legitimate and commendable aim of good citizens. To some extent they were valued by others at the rate at which they valued themselves, and it would add to the dignity of the profession if their services were gratuitous to those who could not afford to pay, and they charged those who were, at a rate proportionate to their means. Nominal rates, which did not measure the value of the work done, and which had no relation to the means of the patient, seemed always to have the effect of lowering the profession, and therefore impaired its usefulness. With a large proportion of unavoidable poverty in the town gratuitous medical services were a necessity, and the profession should be prepared to bear a share in providing it, though he doubted if it was not the duty of the public, and not of the profession, to provide the large amount of gratuitous or very underpaid service which now devolved almost entirely upon the profession. The doing of this work compelled them to do three or four times the amount of work which otherwise they would have to do, and the profession alone could estimate at what sacrifice of health and comfort that work was done. Knowing this, many of its members felt acutely the scant recognition these services received at the hands of the public. They felt acutely, sometimes bitterly, the apparently studied indifference to their claims, and the hardship of its members being rarely recognised as doing a public work. It was often alleged that the physicians and surgeons of the hospitals, and the professors of medical schools, gained direct advantages from their official positions, and that such posts were coveted and assiduously sought for if vacant. Allowing that to be true, and as far as direct gain was concerned it was far less than was supposed, did they not sometimes see competitions for a seat in the Town Council, or on the Board of Guardians, or even in the Imperial Parliament? At least they did before a paternal Caucus settled all those matters comfortably for them. Did the gentlemen who filled these useful, important, and honourable posts so ably perform their duties solely from love for their fellow citizens? Did none of them enjoy the work

itself, or appreciate the *prestige* attaching to official positions? Did none of them look forward with laudable ambition to the well-deserved honours that fell to the lot of men who, at some sacrifice, had undertaken public work? His jeremiad might be summed up in a single sentence. "In Birmingham no work is considered public work that is not at once municipal and political". They would not gain a life of ease in the medical profession; their time would never be their own; not only would they lead laborious days, but their nights would be invaded, and they would know how an unstrung mind would feel with increased force the anxiety and responsibility of night work. But even this dark side had a silver lining. If they did not realise a fortune they might gain a competence, and that without some of the anxieties and responsibilities attached to commerce. If they did not gain the applause of the many they could gain the love of the few. If they did not gain high places amongst men they would, if they deserved it, gain that which such dignities did not always bring—the verdict of a self-approving conscience; the knowledge that by God's help and God's providence, the bread-winner had been given back to a desolate family, the wife restored to a heartbroken husband, the infant had had the blessings of a mother, and the fondly-loved child had been renovated in health and strength. Was not that better than wealth, better than a life of ease, better than transient honours and dignities? And there was something else they would gain—they would gain an entrance into the medical brotherhood—no slight gain when they considered their fidelity and self-sacrificing affection to one another. Alluding to the different branches of the profession, he pointed out that the widespread desire for extending higher education, and the growing importance attached to scientific studies, would afford a larger occupation to teachers of science. Speaking of the practising part of the profession, he pointed out the advantages of the general practitioner over the specialist, and cautioned them against thinking they were too good to be general practitioners. The general practitioner was the backbone of the profession, the man prepared to cope with difficulties of every kind, in every department of general and special practice, honoured in his district as those in special practice rarely were. In conclusion, he gave some good advice to the students as to their studies, urging them to work.

LEEDS SCHOOL OF MEDICINE.

THE Introductory Address was given by Mr. CHARLES J. WRIGHT, lecturer on physiology, and senior surgeon to the Leeds Public Dispensary. In the course of his introductory address, the lecturer said the preliminary examination which medical students had to undergo was a fair test of the general education which was an essential for every man who aspired to a position in an honourable profession; but he trusted the day was not far distant when other subjects, in addition to those now demanded, would be relegated to preliminary studies, instead of, as at present, being left to overcrowd the but too limited time at the disposal after the curriculum was commenced. Such subjects, for instance, as experimental physics, biology, botany, and inorganic chemistry—the last named even now often included in the subjects of preliminary examination, and thus excused after registration—all useful as a mental discipline, most invaluable as an aid to future study, but liable to interfere with due attention to other subjects after medical studies begin.

I presuppose, of course, that a university education, is not within the reach of all. The efforts which have been made of late—and notably by the distinguished Professor of Anatomy of the University of Cambridge (Professor Humphrey)—to bring the advantages of a university life and training within the reach of a larger number of medical graduates, by providing facilities for medical combined with other studies, will no doubt gradually lead to many more availing themselves of such advantages in, at all events, one of our ancient seats of learning.

Let me, however, impress upon all who are now commencing their studies, the importance of devoting a certain amount of time to some of the subjects I have named, whether they are likely to be examined in them or not. It is impossible to overestimate the importance of some branches of physical science as an aid to the solution of many of the laws of nature and phenomena of disease. All interested in the necessity for ensuring a liberal standard of education for those about to enter our ranks will rejoice to find that the General Medical Council contemplate the addition of some of the elementary subjects I have named to those which will be compulsory for the preliminary examination.

He considered the suggestion recently made by a committee of the Metropolitan Counties Branch of the British Medical Association, to the effect that the age of eighteen should be attained before a student entered upon the regular medical curriculum, was a step in the right direction. That would leave at least one year after leaving school, which might be profitably devoted to the study of elementary science.

Opinions in the present day are divided as to whether a certain period (twelve months) should be spent in the surgery before attending lectures. Where a man is young, and has the good fortune to reside with one who has the time, ability, and inclination to aid his pupil, it is possible that much information as to the management of patients, and of a practice generally, may be acquired, and time be profitably spent in gaining a fair knowledge of "osteology", which is always of the greatest use before commencing to dissect, or to attend lectures on anatomy. But experience leads to the conclusion that, if a tyro has the choice, it is better not to commence lectures too early, but to do so as soon as the elementary studies (and examinations) are disposed of, and to leave the residence with a practitioner until at least the "primary" examination (in anatomy and physiology) are passed.

The suggestion that at least two years should elapse between the passing of the "primary" and final examination, which has been already acted upon as a stipulation for the licence of the London College of Physicians, is an admirable one.

Then, when once launched upon their career, students find that examinations are very numerous. There is some danger nowadays of students being somewhat overtaught. There can also be little question that they now run the risk of being overexamined. A recent proposal of the Royal College of Surgeons, to institute an examination in anatomy at the end of the first year, in addition to the usual one after the second winter session, would, had it been established, have added unnecessarily to the burdens of more especially the provincial students, unless indeed it could be held at each individual school.

The regulations of the College of Physicians of London, recently issued, now enjoin three instead of (as heretofore) two examinations for this licence, in addition to the preliminary. Although in these the selection and division of subjects are good ones, he could not but regard an additional examination with some concern as an evidence of a growing tendency. Again, the standard of the requirements of the examining boards has been "raised somewhat more rapidly than it has been overtaken by the student".

Referring to the rewards of merit which he had to distribute, he offered words of encouragement to those who had not succeeded in gaining a prize. It was not always the most clever or brilliant who won in competitive examinations, and who succeeded the best in the race of life. The struggle for existence in these days of high pressure demanded many other qualities as essentials. He could not refer to a better list of qualifications requisite for a successful physician or surgeon, than those summed up for nurses in Miss C. J. Wood's excellent handbook—presence of mind, gentleness, accuracy of memory, observation, and forethought. Let them add to those perseverance, and, what Huxley had dwelt upon, a power of endurance—and they had a list of faculties, the possessor of which was indeed to be envied. Touching upon the subjects which the students would have to master, he urged them not to neglect that department of anatomy which was too apt to be overlooked—the contemplation of the prominencies and outline of the body and limbs in a normal condition, and the changes which they underwent in movement, with the relation of arteries and viscera to the surface, so that, in examination and operation, they might know where to look for them. With regard to physiology, he observed that, though it had made vast strides of late, there was still connected with it very much of what had been denominated "unknown territory". Unfortunately, in our own country, original research—upon which the science of physiology so largely depended—had received a severe check in the restrictions which legislation had imposed upon it; a check which threatened to depose England from the foremost rank it had hitherto maintained, by its contributions to the elucidation of unsettled problems in structure and function.

When John Hunter tied the external carotid artery of the deer in Richmond Park, in prosecuting his researches into the mode of growth, and condition of the fall, of its growing antlers, how could he ever conceive that his experiment would lead to our knowledge regarding the establishment of a collateral circulation after ligature of the main artery of a limb, and that this was destined to form the basis of that triumph of surgery which still bears his name, "the Hunterian operation" for aneurism?

This was but one instance of many which proved what great issues might unexpectedly arise from small beginnings. Could anything show that more clearly than what had transpired during the last thirty years, since the high powers of microscopes had attained to such perfection in the study of "germs"? Since the days when Pasteur, Quatrefages, and Filippi discovered the nature of "pebrine"—a disease of the silkworm, which threatened at one time to ruin the silk trade of France—and found it to consist in the development of minute organisms in the caterpillar, we had passed through epidemics of cattle-plague in this country, and had Beale's investigations showing the development of germs in

that disease. The latter, involving, as it did, an appeal to the pocket, resulted in an indiscriminate slaughter, regardless of cost and suffering. We had then witnessed, more recently, as the outcome of endless controversies on "spontaneous generation", the growth and perfection of that grand conception of modern British surgery, introduced and developed by Professor Lister, the antiseptic treatment of wounds. Though he had never practised vivisection, he could not resist a passing reference to it. During the last few months, it had been suggested that, whereas anyone who decapitated a frog in the interests of science without a tardily obtained licence, rendered himself liable to a fine of £100, or three months' imprisonment, it had been proposed, with respect to vaccination, that a licence to disseminate small-pox, and an immunity from penal consequences, might be purchased for a very few shillings. Was not suffering and disease to the human species at least as important as it was to the lower animals? If it was, then we ought at least to be consistent, by rendering it as penal for a man to run the risk of spreading a loathsome disease, or for a landlord knowingly to poison his tenant's household with sewer-gas, as it would be if he were to mix arsenic or antimony with his food.

Turning from general subjects, the lecturer said it fell to his lot to have the honour of inaugurating the fiftieth session of the Leeds School of Medicine. Exhaustively reviewing the history of the institution, he said that, of the seven provincial schools in this country, four were already incorporated with colleges, and the large centres of population in which the other three were situated, each possessed one in a more or less complete stage of development. The Manchester Royal School of Medicine had for some time been incorporated with Owens College, and, but a few months ago, they had witnessed the foundation by Royal charter of the more stately Victoria University, having its seat in the city of Manchester, and which, though it had not obtained the power to grant medical degrees, now commenced its foundation with every prospect of a glorious future. They might, he trusted, look forward to the not very distant date when their own Yorkshire College might be enabled to comply with the terms of affiliation, and thus be constituted a college of that university. Might he venture to express a hope that the date was not distant when some closer union might be effected between the Yorkshire College and their own School of Medicine? Would not such a fusion be a fitting celebration for marking the completion of the fiftieth year of the existence of the School of Medicine?

It was impossible to contemplate either the present or the future of their school, or to reflect upon possible changes in their administration, without a pang of remorse at the very great loss they had this year sustained, in the death of one who freely gave so much of his time, means, and energies in his devotion to the interests of all the three institutions he had named. So far as the Yorkshire College was concerned, it was not too much to say that it was to a large extent due to John Deakin Heaton (as its chairman of council) that many of the early obstacles to its formation were surmounted; while, as regarded the Infirmary and School of Medicine, his long service of conscientious and disinterested labours, extending, as regarded that school, over thirty-seven years, were so fresh in the minds of all who knew him, that they needed no words of his. Many undertakings benefited by his unflagging zeal and watchful interest, but to none of those was he more attached than to that school; and to Dr. Heaton's good judgment and unfailing attention they might ascribe much of their success during the fifteen years he held the office of treasurer. One other they that day missed from their ranks, whose name it would ill become him to omit to mention. James Seaton was rarely absent on their opening occasion. Suddenly cut off in the very act of following his vocation, he would ever be remembered as one who laboured energetically in the chair of anatomy for twelve years, until his health compelled him reluctantly to relinquish his duties, both in that school and as surgeon to the infirmary.

SHEFFIELD SCHOOL OF MEDICINE.

THE Introductory Address was delivered by Mr. C. NELSON GWYNNE, Surgeon to the Sheffield Children's Hospital, and Lecturer on Practical Physiology and Histology, Sheffield School of Medicine.

Dr. Gwynne began his address by an urgent appeal to the students not to delay earnest work, reminding them of the Greek proverb, ἡ ἀρχη ἡμιον παντος—the beginning is the half of all. He drew attention to the latitude of the science of medicine, and gave examples of its relationship to the physical sciences, to psychology, and to the arts. He devoted the next portion of his address to giving advice to the students as to the method of conducting their studies, and recommended a special study of physiology, and he gave a short review of the advance that science had made since the discovery of achromatism. He went on to say. "When you have completed your second year of study, your chief attention ought to be directed to your hospital work. Let your attendance be regular, and never omit to take copious notes of the cases you have selected for your special attention. Do not endeavour to cope with a large number of cases at once, but, while giving a general attention to the clinical remarks made beside the bedside of every patient, choose out two or three medical, and as many surgical cases, for your special observation. First acquaint yourself with the previous history of your patient; next examine his general present condition, and let the skin, the digestive system, the urine, the circulatory system, the respiratory organs, the temperature, etc., all receive the attention they in each instance deserve. When you have gone through this general examination, the 'locus' of disease will be pretty sure to suggest itself, and will demand further special investigation. Once acquire a certain method in examining your cases, and you will soon find yourselves in every instance intuitively, and with rapidity, following out the same method, and the result will be accuracy in diagnosis and confidence in yourselves. Before quitting the subject of the curriculum I would commend to your attention the subject of hygiene, or the laws of public health.

"Many of you may hereafter be called upon to carry out the duties of the 'Public Health Act', and you will find them, in any case, multifarious and difficult; but a little time bestowed upon the subject now will enable you with much greater ease to accommodate yourselves to the duties that devolve upon you. There is little doubt but that all the licensing bodies ought to make the subject an integral part of their regular curriculum. The public mind is not sufficiently educated on the subject. Dangers to life and property, due to causes that are conspicuous, are soon remedied, but the shafts of disease, whether of scarlatina, of typhoid fever, of diphtheria, of diarrhœa, etc., that arise from a thousand middens and ill-constructed drains, and carry death into a hundred homes, and sap the health and energies of the people, are invisible, and are therefore allowed to run riot in their work.

"After the student has entered on his second year the question of paramount interest to him is the choice of a diploma. The possession of a certain amount of knowledge in a student is not the main desideratum; it is more important to form his habit of mind and to direct his method of investigation. We are too prone at the present day to calculate professional abilities by the standard of a medical diploma. The student who has attained to his degree after a four years' period of study is, however he may estimate himself, but a child in knowledge, and being but a child, the fashioning of his mind for a progressive life-long studentship, the laying down a groundwork for future labours, is far more important than to foster precocity, and, in many instances, after-idleness, by cramming his brain with numberless facts and a variety of details. It was not by such means that the great men of our profession in the past gained renown, nor is it often that a spurt at the commencement of a long race leads to victory. We hear far too much at the present day of examining boards, and far too little of university teaching. In these remarks I do not include Scotland and Ireland, for I am well aware that the universities of Edinburgh and Dublin have never neglected the duties they owed to medical education. But in England, unfortunately, owing to a variety of causes, it has been different, and it is only lately that, with an energy that deserves all praise, the University of Cambridge has determined to revive the teaching of medicine in its walls, and to roll away the reproach that so long attached to it, of snubbing and neglecting a study that directs to the alleviation of human suffering the broadest and most universal scientific investigations.

"The vigorous exertions of the University of Cambridge in the south we are soon likely to see emulated in the north. The want of an university for the north has at length been recognised, and the Victoria University has received its charter and entered upon its mission. Untrammelled by an ancient history, or by old associations with pedantry and prejudice, it starts buoyant with health and hope, soon, if I mistake not, to lead the van, and leave behind in the race older but more lagging competitors. Owing to an opposition which, though hardly liberal, was perhaps expedient, the power of granting medical degrees has not been included in the charter; but as soon as the government of the new university has settled definitely the relations that are to exist between it and the several medical faculties, there is no doubt but that the profession will support the reasonable claim of the Victoria University to grant medical degrees, and thus meet a want long felt in the profession.

"We have waited too long in the hope that successive Governments would legislate for us, and put medical education in this country on a better and more uniform footing. 'The gods help those who help themselves.' It is time that we set to work and bring about our own reformation. It will be a long time before we have in this country an

equivalent to the German 'Staats' Examen'. The late recommendations of the General Medical Council, regarding the scope and method of conducting the preliminary examination, has certainly been a step in the right direction, and I have no doubt but that, if other schemes for reform of a like nature were brought before the council, and backed up by the unanimous voice of the profession, they would, in spite of a certain amount of opposition, be ultimately carried into effect. With the many advantages connected with the one-portal system, there is combined also a grave disadvantage; that is, that the great majority of general practitioners would be quite content to practise on the licence conferred on passing the 'Staats' Examen', and would not care to go to the extra expense and labour to obtain a degree from one of the universities or the old corporations. Such a result would naturally react upon these bodies, and tend gradually to diminish their popularity, and enfeeble their energies; and believing, as I do, that the universities are the natural home of the sciences, and that on the whole it is better that the student should receive his degree where he has studied, I cannot but regard such a result as one to be deprecated.

"Once members of the profession, remember that you are bound by the laws of mutual tolerance, mutual respect, and amity. From the first let your aspirations be high and generous, and in the battle of life exalt yourselves by the legitimate means of superior attainments and assiduous attention, rather than by the short cut of mutual depreciation. Let your reading be regular and varied in its character. While following with childlike faith the light of science, you should not forget that there is yet another light, albeit dim, mystic, that guides to everlasting shores. We cannot explain by any physical reasoning our emotions as we gaze on the far off horizon that bounds the sea, or up at the stars deep set in the chasms of the deep purple sky, nor yet as we listen to certain strains of musical harmonies that answer, as it were, to some far off, universal keynote; such emotions as these we cannot explain by any severe scientific reasoning, and yet they undeniably exist—faint reminiscences, perchance, as the Platonist might say, of that Infinite to which we intuitively feel ourselves akin."

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

THE Inaugural Address was delivered by Dr. T. W. BARRON, Surgeon to the Durham County Hospital.

The lecturer, after extending a hearty welcome to the students, pointed to their rapidly increasing numbers as a proof of the wide-spread interest the college is exciting as a school of medicine; and said that he looked forward confidently to the time when it would hold a distinguished position in the medical world.

The lecturer proceeded: "Year by year, and day by day, the science of medicine continues to progress, opening out in every direction new fields of research, inviting us to the discovery of new facts, exciting an amount of intellectual activity which was never dreamt of by our forefathers. True, that for centuries back there have been intellectual giants, whose great deeds and discoveries have, in their day, electrified the world, and who have established for themselves undying fame. What those ancient 'workers in the dawn' had to contend with may also be judged of, when we remember that the opinions of Pythagoras caused his banishment from Athens; that Democritus was treated as a madman for dissecting dead bodies; that Galileo was imprisoned for proving that the earth moved; that even Harvey was driven from his country, and hooted at from one end of Europe to the other. It is impossible, however, not to acknowledge that the world has gained by this series of persecutions. New theories and discoveries, subjected to the fire of jealous criticism, have withstood the shock only when they have been founded on truth. Cowley well says of Harvey's discovery—

> '[illegible] sought for truth in Truth's own book—
> [illegible] himself was writ;
> [illegible]
> [illegible] upon it.
> [illegible]
> [illegible] others stand
> [illegible]
> [illegible]
> [illegible] a fantastic round.
> [illegible]
> His noble circle of the blood had been untrodden yet.'

"Fortunately for us, as a profession, and fortunately for the world, the list of earnest seekers after truth has gone on swelling, until, to-day the medical journals teem with the records of independent work and observation.

"Gentlemen, we want you not to be content to be blindly led along the bare paths; not to be content merely to accept the testimony of others; not to be content merely to be bookworms, but we want you, like Harvey, 'on the original itself to look'. Accept and make the most of every means by which knowledge may be attained. Your own observations must be guided and regulated by constant reading. Let reading and practical work go hand-in-hand. A purely practical man has been defined as 'a man who practises the errors of his predecessors'. By reading, we are enabled to recognise and avoid these errors; we are also able to regulate our work so that the facts which we observe, and which would otherwise be in a hopeless jumble in our minds, are arranged in, and assigned to, their proper places; we are also better able to judge of the value of our work."

The lecturer then went on to speak of the range of subjects in the medical curriculum, observing that a superficial knowledge of the accessory sciences of botany, chemistry, etc., is possible, and is of great advantage, and by no means to be neglected. The most important question to be discussed and to be decided is: "At what period of his life shall the medical student acquire this secondary knowledge?" At the present day, a sufficient knowledge of the elements of natural science may be acquired at most or all of the middle-class and higher schools. There is not the same need, therefore, for these subjects to be included in the regular medical course as there was formerly, to the great detriment of the already overworked student.

The subject of "articled pupilage" next occupied the attention of the lecturer, who, whilst thinking that they had great reason to be thankful that the old system of apprenticeship was abolished, highly approved of the proposal that every student, before going up for his final examination, should produce a certificate of having studied for six months with a general practitioner, or of having dispensed for six months at a public dispensary; and urged upon the students that they should, for their own sakes, adopt this suggestion, whether made compulsory in their time or not. "Do not launch yourselves into the world until you have had some experience of the kind of practice you will certainly meet with. You will never regret having done this. Six months with a busy practitioner will rub off heaps of cobwebs that you have gathered from your books, will give you an insight into innumerable little details of practice that are not to be found in a hospital, and will teach you courage and self-dependence in the battle of life, when it is fairly begun."

The attention of the students was then directed to the subject of the prevention of disease. "This knowledge has, in fact, become quite as important to a medical practitioner as a knowledge of the treatment of disease. It seems to me that far too little attention is being given to, and far too little time spent on, acquiring a knowledge of this important subject. Who is the greater philanthropist, the man who strives to avert a public calamity, or the man who busies himself in repairing the evils which may have resulted from it? It is impossible for us to believe that very many diseases are not preventable. Preventive medicine is no new thing. We live now in an age when sanitary science has happily attained a definite and decided position in the world. Let us hope that the day is at hand when no private interests shall be allowed to stand in the way of the public good, in the matter of sanitation; when Parliament shall recognise that one of its first duties is the care and preservation of the health of the community. Much has been done, but infinitely more remains to be done; and as the position which sanitary science holds now has been almost entirely due to the efforts of the profession, so we must remember that in our hands lies its further advancement. Diplomas and certificates in State Medicine are now granted at some of the medical schools, and courses of lectures have been instituted in many of them; and I am glad to think that we have not been behindhand in this matter. Attendance on these lectures and on practical demonstrations must be made compulsory. Then, and not till then, shall we be sending out men capable of coping with and answering the difficult questions which daily arise as to what is to be done to avoid disease, as well as to cure it. The compulsory registration of disease, the treatment of the sewage and refuse of large towns, the preservation of infant life, and other similar questions, can be helped forward by the profession as a body. But each member of the profession has innumerable opportunities of employing his knowledge of sanitary details in his intercourse with his patients, and in the treatment of many diseases; a proper attention to sanitary principles will frequently work more good than the exhibition of drugs."

After dwelling upon the advantages of a good general education, the lecturer reminded his hearers that each one of them should keep constantly in mind the serious responsibility that will fall upon him, that each one of them should consider how best he shall fit himself for the duties that will be expected of him....."Live then, now, with the future always in view. Ever remember the great objects of your work: the amelioration of human suffering and the preservation and prolongation of human life. Remember, also, that to be able properly to perform the arduous and responsible duties that may fall upon you, health

and strength are necessary. Overtax neither mind nor body. Live according to those sanitary principles which you will be called upon to advocate in the future; so that, when that future comes, with healthy mind in healthy body, you may be able to fulfil the duties of that high and noble calling which you have set before yourselves to-day."

REVIEWS AND NOTICES.

ANATOMICAL OUTLINES FOR THE USE OF STUDENTS IN THE DISSECTING ROOM AND SURGICAL ROOM. By ARTHUR HENSMAN, Senior Demonstrator of Anatomy at the Middlesex Hospital. With Original Drawings by ARTHUR B. FISHER. Part III: the Thorax; containing Twenty-seven Plates, with Explanatory Tables. Part IV: the Head and Neck; *ibid.* London: Longmans, Green, and Co. 1880.

MR. HENSMAN has now completed his very useful series of outline drawings. The development of this graphic or pictorial method of aiding the memory of primary processes of dissection and reading, is an undoubtedly valuable addition to the resources of the student in becoming not only a full and a ready, but also an exact, anatomist. The value of visual memory is in nothing perhaps greater than in perfecting anatomical study; it is, however, a kind of memory extremely useful to the medical man in clinical and practical work at the bedside at all times; and the student will find the discipline of training his visual memory, which Mr. Hensman's work will help him to pass through, not only useful for the immediate purpose in view, but of permanent value in after-life. The method of outline notetaking may with great advantage be continued in the hospital, as is the custom, for example, in the Leeds Hospital, and in the Samaritan Hospital by Mr. Spencer Wells. The faculty of visual memory has recently been studied in an interesting manner by Mr. Francis Galton, whose results are reported in a paper on the Statistics of Mental Imagery in the July number of *Mind*. He seems to think that scientific men in general are seldom remarkable for that kind of memory; but it is certainly one which medical men, and surgeons especially, must find it advantageous to cultivate. Mr. Hensman's *Outlines* offer a very practically useful study in that direction, and one directly valuable in facilitating the acquisition of the topographical knowledge of anatomy.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CHÂTEAU PALUGYAY.

MESSRS. FALRE AND CO., 179, Regent Street, acting as agents for the old-established house of J. Palugyay and Sons, are introducing into England Hungarian wines which have long been known as of the highest character, and which justly bear a great reputation among connoisseurs and medical men, but which have hitherto been little known here, although esteemed by all who have travelled in Austria, or visited the south of Germany. By these it is recognised as an old and esteemed acquaintance. The Château Palugyay is a wine which has the advantage of being most carefully treated from the day of the gathering of the grape, and on no account is a bad vintage allowed to go out of the cellars under the label of Château Palugyay. Messrs. Palugyay ship only one quality of red wine, and only one quality of white Château Palugyay, and exclusively in bottles. The house is very jealous of the repute of Château Palugyay, and make it a point of honour that the amateurs of this fine Hungarian wine should always find it of equal quality. It is a wine in which blending and manipulations of all sorts are avoided, and may be regarded with confidence as a pure and natural product of the grape. In flavour, it resembles some of the finest kinds of Burgundy. It is pure and delicate, free from acidity, and may be employed with confidence where it is desired to order a pure, natural, old, and fine wine of this character. It will, it is believed, before long, acquire in England the high repute which it enjoys on the Continent.

THE GUILD OF ST. LUKE.—The election for officers will take place at 7.30 on October 20th, in the rooms of the Medical Society of London. At 8, a paper will be read by Dr. Stowers, "Observations on Medical Relief". A collection will be made for the funds of the society on October 18th, at Festal Evensong, in St. Paul's Cathedral, at 7.30 P.M. Sermon by the Rev. Canon Carter.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 9TH, 1880.

PROFESSOR RUTHERFORD AND THE LICENCE TO PRACTISE.

THE September number of the *Edinburgh Medical Journal* contains the address to the medical graduates of the University of Edinburgh, recently delivered by Professor Rutherford. This address differs very materially in character from those usually given under like circumstances. At the commencement of a session, professors, in their introductory addresses, generally hold out words of welcome and hope to the incipient students; whilst, at the termination of their studies, the professors, in the farewell addresses, offer them words of encouragement and practical advice in reference to their future career. On this occasion, Professor Rutherford has abandoned the established programme, and favoured his audience with an address on medical education and reform. In this address we fail to find any of those high principles which we should expect to find from a person of Professor Rutherford's attainments and position. On the contrary, we find much that is calculated to mislead. Professor Rutherford discusses, not so much what medical education should be, but as to who should be the licensing authorities for medical practitioners. He aims, and very justly, at showing that the Scotch universities have been mainly instrumental in elevating the character of medical education, and that "in this course the University of Edinburgh has taken the lead"; whilst, on the other hand, he tells us that, "for some reason or other, the University of London has hitherto had a smaller influence than was anticipated in elevating the education of the medical profession in England". Having thus established to his own satisfaction, seeing, as he does, little beyond the class-rooms, the paramount importance of the Scotch universities, he turns to examine the system whereby legal qualifications in medicine and surgery are obtained. He tells us that the universities should confer higher qualifications, and the corporations should confer lower qualifications; and, with the view of showing how absurd it would be to have but a single portal to the medical profession, he builds up a fantastic gateway, which is too ridiculous a composition to be submitted to serious criticism. He talks of the gatekeepers of "this precious one portal" being centralised in London, "with a committee of delegates from all parts of the country there assembled, and the papers of all candidates sent to them in London". There would be an "arch-examiner" in each subject, and "a number of experts". This is probably the form of portal which Professor Rutherford would frame; but it is not one which was ever contemplated.

Professor Rutherford then tells us that, in spite of the failure of this absurd idea, it came to pass not long ago that "the busybodies of London gathered themselves together, and took counsel one of another"; and that from "the medical mountain of London there proceeded a curious little mouse". Thus it is that this distinguished university professor speaks of a conference composed of two members representing each of the four English universities and each of the three corporations; and it is thus he characterises a scheme of education and examination framed for this country, which has probably never been equalled for its prospective efficiency and completeness.

It is clear that Professor Rutherford does not understand the question which he has proposed to discuss. He refers to the Medical Act of 1858, and therefore probably may have seen it; and he probably

knows the position of the licensing bodies prior to the passing of this Act. At any rate, he ought to know that the licensing privileges of the University of Edinburgh, for which he now claims such a high position, were of a very limited character before 1858, when a medical graduate of that University would have been an illegal practitioner across the Border, if not within it.

He might also have known that the extension of this licensing privilege—the "reciprocity of practice", as it was called—was granted on the distinct understanding that there should be an "uniformity of qualification". The reciprocity was granted, but where is the uniformity? This is, however, not the real question, which is this. By the Act of 1858, there was ordered to be prepared a list of qualified practitioners, for the information and protection of the public. That register is a delusion, because it contains the names of persons who are but partially qualified; and there exist no means short of legislation which can correct the fatal error which was made in 1858. To do this, it is absolutely necessary that each of the fifty or sixty different qualifications granted by nineteen licensing bodies should be watched, and the action of each of the bodies in granting these qualifications carefully scrutinised by the State; or else that there should be established a test-examination in each division of the kingdom, having a common operation above all these bodies. Professor Rutherford objects to the graduates of the University of Edinburgh having to submit to any other examination except their own prior to their being placed on the *Register*, with all the special privileges thereby conferred. Yet he does not object to the test-examination to which their graduates have to submit prior to their being allowed to treat the diseases of soldiers and sailors. Are the public not as deserving of protection as the army and navy? Have the Government of the day no right to say: We legislated for the medical profession by the Act of 1858; we conferred upon its members most important special and exclusive privileges; we have held forth to the public that we have appointed a Council, whose duty it is to see that every person admitted to the *Register* is fully qualified and competent. Does Professor Rutherford believe that Parliament will remain inactive when made acquainted with the true relation of this subject? or, that they will listen to his claim that certain teachers should be the examiners of their own pupils, and should be able to confer on them the exceptional rights and privileges of registered practitioners, remembering that this right is not granted to other teachers—such, for example, as those representing the extra-academical schools of Edinburgh, or the great London hospital schools? On this principle, we can conceive the annual advertisement of the University of Edinburgh headed: "Notice.—Students who receive their education in this university can also obtain a licence to practise—a privilege not granted to pupils over the way!"

The competition amongst the several bodies for the disposal of licences cannot longer be tolerated. The State must protect the public, and must establish means for testing the competence of those who are placed upon the *Medical Register*. Sooner or later, it must be done. In the meantime, the medical authorities have had the opportunity of doing this work for themselves. The English bodies have met; they have made sacrifices of feelings and of interests for the common good; and they have prepared a plan, which we have already described, for the education and examination of those seeking a qualification to be registered. If Professor Rutherford had made himself acquainted with the details of this scheme, or had favoured us by reading the article contained in this JOURNAL on the 19th of June, he would scarcely have spoken as he has done. He might have seen that the proposed plan advocated no new form of qualification, but was merely a proposal to conjoin several examinations in one, and on the result to grant to successful candidates diplomas already in existence.

Finally, as to the small claim which universities have, by their degrees, to confer licences to practise, it may be remembered that it is not so long ago since the University of Cambridge gave special licence to practise in addition to its degrees of Bachelor and Doctor of Medicine. Nay, the University of London itself was unable to confer by its degrees a qualification to practise, until it had obtained a special Act of Parliament for the purpose. The University of Edinburgh has just as reasonable a claim to the right to admit its LL.D.'s to the bar, or its D.D.'s to the pulpit, as it has to admit its M.D.'s to the practice of the medical profession. Indeed, we do not speak hypothetically in marking this distinction between an university degree and a licence to practise, for it will be remembered that it is not so long since the Queen's University in Ireland insisted on and unfortunately obtained the right to register the degree of M.D. conferred *honoris causâ*. It is time that all this should end, and that the licensing of competent practitioners should cease to be a matter of traffic amongst universities and corporations.

THE NURSING QUESTION AT GUY'S HOSPITAL.

THE manifesto of the governors of Guy's Hospital will have been read with very great attention; for it is undoubtedly a document of importance, intended to express the deliberate conclusions of the governors, as represented by Mr. Gibbs and those for whom he signs, on a question which must be regarded as not only of the utmost importance to Guy's Hospital, but also of hardly less importance in reference to the general management of hospitals. We cannot say that a careful study of this document inspires us with any great confidence that those who have drawn it up have approached the subject either in the right spirit or with an adequate comprehension of the real problem at issue. There are many statements in this manifesto which would have a right place in the mouth of a hot advocate, and which are neither ill-conceived nor ill-expressed, if they were intended to constitute the defence by a lawyer of a course which is in itself open to severe condemnation, and which has led to lamentable results. But we altogether deny that the bases assumed in the document are such as can form the foundation for a sound settlement of the question at issue, or that the statements made on the most important events referred to fully and entirely represent the whole facts of the case. It is, of course, well enough to state that the governors accept the subordination of the nurses to the express orders of the physicians and surgeons as a fundamental principle; but, put forward here and in this connection, such a statement might, without undue severity, be characterised as a mere quibble. Of course, every nurse will, and must, upon express order given by a physician, do as she is bid, or run the risk of being ordered out of the ward; but she might be a novice who has supplanted an old, tried, trusted, and skilled nurse, at the will of the matron. Now, in this case, it is the matron who (as the governors who wrote this manifesto are well aware) made regulations which are opposed to the wishes of the staff; and this is what the staff object to—not that a nurse refuses to obey the express dictates of an individual doctor at the moment. Then, again, the statement that "the general arrangements were made for the good of the hospital", is, under the circumstances, a most vague and unsatisfactory generality, of a kind much better calculated to cover an obstinate adherence to what is bad and objectionable, than to indicate a candid intention to examine what it is desirable to change. Whatever the governors may have wished, it is perfectly clear in the views of the staff, who certainly are peculiarly well fitted to judge, that most of the regulations were made in the interests of the nurses: such regulations, for instance, as those relating to the nurse leaving the wards for airing, and for prayers, etc., whilst patients were neglected, as numerous cases presented to the governors proved; and the repetition of the old formula savours rather of obstinacy than of judgment. It may be for the good of the hospital that night-nurses should make the beds at five o'clock in the morning; but, in the view of the physician, to whom the hospital is not a mere word in the abstract, which may be interpreted to mean the will of the treasurer or the pleasure of the matron, it is certainly not for the good of the hospital in the sense of being for the good of the patients, who are brought into the hospital to be cured.

The statement is renewed, that the staff were from the first prepossessed by a prejudice against the matron. Even if such a statement were made for the first time, it must strike everyone as being a feeble and most puerile complaint. The medical officers of a hospital have

their own duty to attend to; that duty is the care of the patients, their cure, the administration of the wards, and the instruction of the medical students, who serve patients so faithfully as dressers and as clinical clerks, and whose presence in the hospital is of such vast importance to the hospital itself and to the population at large. Prejudice is easily overcome by sound judgment and by good conduct; and, even if it were proved that the staff had a prejudice against this lady, who came from a hospital with good credentials, it is certain that no such prejudice would have outlived good conduct and good administration. But the fact is, that the staff have repeatedly disclaimed having had any prejudice against the lady in question; and their statement is at least as fully entitled to acceptance as any other which can be made on the subject. That prejudice was speedily created, is true; but this appears to have followed upon the discovery by the staff that most of the rules which were made by the matron were violently and abruptly introduced to perfect a new nursing theory in the interests of the new nurses; the welfare of the patients in many cases being totally forgotten. Thus, immediately on inauguration of the new reign, an uniform dress was introduced: a pure matter of detail, which was enforced with such martinet vigour as immediately to drive away many good sisters and nurses, who for years had faithfully served the interests of the hospital, and were trusted in their wards by the staff. The mode in which the order was given was most objectionable: a formal notice was sent round open to every sister—many of the sisters being well-born ladies and thoroughly trained nurses—peremptorily ordering them to remove all their jewellery, and threatening dismissal as the penalty of refusal. The violent introduction of such a sumptuary law as this, followed by such effects, and persisted in, in spite of the evil effects which it caused, naturally created prejudice on the part of the doctors, who saw interests, much dearer to them than the cut or colour of the nurses' dresses, sacrificed to the fancies of a new kind of despot, to whom these little externals appear more important than the welfare of the patients and the retention of skilled and trustworthy officers. The governors appear now, in this manifesto, to congratulate themselves that no great change has occurred from the old system. This kind of congratulation reads oddly enough when we know how great a convulsion has been brought about by such apparent slight changes. If, however, we are to read this statement in its full meaning, it would probably be fair to say that it is true, because the staff have, by their vigorous protests, stopped the introduction of many new and pernicious regulations, such, for instance, as to the necessity of the old duties of sister being continued, and that the nurses should not be changed every three months, and so on. The system which was begun appeared to aim at taking the authority from the sister, and regulating the whole establishment from a central office, so that the medical officer had lost his necessary power in the ward, and found himself in the presence of a mere machine moved from a central room, who showed a stolid opposition to his wishes, who did not recognise him as her superior, and who, in all circumstances, was accustomed to refer to headquarters. This was a system totally different, indeed, from the one already in practice, with which medical officers had administered their wards with advantage to their patients. It is one which they have opposed, we are glad to find, with success; but it is strange that the governors offer it as a matter of congratulation that the changes introduced have been so small. This certainly was not the intention of the matron; and if she has been cut short in part of her campaign, it can hardly be put forward as evidence by the governors that she was judicious in her plans. A continued contradiction has, however, characterised nearly all the utterances and proceedings of the governors in this matter. At one time they have spoken of vigorous reforms, and supported the abusive attacks of Miss Lonsdale, as showing the necessity for large changes; at another time, they have maintained that they have done nothing, and wished to do nothing, that is new.

There is one feature in this document which is open to serious comment. The governors appear insidiously to intimate to the public that they ought to consider that the staff have a greater interest in the school than in the hospital; they talk of the researches of the physicians as of things to be respected, but subordinate to the treatment of the patients, and they speak of the past "researches" of the physicians of Guy's Hospital as though they were laboratory experiments unconnected with the wards, the nursing, or with the healing of the patients. All this is, of course, contrary to the fact; and however ingeniously devised to create prejudice, it is not a form of argument of which the governors of a great institution ought to avail themselves in dealing with medical officers of standing, such as those at Guy's Hospital. If Bright made researches which led to the establishing of the disease which bears his name, those researches were none other than clinical observations in the wards carried out by devoted clinical clerks, and due to the careful study and treatment of the maladies of his patients. If Addison has added new elements for distinguishing the form of disease which bear his name, these also are observations in which the bedside physician was able to connect symptoms observed during life with the appearances discovered after death; and the attempt to separate what is called research from treatment, or to intimate that, on this occasion or on any other, the medical staff of Guy's Hospital subordinates research to the interests of the nursing and the healing of their patients, is to submit to the public a statement which those who make it must have the best means of knowing to be entirely without foundation and entirely contrary to the fact. It is contrary to all the traditions of the hospital; it is contrary to all that passes in the wards; it is opposed to the whole view which the medical officers have taken of the present crisis; and the mere suggestion of such a view is in itself highly discreditable to those who make it; and it is, therefore, most charitable to suppose that it has been introduced thoughtlessly, without considering what meaning might be ascribed by heedless readers to the word used. The medical officers certainly had to be on the alert when it was rumoured that the new matron wished to curtail the hours of entry of pupils into the wards, and wished her female pupils to take part in the dressing hitherto entrusted to the students. They would have been false to their duty if they had not objected to such changes. The governors have, individually and collectively, virtually told the medical staff that the nursing arrangements are no business of theirs; they have not very obscurely intimated that the medical staff must consider themselves as merely occupying a servile position, and that if they object to the matron, they must go, and not the matron, and that, on the whole, it is preferable that Miss Burt and Mr. Lushington should stop, and that the medical staff should go. This is, we take it, not obscurely hinted at in the veiled threat contained in the last paragraph of the manifesto. It is a threat which will be treated with perfect equanimity. Mr. Gibbs and those who act with him will probably find, that even if they have all the intention which they insinuate, their power is limited by a higher authority, and that there are more ways than one of bringing that authority to bear. It is certain that public opinion, in itself no mean power, will not endure to see a wretched matter of personal vanity, such as the appointment of Miss Burt, and the determination to retain her in power against the wishes of the medical officers, made a continuous *casus belli* by the governors against the staff.

We do not hesitate to express an opinion that, even if the medical staff had, as this manifesto hints, no other than a prejudice against Miss Burt, and if that prejudice be as unanimous as it appears to be, and that sentiment of objection as strong as it appears to be, and accompanied by a decisive wish that she should withdraw, that the governors need ask for no other reason for dismissing her. A matron is, after all, a subordinate administrative officer. She is to the medical staff much what a steward house governor is at a club; and, if the leading members of a club unanimously object to the steward, it is the business of the committee to ask him to find a situation elsewhere. The nurses are the persons placed in the wards to take the orders of the medical officers; and, if the medical officers are of opinion that the matron who places them there is herself a person not imbued with correct opinions, and who does not inspire the nurses with a proper spirit of loyalty and

of direct subordination; or, if they are of opinion that she is a person who does not suitably select her nurses, who does not appreciate their qualities with justice, who does not arrange their terms or modes of service with propriety, especially if they are all of that opinion, and if they unanimously ask the governors to find a better head for the nurses, it is, in our opinion, the plain duty of the governors to do so. In this case, however, much more has taken place than would be implied in such a view. The matron has obviously committed herself by what has been mildly described as regretable abruptness. Regretable abruptness is a capital fault in a person who is introducing a new system of reforms; and, if her regretable abruptness has brought the hospital into revolution, and herself into collision with all the medical officers, then the fact that the governors choose to retain her, must be interpreted to mean that they prefer to sacrifice the efficiency of the hospital and their harmony with their higher skilled medical officers, for the sake of the merest vanity of power. The fact is, that the whole of the government of the City hospitals will, sooner or later, need revision; and such proceedings as Mr. Lushington has inaugurated can only hasten that revision. Sooner or later, it must be recognised in the City hospitals, as it is recognised in such hospitals as St. George's and St. Mary's, that the medical officers of a hospital are as much its governors as a layman who administers the funds; that it is essential, for the truly harmonious and effective working of such a hospital, that the medical officers should sit at the governors' board with the lay governors; that a mere donation of £30 or £50 does not constitute an unique and particular fitness for governing a medical institution, as a hospital; but that, living in its wards, the habit of dealing with its patients, with a personal knowledge of what is wanted to make it efficient, are as important factors in the determination of rules of government as are merely financial qualifications. At St. George's and St. Mary's, the medical officers and the governors sit together at the board, and discuss together questions of administration. When they differ in opinion, the whole matter is discussed on equal terms; if the medical officers are outvoted, they submit to the decision of the majority with a good grace, having had the opportunity of putting forward their views, and knowing they have been discussed on equal terms. At the Royal Hospitals, owing to the traditional constitution which came down with hereditary property, the medical officers hold an entirely different position. They constitute a body apart, with whom the governors communicate through the treasurer. The governors and the medical officers sit apart from each other, but, up to the present time, each has known how to respect the peculiar competency of each other. This is the first time in the history of the Royal Hospitals that the governors have entered upon a question so largely medical as the nursing in the wards, in order to slight the unanimous opinion and wishes of the medical staff. There is no doubt that, technically, they possess a considerable power in this direction; and, if they choose to lean upon what are here formally described as their parliamentary and statutory powers, they can stretch them to the extent of bringing still more complete discredit upon the hospital they have done so much to disparage and injure. But it must be obvious to men of common sense that there is a limit (concerning which their lawyers could advise them) which public opinion, common sense, good feeling, and a consciousness of special qualifications appear to their staff to impose, apart from Acts of Parliament; and we cannot but think that, among the many errors of this most indiscreet document, not the least is the threat with which it terminates.

PRACTICAL ANATOMY.

THE dearth of subjects for dissection and operative surgery in the metropolis and in some of the provincial schools has, of late years, become a matter for grave consideration. It is of no uncommon occurrence that a student has to wait for six weeks, or even two months, before a "part" can be allotted to him. As a result, he requires to resort to the use of plates and dissected specimens for the purpose of learning his anatomy for the examinations. The knowledge, however, acquired in this way is nothing other than a "cram", and almost always vanishes before the examiner when it is most required. Indeed, many of the failures at anatomical examinations can be clearly traced to the candidate not having dissected sufficiently for himself. The want of practice at operative surgery on the dead subject is still more apparent at examinations, such as the final for the Fellowship of the Royal College of Surgeons of England, by the awkward manner in which many candidates proceed with the operations prescribed to them. That it is high time that something was done towards increasing the supply of subjects, and at the same time lowering the rate at which they may be obtained, is very generally admitted.

The sources from which subjects are obtained are twofold: first, the bodies of those who die in workhouses, hospitals, and other institutions, and are not claimed by their relatives; and, secondly, the bodies of those who during life voluntarily leave themselves for dissection. The supply from hospitals and from voluntary donations is so small that it may be disregarded, so that practically the only source of supply is from the workhouses. The Anatomy Act being only permissive—that is to say, enacting "that it shall be lawful for any executor or other party having possession of the body of a deceased person.....to permit the body of such deceased person to undergo anatomical examination"—the guardians of the poor, or managers of workhouses, hospitals, etc., are not obliged to give up for dissection the unclaimed bodies of persons dying in the institutions under their charge, but may order them to be buried at the public expense. If they do give them up, it is only through a friendly arrangement with the teachers, or with the Government Inspector of Anatomy, by whom the bodies are allocated to the schools. Even if the guardians agree to give the unclaimed bodies of a workhouse for dissection, the engagement may be frustrated by workhouse officials, who may easily get bodies claimed, if unwilling that they should go for anatomical purposes, since claiming a body does not involve paying the expenses of burial. Indeed, we have heard of a keeper of the mortuary of a workhouse refusing to allow the undertaker sent by the inspector of anatomy to remove a body given up, till he had received his "tip". Another way in which the wishes of the guardians may be evaded is by no intimation being sent to the inspector of anatomy of the death of a person possessing no relatives; the corpse can only lie a certain time in the mortuary, and, if not sent for by the inspector before the specified time elapses, it is buried. From these facts, it will be evident that the supply of subjects for dissection, as regulated by the Act, depends entirely, in the first place, on the good-will of the guardians of the poor; and, secondly, on the honesty of, or the inducements offered to, those entrusted with th e carrying out of their wishes. The supply, consequently, must be very uncertain; and there is room for almost any amount of abuse and levying black-mail by those not above doing so. Unfortunately, this is a matter over which the Local Government Board has no jurisdiction, or it might be more easily set right.

Supposing, however, that all the bodies available by the ordinary channel were given up for dissection, it might be asked—Would the supply be sufficient even then? As far back as 1827 it was shown that the number of patients who died in the workhouses of the City of London, and were buried at the parish expense, but whose funerals were not known to have been attended by any relative, was about 1,100 *per annum*. Since then, workhouses have not diminished but increased in size; therefore we believe that we are correct in saying that the supply from present sources would be sufficient if properly regulated, even although the number of medical students in the metropolis is three or four times greater than in 1827.

The price of subjects varies from £3 10s. to £5, according to the expenses incurred for removal and interment. This sum, taking the cost of a subject to be on an average £4, is not so much felt by students of practical anatomy, as it is divided between eight or ten; but on the students of operative surgery it falls heavily, as at least one, if not two or three, bodies are required by each student before he can make himself possibly familiar with the various operations, so as to be able to do them properly. The supply in this country, however, does not afford him

the opportunity always of obtaining a single subject. It is, therefore, almost the universal custom for those who can afford it, and wish to make themselves proficient at operative surgery, to resort to some of the continental universities, where bodies may be obtained at about one-sixth, or even less, of the cost that they can in this country. The opportunity of going abroad being, however, open to comparatively few, it is necessary that opportunities of studying such an important subject as operative surgery should be put within the reach, if possible, of every student without his having to study abroad. We earnestly trust, before the winter session has advanced much further, that some united action will be taken by the schools, with a view to having the number of subjects for anatomical and surgical purposes increased, and at the same time reduced in price.

PROFESSIONAL RESPONSIBILITY AND PUBLIC INTERESTS.

At a special meeting of the South of Ireland Branch of the British Medical Association, convened to express an opinion on the recent investigation into the charges preferred against Professor H. Macnaughton Jones, the following resolutions were unanimously adopted.

"1. That this meeting of the South of Ireland Branch of the British Medical Association heartily sympathise with Professor Jones in the trying ordeal which he had to undergo, in defence of his professional character, at the recent investigation held in the Royal Cork Institute; and we beg to congratulate him on the triumphant vindication of his professional conduct on the occasion in question."

"2. And that we express in the strongest manner our condemnation of the recent proceedings, where a member of our profession was put on his trial, before the public, for alleged malapraxis and mismanagement in the treatment of a patient submitted to his care in the Cork Fever Hospital—whereas, the only thing chargeable to him was, having utilised the most recent medical knowledge at his command for the recovery of what was apparently a hopeless case; and we believe that such an attempt to interfere with a physician's skill and discretion is unfair, unconstitutional, and opposed to the best interests of the public, who benefit most by the progress of medical science. While thus expressing our opinion on the mode of procedure, we cannot fail to recognise the patience and great intelligence which was paid to the case by the Hospital Committee."

We receive with great satisfaction a copy of the resolutions, and we believe that their publication will serve a very useful public purpose. So far as Dr. Macnaughton Jones is concerned, the result of the inquiry has entirely exonerated him from any charge which could have been made. But, in the eyes of every person qualified to judge, who read the case, it must have been and was palpable that he had brought—as, in fact, it was well known in the profession he always does bring—to the treatment of the case not only adequate medical skill, but a very rare and extensive acquaintance with the whole range of medical knowledge, a very remarkable aptitude for assimilating and applying the most difficult of medical studies, and an energy and devotion to his art which are quite exceptional. In this case, he had to deal with one of the most insidious and rapidly fatal of maladies—suppressed scarlatinal poison—brought about by severe scarlatinal poisoning, of which the elimination is slow or suppressed. In employing the alkaloid of jaborandi in such a case, in order to bring about free action of the skin and secretory glands, he was giving the poor child the advantage of all that the greatest skill and most accomplished knowledge could devise for its benefit. The attack made upon him, under these circumstances, was ignorant, violent, unscrupulous, and malignant. Unfortunately, it proved, in the course of the trial, that even a medical witness could be found, if not to countenance the attack, at least to give such reluctant or such strange opinions, on some of the elementary facts, as might have been supposed, but for the cross-examination, to give countenance to the *primâ facie* doubts, by the distortion of which a charge might be framed. Moreover, the evidence of the house-surgeon was such as to show that Dr. Macnaughton Jones laboured under serious disadvantages —having in this instance a subordinate on whom he could not rely to carry out his instructions intelligently and faithfully, or to support him and to give him the full and loyal adhesion and obedience which a subordinate is bound to give to his professional superior, under whose orders he is acting. Under these circumstances, the unanimous vote of the South of Ireland Branch, which includes all Dr. Jones's competitors and rivals in practice, must be most satisfactory to him. It shows him, indeed, what the profession at large could not doubt, what the public at Cork might possibly have doubted, that there is no room in any mind well instructed and capable of forming a just opinion for doubt, that Dr. Jones's conduct in the matter was beyond reproach and deserving of all praise, and thus this charge brought against him has turned to the confusion of those who instigated it. The resolutions have, however, a more important meaning for the public. It would be a matter of the most serious public injury if it could be thought possible that such charges could be renewed or could ever be brought except under a sense of the most serious responsibility and with the result of severe condemnation, when, as in this case, they turn out to be frivolous, unfounded, and unjust. The duty of the hospital physician, who has the duty to decide in the course of a morning the treatment to be pursued in a considerable number of cases, is always one of great difficulty and responsibility. It is only in a certain proportion of cases that it is possible to say that which is absolutely and indisputably the best course to be pursued. It can only be in a minority of cases that, in a court of justice or in a debating society, any course pursued might not be open to suggestions that some other course, on the balance of evidence, might not have been of more or less advantage. The medical man has to decide upon the balance of probabilities. The data of disease are not absolute. The data of science are more or less uncertain. Their application is a matter of individual experience and individual judgment. And, under such circumstances, if it were the fate of the medical man that he, at any moment, would be liable to have his decision traversed before a court of justice, and himself incriminated, if an imperfectly informed, or ingenious, or malicious person could be found to say that he should have advised something else that he thought better, or would have left something undone which he thought would with advantage be omitted, but which the physician in his experience thought it right and necessary to do; if these perils hung over the head of the surgeon or physician going round his ward, his hand might well be paralysed and his mind disturbed.

It is, then, not so much in the interest of any individual that we welcome any expressions of public opinion which should on this occasion affirm the principle which has been so violently called into question—that a medical man, who, in the honest fulfilment of his duty, brings to the treatment of his case his best skill and knowledge, shall not be liable to incrimination or public obloquy; if, in the opinion of some other individuals, a course different to that which he pursued might be suggested as more advisable. Good judgment, adequate skill and knowledge, honest intent, and devotion to the interests of the sick, are the only weapons on which the medical man can rely in fighting the battle of life and in fulfilling his duty to the public; and, if all these are to be broken in his hand, at the instigation of passion or prejudice, he would fight his battle at no small disadvantage. Not he alone would suffer, but the institutions which he serves, and the patients to whom he ministers. In such a case as this, therefore, it is the public of Cork who are at least as much to be congratulated on the issue of the trial, and the honest expressions of indignation which it has aroused, as Professor Macnaughton Jones himself.

At a meeting of representatives from the various metropolitan hospitals, held at King's College Hospital on Wednesday evening, it was decided to form an Association of Hospital Registrars, with a view to securing greater uniformity in the registration of disease.

The Clinical Society of London recommences its meetings this evening, Friday, October 8th.

Additional summonses were this week granted, at the Marlborough Street Police Court, against Miss Houghton, the healing clairvoyante, on the ground that she had obtained five shillings from certain persons by imposture.

FROM a report issued this week, it appears that more than twenty thousand persons were killed last year in India by wild beasts and venomous snakes.

SURGEON W. A. DAUBENY, a junior member of the Indian Medical Service, committed suicide a few days ago at Peshawur. He had only recently arrived in India.

A SHARP epidemic of scarlet fever in Paddington, alleged to be due to the distribution of infected milk, is at the present moment being investigated by Dr. Stevenson, the medical officer of health of the parish. The circumstances have been communicated to the Local Government Board.

IT is announced by telegraph that the Philadelphia Court has forfeited the charters of the Eclectic Medical College of Pennsylvania and the American University of Philadelphia for selling bogus diplomas. These were the medical colleges managed by Dr. Buchanan, who is now awaiting his trial.

THE annual death-rate from diarrhœa last week was equal to 1.6 per 1,000 in London, and averaged 3.9 in the nineteen other large towns; it ranged from 1.4 and 1.5 in Plymouth and Bristol to 7.7 and 9.6 in Hull and Leicester. The deaths in London referred to diarrhœa, which had declined from 367 to 142 in the eight preceding weeks, further fell to 110 last week, but exceeded the corrected weekly average by 27. The 110 fatal cases included 74 of infants under one year of age, and 30 of children aged between one and five years. The deaths of three infants and young children were referred to simple cholera or choleraic diarrhœa.

THE medical schools dinners, which now so agreeably mark the opening of the medical sessions at the various hospitals, were this year not less cordial and successful than heretofore, as will be seen in the columns recording these very agreeable reunions of old students and present officers. Nothing can more strongly foster the spirit of unity, mutual regard, and professional strength of sentiment, than these reunions. There was one notable exception to the public festivities, and that was at Guy's, where the unhappy course pursued by the Treasurer and his allies has introduced discord and ill-feeling where formerly there were so much good-feeling, such pure traditions, and proud emulation of the very highest standard of efficiency and repute. The scene at St. Thomas's Hospital afforded a strong contrast. There the treasurer, governors, staff, and students, met in the happiest spirit of cordial friendship and co-operation. Dr. Alfred Carpenter of Croydon presided as an old and honoured student; on his right the Treasurer and Mr. Le Gros Clark, and on his left Mr. Alderman MacArthur, M.P., the Lord Mayor Elect and one of the *ex officio* governors, and Mr. Bonham Carter, honorary secretary of the Nightingale Fund. The dinner was held in the Governors' Hall, and the utmost good feeling and most evident marks of mutual esteem and confidence prevailed between the students, the governors, the staff, and the head of the Nightingale Nursing Organisation. If Mr. Lushington had been present, he might have learned the useful lesson that it may be possible to govern a hospital without a democratic constitution, with the help and confidence of the medical staff; it is impossible to do so with studied disregard and insult of the staff.

THE Lord Mayor Elect took the opportunity of referring to the forthcoming International Medical Congress in London, and expressing the satisfaction he shall have in doing everything in his power officially to promote its success, and his intention to tender to it an official welcome on the part of the citizens of London. It is understood to be the intention of the Lord Mayor to open the Mansion House for a state reception of the members of the Congress.

GASTROTOMY.

DR. ELIAS reports, in the *Deutsche Medicinische Wochenschrift*, 1880, No. 25, a very successful case of gastrotomy in a man aged 48, reduced to the last extremity by stricture of the œsophagus. The collapsed stomach was with difficulty found during the gastrotomy; it was fastened to the abdominal wall, and opened on the fifth day, when union was complete. Twelve days after the operation, the patient was able to go out, and the nutrition of the body rapidly improved.

PORTRAIT OF MR. LUTHER HOLDEN.

ON Friday, October 1st, an interesting ceremony took place in the Great Hall at St. Bartholomew's Hospital, at 1.30 P.M. In the midst of a numerous gathering of ladies, medical officers, and old and present students, Mr. Savory presented to Mrs. Luther Holden the portrait of Mr. Holden, painted by Mr. Millais, and exhibited during the past season at the Exhibition of the Royal Academy. This portrait has been painted, at the request of several hundred subscribers, as a testimonial of the respect and esteem in which Mr. Holden is held by his friends, colleagues, and pupils, as a great surgeon and medical teacher, and is presented with a view to its transference to the Medical School of St. Bartholomew's Hospital. The Treasurer, Sir Sydney Waterlow, having taken the chair, Mr. Savory, in presenting the portrait, made a most eloquent speech, in which he highly eulogised Mr. Holden for the unflagging zeal with which he for so many years fulfilled the trying and tedious duties of a demonstrator of anatomy, for his extreme kindliness of manner to individual students and patients, and for his being the author of the most readable works on the science of human anatomy. Mr. Holden, in reply, thanked Mr. Savory and the other donors of the portrait, in the name of Mrs. Holden, and expressed his deepest feelings of satisfaction and gratitude at the sentiments which his colleague had delivered; adding, with characteristic modesty, that he never expected that his endeavours to do his duty as a surgeon and as an anatomical teacher would have ever been so warmly praised. In conclusion, Mr. Lund of Manchester, in the name of all the company present, publicly thanked Sir Sydney Waterlow for his kindness in allowing the Great Hall of the Hospital to be used for the ceremony.

THE PARKES MUSEUM OF HYGIENE.

THIS museum was reopened last Monday (after the usual vacation) in connection with the introductory *conversazione* of the medical school at University College. There was a good attendance of gentlemen and students, who manifested much interest in the collection of sanitary appliances, to which several additions have recently been made, including concrete and stoneware goods from the Poole Pottery District. Messrs. Tonks and Son have added to their contribution a model of a new ventilator, called "The Architrave Ventilator", designed by Mr. Mark H. Judge, for the purpose of making an architectural feature of the provision for ventilation. The Parkes Museum will continue to be open free on Tuesdays, Thursdays, and Saturdays.

STILLBIRTH—RESUSCITATION AFTER TWO HOURS AND FIVE MINUTES.

AT the recent meeting of the American Medical Association, Dr. Robert Battey detailed the particulars of an interesting case, occurring after a breach presentation. The child when born was still, and deeply cyanosed, the cord pulseless, and the heart's action very feeble and irregular. Presently the heart seemed to cease to act altogether. Artificial respiration, in various forms, was attempted without any result, and the nurse was then ordered to keep the child wrapped in hot flannel, while he himself kept up inflation by the mouth. It was more than an hour before the first respiration was made, and it was not until ten minutes afterwards that the second breath was drawn. After that, the respiration gradually became more and more frequent, and at the end of two hours and five minutes, both the respiration and circulation seemed nearly normal, while the infant was able to nurse heartily. The child did well for two hours, when it had a difficulty of breathing, with mucous rales, and died suddenly. This case Dr. Battey thought, taught a useful lesson of patience and perseverance in such cases of asphyxia of the new born. Some authors, indeed, advocated the continuous efforts which he had employed in this case; but most physicians, he believed,

were inclined to give up too readily. At all events, he had never read of a case where the child remained asphyxiated for such a long period as in this instance. An infant, he claimed, should not be regarded as dead because its heart had apparently ceased to beat, although this was too often done.

THE VENTILATION OF SEWERS.

THE North Cornwall town of Padstow (the *Pall Mall Gazette* states) furnishes excellent evidence of the value of the ventilation of sewers. Acting on the recommendation of Dr. Blacall, the Local Government inspector, the local board have, during the last eighteen months, put into practice the course advocated by the sanitarians recently assembled at Exeter, that of ventilating sewers so as to permit sewage-gas to escape into the atmosphere as soon as it is generated, and before it becomes dangerous to the public health. As a result, the town has, during the last twelve months, enjoyed complete immunity from zymotic diseases. An useful correspondence on this subject is in progress in the *Times*. It adds nothing new, but emphasises the importance of adequate fall and flushing of sewers, in addition to sufficient ventilation.

EXCISION OF THE SCAPULA.

THE whole of the right scapula was successfully and rapidly removed at Charing Cross Hospital on Saturday last by Mr. Bellamy. It was the seat of a large osteo-sarcomatous growth, which had apparently grown in eight weeks. Full details of the result of this rare and formidable operation will shortly be published.

MILK AND TYPHOID FEVER.

IT is stated that the typhoid fever epidemic in Rochdale is increasing, the milk-supply having in all cases been the same. An examination has been made, and in a small cottage on the farm was found a family of nine persons, with two lodgers, suffering from severe typhoid fever. All kinds of refuse had been thrown upon the ground, and the water which the cattle drunk had thus become poisoned.

THE MEDICAL OFFICERSHIP OF ST. MARYLEBONE.

ON Thursday, the Vestry of St. Marylebone resolved to appoint a successor to the late Dr. Whitmore, medical officer and analyst to the parish. The candidates must be between thirty and forty-five years of age. The salary will be £400 *per annum*, and, in addition, the medical officer will be allowed £100 *per annum*, which he will be required to pay to a properly qualified assistant in the laboratory, such assistant to be approved by the Vestry. The selection will take place next Thursday fortnight, the 28th instant.

METROPOLITAN CEMETERIES.

A Parliamentary return has just been published on the motion of Sir Charles Russell, giving the acreage of the several cemeteries within the metropolitan district, the number of funerals in each before the year 1852, and since that year; the number of dwelling-houses situate within two hundred yards, and the number of persons permitted to be interred in one grave in each of the cemeteries. The places for which licences have been granted by the Secretary of State for new burial grounds, and the extension of old burial grounds, is also given, together with some observations on the drainage of the several cemeteries. The return shows the greatest diversity, both as to the proximity of dwelling-houses and the number of persons permitted to be interred in each grave. The Burial Act of 1852 required that a cemetery should not be constructed nearer to any dwelling-house than 200 yards (the Act of 1855 lessened the distance to 100 yards), except with the consent of the owner or occupier. But there is no corresponding regulation that houses must not be erected within a certain number of yards of a cemetery; and thus it comes about that, at Abney Park, 329, "including houses in course of erection"; at Battersea, 401, "the greater number having been built since the formation of the cemetery"; at Brompton, "about 1,000"; at Camberwell, 261; and at Norwood, 563, "erected since the cemetery was purchased"; and at Nunhead, "about 262 houses, nearly all recently built", are situated within 200 yards of the cemetery. It seems somewhat farcical to provide by law that a cemetery shall not be established within 100 or 200 yards of a dwelling-house, presumably so that it may not be a source of injury to the house, and not to prohibit the erection of houses within a certain distance of a cemetery where it has been established. In France, no house may be built nearer to a cemetery than 100 *mètres*, which seems a more logical proceeding than that to which the above figures bear witness. The interpretations put by the various cemetery managers on the question as to the number of persons permitted to be interred in one grave are of so very diverse a kind as to permit of no general statement being made on the matter; but it would appear that, in a large number of the cemeteries, there is no rule at all on the subject.

ARE SUICIDES LUNATICS?

SOME authorities are of opinion that all suicides are lunatics; and it appears that a judge in the New York Court has, according to the *Journal of Mental Science*, recently ruled, in an action upon a life-insurance policy, that suicide *per se* was evidence of insanity. On the other hand, Hale, by whom, it is alleged, the comparatively modern word suicide was first used, says (*Pleas of the Crown*, vol. i, ch. 31) that "*felo de se*, or suicide, is where a man of age and discretion, and *compos mentis*, voluntarily kills himself." Blackstone uses it in the same sense—self-murder (4 *Comm.*). So far, it is clear that, in the sense in which Hale and Blackstone use the word suicide, no lunatic can commit suicide. Many persons, however, well qualified to form an opinion, and among them some mental physicians or "mad doctors", whose professional habits incline them to the ready detection of latent insanity, are of opinion that, among English people, suicide is in the large proportion of cases, if not in the majority, committed by sane people. In America, the same opinion prevails; and the Hon. Mr. Palmer, in an address to the Medico-Legal Society of New York, declares the opinion that a comparatively small number of suicides in the United States are due to insanity. The reflection that, by persistently remaining alive, a large capital sum, which would become available when the policy was closed, remains in the hands of alien proprietors, appears to be peculiarly aggravating to the mind of many a Yankee speculator; and instances of extremely artful self-murder by persons insured for various heavy piles of dollars are given by Mr. Palmer, which explain the disbelief in insane suicide prevalent amongst American insurance companies. The most "barefaced swindle" in the way of self-destruction will, however, it seems, rarely convince an American jury that the gambler has voluntarily crushed his life beneath the die; and juries will often assign the spoils to the surviving family, even when the companies are convinced that the man's death was "a grave abuse", for which his heirs ought to suffer.

TRANSPLANTATION OF SKIN FROM THE SHEEP TO MAN.

THE Chicago correspondent of the *Boston Medical Journal* writes, under date September 6th, that the topic in professional circles there at present is the operation at the County Hospital, by Dr. E. W. Lee, of transplantation of skin from the sheep to the human body. What now adds to the interest of the operation, and makes those who have watched the progress of the study and trials with anxiety hold their breath, is the fact that the experiment bids fair to be a success. The coaptation of the three large flaps from the side of the lamb to the ulcer on the patient was made on the 24th of August. Six days have elapsed at this writing, and union of all the flaps seems to be perfect. Of course when they come to be separated from the lamb they may suffer and perhaps slough, but it is now well settled that the skin of the sheep will adhere to a granulating surface on the human body. The subject of this experiment (that is, the human subject) is a girl about ten years of age, who sustained an extensive burn on the back a year and a half ago. A large granulating ulcer remains, despite all efforts to induce healing. Skin grafting has been faithfully practised, but without success. The child has of course been obliged to lie prone most of the time, and has become greatly reduced. A few weeks ago an attempt was made to transplant

a flap from the thigh of her older brother, but the flap sloughed. That failing, Dr. Lee began at once to experiment with flaps and dissections from the sides of sheep. His first subject, a lamb, nearly full grown, was lost, soon after the dissection of the flap, from the shock of the operation. He next operated on two other lambs, dissecting up two moderate sized flaps from each, placing oiled silk beneath them to prevent adhesion, and dressing them antiseptically. These animals were then turned out to grass in the hospital yard, and were also fed on milk with occasionally a small admixture of whisky. They took to this diet with avidity. After several days—nearly two weeks—had elapsed, and the animals were vigorous, the operation of application of the flaps of one of them to the patient was made. A new flap was dissected from between the two already made, and applied in the same manner as the others. The new flap has made a firmer adhesion than the old ones. The lamb is fastened in the standing posture, in a wood cage, its body being securely fixed and sustained by plaster-of-Paris bandaging of its limbs and quarters. Perfect coaptation and perfect immobilization are secured. The patient has improved in appearance and general condition since the operation, and the lamb shows no signs of failing health.

THE INTERNATIONAL CONGRESS OF HYGIENE, TURIN.

THE published reports of this International Congress, which was attended largely by French, German, and Belgian sanitarians, and in which England was almost unrepresented, has created great interest in Italy and throughout the continent. The most eminent sanitarians were present from the different continental countries; the official reception was of the most brilliant character, the meetings being held in the Carignan Palace, under the presidency of the Minister of Justice. Among the most interesting subjects discussed at the general sitting was that of compulsory vaccination and revaccination. The Bill introduced by Mons. Lionville into the French Assembly was read at the general meeting, and supported by representatives of all countries. Mons. Finkelburg announced that compulsory vaccination has been most satisfactorily received in Germany; and that, where it had been carried out, it had effected the extinction of small-pox. M. Froben announced that Russia is preparing to make vaccination compulsory. M. Klas Linroth reported that, for half a century, vaccination and revaccination have been compulsory in Sweden, and small-pox is almost unknown there. The Congress, on the proposition of M. E. Vidal, passed a resolution expressing the desire that in all countries the law should impose compulsory vaccination and revaccination.

THE LONDON MILK BILL.

AN ingenious official of the Local Government Board has been making a calculation as to the amount of money of which London ratepayers are annually cheated through the adulteration of milk with water. It appears, from the returns which have been made of the analyses performed in England and Wales during 1879, that in the majority of instances where milk was reported as adulterated, the addition of water had been very freely made; and the entire money loss sustained by the customers, to say nothing of the loss of nutriment, no doubt amounts in the aggregate to an enormous sum. Anything like an exact estimate of such loss is, of course, out of the question; but if it be assumed that, in London, each person consumes only a pint of milk weekly, or rather over half a quarter of a pint daily (and this, considering that over one-eighth of the entire population consists of persons under five years of age, is probably a moderate estimate), the yearly consumption of the metropolis alone amounts to nearly twenty-three million gallons a-year. As a matter of fact, returns received from the various railway companies show that the quantity of milk brought to London by railway now amounts to nearly twenty million gallons annually. To assume an extra three millions as produced within the metropolitan area, or brought thither otherwise than by railway, is probably under estimate, considerably, of the actual figures. But as no statistics on the subject are procurable, the estimate of twenty-three million gallons as the annual consumption of milk in London may be accepted; and this amount, at fivepence a quart, represents an expenditure not far short of two millions sterling. "If nearly a quarter of this milk be adulterated with about 16 per cent. of added water (and this seems, from the analysts' reports, to be the average proportion), it follows—on the hypothesis that the samples analysed are fairly representative of the entire supply—that Londoners are paying between seventy and eighty thousand pounds a year for water sold under the name of milk." Deducting even a considerable percentage from this figure to allow for the unanalysed milk being better than that subjected to analysis, it will be seen how large an interest householders have in maintaining the efficiency of the Sale of Food and Drugs Acts, and in securing supplies of milk from reliable and carefully supervised sources.

THE SALE OF FOOD AND DRUGS ACT.

THE Annual Report of the Local Government Board, issued this week, contains some highly entertaining particulars as to the working of the Sale of Food and Drugs Act. The results of the analyses made throughout the country during last year are tabulated in the appendix of the report, and form the subject of some very interesting remarks. The entire number of analyses made was 17,049, which exceeds by about 850 the number in 1878, and would doubtless have been larger but for the practical suspension of the operations of the Act, whilst the "prejudice to purchaser" question (finally settled by the amending Act of 1879) remained undecided. The percentage of adulterated samples, which was 19.2 in 1877, fell from 17.2 in 1878 to 14.8 in 1879. This diminution, however, was probably more apparent than real; for the standard of strength for spirits fixed by the amending Act is considerably lower than that previously adopted by public analysts in general; and thus many samples which would have figured as adulterated in 1878, appear as genuine in 1879. Excluding spirits, the percentage of adulterated samples was 15.5 in 1877, 13.7 in 1878, and 13.8 in 1879. About a third of the whole number of samples examined were of milk, the percentage of adulteration of which has sunk from 21.6 in 1878, to 19.4 in 1879; and, in the metropolis, from 25.4 to 23.3. Of the bread examined, about 7 per cent. of the samples are reported against, and of flour about 2.5 per cent. The usual adulterant is alum. The sale of butterine for butter is apparently on the increase, and is no doubt commonly effected without notification to the purchaser. Reference is made in the report to oleomargarine, about which the most conflicting opinions have been published; reports and chemical analyses demonstrating its perfect wholesomeness and its extreme unwholesomeness appearing side by side in the parliamentary paper issued on the subject by the Board of Trade. Whatever oleomargarine may be, it clearly ought not to be sold as butter. Coffee is still very largely adulterated with chicory without notification to the purchaser. One sample was found to consist of 90 per cent. of chicory, and only 10 per cent. of coffee. Nineteen per cent. of the samples of mustard were adulterated; but only one sample of sugar out of 243 was found to have been tampered with. Of jam, the one adulterated sample was reported to be extensively composed of seaweed. Of confectionery, all but four samples out of 257 were returned as genuine. In one or two cases, chromate of lead appears to have been used as a colouring matter; and, in one instance, a sample of sweets, sold as "cider cream", was found to consist of strong vinegar flavoured with a little acetate of amyl. Of wines, only 56 samples were examined, three out of the six reported against being sold as "unfermented wines", and consisting of sugar, water, and tartaric acid, with a little flavouring and colouring matter. The adulteration of beer seems of late years to have been steadily on the decrease, the percentage of adulterated samples having fallen from 9.3 in 1877 to 5.0 in 1878, and 3.6 in 1879. In the metropolis, only one sample out of 98 examined was found adulterated. Excess of salt was generally the ground of condemnation. The adulteration of spirits seems now to consist of the addition of water only. Of gin, 21.7 per cent. of the samples were adulterated; of other spirits, 30.8 per cent. It is unsatisfactory to learn that drugs continue to be so largely adulterated, no less than 171 samples being reported against out of 613 submitted for analysis. Certain samples of so-called "paregoric", analysed in Derbyshire, contained no opium whatever; and some samples of

sweet spirits of nitre were found entirely destitute of nitrous ether, whilst others were diluted with amounts of water varying up to 40 per cent. of the whole. Cream of tartar has been found largely mixed with sulphate of lime; and tartaric acid with lead in quantity sufficient to injure health. Of the 17,049 samples examined, the greater number were purchased by officers appointed under the Act of 1875; and only 528, or little more than 3 per cent., by private individuals. It is significant that, in the latter class of samples, the proportion adulterated is 25 per cent., compared with 14.5 in the former. This difference may partly be accounted for by the fact that a private individual does not usually take the trouble and incur the expense of submitting a sample for analysis, unless he has very strong grounds for suspecting adulteration. But another reason undoubtedly is that the appointed inspectors are known to and recognised by tradesmen, who supply them with superior articles than would have been sold to an unofficial customer. The only remedy for this would appear to be that the actual purchase of goods should be made, not by the inspector, but by a substitute: a course which does not seem to be prohibited by the Act, and is, in fact, not infrequently adopted. On the whole, the progress made with regard to adulteration may fairly be described as substantial; and it would, no doubt, be much accelerated if private individuals would avail themselves more largely of the legislative provisions for their own protection.

DEATH FROM THE ADMINISTRATION OF CHLOROFORM.

On Thursday an inquest was held at Hull, before Mr. J. J. Thorney, borough coroner, on the body of James Thompson, aged 59, foreman at the Forge Works, No. 1, Richmond-terrace, Drain Side, who died on Wednesday last from the effects of a dose of chloroform. Sarah Huntley, Beverley-road, who had known deceased for twenty years, and had attended deceased recently, said that after the first operation deceased seemed to recover very well. On the second occasion he manifested no fear of the operation. Mr. R. H. Nicholson, surgeon, said that he had attended the deceased the last three weeks. Deceased was suffering from stone in the bladder. It was necessary to remove the stone to make his life bearable, as he was suffering terrific pain on account of it, and was incapacitated from his work as long as it lasted. There were two operations by which this could be effected. One was by cutting and taking the stone out, and the other was by crushing the stone, an operation known as lithotrity. The operation of cutting was a dangerous one for men as old as deceased was, and for this and other causes, witness determined upon using the lithotrite. Witness had some time ago performed the whole of the operation upon another man, who was now alive and well. It was found necessary to administer chloroform to the deceased, previous to which an examination was made of the heart, pulse, and lungs, the result being that witness thought him a safe subject for the administration of chloroform. On the 23rd of September the operation was performed by witness, with the assistance of two of his assistants, and deceased on that occasion passed successfully under the influence of chloroform. Some of the stone came away, but it was necessary to renew the operation to get the remainder out. Accordingly, on Wednesday, about eleven o'clock, a second operation was performed, one assistant being present. Witness wished to do without chloroform, but deceased urged him to administer it, as he said that he could not bear the operation without it. Witness then administered the chloroform. About 2½ drachms were administered during the whole of the operation, which witness thought was a very small quantity. It was sprinkled from a "drop-bottle", which only let out a few drops at a time, on to a piece of flannel spread over a wire-work frame, which went over the mouth and nose. Deceased submitted very well to it, and witness performed the operation. The stone was crushed twice, and witness was about to do so a third time, when his assistant called his attention to the man's face. Deceased was looking very pallid, as if he had fainted. Witness immediately withdrew the instrument. He suspended deceased in order to send the blood to the head, and flicked him over the breast with a wet towel, while the assistant endeavoured to induce artificial respiration, but although deceased was kept breathing for about half an hour, the heart did not act again. In his opinion, deceased expired when his assistant called his attention to the change of colour in the face. Chloroform was not being administered at the time that happened. Witness, in reply to the coroner, stated that he had administered chloroform above a hundred times a year since he had been assistant surgeon at the infirmary, and he had administered it very many times during the last twenty years.—In reply to a juryman, witness said that the part of the stone that the instrument was attached to measured an inch and five-eighths. James Soutter, student of medicine, pupil of Mr. Nicholson, who said he had been present at many operations in which chloroform had been administered, sometimes as a spectator, and sometimes as an assistant, corroborated the evidence of Mr. Nicholson, adding that he first observed a change in deceased by noticing that his breathing was impeded. Mr. Henry Thompson, who had been house-surgeon at the infirmary for five years, and is now one of the honorary assistant-surgeons of that institution, and who said he had seen many hundred cases in which chloroform had been used, stated that he had made a *post mortem* examination of the body that morning. He opened the chest and examined the heart and lungs. He found the heart weak and flabby, especially the right ventricle. The lungs, with the exception of one little patch, were healthy. The cause of death was failure of the heart's action. From his examination of the bladder he could say that it would have been necessary to have performed the operation several more times. The jury returned a verdict that deceased died "from the administration of chloroform and weakness of the heart; that the chloroform was administered with all due precaution, and that the operation was conducted in a skilful manner."

STIMULANTS FOR PAUPERS.

In several provincial towns there has been, the *Globe* observes, a good deal of clamour lately—in some cases not without good grounds, apparently—in connection with the workhouse expenditure on stimulants. It certainly seems somewhat unaccountable that one workhouse should find it requisite to spend double or treble the sum for this purpose that suffices for its neighbours. Thus, the West Derby Union, with 1890 poor in receipt of parish relief, expended £2043 on stimulants during twelve months, whereas the Liverpool Union, close alongside, with 2797 poor, made £757 serve the purpose. There may have been some good cause for the discrepancy, but the figures, as they stand, certainly justify the ratepayers of West Derby in demanding searching inquiry. Nor does the case come out in a better light when the comparison is extended to other places. The Sunderland Union, with more than 800 poor, bought only £9 worth of stimulants during the year. Here, we should think, the guardians must have erred in the other direction; it seems impossible that the real requirements of the paupers, in the matter of alcoholic drink, could have been met for such a paltry sum, which allowed only 2½d. per head all round. At Manchester, the outlay equalled 1s. 2½d. per head; at Sheffield, 2s. 7½d.; and at Chester, 1s. 1d., according to the showing of a correspondent who writes to a Liverpool contemporary on the subject. It will be seen that even these rates of expenditure differ, but the highest is nothing by the side of the 21s. 6d. per head spent by the West Derby Guardians. The matter is of considerable importance, not only from a ratepayers' standpoint, but because of the discontent it must breed among the poor. We may depend upon it, our contemporary thinks, that the *clientele* of the Liverpool Union look with envy at the more liberal treatment of their class at West Derby Union in the matter of stimulants. Indeed, such differences of treatment might well bring about a gradual concentration of the pauper element in the more favoured unions, even as tramps are known to make a point of seeking asylum for the night at those workhouses where the fare of the casual ward bears a good reputation for liberality.

INQUESTS ON DEATHS FROM TYPHOID.

We find, in the *Bedale and North Merton Times*, an account of an inquest on a person who died of typhoid fever, held by Dr. Walton, the county coroner, with the view of ascertaining how far death was preventable and due to avoidable causes and to sanitary neglect, such as

would form a just subject for legal investigation. Some very important facts were brought out at the inquest: thus, the medical officer of health gave evidence that the water near deceased's house was not fit for use, and that death was probably due to the stench from a cesspool in the locality, which cesspool was a dangerous nuisance, and was only thirty yards from the pump. The medical man, Mr. Lumley, was of opinion that fever was due to the man's drinking foul water on the railway side where he was employed, alleging that he should think that the man did not drink any water at home except what had been boiled, such as tea and broth, as he was from home all day. Altogether, we are of opinion that Dr. Walton, in holding this inquest, rendered an important public service; and we are very glad to notice that Dr. Richmond, medical officer of health, expresses also his opinion that such inquiries are most beneficial to the public, while Mr. Fowl, on behalf of the rural sanitary authority, also thanked the coroner for the manner in which he had conducted the inquest, agreeing that it was his duty to hold such inquiries, and that they are the means of bringing before the public facts connected with the causation of preventable disease in a forcible manner, and impressing upon them lessons of which the value would otherwise be lost.

XYLOTHERAPY.

METALLOTHERAPY in the treatment of hysteria and morbid sensibility of the skin bids fair to be now succeeded in France by xylotherapy, or the application of various woods to the same purpose. This new method has been submitted to the Paris Académie de Médecine by M. Dujardin-Beaumetz, who reported the following observations made in four cases of hysterical hemianæsthesia by one of his pupils, M. Jourdanis, at the St. Antoine Hospital. When a circlet of wood was applied to the skin of these patients, the following phenomena ensued at varying intervals. At first, the patient complained of the ligature which kept the wood in place; then she distinctly felt the circlet itself; and if it were immediately removed, the skin at that point was found to be hotter and redder than in the adjacent parts; likewise the punctures previously made at that point bled, and those made at the moment in the zone which had been covered by the wood plate were distinctly felt; and if the application were of any duration, sensibility gradually reappeared. All woods have not the same æsthesiogenetic qualities; some are very active, and others completely inert. The bark of the yellow cinchona seems to possess the most powerful æsthesiogenetic influence, superior even to that shown by the metals. In a few minutes, this bark applied to the skin restored sensibility, not only to the point where it was applied, but also in a very extended zone. After the cinchona bark come the woods of thuya, rosewood, mahogany, walnut, maple, and apple-trees, all of which possess decided æsthesiogenetic qualities. But with these woods the persistence of sensibility is very short; frequently, in a quarter of an hour after their application, anæsthesia has become as complete as before. Ebony, ash, poplar, and sycamore woods have no æsthesiogenic properties.

COMPRESSION OF THE FEET OF CHINESE WOMEN.

SPECIMENS of Chinese ladies' feet are tolerably familiar, preserved in museums; and the wasted condition of the tissues of the leg and foot has been often described. But the manner in which the deformity is produced, and the tortures to which girls are subjected, that their feet may be "quite in the fashion", are not, perhaps, so familiar to English readers. The process is thus graphically described by an American missionary, Miss Norwood, of Swatow. She says that the binding of the feet is not begun till the child has learnt to walk and do various things. The bandages are specially manufactured, and are about two inches wide and two yards long for the first year, five yards long for subsequent years. The end of the strip is laid on the inside of the foot at the instep, then carried over the toes, under the foot, and round the heel, the toes being thus drawn towards and over the sole, while a bulge is produced on the instep, and a deep indentation in the sole. The indentation, it is considered, should measure about an inch and a half from the part of the foot that rests on the ground up to the instep. Successive layers of bandages are used till the strip is all used, and the end is then sewn tightly down. The foot is so squeezed upward that, in walking, only the ball of the great toe touches the ground. Large quantities of powdered alum are used to prevent ulceration and lessen the offensive odour. After a month, the foot is put in hot water to soak some time; then the bandage is carefully unwound, much dead cuticle coming off with it. Ulcers and other sores are often found on the foot; frequently, too, a large piece of flesh sloughs off the sole, and one or two toes may even drop off, in which case the woman feels afterwards repaid by having smaller and more delicate feet. Each time the bandage is taken off, the foot is kneaded, to make the joints more flexible, and is then bound up again as quickly as possible with a fresh bandage, which is drawn up more tightly. During the first year, the pain is so intense that the sufferer can do nothing, and for about two years the foot aches continually, and is the seat of a pain which is like the pricking of sharp needles. With continued rigorous binding, the foot in two years becomes dead and ceases to ache, and the whole leg, from the knee downward, becomes shrunk, so as to be little more than skin and bone. When once formed, the "golden lily", as the Chinese lady calls her delicate little foot, can never recover its original shape.

SCOTLAND.

THE GLASGOW MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of the winter session of the above Society was held on the evening of October 1st, when Dr. D. C. M'Vail read an account of "An Experimental Investigation on the Cause of Pulse Dicrotism". Afterwards, the meeting proceeded to the election of office-bearers for the session 1880-81, when the following gentlemen were chosen: President, Dr. George Buchanan; Vice-Presidents, Drs. D. Taylor and J. B. Russell; Council, Drs. Alex. Robertson, A. L. Kelly, Bruce Goff, Geo. Willis, Geo. Mather, H. C. Cameron, Robert Forrest, and Lapraik; Secretaries, Drs. Joseph Coats and W. L. Reid; Treasurer, Dr. Hugh Thomson.

GLASGOW ROYAL INFIRMARY NURSING LECTURES.

THESE lectures on medical and surgical nursing have been resumed this winter, and the introductory lecture was delivered on October 1st by Dr. W. J. Fleming. He chose as his subject the vocation of nursing, and contrasted the nursing system of the past with that which prevails in the Glasgow Royal Infirmary at the present time, showing the great advantages of the latter over the former. Although these lectures were primarily established with a view to the more efficient training of the infirmary nurses, they are now thrown open to the outside public, and information is imparted on all the practical details of medical and surgical nursing, and on the management of such emergency cases as occur daily in family life. The lectures are given weekly, and are divided into surgical and medical, the former being delivered by Dr. W. J. Fleming, and the latter by Dr. J. Wallace Anderson.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending September 25th, it appears that the death-rate in the eight principal towns during the week was 18.9 per 1,000 of estimated population. This is 1.4 under that for the previous week of the present year. The lowest mortality was recorded in Perth—viz., 11.7 per 1,000; and the highest in Paisley—viz., 24.4 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 6.2 per 1,000, or 0.4 under the rate for last week. The number of deaths from diarrhœa was less than during last week. There was an increase in the number of deaths from scarlet fever in Glasgow and Edinburgh, and diphtheria was more prevalent in Glasgow, Edinburgh, and Dundee. Acute diseases of the chest caused 68 deaths, or 7 more than the number recorded last week. The mean temperature was 52.7°, being 1.8° under that of the week preceding, and 2.8 above that of the corresponding week of last year.

EXHIBITION OF FERNS, MOSSES, AND FUNGI IN GLASGOW.

THE exhibition of ferns, mosses, and fungi, under the auspices of the Cryptogamic Society of Scotland, to which reference was made in the JOURNAL of last week, took place on September 30th and following days, and it proved to be one of the most interesting ever submitted to the public. The collection of ferns was of rare excellence, including specimens of nearly every known British variety, and that of the mosses was equally complete. Among the latter was an extensive collection of innumerable varieties of mosses, gathered mostly in the Scotch Highlands, over a series of years, by Dr. Stirton, President of the Cryptogamic Society. It is impossible to speak too highly of the show of fungi, wholesome and unwholesome, which were arranged with the object of illustrating the extent to which edible fungi exist, and how they might easily be utilised for food. The exhibition was largely attended, and much interest was evinced in every department of it.

NEW HOSPITAL AT BARNHILL.

THE new hospital in connection with the Barnhill Poorhouse was formally opened on September 30th, and, by its erection, great improvements have been made in the means for treating the sick. As now arranged, the western half of the establishment is entirely devoted to hospital purposes, while the last wing is wholly set apart for the accommodation of the ordinary inmates of the poorhouse. The wards are systematically arranged on the different floors, and, by these changes, considerable additional accommodation has been obtained. There are now twenty-one wards, with 265 beds, and six large day-rooms for nurses attached, all of which are well lit and ventilated. The wards have been admirably fitted up, and are furnished with all the modern appliances for efficiently conducting the new system of nursing the sick. Formerly, the nurses were almost entirely composed of pauper inmates of the house, but now the Nightingale system has been introduced. Each ward is in the charge of certificated nurses, and the whole staff is under the direction of a trained lady-superintendent. The Committee are to be congratulated on the success which has attended their efforts to improve in every way their parochial hospital, as it must result in increased efficiency and economy.

ROYAL INFIRMARY, EDINBURGH.

THE financial year of the Royal Infirmary, Edinburgh, has just closed; and the amount received during the year, consisting of sums of £100 and upwards, in the form of donations and legacies, reaches the respectable figure of £20,925 18s. 6d.; of this, however, £2,670 has been for the Convalescent House at Corstorphine. Among the larger sums received are £2,269 from William Baillie, Esq., of Fallahill; Rev. Wm. M'Lean of Penninghame, £5,400; John Humphry, Esq., Pitlochry, £3,000; James Macgregor Mackay, Esq., Brighton, £1,000; John Thomson, Esq., Bathgate, £1,000; John Vernon Webster, Esq., £1,180 4s. 8d., etc. The managers of the infirmary are grateful for the liberal support afforded them, and are encouraged to appeal for still further assistance, in order that the debt on the New Royal Infirmary may be speedily extinguished, and the enhanced cost of maintenance fully provided for.

OPENING OF THE ANATOMICAL DEPARTMENT IN THE NEW UNIVERSITY BUILDINGS, EDINBURGH.

ON Monday, the dissecting-rooms in the New University Buildings, Edinburgh, were opened for the session. This somewhat premature opening has been rendered imperatively necessary by the overcrowding in the old dissecting-rooms, which not only incommoded the students at work there, but compelled many of them to seek their anatomical training elsewhere. The new dissecting-room (for, departing from the old system of having several rooms for the purpose, the practical anatomy, as far as dissection goes, will be confined to one room) is 108 feet in length, 39 in breadth, and, at the lowest part, 27 in height. The walls are of brickwork, painted; the flooring is splendid, and the light is derived from the roof and from windows facing the north. It will be heated mostly by hot-water pipes, but there are several fireplaces, which will aid in heating and ventilating so spacious a hall. In the middle of the room are troughs, with hot and cold water for practical purposes, while at one end there is ample cloak-room and lavatory accommodation. This room will comfortably contain five hundred students. As an adjunct, there is a large well-lighted bone-room, a microscope-room, and various smaller ones for other purposes. The new lecture-room, which will not be required for three weeks yet, will also provide comfortable room for five hundred students, is well lighted, and has complete facilities for the proper illustration of the lectures; is lighted by a cupola roof, and the writing-desks are of iron, so that they may resist the ravages of time and the initial-cutting propensities of future medical "'Arrys". The ventilation is provided for by the shaft described in the JOURNAL a fortnight ago. The department is provided with a lift and other conveniences which need not be specified.

COTTAGE HOSPITAL AT STOW.

IT is proposed to provide a cottage hospital at Stow. To procure the necessary funds, a bazaar was held last week. In opening it, Lord Reay, who presided, said that the object of such hospitals was for the treatment of cases of an acute character, of epidemic diseases and surgical cases where operations required to be performed on the spot, and the patients could not bear removal to Edinburgh. In carrying out the object in view, they must endeavour, by a proper scale of charges, to make it self-supporting.

THE SOCIAL SCIENCE CONGRESS.

THE opening meeting of the Social Science Congress took place at Parliament House, Edinburgh, on Wednesday, and was attended by a large concourse of members. The President, Lord Reay, delivered the inaugural address. The Sections began to meet on Thursday morning.

CONVALESCENT SEASIDE HOMES.

THE eleventh annual general meeting of the subscribers to the West of Scotland Convalescent Seaside Homes at Dunoon was held in Glasgow on Monday. Sir Peter Coates presided, and there was a good attendance, while letters of apology were read from many influential supporters. The Directors' report submitted showed that, at the previous meeting, 183 convalescents remained in the institution; and that, since then, 2,339 had been admitted, while 142 applicants had been rejected as unsuitable. Of the total, 2,108 were perfectly restored to health, 106 were very much improved, 51 were but partially benefited, 137 did not improve, and 120 were now under treatment. During the past year, no deaths had occurred, that being the first year since the commencement of the homes concerning which such a statement could be made. It was remarkable, however, that, although 16,293 applicants had been received in the course of the past eleven years, only 19 deaths had been recorded. The weekly cost of each person for sustenance had been about 5s. 9¼d., being three farthings a week lower than last year. It was mentioned that the new wing had cost £7,985 16s. 9d., of which £5,918 15s. 2d. remained a burden on the institution; but Miss Clugston hoped to remove this by means of a bazaar. The financial statement, which was read by Mr. J. Gray, the honorary treasurer, gave the ordinary revenue at £3,899 15s. 8d., and the ordinary expenditure at £3,772 14s. 7d. The chairman and Mr. T. White intimated that they were willing to subscribe £100 each towards the liquidation of the cost of the new wing in the event of other eight gentlemen doing the same. A number of workmen's representatives complained of the restriction of the hours during which convalescents were allowed to recreate outside the gates; but the chairman replied that the directors were determined to enforce these rules, as they had been beneficial to all parties. The report, with the accompanying financial statement, was adopted, the directorate completed, the institution recommended to continued public support, and the usual votes of thanks awarded. Sir Peter Coates of Auchendrane, Messrs. James White of Overtoun, and Alexander Crum of Thornliebank, agreed to give £100 each towards the liquidation of the debt on the institution.

IRELAND.

An outbreak of scarlatina, of a serious character, is reported to have taken place at Croom, in the county Limerick: and it is reported that several children have died from the disease.

At a meeting of the Drumcondra Town Commissioners, held last Monday, Dr. Charles A. Cameron was appointed public analyst to the township, at a remuneration of ten guineas *per annum*.

THE RECENT INQUIRY AT THE CORK FEVER HOSPITAL.

At a special meeting of the Council of the Irish Medical Association, held on Tuesday last, the following resolution was proposed by Dr. Chapman, President of the Association, seconded by Dr. A. H. Jacob, and unanimously adopted.

"The Council of the Irish Medical Association, having regard to the facts disclosed in the recent inquiry respecting occurrences at the Cork Fever Hospital, and being of opinion that Dr. Jones acted conscientiously within the best of his judgment as a physician, and in complete accordance with professional propriety, hereby expresses its sympathy with him in regard to the charges made against him.

"That the Council furthermore, in vindication of the freedom of action of a medical attendant, responsible for the life and health of his patient, cannot recognise the competency of any non-medical tribunal to pass judgment on a question of purely medical science; nor does this Council consider that any physician should be held responsible for results, so long as due skill and care have been devoted by him to the treatment of the patient entrusted to him."

DR. HUDSON.

We regret to learn that, on account of failing health, Dr. Hudson, Physician in Ordinary to the Queen in Ireland, and the Crown representative for Ireland on the General Medical Council, has resigned the Regius Professorship of Medicine in the University of Dublin. It is believed that Dr. Banks, late King's Professor of Medicine in the School of Physic, and the present representative of the Queen's University on the Science Medical Council, will be selected to succeed Dr. Hudson in the Regius Professorship.

ST. MARK'S OPHTHALMIC HOSPITAL.

We regret to learn that it is contemplated—unless immediate and substantial help be obtained from the public, so as to enable the authorities of this hospital to clear off the heavy debt they are now in, and to carry on the future work of the charity—to close a number of beds, and to refuse admission to future applicants, except cases of the greatest urgency. It is to be regretted, we think, that an amalgamation was not made between this hospital and the National Eye and Ear Infirmary, when, on two occasions within recent years, such a union might, perhaps, have been arranged, to the benefit of both institutions. Healthy professional and scientific rivalry is, doubtless, beneficial; but Dublin is too small a city to support two special ophthalmic hospitals, in close vicinity to each other, in addition to the too numerous small general hospitals, in nearly all of which there are special ophthalmic and aural departments. The National Eye and Ear Infirmary is about changing its quarters from Stephen's Green, to larger and more commodious premises in Molesworth Street.

THE SLIGO WATER-SUPPLY.

The Sligo Corporation have decided to borrow a sum of £30,000 from the Local Government Board, the amount required for the waterworks; and have recently passed a resolution, requesting the Board to hold an inquiry into the matter.

[illegible] FOR [illegible] HOSPITALS, CORK.

The Committee have appealed for the necessary funds to complete the Building Fund and remove the debt under which this institution labours. The total cost of the new hospital is £13,000, of which upwards of £11,000 has already been received; and, of the sum required, a certain amount has been promised.

NURSING AT GUY'S HOSPITAL: STATEMENT OF THE GOVERNORS.

A memorial with reference to the nursing at Guy's Hospital having been forwarded to the Governors of the hospital by the Guardians of St. Saviour's, the Governors, at their meeting on Wednesday, the 29th ultimo, adopted the following reply:

"The guardians state that 'they have heard with real concern that the governors have determined to make the physicians and surgeons subordinate to the nurses.' The governors are not aware of the source from which the guardians can have received such information. They can only state for themselves that the subordination of the nurses to the express orders of the physicians and surgeons in all matters involving or affecting medical or surgical treatment is, in their opinion, a fundamental principle of hospital management; that they are determined to maintain that principle, and that no suggestion for a departure from that principle has reached them from any person in or out of the hospital. The general arrangements for the supply of persons fit to be trained as nurses, for the health and training of such persons, and for assigning to them their posts in the hospital, involve questions of great complication and difficulty, including the domestic relations and duties of nearly one hundred and fifty women of various social ranks, which call for much tact and judgment in administration. In all the alterations which have bern made, the sole aim of the governors has been the increased welfare of the patients; and during all the discussions between the medical staff and themselves their object has been to 'conciliate', without any desire to assert unduly the power placed in the hands of the court as the controlling authority of the hospital. Last autumn the late matron resigned her office after thirty-four years of approved service; and Miss Burt, who had for six years discharged with great credit the offices of superintendent of the Leicester Infirmary and of the Training Establishment for Nurses, was invited to undertake the duty. She entered on her duties on November 1st, 1879, and at once, under the instruction of the treasurer, proceeded to deal with those points on which improvements had been for a long time past admitted to be necessary. It was unfortunate that the opinions of the staff were not fully ascertained before any new rules were drawn up. It was, however, still more unfortunate that a prejudice had been raised throughout the hospital against the matron a month before she came, viz., on September 26th. The rules which had been prepared for the guidance of the nurses were, in consequence of the alarm raised in the wards, misinterpreted as soon as they were issued. The rules were intended to secure more punctual attendance in the wards; to remove all excuse for doing any work in the wards not directly beneficial to the patients; to provide orderly and comfortable meals for the nurses; to prevent the nurses leaving the wards for recreation at undesirable hours; to distribute the work done in the wards so as to secure a thorough training of probationers, of whatever social rank; to diminish the menial work of the trained nurses, which had been a serious hindrance to their proper duties in former times; to provide for the night-nursing by fully trained nurses; and, consequently, to require that trained nurses should take their share of night-work, a point on which, through misconception, there has been much controversy. A uniform dress for the several classes was also prescribed. No new measures have been introduced which in any way diminish the authority of the head nurse (or sister, as she is called in the Act of Parliament which, in 1724, established the hospital), or encourage nurses to act on their own responsibility, irrespective of the medical authorities; nor is there any justification for the suggestion that the orders of any one of the medical staff with respect to a patient under his care are not, and have not been, implicitly and immediately obeyed.

"The governors observe the importance attached by the guardians to the 'spiritual life of the patients', but no rules whatever exist in relation to it which can, as the guardians suppose, override the medical treatment of the patients, or in any way affect the efforts of the medical staff. In this respect, things continue on precisely the same footing as heretofore. The following is the only new practice adopted in religious matters. Short family prayers are read from a manual issued by the Christian Knowledge Society, at which the day-nurses attend before they go to breakfast and to their morning duty, and after they come off duty in the evening. The night-nurses also, after coming off duty, attend the short daily service in the chapel which has always been held there.

"Friendly co-operation between the staff and the executive authority appears to have ceased from the first promulgation of the rules, and although the governors have endeavoured to the best of their ability to remove misunderstandings, and, by careful and protracted inquiry, to discover in what practical matters the staff have reason to complain of

the general competency and conduct of the nurses, they have not been able to make the discovery. They have only met with what seem to them exaggerated inferences from a few particular occurrences, repeated over and over again, or general denunciations of the abstract principle of some supposed new system alleged to have been introduced. The governors have endeavoured to comply with the wishes of the medical staff as to the allocation or retention of nurses in particular posts, and as to the regulation of their hours, so as to suit the convenience of the physicians and surgeons, though at some sacrifice of important considerations. But these and other overtures of conciliation have been met by renewed acts of opposition, either in the form of collective protests or of attacks in the public journals, and by peremptory demands for the dismissal (as the only condition of peace) of an officer whose intentions and acts the staff, in the opinion of the governors, wholly misapprehend, who earnestly desires their assistance and advice, but with whom they refuse to communicate, notwithstanding repeated entreaties to them to meet her personally. The governors are not aware of any obnoxious rules or arrangements which need modification, but if at any time any such need should arise, the weekly committee appointed by the governors will give the medical staff, through the representatives they have been requested to select, the opportunity for making their requirements known. If, however, the medical staff do not attend—still more, if they refuse to attend the weekly committee—it is not possible for the governors to deal with requirements which the medical staff do not afford them the obvious means of dealing with.

"The guardians may rest assured that the governors are not unmindful of the reputation of the eminent men whose researches have gained celebrity for the school attached to Guy's Hospital. The governors, acting on the recommendation of the late and present treasurer, have given very substantial proof of the interest they take in the school, by the expenditure of many thousands of pounds within the last few years. But, important as the advancement of medical research may be, and undoubtedly is, in a professional and even in a national point of view, it must not be forgotten that the primary object of a hospital is the alleviation of the ever-present sufferings of the sick poor. The welfare of many charitable institutions might be imperilled if an impression should gain ground in the public mind, however ill-founded, that any professional objects or struggles for power stood in the way of cordial co-operation among all the persons entrusted in various degrees with responsibility for the successful attainment of this paramount end. Keeping this end steadily in view, but also having special regard to other interests and feelings, the governors have patiently persevered in efforts to avert consequences which have been for some time obviously impending; but they are not at liberty to evade the responsibilities of their position under an Act of Parliament, however painful their duty may be.—(Signed) H. HUCKS GIBBS, President.

In a correspondence published in the *Times* of Thursday morning, Mr. Bryant has very vigorously called in question the accuracy of the statements in this manifesto. Especially he denies that any joint inquiry by the governors and the staff has been conducted.

NUGAE HIBERNICAE.

No. III.—THE DUBLIN LIONS.

AT three o'clock p.m. on Friday, September 24th, 1880, the lions in the Dublin Gardens started a play worthy of their ancient reputation, and which nearly ended in the death of the ten lion cubs, which form, at present, one of the most attractive features of these well known gardens.

There are now, in the Dublin Gardens, two lionesses, called respectively "British Association" and "Zenobia", each the happy mother of numerous cubs, between whom, as between their respective mothers, a healthy jealousy exists.

It so happened, that "Zenobia's" cubs were, on the day in question, six weeks old, while the spotted darlings of "British Association" were eight months old (and valued at £50 each: a fair price, considering how badly rents are likely to be paid in Ireland during the coming winter).

"British Association" had been long separated from her five cubs, while "Zenobia" slept day and night surrounded by her pets—and it occurred to the elder five cubs that they ought to call upon and enquire after the welfare of their brethren and "Zenobia". Accordingly, they began to scrape gently at the sliding door, which separated their respective domiciles, asking for admission to interview their young relations and their respected mother; but "Zenobia" somehow did not understand their intentions, and grew very angry, and finally tore down, *toto corpore, et omnibus unguis*, the too slender partition which separated their cubicles.

Meanwhile, the superintendent of the gardens had been feeding a sick leopard in the neighbouring house with a tender rock-pigeon, and hearing the crash:

"Stupet insolitis alto
Maligno [illegible] exit in [illegible]e verti[illegible] pastor."

However, he had presence of mind sufficient to arm himself with a stout iron bar, with which, arriving on the scene of action, he struck, ungallantly, "Zenobia" on the snout as she was charging through the opened door on the unhappy but gallant cubs of "British Association", fully resolved to die like African lions, and, in dying, to bring to Hades with them "Zenobia's" cubs.

The superintendent stood, with iron bar in hand, for fifteen minutes guarding the pass, before help arrived, when the combatants were finally separated, and peace for the time restored—a "peace with honour", like that of the Treaty of Berlin, but like it, liable to be interrupted as soon as a suitable opportunity shall offer.

I may add that neither "British Association" nor "Zenobia" are blood relations of the famous Dublin lioness "Biddy", whose edifying death some years ago, fortified by a black and tan terrier, who killed the rats that dared to gnaw the dying heroine's feet and paws, excited so much sensation amongst the readers of Sunday School magazines and pictorial children's weeklies, not only in England and America, but also in Spain and Brazil, in which countries a bull-fight is considered a spectacle fit for the study of ladies of rank, while rats annoying a dying lioness are voted "bad form". ZOOPHILUS.

THE REGISTRATION OF INFECTIOUS DISEASE AT JARROW.

THE evidence that is rapidly accumulating of the advantages gained in repressing epidemics, through the compulsory notification to the sanitary authority of each case of infectious disease as it occurs, has just received a most important addition, in the testimony of Mr. John Spear of its extreme value at Jarrow last year. It may be remembered that, by a local Act of 1878, every case of infectious disease occurring at Jarrow is required to be reported to the sanitary authority by the occupier and also by the medical attendant. Mr. Spear speaks of the usefulness of this notification in the highest terms. He says that "in its practical application it has been found, it may truly be said, perfect, and has left really nothing to be desired. If one tried hard to find fault, one might say that in a few cases the certificates have not come in at quite so early a date in the course of the case reported upon as was desirable; but, on the other hand, much more frequently it has happened that I have received unofficial notice of doubtful cases before a certain diagnosis in regard to them could be arrived at. So far, again, from this provision bringing the medical officer of health and the medical practitioners into conflict, as had been predicted by some, it has assisted in the formation of a close and pleasant intimacy between us, and a mutual confidence, which was freely illustrated during the year, when, on the occurrence of many cases presenting unusual and somewhat contradictory clinical features, I was permitted, without a single objection, to visit such cases, and take clinical observations, often twice a day, and for days continuously. The medical practitioners of the town are in one accord as to the efficacy and practicability of the measure, and most of them are now its warm supporters; whilst from private individuals I have not heard one single objection. The smoothness of its working, and the practicability of this measure, are, in short, established by the experience of Jarrow; provided, as has been pointed out to me by my professional brethren, the medical officer of health is not engaged in private practice, and is reasonably conciliatory in his dealings."

Mr. Spear speaks especially of the immense value of the receipt of early information of cases in a recent outbreak of typhus fever at Jarrow. The infection of this disease existed in the district, in no inconsiderable degree, throughout the year, and yet there was nothing approaching an epidemic outburst. In a district where typhus fever had not appeared for years, and amongst a low-class, closely-packed, often under-fed population, it was most unlikely that there should have been, always throughout a whole year, five or six different centres of typhus infection, and yet no outburst, unless it were for the prompt precautionary measures that were applied. In all human probability, the infection would have assumed, under such conditions, its usual form of an ill-defined epidemic wave, difficult to trace in its individual progress, and not have remained, as it did, "a mere dribbling stream, kept within a very narrow and always perfectly obvious channel". Moreover, the efficacy of prompt precautionary measures was demonstrated in numerous individual cases almost with the accuracy of a scientific experiment. Thus, for seven weeks, the typhus infection existed in a house where, with one exception, all the family suffered, the

sufferers being at last removed by the parish authorities. During this time, all but one neighbour was rigidly excluded. That neighbour, and that one only, took the disease, and subsequently her husband and all her husband's family suffered. Such was throughout the experience. When persons insisted on seeing a sick or dying relative, or upon attending a funeral party, in an infected house, they caught the disease; when a lover visited surreptitiously his sick mistress (four such instances occurred), he paid a like penalty; when a neighbour was allowed to nurse a patient, or lay out a corpse, she suffered; whenever such and similar indiscretions were allowed, and it was very difficult, sometimes impossible, to prevent them, the disease spread; when they were prevented, it disappeared. "In short, throughout", Mr. Spear observes, "we retained an effectual grasp upon the disease: when even a finger was relaxed, we could see, as it were, by its effects, the infection oozing away; when the grasp tightened, it was stayed."

With evidence such as this in its favour, it will be difficult for the Local Government Board to resist the general application of the requirement of compulsory notification of infectious cases, although, in their just issued report, the Board, whilst observing that they "are glad to find the system is being further extended", state that they "have hesitated, without further experience of the system, to introduce any general measure on the subject." The results of its practical working in the now numerous districts where it is carried on would seem to be of a wholly favourable kind, and no less than five towns which applied to Parliament for powers of notification this session have been granted such powers with the full sanction of the legislature and of the Local Government Board. Evidently, then, the time is rapidly approaching for an entirely new departure with regard to this important question; and, as numerous local authorities will probably now have under consideration the propriety of promoting local Bills in Parliament for next session, it would be well that their medical officers of health should take the opportunity of bringing under their notice the advantages which have thus been practically shown to accrue from the compulsory notification of all cases of infectious disease.

PRIZES IN THE MEDICAL SCHOOLS.

THE following are lists of the successful candidates for prizes in the Medical Schools during the session 1879-80.

ST. BARTHOLOMEW'S HOSPITAL.—Lawrence Scholarship and Gold Medal, D. D. Day; Brackenbury Medical Scholarship, D. A. King; Brackenbury Surgical Scholarship, A. A. Bowlby; Senior Scholarship in Anatomy, Physiology, and Chemistry, A. J. Anderson; Open Scholarships in Science, H. Lewis Jones, T. W. Shore; Preliminary Scientific Exhibition, J. B. Nias; Jeaffreson Exhibition, A. Thisleton; Kirkes Gold Medal, D. D. Day; Bentley Prize (no award); Hichens Prize, J. R. Forrest; Wix Prize (no award); Practical Anatomy, Senior: Foster Prize, R. J. Collyns; 2. J. L. Stretton; 3. H. Hendley; 4. F. J. Walker; 5. J. Berry; 6. E. W. Roughton, J. Williams, and S. Davies (equal); 7. S. Pruen; 8. M. Wright; 9. H. E. Bateman; 10. A. W. Wheatly; Practical Anatomy, Junior: Treasurer's Prize, A. E. Hind; 2. T. W. Shore; 3. T. E. Lovegrove; 4. C. O'E. Harding; 5. A. M. Page; 6. J. F. Steedman; 7. S. Paget.

CHARING CROSS HOSPITAL.—Llewellyn Scholarship, Charles Rout. Golding Scholarship, W. B. C. Treasure. Governors' Clinical Gold Medal, C. W. G. Burrows. Pereira Prize, C. R. C. Lyster. Anatomy, Senior: Silver Medal, D. L. Jones; Certificates, W. Tibbles, W. B. C. Treasure, J. L. Rodwell, and J. Donald; Junior: Bronze Medal, W. H. Haw; Certificates, C. Josling, B. W. Thomas, and A. F. Turner. Physiology, Senior: Silver Medal, J. T. Tibbles; Certificates, J. Donald, W. B. C. Treasure, D. Ll. Jones, and W. Tibbles; Junior: Bronze Medal, H. d'Arcy Power; Certificates, C. Josling, and E. Berkley. Chemistry, Silver Medal, B. W. Thomas; Certificates, J. Marriott, A. E. Nelham, and R. S. Oram. Medicine, Senior: Silver Medals, Charles Rout, and E. E. Newnham; Certificates, C. W. G. Burrows, and A. Honman; Junior: Bronze Medal, H. R. Hancock; Certificates, J. Donald, W. C. Beatley, and J. H. Taylor. Surgery, Senior: Silver Medal, Edwin Wooton; Certificates, C. W. G. Burrows, and Charles Rout; Junior: Bronze Medal, J. Donald; Certificate, G. Locke. Botany, Silver Medal, S. Wyborn; Certificates, J. Donald, and W. B. C. Treasure. Materia Medica, Silver Medal, G. Locke; Certificates, H. R. Hancock, and W. B. C. Treasure. Midwifery, Silver Medal, Charles Rout; Certificate, A. Honman. Forensic Medicine, Silver Medal, C. W. G. Burrows; Certificate, W. J. Haddock. Pathology, Silver Medal, A. Honman; Certificate, W. Niblett. Practical Chemistry, Silver Medal, W. C. Beatley.

ST. GEORGE'S HOSPITAL.—William Brown £100 Exhibition (held by) G. R. Turner; William Brown £40 Exhibition (held by) A. M. Sheild; Sir Charles Clarke's Prize, W. V. Robinson; Brodie Prize in Surgery, H. R. Fuller; Henry Charles Johnson Prize, P. Edgelow; Treasurer's Prize, Norman Reid; Thompson Medal, H. H. Taylor.

GUY'S HOSPITAL.—Treasurer's Gold Medal for Medicine, Percy Warner. Treasurer's Gold Medal for Surgery, William Wentworth Fryn. Sands Cox Scholarship, Edwin James Wenyon. Third Year's Students: First Prize, £35, George S. Mahomed; Second, John Dean; and Percy Warner. Second Year's Students: £17 10s. each, Edwin James Wenyon and Sidney Worthington (equal). Certificates, Wheelton Hind (highly commended); James Henry Targett, and William Thos. [illegible]. First Year Students: First Prize, Albert Martin. Second Prize, [illegible] Warner. Hodgkin Prize, [illegible]. Certificates [illegible]. Physical Exercises Prize, Walker, George Arthur [illegible]. Hostmaster's. Michael Harris Prize, Louis Albert Dunn.

KING'S COLLEGE.—Scholars, William George Evans and Septimus Farmer (equal), Senior; Walter Tyrrell Brooks, Second Year. Alfred Mason Vann, Sydney Sargent Merrifield, and Gerald George Hodgson, Junior. Gerald George Hodgson, Charles Plumley Childe, and Thomas Sydney Short, Warneford, Class I. Henry Daniel James, Warneford, Class II. Richard Henry Botham and Gotfred Midgley Taylor (equal), Science (Clothworkers' Company). Walter George McMillan, Daniell. *Winter Session*, Warneford Endowment, Prizes, John Arthur West and Sidney Ernest Craddock. Leathes Endowment, Prizes, John William Kealy and Peter Henry Emerson. Divinity, First Year, Prizes, Herbert Crowley Dent, Charles Thomson Dornford, Thomas Sydney Short, and William Habgood; Second Year, Prizes, Robert Garner Lynam and Alfred Mason Vann. Anatomy, Prize, St. Clair Thomson; Certificates of Honour, George Stratton Aslett, Arthur Rae Edwards and Bertram Herbert Stivens (equal). Physiology, Prize, Robert Garner Lynam; Certificates of Honour, Hugh Reeve Beevor and Bertram Herbert Stivens. Chemistry, Prize, Guy David Porter; Certificate of Honour, Robert Garner Lynam. Medicine, Prize, William Thomas Maddison; Certificate of Honour, Josiah Charles Castor. Clinical Medicine, Prize, Charles Henry Whitcombe; Certificate of Honour, William Thomas Maddison. Surgery, Prize, Simpson Powell; Certificate of Honour, Josiah Charles Castor. Clinical Surgery (Professor Wood), Prizes, Simpson Powell and Ernest Hamilton Wagstaff (equal). Clinical Surgery (Professor Lister), Prize, John Arthur West; Certificates of Honour, St. Clair Thomson, Ernest Walter Benson, and Charles Ernest Goddard. Zoology and Comparative Anatomy, Prize, John Freeland Freeland. *Summer Session*. Practical Physiology, Prizes, Francis William Le Maistre and Nathaniel Henry Turner (equal); Certificates of Honour, Thomas Sydney Short and Herbert Crichton McDouall. Practical Chemistry, Prize, Herbert Crichton McDouall; Certificates of Honour, George Wale and John Freeland Freeland. Botany, Prize, Charles William Kieser; Certificates of Honour, Thomas Sydney Short and John Freeland Freeland. Tanner Prize, Charles Ernest Goddard. Todd Clinical Prize, Simpson Powell. Pathological Anatomy, Prize, Bertram Herbert Stivens; Certificate of Honour, William Groom. Practical Biology, Prize, Charles William Kieser; Certificates of Honour, John Freeland Freeland and Percy George Lewis. Forensic Medicine, Prize, William Thomas Maddison; Certificate of Honour, Sidney Ernest Craddock. Obstetric Medicine, Prize, William Groom; Certificate of Honour, Arthur Henry Gordon. Materia Medica, Prize, Walter Tyrrell Brooks; Certificates of Honour, Robert Garner Lynam and Sydney Sargent Merrifield (equal). Clinical Medicine, Prize, Philip Boobbyer. Associates, William Henry Addison, Charles Edward Baddeley, Reginald Clarke, William George Evans, Septimus Farmer, Thomas William Graves, Herbert John Robert Moberley, Henry Morris, Bernard James Newmarch, Hibbert Sullivan Parker, Henry Frederick Hugh Smith, Francis Henry Spencer.

LONDON HOSPITAL.—Hospital Medical Scholarship, T. G. Stonham; Certificates, W. J. Pook, C. E. Brunton. Hospital Surgical Scholarship, E. A. Neatby; Certificate, S. H. Appleford. Scholarship in Human Anatomy, F. H. Taylor; Certificates, A. T. Schofield, J. Bostock, T. E. Gordon. Scholarship in Anatomy, Physiology, and Chemistry, R. F. Fox. Out-patient Dressers' Prizes, W. Coates, J. Sinclair, H. F. Iliewicz, G. Adkins. Entrance Science Scholarships, A. J. Richardson, B.A.; A. T. Ozzard. Buxton Scholarships, G. A. L. Bowling; S. F. Smith.

ST. MARY'S HOSPITAL.—1879. Open Scholarship in Natural Science, G. W. Hill. 1879-80. Scholarship in Pathology, A. Benson; Scholarship in Anatomy, R. P. Griffin; Prosectors, J. R. Cater and P. P. Whitcombe. *Summer Session*, 1879. First Year, Materia Medica, Prize, J. R. Cater; Certificates, H. Green, G. Harrison, W. F. Marjoribanks, G. F. Pollard, and W. F. Webster. Botany, Prizes, J. H. Spitzly and P. P. Whitcombe; Certificates, G. Harrison, W. F. Marjoribanks, and G. F. Pollard. Practical Chemistry, Prize, J. H. Spitzly; Certificates, J. R. Cater, H. Green, G. Harrison, and P. P. Whitcombe. Second Year, Midwifery, Prize, F. J. Ingoldby; Certificates, F. H. Butler, T. B. F. Eminson, and B. Thornton. Medical Jurisprudence, Prize, T. B. F. Eminson; Certificates, F. H. Butler and H. Stott. *Winter Session*, 1879-80. First Year, Anatomy and Histology, Prize, C. H. Hale; Certificates, E. P. Cockey, U. K. Dutt, F. A. Rogers, and A. T. Masters and L. Roberts (Anatomy), and G. W. Hill (Histology). Chemistry, Prize, E. P. Cockey; Certificate, T. H. R. Crowle. Second Year, Anatomy and Physiology, Prizes, H. Green and A. H. Willoughby; Certificates, J. R. Cater (Anatomy), R. H. S. Spicer and W. R. Tytheridge (Physiology). Third Year, Medicine, Prize, T. B. F. Eminson; Certificate, E. A. Wood. Surgery, Prize, T. B. F. Eminson. Operative Surgery, Prize, T. B. F. Eminson; Certificate, W. B. Thomson. Pathology, Prize, T. B. F. Eminson. Third and Fourth Year, Clinical Medicine, Prize, G. C. R. Bull; Certificates, T. B. F. Eminson, R. N. Hormazdji, T. M. King, F. St. G. Mivart, B. Thornton, and E. A. Wood. Clinical Surgery, Prizes, F. St. G. Mivart and H. E. Sieveking; Certificates, G. C. R. Bull, T. B. F. Eminson, W. B. Thomson, and R. W. Wilson.

MIDDLESEX HOSPITAL.—Broderip Scholarships, 1. P. T. Thane; 2. H. Canton. Murray Scholarship, J. B. Sutton. Governors' Prize, P. T. Thane. Clinical Prize, E. Davis. Medicine, Prize, P. T. Thane; Certificates, E. Davis, J. B. Sutton. Surgery, Prize, E. Davis; Certificate, P. T. Thane. Pathology, Prize, P. T. Thane; Certificate, E. Davis. Practical Surgery, Prize, J. H. Douty; Certificates, C. G. Brodie, C. E. Faunce, G. Frost, J. H. Minchinton, and J. B. Sutton. Anatomy, Prize, W. Hern; Certificates, C. G. Brodie, E. R. Dimsey, J. H. Douty, C. E. Faunce, G. Frost, J. F. McMillan, H. R. Neblett, M. W. Russell, T. Taylor, M. Williams, W. E. Wynter. Physiology, Prize, G. Frost; Certificates, J. H. Douty and W. Hern. Dissections, W. Hern. Chemistry, Prize, R. Price; Certificates, J. S. Amoore, W. Matthews, and H. J. Thornton. Midwifery, Prize, G. Frost; Certificates, E. R. Dimsey, J. H. Douty, S. R. Dyer, W. Hern, E. Stewart, H. J. Thornton. Medical Jurisprudence, Prize, G. Frost; Certificates, J. H. Douty and H. J. Thornton. Materia Medica, Prize, W. H. Crago; Certificates, R. B. Bentlif, C. O. Birch, G. M. Brahe, A. Gittings, W. W. Linney, W. Livermore, J. McOscar, R. Mills, A. W. Ogle, R. Price, S. W. Quartley, A. E. Rook, P. W. Smith, A. F. Stace, W. A. Stevenson, V. H. W. Wingrave, W. Wise. Practical Chemistry, Prize, W. H. Crago; Certificates, W. W. Linney, R. Mills, A. W. Ogle, R. Price. Botany, Prize, W. H. Crago; Certificates, W. Livermore, R. Mills, A. W. Ogle, P. W. Smith, W. Wise. Practical Physiology, Prizes, W. H. Crago and V. H. W. Wingrave. Comparative Anatomy, Prize, J. F. McMillan; Certificate, C. E. Faunce. Psychological Medicine, Prizes, G. Frost and J. B. Sutton; Certificates, C. G. Brodie, J. H. Douty, and S. R. Dyer. Medical Society's Prize, W. E. Wynter and P. T. Thane. Entrance Scholarships, October 1879, 1. H. C. S. Forbes; 2. A. W. Ogle.

ST. THOMAS'S HOSPITAL.—[illegible] Scholarship, 1879. First Year's Student, O. F. N. Treadwell, £21. Certificates. Second Year's Students, L. W. Buckle, £15, and Certificate, W. Watson Cheyne. Lines, Girdwood Certificate. [illegible] Session, 1879-80.

—Entrance Science Scholarships, R. M. Williams, £60 and Certificate; B. Relton, £40 and Certificate. First Year's Students, C. D. Green, Tite Scholarship, £30, and Certificate; W. B. Tomson, £20 and Certificate; F. F. Caiger, £10 and Certificate. Third Year's Students, W. W. Jones, Second Tenure of College Scholarship, £42, and Certificate; also Prize, £20, and Certificate. Anatomical Assistants, G. F. Cooper, L. W. Bickle, and W. T. Crick, Certificates; Prosectors, J. E. Dunn and F. H. Furnival, Prizes and Certificates. Solly Medal and Prize (£20), C. A. Ballance. Surgery and Surgical Anatomy, W. A. Duncan, The Cheselden Medal; Practical Medicine, C. F. Coxwell, The Mead Medal. Resident Accoucheurs, W. A. Battle, K. Takaki, C. E. Sheppard, and C. A. Ballance, Certificates. House-Surgeons and Assistant House-Surgeons, D. S. Davis, R. J. Williamson, R. P. Smith, and C. E. Sheppard, House-Surgeons; R. J. Williamson, C. A. Ballance, A. Newsholme and J. R. Lunn, Assistant House-Surgeons, Certificates. House-Physicians and Assistant House-Physicians, W. W. Groome, R. P. Smith, J. Shaw, and A. Newsholme, House-Physicians; R. P. Smith, D. S. Davis, J. Shaw, A. Newsholme, R. J. Williamson, and G. S. Hatton, Assistant House-Physicians, Certificates. General Proficiency and Good Conduct, W. A. Duncan, The Treasurer's Gold Medal.

UNIVERSITY COLLEGE, LONDON.—*Winter Session.*—Entrance Exhibitions (tenable for two years), £30, S. C. Jones; £20, E. W. Emtage; £10, Conrad Pereira. Atchison Scholarship, for general proficiency £45 per annum, tenable for two years, Henry Maudsley and R. S. Walton (equal). Atkinson-Morley Surgical Scholarship (£45 per annum, tenable for three years), Henry Maudsley. Liston Clinical Medal), D. E. Anderson. Anatomy: Gold Medal, W. R. Buckell. First Silver Medal, W. C. Wilkinson; Second Silver Medal, E. Skipper. Certificates, 4. E. W. von Tunzelmann; 5. W. D. Halliburton; 6. F. H. Lane; 7. S. H. C. Martin and C. R. Elgood (equal); 9. W. H. Horrocks; 10. E. T. Thring; 11. E. Hudson; 12. F. J. F. Culhane and F. Knight (equal); 14. F. J. Bollen; 15. E. A. Dingley; 16. G. H. Fink.—Junior Class: Silver Medal, A. J. Turner. Certificates, 2. R. H. Marten; 3. Harry Littlewood; 4. W. A. Gostling; 5. Thomas Wilson; 6. W. H. Brown; 7. J. J. Powell; 8. D. Williams; 9. J. H. Brown; 10. R. E. Duke; 11. J. S. Reed; 12. F. A. Dixey; 13. Frank Hinds; 14. H. H. Wigg; 15. A. J. Drew. Physiology: Gold Medal, E. W. von Tunzelmann. First Silver Medal, W. R. Buckell. Second Silver Medal, Paul E. Moline. Certificates, 4. A. F. Stoddart; 5. F. J. Bollen; 6. W. A. Gostling; 7. W. C. Wilkinson; 8. E. Skipper. Chemistry: Gold Medal, W. A. Gostling. First Silver Medal, H. L. Sulman. Second Silver Medal, S. F. Harmer. Certificates, 4. Albert Tarn, P. Mukerji, and J. W. Carr (equal); 5. P. J. Edmunds, F. E. Girling, and Bernhard F. Halford (equal); 6. E. F. Berry, W. M. Bayliss, E. H. Thane, and P. Flemming (equal); 7. T. A. Lawson, J. H. E. Brock, and E. G. Stocker (equal); 8. E. R. St. Clair Corbin and C. B. Innes (equal). Medicine: Gold Medals, R. S. Walton and A. Atmaram (equal). Silver Medal, D. Collingwood. Certificates, 4. P. E. Shearman and H. W. Newsholme (equal); 6. H. Maudsley and R. W. Barrow (equal); 8. W. Renner. Surgery: Gold Medal, Henry Maudsley. First Silver Medal, G. E. Twynam. Second Silver Medal, P. E. Shearman. Certificates, 4. A. A. Carr; 5. P. Rhys Griffiths; 6. S. R. Lidiard and R. W. Barrow (equal); 8. H. M. Curtayne; 9. W. Renner. Zoology and Comparative Anatomy: Gold Medal, J. H. E. Brock. First Silver Medal, Walter E. Roth. Second Silver Medal, S. F. Harmer. Certificates, 4. E. H. Thane; 5. W. B. Ransom; 6. P. J. Edmunds; 7. F. C. Hart Smith; 8. J. W. Carr; 9. P. Flemming; 10. W. M. Bayliss.—Practical Class: Silver Medal, W. G. Earle. Certificates, 2. J. R. Adie; 3. W. M. Bayliss; 4. F. C. Hart Smith. Clinical Medicine: Gold Medal, A. Atmaram. Silver Medal, R. S. Walton. Certificate, 3. L. F. Ford.—Junior Class.: Silver Medal, W. C. Adams. Certificates, 2. E. Laurent, J. S. McDonagh, and R. P. Roberts (equal); 5. F. Quick, J. A. Shaw, and C. Stonham (equal); 8. H. W. Newsholme; 9. A. D. Maitland; 10. S. R. Lidiard; 11. H. M. Curtayne. *Summer Session.*—Botany: Gold Medal, W. A. Gostling. First Silver Medal, B. F. Halford. Second Silver Medal, S. F. Harmer. Certificates, 4. W. B. Ransom; 5. J. H. E. Brock and W. G. Earle (equal). Midwifery: Gold Medal, Charles Stonham. Silver Medal, A. A. Carr. Certificates, 3. S. R. Lidiard; 4. P. Rhys Griffiths.—Junior Class: Silver Medal, E. T. Thring. Certificates, 2. W. H. Horrocks; 3. Ernest Hudson; 4. Evan Williams, J. W. Walker, and F. J. Bollen (equal); 7. R. Boxall; 8. E. Skipper; 9. I. H. Jones; 10. F. J. Lea; 11. J. W. Draper; 12. F. H. Stokes; 13. C. O. Fowler; 14. W. J. F. Sumpter. Practical Chemistry—Senior Class—Gold Medal, A. H. N. Lewers. First Silver Medal, F. W. Cock. Second Silver Medal, W. A. Gostling. Certificates, 4. C. R. Elgood; 5. J. R. Day, C. J. Pitt, Thos. Wilson, R. de Cordova, J. L. Blomfield, and W. H. Brown (equal); 8. Frank Hinds, A. J. Turner, J. J. Powell, and E. A. Dingley (equal). Junior Class: Gold Medal, T. A. Lawson. First Silver Medal, E. H. Thane. Second Silver Medal, W. M. Bayliss. Certificates, 4. Hy. Bird; 5. J. H. E. Brock; 6. W. B. Ransom, H. R. Woolbert, C. W. Weighell, J. W. Yeats, C. L. Arkle, H. T. Bury, P. Flemming, and J. W. Carr (equal); 7. C. F. Stickland, Wilson Hy. Fox, and J. J. Weaver (equal); 8. Christian Böhrsmann, F. C. Hart Smith, J. R. Bennett, W. T. Cocking, W. J. Tilley, Lawrence Barnett, John Bell, T. P. Gostling, Charles Andrews, Wm. Sutherland, and F. W. Crowther (equal); 9. James Pearson, F. J. Butt, A. F. Voelcker, I. Schade, G. E. Claxton, and S. C. Jones (equal). Materia Medica: Gold Medal, R. de Cordova. First Silver Medal, W. D. Halliburton. Second Silver Medal, W. C. Wilkinson. Certificates, 4. W. A. Gostling; 5. S. H. C. Martin and W. H. Horrocks (equal); 7. E. W. von Tunzelmann; 8. W. H. Brown; 9. H. H. Wigg; 10. J. J. Powell and J. W. Draper (equal); 12. E. A. Dingley; 13. J. R. Day; 14. H. P. Birch. Medical Jurisprudence: Gold Medal, D. W. Donovan. Silver Medal, E. Laurent. Certificate, 3. H. W. Newsholme. Pathological Anatomy: Silver Medal, E. Laurent. Certificates, 2. E. Skipper and G. W. Collins (equal); 4. J. A. Shaw; 5. P. Rhys Griffiths. Practical Physiology: Gold Medal, Ernest Hudson. Silver Medal, F. W. Cock. Certificates, 3. H. H. Wigg; 4. W. A. Gostling; 5. J. J. Powell; 6. W. H. Brown. Ophthalmic Medicine and Surgery: Silver Medals, A. A. Carr and H. M. Dancy (equal). Certificate, 3. S. Gordon Smith. Hygiene: Silver Medal and First Prize, F. W. Mott. Second Prize, J. S. Tew. Certificates, 3. J. D. Hayward; 4. D. E. Anderson. Clinical Medicine, Junior Class: Prize, E. Skipper. Certificates, 2. J. W. Walker; 3. E. T. Thring; 4. P. Vincent; 5. H. G. Sworn; 6. J. D. Bluett and M. E. Dovaston (equal); 8. J. E. Penn; 9. F. A. Stokes.

WESTMINSTER HOSPITAL.—*Summer Session*, 1879.—Class Certificates: Practical Chemistry—1. C. H. Wise, E. A. G. Doyle, and D. D. Dryden; 2. W. A. Barrett and C. J. Humphreys. Histology (1st Stage)—1. C. H. Wise and R. Halpin; 2. D. D. Dryden and R. Sanderson; (2nd Stage) 1. R. Halpin and E. A. G. Doyle; 2. R. Sanderson and G. E. Butler. Materia Medica.—Prize and Certificate—J. D. Mortimer: Second Class Certificates, J. Hepburn and C. H. Wise. Midwifery—Prize and Certificate—C. Glassington; Certificates—1. Mercer Davies and W. H. Quicke; 2. W. H. Legge. 1879-80. Entrance Exhibitions—(Houldsworth) 1. H. W. Hart (£50 per annum); 2. J. Swain (£10 per annum). Mr. Gould's Prize for Practical Anatomy (no award); Exhibition for First Winter Subjects, P. R. Mander; Frederic Bird Medal and Prize, Mercer Davies and W. H. Quicke (equal); Chadwick Prize, J. W. Batterham; Dr. Murrell's Prize for Histology, R. Sanderson; Clinical Medicine, Mercer Davies; Clinical Surgery, G. F. Gubbin. Class Certificates: Anatomy (Senior)—1. R. Sanderson and E. A. G. Doyle; 2. G. E. Butler and A. De Courcy Scanlan. (Junior) 1.—P. R. Mander, P. Jackson, H. Larder, C. Waller, and R. Caldwell; 2. J. Smith, C. J. Humphreys, W. Urwick, and J. C. Matthews. Physiology (Senior)—2. E. A. G. Doyle and R. Sanderson. (Junior)—1. P. R. Mander and H. Larder; 2. C. Waller and C. J. Humphreys. Chemistry—1. P. R. Mander; 2. W. B. J. Gubbin, J. C. Matthews, F. C. Kempster, and H. Larder. Medicine—1. Mercer Davies, W. H. Quicke, and J. W. Batterham. Surgery—1. J. W. Batterham; 2. Chas. Glassington. Histology (3rd stage)—1. R. Sanderson and G. E. Butler; 2. E. A. G. Doyle.

LEEDS SCHOOL OF MEDICINE. *Winter Session*, 1879-80. Medicine (no award). Surgery, Medal, J. W. Dearden; Certificate, F. H. Mayo. Anatomy, Medal, John Dacre; Certificate, W. J. Waddington. Lecturer's Prize, J. Dacre. Anatomy (Junior), Certificates, H. J. Robinson and T. J. Walker. Physiology, Medal, J. Dacre; Certificates, Arthur Bowe and A. A. Ward; Lecturer's Prize, John Dacre. Chemistry (no award). *Summer Session*, 1880. Forensic Medicine, Medal, J. W. H. Brown; Certificate, F. Wilson. Pathology, Prize, F. H. Mayo. Botany, Medal, G. L. Wells; Certificate, H. Child. Practical Chemistry, Medal, H. Child; Certificates, J. J. Mountain and J. N. Hawtin. Midwifery, Medal, J. Dacre; Certificate, A. A. Ward. Materia Medica, Medal, — Smailes; Certificate, J. H. Naylor.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—*Winter Session*, 1879-80. Lyon Jones Scholarship, F. C. Larkin, A. Barron, J. W. Ellis, and A. H. Wilson. Third Year Subjects (Medicine, Surgery, and Pathology), Silver Medal, R. Honeyburne; Bronze Medal, F. J. Laimbeer. Second Year Subjects (Advanced Anatomy and Physiology), Torr Gold Medal, A. H. Wilson; Bronze Medals, W. C. Garman and T. P. Lowe; Certificates, 1. G. Jones; 2. J. R. L. Dixon. First Year Subjects (Elementary Anatomy and Physiology, and Chemistry), Bligh Gold Medal, W. O. Travis; Bronze Medal, Joseph Walker; Certificates, 1. F. C. Larkin; 2. H. A. Bredin. Histological Prizes, A. H. Wilson and A. H. Clemow. *Summer Session*, 1880. Senior Subjects (Medical Jurisprudence and Midwifery), Bronze Medal, J. W. Ellis; Certificate, R. Williams. Junior Subjects (Botany, Materia Medica, and Practical Chemistry), Silver Medal, Joseph Walker. Comparative Anatomy, Prize, F. H. Barendt. Students' Debating Society's Prizes, Essay, 1. W. C. Garman; 2. J. R. L. Dixon; Debating Prizes, 1. — Nevins; 2. J. G. Brown; Reports of Medical Cases, F. J. Laimbeer; Reports of Surgical Cases, J. W. Ellis; Prize for Specimens, A. Barron.

SHEFFIELD MEDICAL SCHOOL.—*Summer Session*, 1879. Materia Medica and Botany, Mr. Tyler. Midwifery and Medical Jurisprudence (not awarded). Chemistry, Mr. W. Collier. *Winter Session*, 1879-80. Senior Anatomy and Physiology, Mr. Banham and Mr. Harrison. Junior Anatomy and Physiology (not awarded). Medicine and Surgery, Mr. W. Collier.

UNIVERSITY COLLEGE OF BRISTOL: MEDICAL SCHOOL.—*Summer Session.* Botany, Prize, H. W. Windsor-Aubrey. Practical Chemistry, Certificates, H. T. Rudge, A. G. Cunninghame. Practical Physiology, Prize, H. T. Rudge; Certificates, E. D. Duffett, A. G. Cunninghame. Materia Medica and Therapeutics, First Prize, A. G. Cunninghame; Lecturer's Prize, H. T. Rudge. Midwifery and Diseases of Women, Certificate, F. Tratman. Pathology and Morbid Anatomy, Certificate, A. J. Weatherly. Medical Jurisprudence, Prize, F. Tratman. *Winter Session.* Anatomy and Physiology, First Year, Prize, H. H. Tomkins. Certificates in Anatomy, First Year, R. S. Coulthard, H. Simmons, J. E. Jefferis, W. A. Jones, H. W. W. Aubrey, W. J. T. Barker, F. W. Weir, H. C. Thurston. Physiology, First Year, Lecturer's Prize, J. E. Jefferis; Certificates, W. J. T. Barker, H. Simmons, R. S. Coulthard, H. W. W. Aubrey, H. C. Thurston, W. A. Jones. Anatomy, Second Year, Prize, L. E. A. Salmon; Certificates, H. T. Rudge, J. Jenkins, A. G. Cunninghame. Physiology, Second Year, Prize, L. E. Salmon; Certificates, A. G. Cunninghame, J. Jenkins, H. T. Rudge. Practical Anatomy, Second Year, Prize, H. T. Rudge; Certificates, L. E. A. Salmon, A. G. Cunninghame, E. D. Duffett. Practical Anatomy, Third Year, Prize, W. H. Francis and J. P. Myles (equal); Certificates, G. T. Myles and F. Tratman (equal); Prosector's Certificates, A. G. Cunninghame, C. E. Evans, and H. T. Rudge (equal). Chemistry, Prize, F. W. Weir; Certificates, W. J. T. Barker, H. Simmons, H. H. Tomkins, J. E. Jefferis. Operative Surgery, Certificates, W. H. Francis, J. P. Myles. Medicine, Prize, J. P. Myles.—ROYAL INFIRMARY. Suple's Surgical Prize, J. P. Bush; Pathological Prizes, J. P. Bush, G. T. Myles (equal).—GENERAL HOSPITAL. Martyn Memorial Entrance Scholarship, F. W. Weir; Lady Haberfield Prize, T. A. P. Marsh.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE. 1879. University Scholar, J. S. Beverley; Dickinson Scholar, J. R. Dodd; Gibb Scholar, J. Foggin. 1880. Tulloch Scholar, S. Brookfield; Charlton Scholar, W. G. Black. *Summer Session*, 1879.—Chemistry (Practical): Medal and First Certificate, S. Brookfield. Botany: Medal and First Certificate, S. Brookfield. Materia Medica: Medal and First Certificate, S. Brookfield. Midwifery: Medal and First Certificate, J. Norie. Medical Jurisprudence (not awarded). Pathological Anatomy: Medal and First Certificate, J. Foggin; Second Certificate, R. H. Rowell. Practical Physiology: Medal and First Certificate, R. Hardie; Certificates, 2. S. Brookfield; 3. H. M. Fenwick. *Winter Session*, 1879-80.—Anatomy (Junior Class): Medal and First Certificate, R. J. Burns and G. G. Howitt (equal); Certificates, A. Hepworth, I. Hartley, and F. E. Abbott (equal); (Senior Class): Medal and First Certificate, H. M. Fenwick; Certificates, 2. S. Brookfield; 3. R. Hardie; 4. C. H. Evers. Dissection: Medal and First Certificate, S. Brookfield. Physiology (Junior Class): Medal and First Certificate, R. J. Burns; Certificates, 2. G. W. Richards; 3. I. Hartley; 4. G. G. Howitt; 5. A. Hepworth; (Senior Class): Medal and First Certificate, S. Brookfield; Certificates, 2. F. C. Mears; D. H. Barley. Chemistry: Medal and First Certificate, A. Hepworth; Second Certificate, A. G. Laidler. Surgery: Medal and First Certificate, W. G. Black; Second Certificate, W. Robinson. Medicine: Medal and First Certificate, W. G. Black; Second Certificate, W. Robinson. Public Health: Medal and First Certificate, R. H. Rowell.

GLASGOW ROYAL INFIRMARY AND SCHOOL OF MEDICINE.—*Winter Session*, 1879-80. Chemistry: Class Prize, James Johnstone. Chemical Division: Prize, Samuel Stewart; Honorary Certificates, John Sutherland, William Jones, and David Stevenson. Medical Division: Prize, John W. White; Honorary Certificates, Walter Morris and Alexander Cook. Anatomy: Senior Division, First Prize, Charles S.

Young: Second Prize, Thos. H. Williams; Honorary Certificates, Henry Mason, John Humphreys, and James Gillies. Junior Division: First Prize, J. W. White; Second Prize, P. Forbes Jardine; Honorary Certificates, William Middleton, Joseph Amy, and William A. Algie. Practical Anatomy—Senior Division—Honorary Certificates, Sheridan Dean, John Humphreys, Henry Mason, Thomas H. Williams, and Charles S. Young. Junior Division: Honorary Certificates, William A. Algie, Joseph Amy, Robert Evans, P. Forbes Jardine, David Lloyd, Walter Morris, Wm. Middleton, Edmund Warters, and J. W. White: Class Prosectors, Charles S. Young and Thos. H. Williams. Physiology: First Prize, Charles S. Young; Second Prize, James Gillies; Honorary Certificates, Henry Mason and John Humphreys. Surgery—Junior Division—Prize, Chas. S. Young. Senior Division: Prize, Ernest A. Hyrons. Honorary Certificates, Ernest A. Hyrons, C. S. Young, R. Howson, Arthur Jones, and Thos. H. Williams. Practice of Medicine: First Prize, Robert Howson; Second Prize, John H. Jones; Special Prize, Ernest A. Hyrons. Materia Medica: Prize, Ernest A. Hyrons; Honorary Certificate, Benjamin Peake. *Summer Session, 1880.* Practical Medical Chemistry: Honorary Certificates, Walter Morris, Albert F. Tunstall, and Harold C. Ling. Forensic Medicine: Prize, John Gillies; Honorary Certificates, Thomas H. Williams, Arthur Jones, John Garey. Midwifery: First Prize, Thomas H. Williams; Second Prize, James Gillies; Third Prize, John W. White; Honorary Certificates, Edmund Cass, Arthur Jones, Joseph Amy, and Alexander Fraser. Pathology: Prize, Thomas H. Williams; Honorary Certificates, Robert W. Lindsay and John S. Forrest. Practical Physiology: Prize, Thomas Moore Dawson.

CARMICHAEL COLLEGE OF MEDICINE AND SURGERY.—Senior Class Prizes, 1. Wm. Watson Pike; 2. Samuel Malenoir Thompson; 3. Arthur Murray. Second Years' Class Prizes, 1. Patrick De Bastero Skerrett; 2. Arthur Kennedy; 3. Wm. Dargan Gray. Junior Class Prizes, 1. Morris Asher; 2. James Tandy Bolger. Extra, Edward D. Mullen, John Henry McAuley, and Charles Wynne (equal). Special Prizes:—Chemistry, William McGee. Medicine, Hugh Brosnan: Extra, William Arthur Moynan. Midwifery, Henry Atock; Extra, Alexander J. Fleming and W. A. Moynan. Institutes of Medicine, T. C. Moore, sen.: Botany, J. H. McAuley: Extra, Thomas C. Moore, jun. Ophthalmic Surgery, Prize withheld: Extra, W. A. Shepherd: Materia Medica, M. Asher: Medical Jurisprudence, M. Asher and P. De B. Skerrett: Extra, Alex. Fleming Harper. Practical Chemistry, M. Asher. Practical Histology, J. Alfred Scott. Carmichael Scholarship, W. W. Pike: Extra, J. Keenan. Mayne Scholarship, (withheld): Extra, S. M. Thompson.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL:
NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the office of the Association, 161A, Strand, London, on Wednesday, the 13th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 14th, 1880.

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 21st, at a quarter-past five o'clock. The following question has been settled by the Council as the one on which members should be invited to express their opinion at the said meeting after dinner: "What, in your opinion, is the best method to be adopted by the Profession, the Public, and the Sanitary Authorities, in order to check the spread of Infectious Diseases?"

Members having any communication to bring before the meeting are requested to send notice of its title to the Honorary Secretary; they will further oblige by informing him, before the day of meeting, if they purpose being at the dinner.

Dinner, 5s. a head, exclusive of wine.

W. M. KELLY, M.D., *Honorary Secretary.*

SHROPSHIRE AND MID-WALES BRANCH.

THE annual meeting of the above Branch will be held at the Salop Infirmary, on Tuesday, October 19th, at 2.30 P.M. (and not on the 12th, as previously stated).

The annual dinner will take place at the Lion Hotel, at five o'clock precisely.

Members intending to read papers, or bring forward subjects for discussion, are requested to communicate with

HENRY NELSON EDWARDS, *Honorary Secretary.*

BORDER COUNTIES BRANCH.

THE autumnal meeting of this Branch will be held at Dumfries, on Friday, October 29th, at 1 P.M.

Gentlemen who intend to read papers are requested to communicate with the Honorary Secretaries.

J. SWAN, M.D., Dumfries } *Honorary*
J. G. BELL, M.B., Kendal } *Secretaries.*

October 5th, 1880.

STAFFORDSHIRE BRANCH.

THE seventh annual meeting of this Branch will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, October 28th, at 4 P.M.

An address will be delivered by the President, Mr. W. H. FOLKER.

Dinner at half-past five. Tickets (without wine), 7s. 6d. each.

VINCENT JACKSON, Wolverhampton } *Honorary Secretaries.*
J. G. U. WEST, Stoke-upon-Trent }

Wolverhampton, October 1st, 1880.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of the above District will be held at the Kent County Ophthalmic Hospital, Maidstone, on Tuesday, October 26th, at 3 o'clock P.M.; J. MEREDITH, M.D., in the Chair.

Dinner will take place at the Mitre Hotel, at 6 P.M.; charge 5s., exclusive of wine. A. HALLOWES, *Honorary Secretary.*

11, King Street, Maidstone, October 5th, 1880.

THAMES VALLEY BRANCH.

THE next meeting of this Branch will be held at the Griffin Hotel, Kingston, on Thursday, October 21st, at 6 P.M.

Dr. Atkinson will read a paper.

The dinner will take place after the meeting, at 7 P.M.

EDWARD L. FENN, M.D., *Honorary Secretary.*

Richmond, Surrey, October 6th, 1880.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next ordinary meeting will be held at the Hospital, Monmouth, on Thursday, October 14th.

Members desirous of reading papers, etc., are requested to communicate the titles to Dr. Sheen.

ALFRED SHEEN, M.D., } *Honorary Secretaries.*
J. HANCOCKE WATHEN, }

September 27th, 1880.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 14th, 1880, at 4 P.M.; Dr. JOHN WALTERS, in the chair. Dinner will be provided at 6 P.M. precisely. Charge, 6s., exclusive of wine.

The following papers have been promised.

1. Dr. A. L. Galabin: The Albuminuria of Pregnancy and its Relation to Puerperal Eclampsia.

2. Dr. C. Holman: A Brief Retrospect of some of the more Important Advances in Obstetric Practice during the last thirty years.

3. Dr. J. Walters will exhibit some Cases illustrating the Treatment of Disease of the Hip-joint and Curvature of the Spine.

4. Mr. W. A. Berridge and Dr. J. Walters: Case of Intestinal Obstruction from Impacted Gall-stone, for which Abdominal Section was performed.

J. HERBERT STOWERS, M.D., *Honorary Secretary.*

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE first meeting of the session will be held in the Medical Institute, New Edmund Street, on Thursday, October 14th, 1880. The Chair will be taken by the President, R. PROSSER, Esq., at 3 o'clock P.M.

Business.—The following member of the Association will be balloted for as a member of the Branch: F. William Smith, M.D., Leamington.

Papers.—Mr. Gamgee: On the Relative Merits of Different Methods of Wound Treatment.

Dr. Sawyer: Therapeutic Notes.

Members are invited to exhibit patients, pathological specimens, new drugs, instruments, or appliances, at the commencement of the meeting.

N.B.—Members are requested to pay their subscriptions to Dr. Rickards.

E. MALINS, M.B., 8, Old Square, } *Hon. Secs.*
H. RICKARDS, M.D., 14, Newhall Street, }

October 6th, 1880.

MIDDLESEX MEDICAL SOCIETY.—At the annual meeting of the Middlesex Medical Society, the following gentlemen were elected to offices; viz.: Dr. Thomas Savage, President; Mr. Harmur, Treasurer; Messrs. Garner and Bates, Secretaries; Members of Council, Mr. T. H. Bartleet, Mr. John Greene, Dr. J. Johnstone, Mr. Furneaux Jordan, and Mr. W. Thomas. Dr. Matthews Duncan will deliver the inaugural address on the 20th instant; his subject will be the Treatment of Puerperal Fever.

CORRESPONDENCE.

TYPHOID FEVER AT WORMWOOD SCRUBBS.

SIR, With reference to your comments last week on the outbreak of typhoid fever at Wormwood Scrubbs, permit me to divest the evidence, as it appeared in print, of much of the exaggeration in which reporters, thirsting for startling events, are too apt to indulge.

I stated, and I reiterate the statement, that the warder now lying ill, his wife, and the members of another family who formerly resided at the Scrubbs, are all positive as to the ever present stench of pig manure.

The existence and extent of a greater evil, that of undecomposed human excreta, had not then come to my knowledge, and I could only speak of an atmosphere polluted by piggeries, which my informants insist are intolerable, and, which all will agree, are often peculiarly malodorous, if not pestiferous.—I am, sir, your obedient servant,

V. C. CLARKE.

Millbank Prison, September 30th, 1880.

OBITUARY.

GEORGE DERBY WAITE.

MR. GEORGE DERBY WAITE, who was born in 1804, was the second son of John Waite, Surgeon-Dentist to George the Fourth when Prince of Wales. He received his early education at Eton and in France. After the death of his father, in 1820, he studied for some time in Paris, under Dupuytren, at the Hôtel-Dieu; and during his residence there, became attached professionally to the British embassy of that period. On his return to London, he passed the College of Surgeons, in 1824, and succeeded to his father's profession, which he practised with much success. In 1843, he was induced, by a member of the Imperial family of Russia, to go to St. Petersburg, where he attended the Court and many of the nobility. Whilst in St. Petersburg, he became a Member of the Imperial Surgical Academy of that city.

Some few years after resuming his profession in London, on the institution of the College of Dentists he was elected president, which post he held for some time; continuing in practice until 1870, when, owing to advanced age, and failing health, he retired, subsequently visiting Australia, and residing chiefly in Paris. Mr. Waite was a good classical scholar, and author of two or three useful works on professional subjects. He was particularly esteemed by a large circle of influential friends, for his kind and amiable disposition, and for his courteous manner; and is deeply lamented by these, and by relatives who survive him.

GLANFORD BRIGG RURAL.—This is an excellent and very practical report, containing, amongst other useful features, a statement of the sanitary improvements effected in each village during the last five years. During 1879, there were 414 deaths from all causes, being the lowest number since 1874. The year was free from any general outbreak of fatal infectious disease. Measles, scarlet fever, whooping-cough, and diphtheria, occurred in several parishes to a small extent, but typhoid fever only caused the death of two persons. A considerable improvement took place in the proportion of deaths under five years to the total deaths, the percentage being 34 in 1879, against 38 in 1878. The general death-rate was 14.22 per 1,000.

SAMFORD RURAL.—Compared with the average of the nine previous years, the birth-rate in this district was under the average in 1879, and the death-rate slightly above it. The increased mortality was due to the high death-rate among elderly persons from diseases of the respiratory organs during the first six months of the year. The mortality during the last two quarters was exceptionally low, and the general health of the district remarkably good. The birth and death rates were 27.4 and 18.0 per 1,000 respectively. The deaths from zymotic diseases numbered only 11, against 21 in the previous year. These 11 deaths included 4 from typhoid fever, apparently in different villages. Phthisis was responsible for 32 deaths, and pulmonary diseases for 46, both figures being in excess of those for previous years. Of the 224 deaths, 52 were of children under one year of age—a proportion ascribed to the extreme cold of the first half of the year. Eighty-nine deaths were recorded of persons upwards of sixty years of age, two being over ninety years old at death. The water-supply of the district would appear, from Mr. Elliston's account, to be greatly in need of improvement.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 30th, 1880.

O'Connor, Thomas, Ballina, co. Mayo.
Hollus, George, Wellington, Salop.
Pickthorn, Thomas Russell, Westbury Road, South Kensington.
Shaw, John Alexander, Deal, Kent.
Tinoco, Francisco Esteran de, Bedford Place, Russell Square.

The following gentlemen also on the same day passed their Primary Professional Examination.

Beswick, Robert, Guy's Hospital.
Burrows, Charles William Grimes, Charing Cross Hospital.
Locke, George, Charing Cross Hospital.
Phillips, Lawrence W. K., Guy's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

BALLINROBE UNION—Medical Officer for Hollymount Dispensary District. Salary, £100 per annum, with £25 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 16th inst.

*BETHLEM HOSPITAL.—Two Resident Medical Students. Applications, with testimonials, before October 9th.

BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon. Salary, £150 per annum, with furnished apartments, etc. Applications, with testimonials, to the Secretary on or before October 13th.

BOURN UNION—Medical Officer and Public Vaccinator for Castle Bytham District. Applications on or before October 14th.

BORRISOKANE UNION—Medical Officer for Borrisokane Dispensary District—Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 18th instant.

BRIGHTON AND HOVE LYING-IN INSTITUTION—Honorary Surgeon. Applications, with testimonials, on or before November 5th.

CARLOW DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent. Candidates must have a double qualification, and be registered. Applications to the Under-Secretary, Dublin Castle, to the 18th inst.

CHARING CROSS HOSPITAL—Assistant-Physician—Applications, with testimonials, on or before October 30th.

CHARING CROSS HOSPITAL—Assistant Surgeon. Applications, with testimonials, on or before October 30th.

CHELTENHAM GENERAL HOSPITAL—Junior House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, before October 10th.

CHELTENHAM GENERAL HOSPITAL AND DISPENSARY—Resident Surgeon. Salary, £125 per annum, with furnished house, gas, coals, etc. Applications, with testimonials, not later than October 15th.

DROGHEDA UNION—Medical Officer for Monasterboice Dispensary District. Salary, £110 per annum, with £20 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 11th inst.

*GREAT NORTHERN HOSPITAL—Physician for Out-Patients. Applications, with testimonials, on or before October 30th.

*HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST—Resident Clinical Assistant. Applications, with testimonials, on or before October 9th.

KINSALE UNION.—Medical Officer for Courcey's Dispensary District. Salary, £100 per annum, exclusive of sanitary, registration, and vaccination fees. Election on 11th instant.

*LONDON FEVER HOSPITAL—Assistant to the Resident Medical Officer. Salary, £120 per annum, with apartments, etc. Applications, with testimonials, to the Secretary not later than October 20th.

*NORTH-WEST LONDON HOSPITAL—Surgeon. Applications, with testimonials, to the Secretary not later than October 12th.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY—Resident Medical Officer. Salary, £130 per annum, with furnished apartments, etc. Applications, with testimonials, to the Secretary on or before October 15th.

*ROYAL FREE HOSPITAL—Assistant Physician. Applications, with testimonials, to the Secretary on or before October 27th.

ROYAL FREE HOSPITAL—Senior Resident Medical Officer. Salary, £104, with board and residence. Applications, with testimonials, on or before October 20th.

*ROYAL SOUTH HANTS INFIRMARY, Southampton.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before October 23rd.

WESTERN GENERAL DISPENSARY—Honorary Physician. Applications, with testimonials, to the Secretary, on or before October 11th.

WESTMINSTER GENERAL DISPENSARY—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, gas, and attendance. Applications, with testimonials, on or before October 23rd.

*WHITECHAPEL UNION—Assistant Medical Officer of the Infirmary. Salary, £150 per annum, with furnished apartments, coals, gas, and washing. Applications, with testimonials, not later than October 11th.

WIMBORNE AND CRANBORNE UNION—Medical Officer of Health for the Sanitary District of the Union. Salary, £80 per annum. Applications, with testimonials, not later than October 14th.

WORCESTER GENERAL INFIRMARY—Third Physician. Applications, with testimonials, to the Secretary not later than October 13th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BATTERSBY, R. L., M.B.Lond., appointed Certifying Factory Surgeon for Berkhamsted.

GOODE, C. Fox, M.R.C.S., appointed House-Surgeon to the Brighton and Hove Lying-in Institution, *vice* W. T. Freeman, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

HAMMOND, Gurnell, L.D.S., R.C.S.Eng., appointed Honorary Dental Surgeon to the Western General Dispensary, Marylebone Road, *vice* Lane Clark, resigned.

HILLS, A. Phillips, M.R.C.S.Eng., appointed Surgeon to the London and Manchester Industrial Assurance Company (Limited), for the Battersea District, *vice* Geo. Hills, M.D., F.R.C.S.Eng., deceased.

HOWLETT, E. H., F.R.C.S.Eng., appointed Resident Surgical Officer to the Manchester Royal Infirmary, *vice* G. A. Wright.

JONES, Thomas, M.B., appointed Lecturer on Practical Surgery to Owens College, Manchester, *vice* S. M. Bradley, F.R.C.S.Eng., deceased.

MAYLARD, A. E., M.B., B.S., appointed Demonstrator of Anatomy at Guy's Hospital.

TWEDDELL, George, M.R.C.S., L.S.A., has been unanimously elected Medical Officer of Health for Houghton-le-Spring Urban Sanitary District.

WHITE, R. Prosser, M.B., appointed Assistant House-Surgeon to the Halifax Infirmary, *vice* Thomas Hammond, L.R.C.P.Lond., resigned.

POOR-LAW MEDICAL APPOINTMENTS.

HARRIS, F. W. H., M.R.C.S., appointed Assistant Medical Officer to the Suffolk County Asylum, *vice* Arthur T. Tate, L.R.C.P.Ed., L.R.C.S.Ed., resigned.

HAYWARD, William Henry, M.R.C.S., L.S.A., appointed Medical Officer to No. 2 District of the Wolverhampton Union, *vice* James Wells, M.R.C.S.Eng., L.S.A., resigned.

MCDOWELL, Francis Victor, L.R.C.S.I., L.M., appointed Medical Officer to the Baltinglass Union Workhouse and Fever Hospital, *vice* W. F. Seymour, L.K.Q.C.P.I., L.R.C.S.I., deceased.

STRITCH, Dr., appointed Medical Officer to the Lowpark Dispensary District of the Swinford Union, *vice* P. C. Phillips, resigned.

WATSON, Christopher, L.K.Q.C.P.I. & L.M., appointed Medical Officer to the Kildare Dispensary District of the Naas Union, *vice* T. B. Kehoe, L.R.C.P.Ed. & L.M., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

BARFOOT—BLEAKLEY.—On October 2nd, at Palm Grove Wesleyan Chapel, Birkenhead, by the Rev. R. S. Coe, Harry Barfoot, M.D., of Birkenhead, eldest son of William Barfoot, of Leicester, to Susan Elizabeth, eldest daughter of Alexander Bleakley, of Birkenhead.

HENDERSON—BERTRAM.—At Freeland Bank, Partick, on September 28th, by the Rev. T. M. Lawrie, Dowanhill U. P. Church, assisted by the Rev. John Calder, Established Church, Partick, Dr. Alexr. Henderson, Partick, to Isabella Hamilton, only daughter of Peter Bertram, Esq.

SINCLAIR—JÜRGENSEN.—On the 4th inst., at the church of St. Giles-in-the-Fields, by the Rev. Walter J. Watkins, Vicar of the Parish, Alex. D. Sinclair, Esq., M.D., of Boston, U.S., to Ingeborg Christiane Maria, eldest daughter of the late Judge Jürgensen, of Kiel, Germany.

DEATHS.

FENTON.—On September 20th, at King William's College, Isle of Man, aged 18, Arthur John Fenton, third son of Henry Simpson, M.D., Manchester.

MARRIOTT.—On September 30th, at Kibworth Harcourt, Leicester, after long and painful illness, John Marriott, aged 87.

REDMAYNE.—On September 10th, at Spring Bank, Astley Bridge, Bolton-le-Moore, John T. Redmayne, M.R.C.S., F.R.M.S., aged 34. No cards.

DURING the thirteen weeks which ended on Saturday last, the death-rate in the metropolis averaged 21.3 per 1,000, against 19.3, 22.1, and 18.4 in the corresponding periods of 1877, 1878, and 1879.

GUY'S HOSPITAL: OPEN ENTRANCE SCHOLARSHIPS.—The open scholarship of 125 guineas in Science has been awarded to Mr. H. W. Pigeon. The open scholarship of 125 guineas in Arts has been awarded to Mr. R. Moody Ward, B.A. Mr. G. E. C. Anderson, B.A., *proxime accessit*.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The first meeting of the session will be held at 1, Adam Street, Adelphi, on Friday, the 15th instant, at 7.30 P.M., when the President, Dr. J. S. Bristowe, will deliver an inaugural address.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the annual meeting of this corporation, held on the 4th inst., Dr. Robert Scott Orr was elected President, and Dr. Robert Perry Visitor of the Faculty.

AT a monthly meeting of the Armagh Town Commissioners held this week, Dr. Gray, medical officer of health, reported that Armagh had not been so free from disease for the last ten years as it was at the present time. It was, he stated, free from disease of every sort.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Mr. Bennett May, B.S., F.R.C.S., has been unanimously elected to the newly created honorary office of Casualty Surgeon.

SURGEON-GENERAL W. MONRO, M.D., C.B., who has occupied the position of Head of the Medical Branch in the office of the Director-General of the Army Medical Department during the last six years, has left for Gibraltar, to assume the duties of Principal Medical Officer at that station. Surgeon-General G. A. F. Shelton, M.D., has been moved from Aldershot, and appointed to the Medical Branch at Whitehall Yard, vacated by Surgeon-General Monro. Deputy Surgeon-General Dr. Fasson, recently returned from the West Indies, has been nominated Principal Medical Officer of the Camp at Aldershot, in the place of Surgeon-General Shelton, removed to London.

PROFESSIONAL ENCOURAGEMENT.—The French official Gazette (*Journal Militaire Officiel*) publishes the names of thirty-one army medical officers of various grades who, during the year 1879, produced the best essays and reports in manuscript on scientific and professional subjects. Along with the names of the medical officers are printed the titles of the works of which they have been the authors. The above announcement is stated to be made by order of the Minister of War, on the recommendation of the Conseil de Santé des Armées, the governing body of the French army medical service, and as a testimony of the minister's satisfaction and approval.

PUBLIC HEALTH.—During last week, being the thirty-ninth week of this year, 5,776 births and 3,571 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living. The annual death-rate was 22 in Edinburgh, 18 in Glasgow, and 36 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Plymouth, 13; Bristol, 17; Portsmouth, 17; Birmingham, 18; Sheffield, 18; London, 19; Newcastle-upon-Tyne, 20; Brighton, 21; Nottingham, 22; Oldham, 23; Wolverhampton, 24; Leeds, 24; Norwich, 23; Manchester, 25; Bradford, 25; Salford, 26; Liverpool, 28; Leicester, 29; Hull, 30; and the highest rate, 32, in Sunderland. The annual death-rate from the seven principal zymotic diseases averaged 4.6 per 1,000 in the twenty towns, and ranged from 1.4 and 1.9 in Plymouth and Portsmouth, to 9.8 and 11.6 in Sunderland and Leicester. Scarlet fever showed the largest proportional fatality in Sunderland and Norwich. Fever (principally enteric) showed an excessive death-rate in Norwich, Sunderland, and Leeds. In London, 1,353 deaths were registered, which were 7 below the average, and gave an annual death-rate of 19.3. The 1,353 deaths included 2 from small-pox, 12 from measles, 61 from scarlet fever, 10 from diphtheria, 20 from whooping-cough, 17 from different forms of fever, and 110 from diarrhœa—being altogether 232 zymotic deaths, which were 21 below the average, and were equal to an annual rate of 3.3 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 124, 153, and 174 in the three preceding weeks, further rose to 199 last week, and exceeded the corrected weekly average by 10; 121 resulted from bronchitis, and 51 from pneumonia. Different forms of violence caused 44 deaths; 39 were the result of negligence or accident, including 24 from fractures and contusions, 2 from burns and scalds, 8 from drowning, and 3 of infants under one year of age from suffocation. Five cases of suicide were registered, including one in which death was caused by being run over by a van. At Greenwich, the mean temperature of the air was 56.6°, and 1.4° above the average. The mean degree of humidity of the air was 92, complete saturation being represented by 100; the air was, therefore, damp. The direction of the wind was variable, and the horizontal movement of the air averaged 4.7 miles per hour, which was 5.9 below the average. Rain fell on Saturday to the aggregate amount of 0.21 of an inch. The duration of registered bright sunshine in the week was equal to 25 per cent. of its possible duration. No ozone was measured on any day of the week, except on Saturday, when the amount was small.

DRAYTON RURAL.—Dr. Sandford's annual report consists mainly of observations on the mortality figures of the year, coupled with a brief statement as to the improvement of the water-supply. During 1879, there were 56 deaths under five years of age, and 202 deaths over that age; the latter including 43 from bronchitis, pneumonia, and pleurisy, 22 from diseases of the nervous system, 22 from phthisis, and 7 from zymotic diseases. Twenty-nine deaths are recorded from "old age". Of these, 16 were females, whose average ages were 78 years; and 13 were males, their average ages being 84 years. One of the females, aged 91 years, and one of the males, aged 95, were man and wife. Dr. Sandford records two cases of the callousness of masters (far too often observed) in sending home their servants sick of infectious disease. The general death-rate of the district is given as 17.22 per 1,000.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Hunterian Society, 7.30 P.M., Council Meeting. 8 P.M., Address by the President. Mr. Clement Lucas will show "A Case of Excision of both Elbow-Joints"; Dr. Stephen Mackenzie, "A Case of Glioma of the Brain".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE PERIOD AND INFLUENCE OF INFECTION.

SIR,—In a discussion at the Sanitary Congress, and in the course of various inspections of the dwellings of the poor in different towns, I have been struck with the necessity for a clear and authoritative definition of the period after an infectious or contagious disease during which it is desirable that a patient shall be isolated to avoid risk to his neighbours. In the case of children, this is a matter of the highest importance. At present, great pressure is brought to bear upon parents by teachers with the view of securing the attendance of children at schools inspected by Government. If one medical attendant proves obdurate, he often loses a patient, as a more pliant one is summoned, who at once sanctions the raising of the quarantine. Let me give a typical example; it came under my notice last week. A laundress, with a family, has a child suffering from scarlet fever. Her medical attendant insists upon her giving up washing till all danger of contagion has passed. She submits to this for a brief period; then, getting impatient, she dispenses with the attendance of her old medical man, and calls in another. The second comer proves more amenable to her arguments. Washing is resumed, and the child despatched to school. After a brief interval, the child is once more in bed with renal dropsy. Yet the medical attendant who did his duty loses his patient and his reputation. The patient's cry being, "Don't send for Dr. A., he will keep your child in the house for six weeks; but call in that nice Dr. B., who will send the patient to school within a fortnight". There is, therefore, great need for the College of Physicians to lay down a definite period for each of the infectious diseases during which it is necessary that a patient shall be isolated. By fixing a maximum and a minimum time for the isolation of each disease, some discretion will be left to the medical attendant, and great scandal and danger to the public health will be prevented.

I should like to ask in this connection if surgeons object to have cases of typhoid fever in the same wards, or in the same building, with cases of recent operation? If so, on what grounds is this objection based?—I am, etc.,

Seamen's Hospital, Greenwich, September 29th, 1880. HENRY C. BURDETT.

THE DEGREE OF M.D. AT THE UNIVERSITIES OF ST. ANDREW'S AND DURHAM FOR REGISTERED PRACTITIONERS.

SIR,—Will you permit me to draw the attention of "F.R.C.S.Eng.(Exam)." to the fact that, besides the University of St. Andrew's, that of Durham also grants the degree of M.D., after due examination, to practitioners of fifteen years' standing? He will find the full particulars concerning both Universities in your copious Educational Number (September 11th), and should he require further information, he can have it by addressing Dr. Luke Armstrong, Registrar of the Durham College of Medicine, Newcastle-on-Tyne, in the one case, and the Secretary of the University of St. Andrew's, N.B., in the other.

Your other correspondent, "Podagra", may perhaps be comforted to know that, if the University of St. Andrew's may only admit ten qualified practitioners to examination for the degree in one year, that there is no such restriction upon the action of the University of Durham. The Warden and Fellows of that University will be glad to welcome "Podagra", and as many of his gouty companions as may be pleased to present themselves for examination; and I believe the degree is quite as respectable as that of St. Andrew's.

I recommend both correspondents to study carefully your Educational Number (1028); in it they will find the fullest details as to the time and character of the examinations; and when this is understood, it will be easy, through your advertisement columns, to obtain the help of a competent tutor to assist their preparatory studies.—I am, your obedient servant, M.D.ST. ANDREW'S (1850).

F. F. M. (Somerset).—We regret that we have been unable to obtain a satisfactory answer for the query.

CONSOLATION FOR THE BALD.

PROFESSOR FOURNIER, in a lecture on alopecia, says of baldness: "There is nothing ridiculous or malformed about it, and it confers upon the physiognomy an expression of wisdom, experience, and venerability. It adapts itself marvellously to certain heads which would be deformed by a wig, and is the severe beauty represented in sculpture by the classic head of Æschylus."

BINAURAL STETHOSCOPES.

SIR,—In answer to the inquiry by "Physician", with respect to a binaural stethoscope, I should recommend him to try Klein's. It consists of an ebony chest-piece, with two vulcanite tubes, with self-retaining ear-pieces. When not in use, the tubes may be separated from the chest-piece and folded into a very small compass. Another great advantage is its durability. I have used one now for over five years, and it is as good for use as when quite new. Messrs. Krohne and Sesemann of Whitechapel are the makers, and the price is five shillings.—Yours truly,

F. ERNEST POCOCK, M.D.

The Limes, St. Mark's Road, Notting Hill, W., October 1st, 1880.

SIR,—I can recommend as a binaural stethoscope that of Stern of Vienna. It is simple, portable, and inexpensive. The aural extremities are not provided with a spring, but by giving them a slight screw movement, they are easily retained in the ears. I have modified the stethoscope so that (1) it is adapted to an ordinary wooden stethoscope, and may be used as a binaural or monaural instrument at pleasure; (2) the India-rubber conducting-tubes are graduated in inches, and thus serve as a cystometer or chest-measure. The instrument has been made for me by Messrs. Maw and Co. of Aldersgate Street, and I have long had it in use.—Yours truly, A. ERNEST SANSOM, M.D., F.R.C.P.

30, Devonshire Street, Portland Place, W., October 2nd, 1880.

MR. J. H. GORNALL.—It is not usual, but the matter is one entirely of personal taste. Some men are more anxious to employ their decorations than others, and think their display of greater value. They are entitled to act upon their opinion; but they take the risk of unpleasing comment.

DIMPLES TO ORDER.

A NEW YORK paper heralds a manufacturer of dimples, who comes from Paris, of course, and whose *modus operandi* is described as follows: "I make a puncture in the skin at the point where the dimple is required that cannot be noticed when it has healed, and with a very delicate instrument I remove a slight portion of the muscle. Then I excite a slight inflammation, which attaches the skin to the subcutaneous hollow I have formed. In a few days the wound—if wound it can be called—has healed and a charming dimple is the result."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

CREMATION SOCIETY OF ENGLAND.

SIR,—I should be glad if any of your readers could give me any information with regard to the "Cremation Society of England", referred to by Mr. Spencer Wells in the JOURNAL of September 18th, p. 461.—Your obedient servant, E. J.

*** A full description of the objects of the Cremation Society of England, as well as the rules of the Society, and a great deal of other information relative to the reform in question, will be found in the volume of the *Transactions of the Cremation Society of England*, published by Smith, Elder, and Co., 15, Waterloo Place, London, S.W., price one shilling. It also contains plans and descriptions of all the systems in use abroad, and of the Society's crematory at Woking. There is also a full defence of the system, published by the same firm, entitled *Cremation; its History, and its bearings on Public Health*, price 8s. 6d. For further information you can apply to the Honorary Secretary, Mr. W. Eassie, C.E., at his office, 11, Argyll Street, London, W.

APROPOS of Dr. Warlomont's vaccinator, Dr. Cooper Rose recalls attention to the instrument some time since invented by himself.

A DOUBTFUL CASE.

SIR,—I should feel obliged by your giving insertion to the following, with a view of eliciting from some of your readers the proper mode of treating the case. The history of it is as follows, which I give in her own words. "This complaint in my nostrils begins with great tightness, so that I cannot breathe through my nose. In two or three days, it begins to discharge, and when that is the case it causes a great irritation in my throat, and I am obliged to clear it constantly, till it becomes quite sore. Last week, I felt the same fulness in my ears, which made me deaf for a time. It is always worse of a morning. It never troubles me much at night, and does not prevent my sleeping, even when it is in its worst stage; but as soon as I awake, I feel a burning sensation in the throat till I throw up some mucus. Then it returns to the nostrils, and my voice sounds as it does when one has a bad cold in the head. It is a little better sometimes, but I have not been quite free from it since it began twelve months ago. When it is very bad, my nose swells, and I feel giddy. In every other respect, I am quite well."

She is a person about forty-nine years of age, and has borne a large family. Quinine, iodide of potash, arsenic, etc., have been tried; arsenic gave her a temporary relief. Astringents made it worse. On examination, no growth or abrasions of the mucous membrane can be seen.

Should any of the readers of the JOURNAL be able, from this short account, to enlighten me on the cause and treatment, they will oblige, yours faithfully,

Lampeter, September 26th, 1880. A. E.

MR. T. S. SUTTON (Witney) - In addition to the Shropshire tariff, there is a tariff prepared by the Manchester Medico-Ethical Society.

THE MICHIGAN COLLEGE OF MEDICINE.

MR. J. B. ASCHER, Detroit, U.S.—The following is an extract from the minutes of the Executive Committee of the General Medical Council held on June 15th. *Resolved*—"That the Matriculation Examination of the Michigan College of Medicine be included in the list of Preliminary Examinations recognised by the Council."

MIDWIFERY FEES.

SIR,—Mrs. S. engages me to attend her in her confinement. I make occasional visits to see her, a distance of about three miles from my house, even calling on her the day previous to her confinement. Mrs. S., when taken ill, sends for the assistance of another medical man residing in the same town as myself, who goes out and attends her, and who was not, I believe, informed of her previously engaging with me. The first and only information I received of her confinement having taken place was through reading the papers a few mornings afterwards. Will you kindly give your opinion on the matter; also inform me whether I can recover the fee for which I was engaged, and the mode of proceeding to do so.—I am, yours faithfully, J. L. D.

*** 1. Yes. 2. By suing in the county court, if, on formal application, the fee agreed at the period of engagement be not made.

SIR,—Allow me to bring to your notice *The Progress of the World*, by Michael S. Mulhall, F.S.S. (Edward Stanford), reviewed in the *Pall Mall Gazette*, Sept. 22nd. Nothing could be stranger in opposition to Malthusianism. I am, etc.,

Kingston, Surrey, September 23rd, 1880. F. P. ATKINSON.

UNPROFESSIONAL ADVERTISING.

"DR. LISTER, F.R.C.S., L.R.C.P. London. Registered. (Successor to Dr. Bartlett.) Matters.

SIR,—The above advertisement appeared in the *Newcastle Weekly Courant* for the 18th of this month. I shall be glad to have your opinion whether or no such advertisement is unprofessional; and whether it is not a breach of etiquette on the part of the advertiser introducing my name, without consulting me in the matter. I am, sir, yours truly, J. H. BARTLETT.

Porlock, Somerset, September 21st, 1880.

*** Such advertisement is unprofessional, and it is a highly improper proceeding to introduce Dr. Bartlett's name.

THE CASE OF A. B., ETC.—Dr. Lee being satisfied, we fail to see that C. acted unprofessionally in attending the consultation without consultation with A. Patients must be allowed to choose their own medical attendants. In this case, B. made her choice, and, in consequence, may have acted not over wisely.

INFECTION FROM DISSECTED LIVERS.

SIR,—In the *British Medical Journal* for September 11th, I see a query of yours regarding the supposed poisoning produced by snipping off a piece of the uvula. Some few months ago, I had an average length uvula, and a tonic voice. I took a bright fancy to have it removed, and was a month or two minus uvula, and a total loss of the human voice, but much greater ease in taking the Lord's name. From this and other causes, I recommend to me that anything tending to shorten the uvula, and thereby getting access direct to the vocal cords, would render the voice further assistance of that peculiar character of a bird's tune. I offer the remarks in great haste, but trust they may be serviceable. I am, sir, yours truly,

J. W. H.

MUSIC AS A THERAPEUTICAL AGENT.

SIR,—In last week's JOURNAL a paragraph appears entitled "The Banjo as a Therapeutic Agent". In describing his treatment of the lady of "delicate and intense organisation", Dr. Samuel A. Francis must have unintentionally conveyed to many persons an unfavourable impression of the efficacy of music in medical treatment. That music has at all times been employed therapeutically is a well authenticated fact, and various have been the instruments chosen for treating disease. In a pamphlet of mine, published early in this year by Mr. Lewis of Gower Street, and entitled *The Therapeutics of Music*, etc., I have given numerous examples of medical treatment, and I have ventured to suggest that the employment of music as a remedial agent might be more extensively adopted in our asylums than is at present the case. Shortly after my pamphlet appeared in print, I discovered that the path I had chosen had been trodden before, for a Dr. Louis Roger of Montpelier, published, in 1803, a treatise styled, *Traité des effets de la Musique sur le corps humain*, etc.; and, in 1874, Dr. H. Chomet wrote on, *Effets et Influence de la Musique sur la Santé, et sur la Maladie*.

I mention these to prove that Dr. Francis's treatment was only original so far as his musical medium was concerned, for nowhere can I find that the banjo has ever been chosen "to exhilarate the aged and infirm", or to ward off the pending "muffled exit."

I cannot go so far with Dr. Francis as to assert that by banjo treatment death may be averted after all the "regular, legitimate, and scientific" remedies have been tried, and have failed. However, I believe that much remains to be known of music's hidden properties, before its therapeutic value is fully established, and, on the other hand, I regret that the ludicrous aspect of the case quoted by Dr. Francis should tend to retard rather than promote the adoption of music in medicine.—Yours faithfully,

G. HERBERT LILLEY, M.D.,
September 25th. Assistant Surgeon to H.M. Prison, Parkhurst.

MORPHIA FOR SUBCUTANEOUS INJECTION.

SIR,—I should feel obliged if one of your readers would give me a good formula for making a solution of morphia which will keep well. I used one some years ago containing a small percentage of carbolic acid which answered every requirement, but I am unable to remember the exact proportions.—I am, sir, yours, etc.,

G. P.

CONTINENTAL PRACTICE.

SIR,—In reply to the letter of "Double Qual.", in the JOURNAL of October 2nd, I should advise him to consult Hardwicke's *Medical Directory and Practice in all Parts of the World*, published by Churchill. In it he will find, not only the university regulations of all countries of the world, but also the conditions upon which he may practise in any part of the globe, with other useful information.—I am, sir, yours truly, MEDICUS.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. W. W. Cheyne, London; Mr. Edmund Owen, London; Dr. H. de Havilland Hall, London; Dr. Stephen Mackenzie, London; Mr. H. H. Clutton, London; Dr. J. F. Goodhart, London; Mr. J. W. Haward, London; Mr. Vincent Jackson, Wolverhampton; Mr. A. Clarke, London; Dr. C. V. Kelsey, New York; Mr. J. Christy, London; Dr. F. Ernest Pocock, London; Dr. George Budd, Bristol; Mr. W. F. Teevan, London; Dr. W. F. Clarke, Southborough; Mr. R. M. Manu, Manchester; Mr. J. S. Gamgee, Birmingham; Dr. Cooper Rose, Hampstead; Mr. J. H. Gornall, Warrington; Dr. Crichton Browne, London; Our Dublin Correspondent; Dr. Graham Browne, Edinburgh; Mr. W. Sykes, Rotherham; Dr. E. T. Tibbits, Bradford; Mr. H. W. Sharpin, Bedford; Mr. F. F. Moore, Somerset; Mr. A. H. B. Hallowes, Maidstone; Dr. W. Marcet, Cannes; Dr. Gordon, Strabane; Mr. John Cameron, Bilston; Dr. A. H. Hassall, London; A Member; M.D.; Dr. W. H. Broadbent, London; Our Glasgow Correspondent; Dr. E. Young, Hounslow; Dr. C. D. Waite, London; Dr. Hardwicke, Sheffield; Dr. T. W. Barron, Durham; Mr. H. Nelson Hardy, London; Mr. W. Pogson, Leeds; Dr. A. T. H. Waters, Liverpool; Dr. Amyot, Diss, Norfolk; Professor Schafer, London; Dr. G. Beatson, Glasgow; Our Edinburgh Correspondent; Dr. James Stevenson, London; Messrs. E. A. Phillips and Co., London; Mr. Arthur Lattey, Maldon; The Curator of the Parkes Museum; Mr. J. B. Holloway, Peckham; Mr. Bartleet, Birmingham; Dr. Kirkwood, Peterborough; Dr. J. C. Lucas, Afghanistan; Mr. F. W. Jordan; Dr. Goodridge, Bath; Dr. Pallen, New York; etc.

BOOKS, ETC., RECEIVED.

Osteotomy. By W. MacEwen, M.D. London: J. and A. Churchill. 1880.

Rational Mechanics of Animal Locomotion. By William Pratt Wainwright. New York: D. Van Nostrand. 1880.

Scale of Charges for Advertisements in the "British Medical Journal".

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Post Office Orders should be made payable to Mr. Francis Fowke, at the West Central Post Office, High Holborn. Small amounts may be sent in postage stamps.

Agent for the Advertising Department in France: J. ASTIER, 67 Rue Caumartin, Paris.

AN ADDRESS
ON
ELEMENTAL PATHOLOGY.

Delivered in the Pathological Section at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

By SIR JAMES PAGET, F.R.C.S., D.C.L., LL.D., F.R.S.,
Sergeant-Surgeon to H.M. the Queen, Consulting Surgeon to St. Bartholomew's Hospital; President of the Section.

EVERY pathologist must have felt that the greatest difficulty in his study is in the manifold complexity of the body in which it is pursued. The living human body is, surely, the most complex mass of matter in the known world. In composition, it surpasses the highest powers of chemical analysis; in mechanism, it is as far beyond the calculations of the physicist; its structures are but dimly seen with even the most perfect microscope; all the known forces of nature are constantly and coincidently at work within it; through circulating blood and a nervous system every part is within swift communication with all the rest; and it includes the apparatus of a mind, from whose influence no portion of its matter is distantly removed. And in this body the pathologist has to study, not that which is fixed, orderly, and natural, but that which is in disorder and unsettled. May we not, therefore, hold that, among all the sciences of observation, human pathology has, in the very nature of its subject-matter, the greatest difficulties to contend with?

I have long and often felt that, in these difficulties, we might gain help from studying the consequences of injury and disease in the structures of plants. For although these, too, are complex, minute and hard to analyse, yet they are less so than are the structures of any but the very lowest animals; and, which is most important, the processes in them are not subject to the influence of a nervous system, or of a common nutritive fluid distributed from a central organ and quickly carrying to every part materials derived from all the rest. In the absence of a nervous system and of a quickly circulating nutritive fluid, we come nearer to the opportunity of studying a really elemental pathology, nearer to the changes wrought between formed and varying formless matter. I say, without a nervous system, and without a circulating fluid; for though some of the properties of vegetable structures, such as are shown in their subjection to the influence of anæsthetics, their movements in relation to light, and the various groupings of their colouring particles, indicate a likeness to the properties of simple nervous structures; and though, through communicating minutest channels, every portion of a plant may be regarded as in relation with all the rest; yet these small degrees of likeness can scarcely detract from the great contrast between plants and animals in the having, and the not having, nervous systems and circulating bloods.

It was in the hope of promoting a study of elemental pathology that I determined, when I had the honour of being asked to preside in this Section, to put together various facts in vegetable pathology which, in the idleness of vacations, I had learned. I thought that I might provoke some of my hearers to a study which I supposed that few had pursued. I was nearly turned from my purpose when I found the vast quantity of good scientific work that has been done in it; the many volumes of books and the hundreds of papers relating to the injuries and diseases of plants which have been written within the last twenty years by both botanists and cultivators, especially by those engaged in the schools of forestry and orchard-culture in Germany. I saw no hope of studying them worthily; but, in those that I have had time to read, I have seen enough to make me more than ever sure that human pathologists may find, in watching the consequences of injuries and diseases of plants, facts of the highest interest in their more proper study.

Let me point out some few of these; but, first, I must disclaim all pretence of an ability to treat the subject as a scientific botanist, or a practical gardener, or anything intermediate between these excellent extremes. I can only, as a human pathologist, see that knowledge of great value is within our reach: I may be able to point out to you where and how some of it may be found; and I can promise attractions of novelty in the study, and of renown to be gained from it; for, admirable as is the work already published, very little of it has been done by those who could fully estimate its value in human pathology.

In my selection of subjects, I will limit myself to those that are of interest in general pathology; and, first, to hypertrophies, or the simple overgrowths of natural, or nearly natural, structures. Of these, I do not know that there are in plants any well-marked instances corresponding with those which are the most frequent in animals, in which a part grows in direct proportion to the exercise of its function, and thus may grow to relative excess when its function is, through the will or for necessary adjustment, excessively discharged. But, in plants, there are abundant opportunities of studying those forms of hypertrophy which depend on an increased supply of nutritive material to any part. To mention but one: the arts of partial or complete "ringing" and of constricting or bending the branches of trees depend for success on their insuring an accumulation of nutritive sap in the part of the branch from which its movement is checked. The result is what we may call an hypertrophy of flowers or, in other instances, of fruit, or wood, or bark, proportionate to the increased supply of nutriment; just as, in ourselves, hairs and some other structures will grow excessively with an excessive afflux of blood; or, still more and in almost exact parallel, as limbs will grow with a retarded reflux of lymph.

Similarly, I believe that you may find in plants many instances of the kind of hypertrophy which, in ourselves, we call compensatory, in that, one part being repressed or removed, another enlarges with growth of natural structures, as if for compensation; for I think that some of the arts of gardening are based on observations that removal of certain parts of plants will induce an overgrowth of others. Perhaps, among these you may find facts which may help to explain those obscure cases in animals and ourselves in which parts or organs, which have no natural alliance in function, are yet commonly allied in disease, as if they were in some relation of complemental nutrition. Such are the excessive growths of connective tissue and fat which may follow the removal of the generative organs; events well known but, I believe, not well explained.

I will not cite more facts. Only consider how many of the luxuries from our orchards and gardens are really such growths as in our pathology we should call hypertrophies, and that to produce these is within the art of the gardener, and you may see how large a collection of facts which may be useful in our study are within our reach, constantly at hand for observation and, which is yet more important, within the range of experiment.

Let me speak next of some illustrations of the simple defects of nutrition which we class as atrophies or degenerations.

I am not sure whether there be among plants any atrophies by mere wasting of parts once completely formed, which may be compared with the emaciation of animal structures.* Shrivelling, drying, withering, and defective growth are only too frequent; but these are all different from that unmaking and removing of structures which we trace in both the healthy and the morbid processes of nutrition in animals.

The atrophies with degeneration are very numerous; but I will take for illustration only that group which we may see beginning all around us in the decay and fall of leaves. This decay is their senile degeneration. It is marked chiefly by their changes of colour—the changes to which we owe the characteristic beauties of our autumn scenery. These are accompanied by changes of texture, shown in the dryness and brittleness of the leaves, and by changes of chemical composition; but I will refer to only the changes of colour. And observe that these indicate decay, not death. They do not occur when fresh leaves are quickly killed, as in hot water, or when they are pressed and dried for a herbarium.

Among many things to be observed in the changes of colour, let me first ask you to note their usual symmetry. One of the characteristics of mere degenerations, as we see them in old age, is that they are symmetrical. I hardly need cite instances; many of us may study them in ourselves or one another. Symmetrically we become, equally on right and on left, bald, or grey, or wrinkled, or dusky with dark pigment in our epidermis, and harsh-skinned with thickening and hardening of its cells. And we know that, as a rule, arteries become symmetrically fatty and calcareous; and that very commonly joints are symmetrically affected with the arthritis of old age; and so on. Now, similarly, the rule in leaves is that, in so far as they are symmetrical in shape and structure, so are the changes of colour which mark their decay or degeneration.† You may find, indeed, very many exceptions to the rule; for it cannot be observed in leaves which have been unequally expanded, or whose several parts have not been equally exposed to heat and light, or in which parts have been killed or injured. Many

* I may have overlooked many instances of it; but some that may seem like mere wasting are rather diseases with associated degeneration. Such are the gum-disease (gummosis), the resin-flux (resinosis), and others of the same group, which I find classed as liquefactive diseases, and in which cell-walls, wood, and other structures dissolve in or into morbid products. See Sorauer, *Handb. der Pflanzenkrankheiten*, p. 184; and *Frank, Lehrb. d. Naturwissenschaften, Pflanzenkrankheiten*, p. 284. I venture to guess that these may give help in the study of our mucoid and other liquefactive degenerations.

† "In so far", for the symmetry of living things is not mathematical; it is artistic, in the divine perfection of art.

accidents may hinder the observance of a rule of symmetry; but the observance cannot be an accident; and, if you will pick up leaves enough, and look well at them, you will see that the general rule of symmetry in the changes of decay is as evident as is the similar rule in our own symmetrical diseases and degenerations.

The changes may best be seen in those leaves or leaflets of dicotyledons which have a simple bilateral symmetry, a median vein, or fibro-vascular bundle, passing through the length of each leaf and giving off side-branches; but it is often scarcely less plain in palmate and in pinnate leaves, both in their several divisions and in the comparison of each division with its opposite fellow. In such leaves you may trace, in each pair of similar parts, similar changes of tint spreading uniformly or gradually over them; usually, first, from a darker to a paler green, from brighter to less bright; then to pale yellow or brown, or to some tinge of red or scarlet or flame-colour or some other of the tints that make autumn scenery glorious.

Now let me point out some things in our pathology which these facts may illustrate. The changes of colour are not mere chemical changes ensuing in a dead part. Leaves do not usually die till after, sometimes long after, they have fallen. Their changes of colour and of texture, even to the last dull brown in which they crackle as we tread on them, are vital changes in the same sense as are those which we see in ourselves in the advance of old age. In this view, they may be taken in evidence on the question as to the nature and meaning of some symmetrical diseases.

There are at least two reasonable theories concerning these diseases. One is, that the symmetry is due to the relation between some morbid material in the blood and certain parts which are symmetrically placed and are exactly identical in composition; absolutely like to one another, and not absolutely like to any other part which is not similarly affected by the same material in the blood. This was the theory on which Dr. William Budd and myself wrote our essays on the symmetry of disease nearly forty years ago. The other, which at that time I only ventured to suggest, but which is now, I think, rather dominant, is that symmetry in disease is determined by the disturbed condition of symmetrically distributed nerves, the disturbance issuing from a single nervous centre. I cannot now discuss this question, or endeavour to show how probable it is that each theory is true and sufficient for certain cases, and that for some they must be combined; but the symmetry of decay in leaves may be taken as a strong fact in support of at least these two principles: 1. That symmetrical changes may occur in degeneration and disease, as certainly as in development, without any influence of a nervous system or of a circulating blood; and 2. That, among structures which, to all our tests, may appear identical, those alone may be absolutely alike which are symmetrically placed. Surely no two things can appear more alike than are two adjoining leaves of a tree, or two parts of the same leaf; and yet, if, under the same conditions, these do not decay in the same time and measure, it can only be because they are not absolutely alike. Thus the symmetry of decay in leaves may prove that none but symmetrically placed parts may be verily alike; and thus the possibility, to say the least, that in ourselves a diseased blood may similarly affect only such parts; and thus that, among symmetrical diseases, there may be some of which the essential and sole necessary condition is some morbid material in the blood.*

But let me now point out another of the lessons which may be read in the decaying leaves; for really the pathologist may find in them as many as the moralist and the poet have found.

The leaves, I have said, are decaying, not dead; and their fall is due to other degenerative yet truly vital changes. Dead leaves do not similarly fall. If a branch have been killed before autumn, you may often see its dead leaves hanging dry and withered all the winter through; and often, when leaves are yellow and withered in their last decay, they hang quivering and spinning, ready to fall, yet waiting. Each leaf is literally hanging on a thread; and at last, by a rougher wind, or a drop of rain, or some chance-violence, the thread is broken, and the leaf falls.

This breaking of the thread is preceded by degenerative changes in the structures of the leaf-stalk and of the stem adjacent to their juncture or articulation. These changes were first well described by the late Dr. Inman† of Liverpool; they have since been made more fully known by von Mohl* and others; and the rules observed in them hold, with certain variations, in the fall of petals, bracts, fruits, some twigs, and other deciduous organs.

In their beginning and maturity, the structures of the leaf-stalk and the stem or twig are continuous. There may be some external mark of distinction; but within there is exact continuity; the epidermis, parenchyma-cells, fibres and sap-vessels are alike continuous. But, in preparation for the fall, changes ensue in the adjacent parts of both leaf-stalk and stem. In both, alike and equally, the cells multiply by partition; and those most nearly adjacent change, by a process of degeneration, into cork-cells, dry, brown and air-holding. Then, as these degenerative changes advance from opposite directions towards the plane of junction between leaf and stem, they meet; and, at their place of meeting, an intermediate layer, or rather two layers, of cells die and become scale-like and part asunder; and now the leaf is ready to fall. It hangs only on the dried thread of fibres and vessels which pass into it from the stem; and the stem is protected by its layers of cork and withered cells from the invasion of parasites and insects.

It would be hard to find a more admirable instance of processes adjacent, coincident, concurrent to a common end, yet independent. We have many of the kind in our pathology, but none more evident, or more within reach of complete study, as of vital processes tending to one end, but not guided from one centre; concurrent, but not concatenate; as independent as are the works of the several bees that make one honeycomb. And thus we may learn from the falling leaves a lesson against thinking that, when we see concurrent morbid processes, we must always expect to find some centre from which all are guided. It is not to be doubted that in organisms such as ours, in which the work is more divided according to its kind and more distributed to appropriate organs, more is subjected to regulation by central organs, and the working of each part is more influenced by that of all the rest; yet it is not probable that, in any instance, the law is abrogated according to which each elemental structure lives its own life in a method determined by its own inherent properties. There is no law in pathology more important than this: let the falling leaves remind us of it.

And yet one lesson more. That thread on which for a time the falling leaf hangs quivering—that thin bundle of fibres and vessels connecting it with the stem—is regarded as a development from simpler cell-structures. Fibres and vessels are "higher" structures; so much higher, that the relation between the Vasculares and Cellulares in plants may match in importance with that between the vertebrata and the invertebrata in animals. But mark this instance of anomaly in our language. In the elevation from the lowly cellular state to the higher dignity of fibres and vessels, there is, indeed, an instance of that development which makes fit for membership in a higher economy; that is, an economy more nearly like our own. But in the attaining of this fitness there is loss of vital power. There is no such activity of organic life in the vessels and fibres of wood or bark as there is in the cells around them; they are comparatively unchanging; they cannot multiply; they cannot repair their own injuries; cannot protect themselves; cannot even degenerate as the fading leaf-substance around them does (for even to degenerate needs vital power); they can only die, and the dead thread on which the decaying leaf hangs cannot dispart itself; it must be broken by some alien force. In the taking of higher form, the cells seem to have spent their power of forming.

Now we have in ourselves similar instances of degenerations which we call developments. When cartilage becomes bone we usually say it is developed; but this is only because it becomes fitter for a share in a higher condition of our economy. The man is "higher" than the child, and therefore we are ready to speak of everything as ennobled if it contributes to his manliness. But, in respect of texture and self-activity in vital process, in the activity which can work with even a distant supply of blood, cartilage is better than bone; and the change into bone partakes of the nature of a calcareous degeneration; in general utility there is development, in self-activity there is degeneration.

The same may be said of many changes from cells to fibrous structures in ourselves. In teleology there is elevation; in vital histology, degradation. And this anomaly of words is found, not without some confusion of thought, in parts of our pathology. We speak of rickets as a hindered or arrested development, and so, in respect of purpose and utility, it is; but, in respect of elemental tissue-life it is rather an arrested degeneracy.

You may study such anomalies of terms in many instances in plants. Let me suggest a thesis for the D.Sc. There are such things as green roses: show the analogies between a green rose and a rickety child.†

* In connexion with this subject, it may be useful to study the variegations of leaves, in many of which there is a constant variation of Begonia, a perfect symmetry of [illegible]. They may be [illegible] and [illegible] when [illegible] are [illegible] wholly due [illegible]

* [illegible] from the Proceedings of the Literary and Philosophical Society of Liverpool, New Series, No. [illegible]

† Help may be found in the study of Dr. Ord's thoughtful paper "On Brownian Movement," in the *Journal of Anatomy*, June 1880.

But now let me end my notices of those changes in plants which you may study for illustration of atrophies and degenerations and retrogressive metamorphoses in ourselves. There are many more, such as the sweetening of fruits, in which, while becoming more useful to ourselves, they acquire chemical conditions less distant from inorganic matter; and the red and yellow tints of ripeness, which are colours indicative of imperfection, or the central softening and decay of fruits very like that of large morbid growths. In all these, as well as in decaying leaves, you may study general pathology when and where you will.

I will next speak of the repair of injuries. In studying the processes of repair in plants a first observation may be that, speaking generally, the repair of injuries and diseases is less complete in them than it is in animals, even than in ourselves and others of the highest groups. The processes of repair, so far as they extend, are similar in both, but in plants they rarely extend further than to be defensive or protective to the injured parts; they seldom reach to what may justly be called reparative or reformative, and much more rarely to anything that may be named reproduction or regeneration of lost parts. Indeed, the only instances of reproduction which I have found recorded, are those of the cells of Vaucheria,* and of parts of the minute leaflets of the small moss, *Bryum Billardierii*, and even in these the mid-rib was not reproduced.†

In most of the ordinary wounds and other injuries of leaves and stems, as well as of petals and fruits, we see only incomplete repair. Punctures and incisions and minute excisions, such as in ourselves would be quickly closed and healed, and in a few days be almost unobserved, are, in plants, not closed at all, unless with careful help and in some few species.‡ The gaps or spaces are not filled-in with new material, there is no tendency to contraction, the edges do not draw together. The healing which does take place in these cases may be compared most nearly with that which, in animals, we see in wounds left open and healing under a scab. The cells and the ends of the fibro-vascular bundles which are cut across empty themselves and die, and then, becoming dry, they slowly scale off and are detached: or, the contents of the cells may ooze out and yield a gummy deposit which may dry and glaze the surface of the wound. After a time this cracks and is detached, but while it lasts it serves, as do the dead and dry layers of divided cells, for some protection of the cut surfaces. They serve, alike, for timely protection against invasion by parasites, just as in an animal do the dried blood or the first exudation on a wound left open. Beneath this temporary protective layer the more permanently protective or reparative changes now ensue, and these are usually described as in two methods: the formation of cork and the formation of callus.

In the healing with cork, which is the more frequent in the more succulent parts of plants, the layers of cells next beneath the dead cells or the gummy covering multiply by frequent partition, forming rows of thin-walled flattened cells. Then of these the outermost, lying at and next to the surface of the wound, become cork-cells, their walls thickening and their contents being replaced by air. The more deeply seated remain active, still capable of multiplying and of replacing the cork-layer, which now serves as a dermal covering, and becomes continuous with the periderm at the borders of the wound, but does not acquire an epiderm.

In the healing with callus, examples of which may be studied in the closure of the wounded surfaces of slips and cuttings, the living cells next to the surface of the wound grow out into papillæ or short pouches, with or without cell-division. These may form a protective cork-layer, and if they approach from nearly adjacent surfaces they may intermingle and unite; or they may form other structures, replacing those injured, as epithelial cells, parenchyma-cells, or a new cambium layer, in which bark and wood and fibro-vascular bundles may form.

The best instances of healing after this manner are in the wounds or the splittings or strippings of bark which do not go through the outer layers of the cambium in vigorously growing stems or branches.§ In the actively living structures of the cambium, if it be very gently guarded, callus forms by outgrowth and division of cells, somewhat after the manner of granulations, and of these, not only bark but wood, vessels, bark and cork may form and become connected with the similar tissues at the borders of the wound.

These, I say, are examples of the best healing known in plant-structures, and they must be worth studying carefully, for they would illustrate many points in our own healings and are far more apt for minute examination than any injured structures in animals.* Yet even in these the defective reparative power in plants is shown. An animal, if skin be stripped from it, will, if possible, lick the raw part, and then let dust and hair and dirt collect and help to make a scab with blood and oozing fluid, and under the scab new skin will form, not indeed perfectly but well. But when bark is stripped only down to the living cambium the raw part must not be touched; mere wiping or touching with the finger, or too much drying, may kill the cambium-cells and prevent all healing; or parasites may attack it and make more mischief. And when we leave these best cases the repairs observed in plants are far less; even small branches or twigs when partially broken do not reunite, unless in a few instances in succulent plants in which the broken surfaces are carefully kept in contact, and even in them no new woody tissue may be formed. You know what is called in surgery a greenstick-fracture and its sure method of repair. In a real green stick no repair of the kind would happen; no ensheathing or intermediate callus would form; at the best the broken surfaces would be covered with a protective layer of cork without an epiderm. I cannot find an instance of repair in plants which even approaches in completeness to the ordinary repair of a broken bone or a divided nerve or tendon in ourselves or any other animal.

Perhaps the strongest contrasts may be seen in the wounds or strippings of trees that go down to the layers of wood; or, in what will follow the amputation of a branch from a tree and of a limb from a man. You may see in front of St. Catherine's College some elms from which branches were cut yesterday; and not far off, at Addenbrooke's Hospital, I dare say you may see patients from whom parts of limbs have been amputated; and, if the stumps have been treated after the manner advised by our distinguished President, they will have been left to be repaired by nature, as truly as are the stumps of the branches of the elms. The stumps in the hospital have been cut in better shape for healing; but those in the garden have the advantage of more perfect rest, and, in whatever shape they might have been cut, the result would have been the same. Now, it is most probable, nearly sure, that the human stumps will be healed in a few weeks, and that in two or three months all the wounded parts will be covered-in with skin and scar and cuticle firmly adhering and compact. But it will need a very long life to see the healing of any stump of the same size on the trees. The wood cut across will die, and its necrosis will never be repaired; rotting, like a caries, may extend from it into the trunk, but it will not be repaired. Year after year the annually formed rings of new wood and bark will overlap the borders of the wound; each year they will grow thicker and will converge, and at last after many years they may, perhaps, meet and coalesce and cover-in the wounded surface; but they will not unite with it, there will always be a cavity over the dead wood: a stump so ill-healed as would be a shame to any hospital. I must not imply that there are no better healings after amputations in trees than you may see in elms: some trees heal better, as do beeches and planes; but I think it may be said generally that the stump of any branch will need more years for its healing than the stump of a limb of the same size will need of weeks; and that, in the end, the work of the weeks will be far more reparative than that of the years. And in this reckoning I would include not only the limbs that have been surgically cared for, but those that have been violently crushed, mutilated, or torn off in animals left to themselves.

This slowness and defect of repair are observed in other things besides the healing of wounds. Dead portions of leaves, or of wood, or other structures, are not cast-off unless by external force.† We have borrowed the word "exfoliation" to tell of the separation of dead bone; but, as I have said, it is only living leaves that can exfoliate. Dead pieces of young wood remain where they were killed, as they often are, without external wounds, by hail stones‡ or any accidental blows. The structures adjoining them may become hard or corky, but they do not separate from them, there are none of the reparative changes which are seen in even a "quiet necrosis". Similarly you may often see dead tips of leaves, perfectly defined from the living parts by colour and by texture, yet without any groove or other sign of process of separation, the dead and the living epidermis remaining still continuous. And as to recovery from diseases I believe it may be summed up in saying that no vegetable structure altered by disease ever reverts to its original healthy state.§

* As quoted from Hanstein by Frank in the *Encykl. der Naturwissenschaften*, Abth. i, Lief 12, p. 382; and in *Botan. Zeitung*, 1872.

† Described by K. Muller in *Botan. Zeitung*, 1850, p. 290, and quoted by Frank, Waldenburg, Beijerinck and many more, who do not add any similar fact.

‡ See Frank, *loc. cit.*, p. 383-4.

§ It may be well studied in longitudinal wounds made through bark for the relief of tension (See H. de Vries in *Archives Néerlandaises*, t. xi; Haarlem, 1876).

I have adopted, chiefly, the descriptions of healing given by Frank (*loc.*). I hope that more minute descriptions and more mutual illustrations between animal and vegetable repairs will soon be published by Mr. Shattock, who has been studying the subject with great care and skill.

† A partial exception must be made for the tips of the fibres and vessels divided in some cuttings. See Arloing, *Sur le Bourrage des Cactées*, *Ann. des Sci. Naturelles; Botanique*, B. iv, p. 14, 1877.

‡ Goethe, *Ueber den Kreislauf der Atmosphäre*, 1827, p. 2.

§ "It is confessed that diseases in the vegetable kingdom, when once established, are, for the most part, uncontrollable." Berkeley, *Gardener's Chronicle*, January 21st, 1854, p. 37.

Now let me commend to you this subject of the repair of injuries in plants, not only for illustrations of our pathology, but as a part of the study of what may be called the philosophy of healing. They heal very slowly and imperfectly, they may need many years for the healing of small injuries, eight or nine years for a frost-crack in a young branch:* yet they do heal; the intention, as Hunter would have called it, is not given-up. Let me relate one case.† A fir tree, fifty years old, had a large piece of bark stripped from its trunk. The wound extended round nearly a fourth of the circumference of the trunk, and laid bare the wood. It was not dressed or guarded; the outer layer of the exposed wood died as usual, and then every year the successive annular growths of new wood and bark extended a little further over the bared place. In one hundred and fifty years these growths met and coalesced, and the wound was covered-in. When the tree was felled and cut through at the injured part, where there was still a deeply depressed scar, the concentric rings of wood proved the growth of fifty years before, and one hundred and fifty after, the injury, and even now the healing was not complete; there was still a cavity between the old wood and the new; the healing was not such as we should call good in any similar case in an animal. Still, there was healing; the "intention" was maintained for a century and a half.

Surely, in our familiarity with the processes of repair we overlook their wonder; the wonder that there should be in anything an inherent power of repairing the consequences of accident; that, for instance, in any one of us, after living for many years, with only those timely regular changes, the methods of which we have inherited from our ancestors, an accident, some quite unlikely event, such as may never have happened to an ancestor, such as no conceivable process of selection or of inheritance can have prepared us for, some mere chance as we must call it, should bring-out an increased power and a new method of organising structures exactly adapted to the repair of the consequences of that chance. And let me remind you that this power of repair is not a property of living things alone—it is evident in crystals.

It may seem unreasonable to say that we may study principles of elemental pathology in the apathetic inorganic world, or in things that we call dead. But certainly we may study them in crystals. The experiments of Jordan which I repeated many years ago, and related in lectures at the College of Surgeons,‡ have been extended by Pasteur,§ Karl von Hauer,‖ and others, and this chief fact has been abundantly proved—that if a portion of a crystal be broken off, or filed or dissolved away, and if then the mutilated crystal be replaced in a solution of the same salt or of an isomorphous one, the lost part will be replaced, the damaged form will be repaired. In this process of repair the whole crystal will be enlarged, new crystalline matter will be formed on every surface, but the quantity formed on the injured part will be greater than that formed on any other part, and repair will be more active than mere growth till the proper form of the crystal is regained. Then, when the repair is complete, growth alone will go on and each part of the crystal, if it remain in the same solution, will increase in due proportion with the rest.

It seems impossible, by any just definition, to separate this process from those which, as pathologists, we study in the repair of the accidental injuries of living bodies. In all alike, when a natural form has been lost or impaired by external force, the native formative power works at the injured part with an energy and a method modified appropriately to the recovery from the loss, and then, when the recovery is achieved, returns to its previous energy and method. Of all alike, it may be said that where we find evidence of a design to be fulfilled in the attainment or maintenance of a certain form, there, also, we may find evidence of some power to repair injuries which that form may sustain from accidental external forces.¶ However various in its degree and method the power of repair is in all.

I wish that some of you, with a good broad knowledge of pathology, would study this repair of crystals and the possibility of their recovery from other changes besides those of form. The study could hardly fail to yield facts that would be very useful in the proper business of our lives. Only let me warn you that, as I have learned from Mr. Maskelyne, [illegible] crystals needs great care; if they are to be well repaired they must have as gentle handling and as kindly nursing as the tenderest patients of our own race.*

Even if, in studying the repair of injured crystals, we should not learn things directly useful in our own pathology, yet the facts should keep us safe from the error of referring reparative processes to such supposed causes as are called increased action, or determination, or reflex trophic force, or the like; they must convince us that repair is the result of some elemental general law of formed matter prevailing beyond the whole range of life and living structure, even in all natural bodies having harmonious form and proportions.

But while, in the widest survey of repair that we can take, we may thus see an instance of so simple an expression of the Divine Will as we call a general law, yet, in the degrees of apparent observance of that law, we find differences very wide and, so far as I know, quite inexplicable. We do not find equality of reparative power in all formed bodies, nor any rule of proportion between that power and their less or more simplicity of structure. There are some rules of such proportion among animals, but they are very partial, and the rule fails completely when we compare the reparative processes in plants with those in animals.

Let me revert to this comparative defect of healing powers in plants, though it may be only to tell my ignorance of all relations between it and any other of their properties or the conditions of their life. It is not related to any immunity from injuries enjoyed by them, for they are far more exposed to injuries than are animals; nor to any absence of necessity for healing, for, after wounds, they suffer severely, and often fatally, from the attacks of parasites of all kinds. It is not because of any lack of productive power at the injured part, such as we might be disposed to refer to the want of circulating blood or of nerve-force; for from many wounds of plants, as the art of grafting and of multiplying by slips or cuttings may show, entire new plants may grow; and yet these are not reproductions; they may, in one sense, replace that from which the slip was cut away, but they do not reproduce it; they are not continuous with its remains, and they commonly become much more than that which was lost would have become. Again, the increased growths which injuries may produce in plants are not to their own advantage, though they may be so to that of a successor or a parasite; and on many wounds of wood hard and heaped-up masses of new wood may form, such as may be roughly compared with our cheloid scars and excesses of bone-callus. Neither can the defective repair be ascribed to any general tenacity in the regular methods of growth in plants, or to any general want of pliancy or of ability to adjust themselves to new conditions; for the art of horticulture abounds in instances of changes in methods of growth completely adjusted to changes of condition. There are in plants ample powers for enlarged growth and ample range of pliancy in method; but that special change in method of growth, which is familiar to us in ourselves and other animals, and which, as with design and on purpose, is adapted to the speedy healing of injuries, is in them comparatively defective. Which of you will work so as to find the explanation of what seems so strange an inconsistency?

(To be continued.)

[illegible] primary form, the repair is either very slow or is even not attempted.

Yet that healing may be "left to nature". Mr. Maskelyne has often seen in native crystal marks of its duties repaired.

DROITWICH RURAL.—The statistics for this district show that during 1879 the birth-rate slightly decreased, whilst the death-rate increased. The infantile death-rate was higher than during the two former years, but the deaths over sixty showed a great increase; whilst the deaths from the ages of five to sixty were only 88, showing a death-rate of 5.04. Dr. Swete regards, therefore, the increased death-rate as clearly due to climateric influences on the very young and on the aged. The death of one female was registered at the age of 102 years. The zymotic death-rate was lower than it had been during the previous four years, scarlet fever having much decreased. No epidemic occurred throughout the district, the cases of zymotic disease being nearly all isolated, and some of them being imported cases. In one case of scarlatina, gloves were being made for the trade at Worcester. Dr. Swete communicated with the manager of the factory, and had the stock of gloves and material perfectly disinfected, and no more sent to the infected house. As he points out, gloving in a house infected with scarlet fever is a ready means of spreading the disease amongst families where no clue to the cause of infection is apparent; and it would seem necessary for great caution to be used in the giving out of work to houses where there is a suspicion of the presence of infectious disease. The birth-rate of the district was last year equal to 32.8 per 1,000 of the population, as against an average of 32.4; the death-rate 18.3 per 1,000, against an average of 16.50.

REMARKS

ON THE

GENERAL WORKING OF THE PUBLIC HEALTH ADMINISTRATION IN GREAT BRITAIN.

Read in opening a discussion in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

By ALFRED CARPENTER, M.D., C.S.S.Camb.

The general working of the public health administration in Great Britain is a wide subject. I can only refer to a few points which strike me as deficient in its action, and capable of improvement.

It may be considered from several points of view. The most important in the eyes of the medical man is its efficiency, but that which excites the greatest attention on the part of the people is its first cost. How much will it add to the present rate? is the inquiry of the majority; and unfortunately that inquiry does not always extend to the rate which will have to be levied a few years hence. It is all but useless to propose measures which will be costly in the first place, even if an immediate benefit is likely to accrue to the community. The principle of local self-government is so often found to be antagonistic to efficient and really scientific methods of dealing with disease, that numbers of earnest sanitarians commit themselves to centralisation of authority, and call upon the Government to do that which it can only do through the will of the people. To my mind such a course tends to impede sanitary work. It is really useless to call for compulsory powers until the governing body (that is the majority of the people) have been educated in the first principles of sanitary work. It is worse than useless to press upon the attention of the legislature measures which the public do not understand, and are not prepared to endorse. It is useless to call for Acts of Parliament which magistrates will not enforce, unless the reasons for them are clear and decisive to the common intellect. In considering the working of the public health administration we must take into account, therefore, not only efficiency and first cost, but also those principles which are connected on the one hand with centralisation, and on the other with local self-government.

There are many things to be said for a controlling authority. It is necessary that there should be such a body at the seat of Government capable of compelling the observance of imperial laws, and if we could have infallible wisdom at head-quarters, an autocrat, able and willing to enforce sanitary obligations, would be of inestimable benefit to the nation; but the Government of the day is elected by the people, and the powers which rule in Downing Street are aware that they hold the reins of government only so long as they please the people. Occasionally a Government is found to listen to clamour, and to think that much noise means much power, and hence individual members of it try to please the noisy section of their supporters, and to bring in such measures as that introduced by Mr. Dodson, for, as our editor says, the sale of indulgences, or granting licenses to disobey the laws. Should we ever have a Minister of Health that minister will hold office so long as he and his colleagues command a majority, and we may rest assured that he will not trample on the toes of the electors with too heavy a tread, knowing full well that a really efficient discharge of his duties would lose him his place at the next general election. As sanitarians we must look at results on both sides. A too serious attempt at compulsion might bring about a violent transition of party. Ministers now consider too much that which is expedient rather than that which is best, and it might be possible for a man of the Peter Taylor stamp to be at the head of the Local Government Board, or even to be a Minister of Health, on the principle of "*Lucus a non lucendo.*" Such a transition would be one of the greatest misfortunes which could happen to civilisation, as well as to public health, and whilst anxious to promote our cause we must be careful not to press compulsion until the public are convinced that it is right, and not even to ask for compulsion except in those cases in which it is clear to a common intellect that a man by his neglect or act is doing a very serious evil to his neighbour. Our course therefore appears to be that whilst urging upon the Government of the day the duty of providing an efficient controlling authority, it should only add to that duty the necessity of advising local bodies whenever it appears to the central authority right to tender it. It will be far more statesmanlike to insist upon the education of the people in the first principles of sanitary science, so that electors may know how to refuse the evil, and choose the good from among those who ask their suffrages as members of Parliament, as well as local representatives in the legislative assemblies of their own particular districts.

It has sometimes happened to me to hear it said that this or that community ought to be compelled to carry out this or that sanitary law by a Government officer, and that the ministry of the day should appoint men to do such and such works, and have power to levy a rate upon the district for the purpose of paying for them.

However beneficial to the people themselves such a course might be if the director of the work himself knew what was best to be done, to my mind it is a wrong course to be pursued, and is no more to be justified than is the conduct of those who would spread the beneficial influence of Christianity at the point of the sword, or if not by bloodshed, at any rate by the agency of the terrors of the law.

Compulsion under such circumstances would be dearly bought, and would be certain in the end to lead to reaction, and to damage the cause which we, as sanitarians, have so much at heart. The public will not be what they are pleased to term "doctor ridden", we must show to them that it is to their own interest to carry out our suggestions, otherwise we shall recede rather than advance in sanitary legislation. The whole medical profession would be quite powerless to carry or to enforce such a measure as compulsory vaccination, unless the people were fully convinced of its benefit. If the people are properly instructed in the matter we need not fear the noisy clamour of a few interested persons, and salaried officers of half-educated committees, and inferior politicians who find that such conduct gives them personal notoriety. I wish I could adopt the view that the general working of the Public Health Act is at this time satisfactory. Much has been done. Many solid foundations have been laid, and in many districts efficient officers have been appointed to supervise the district, and to see that the sanitary laws which have been enacted are complied with. But the strength of a chain is only that of its weakest link, and there are many weak links in every sanitary chain in the kingdom, whilst in very many places the laws are all but inoperative. The authorities conform to the letter, but they avoid the spirit of it. There is still much overlapping of authority, much friction between bodies, each striving how not to do the work that is before it; there is waste of time, waste of money, and much useless work carried on—useless, because carried on at the wrong time; disinfection where there is nothing to disinfect; disinfectants employed which counteract each other; orders served upon parties to do works which would be best undone; sewers made where no sewers ought to be countenanced, or constructed so as themselves to be sources of disease; arrangements fitted only for town population adapted to villages for which they are not fitted; managers appointed to manage works which they do not understand. The cause of all this is that members are elected by the ratepayers into local boards and town councils not because they are acquainted with political economy and sanitary science, but because they promise to do that which ratepayers ought to know to be totally beyond their power. When elected, these men at once blossom out as fully competent to deal with the most intricate and difficult subjects on the shortest possible notice. I am of course most struck by the action of local authorities in my own neighbourhood; authorities which are credited with some knowledge of sanitary science, and some of them supposed even to be in the van of sanitary progress, and yet who in some cases, from the employment of inefficient and make-believe officers, transgress the first principles of sanitary work in almost everything they undertake, and, as a consequence, fall into numerous misfortunes.

One of the first necessities of the present time in connection with public health administration is that men who undertake duties connected with the working of sanitary acts should be themselves acquainted with the first principles of sanitary work, and should believe in the necessity for such work. I saw not long since some works being executed by a sanitary authority for the purpose of removing sewage pollution from a certain stream; about 150 men were employed upon the work, and the only privy accommodation provided for those men was a shed which allowed of the discharge of the workmen's fæces into the very stream which they were erecting works to purify. At the present time there is no law to compel local authorities to elect officers who have proved that they know anything of the duties they are about to undertake.

Fortunately, a Sanitary Institute has been started, whose object is to promote sanitary education and to grant certificates of competency not only to inspectors of nuisances, but also to surveyors of highways, and

local boards. That institute ought to meet with the support of the public, as well as that of the medical profession, and it would be well if local authorities in selecting officers from among the candidates would publicly state that they would prefer candidates who had certificates of competency from the Sanitary Institute.

The universities, and notably that of Cambridge, has instituted examinations in state medicine for medical officers of health, but nothing has been done either by the State itself or by the Medical Council, whose President honours us with his presence as President of our Section to-day, to render it incumbent upon men who undertake the work of medical officers of health to have any knowledge of preventive medicine; and there is nothing whatever in the education of the medical practitioner that gives the public any credential that he has had any special instruction in that in which I venture to claim as the most important part of the civil medical practitioner's education. The wildest notions are put forward as truths, and the most ridiculous statements made by elected medical officers of health which are utterly at variance with the true principles of prevention, and which are qualified to bring the profession of medicine itself into contempt. No man ought to be appointed a medical officer of health who has not made disease-prevention a special study. No man ought to be appointed a surveyor or inspector of nuisances who has not shown himself by examination at the Sanitary Institute or elsewhere to be qualified for that office.

This brings me to a consideration of the area which such officers should supervise. The inspector of nuisances cannot supervise a large area. He ought to have a personal knowledge of every house in his district, and to make an inspection of each as a matter of course at least twice a-year, as well as carry out all other matters of detail connected with his office. From fifty to sixty houses a-week, even if they be in close proximity, is as much as any officer can properly look after. The district for the surveyor should be based upon local boundaries and wathershed areas, rather than population; and its size will depend more upon his ability to choose assistants than extent of area.

The case of the medical officer of health is on a different footing. His district ought to be large enough to occupy the whole of his time, and also to be bounded by natural limits. He should devote himself to the duty of prevention, without having the trammels of private practice to interfere with his public work. If he be an able man, it is certain that, in times of sickness above the average, he will be too much occupied with private work to pay a larger attention to the duties of his office; and, when most required, it will be impossible for him to do his duty both to the local authority and his own patients; whilst it follows, from the ordinary principles common to human nature, that he will not neglect that portion which pays him best. Again, there ought not to be a possibility of antagonistic interests as between the private practitioner and the public officer, and it stands to reason that there will be some amount of jealousy and mistrust on the part of those who may fairly consider the medical officer of health as a professional rival. Medical men will consent to his intrusion when he has no other duty to perform than to advise as to disease-prevention. But they will not consult him if it may by chance be an introduction for the medical officer of health to their own patient.

The plan I advocate, for medical officers of health to restrict themselves to preventive duty, is urgently required. They ought to have nothing to do with private practice. The area to be supervised should depend upon the density of the population and the means for locomotion; the wealth of the people, and the character of their industries, will also be factors in the case, so that no hard and fast line can be laid down; but, when possible, the boundaries should be natural boundaries, such as the crest of a range of hills, the banks of a stream, or a particular watershed. To have one side of a street looked after by one officer, and the other by another, is a serious mistake. Areas of small size and with arbitrary boundaries ought not to be countenanced. It is important that the area should be conterminous with jurisdiction, so that there may be no conflict of authority.

In the district in which I reside, there is a parish of some seventy thousand persons; it has a local board, having jurisdiction over the health of the people. There is an accomplished medical officer of health, who is in general practice, and his partner is chairman of the gas company. I may say at once that no one ever says a word against the way in which his duties are performed; he tests the gas for the local board, and does all that they call upon him to do, in the best way in which a skilful officer should do it; but he has no official connection with the board of guardians, who supervise the destitution of the district, and he has nothing to do with the medical officers who attend [illegible]. The parish is situated in the centre of a larger area, which is supervised by the board of guardians, and who are the sanitary authority of the outer circle, which consists of a ring of parishes surrounding the local board's area; indigitating with it; on some sides sending sewage into the district, and on others receiving it. Indeed, the whole of the sewage of the central and more populous area is utilised in the outer circle in the area under the jurisdiction of the rural sanitary authority, which is the board of guardians.

Thus, there are houses in close proximity to sewers, partly in one district, partly in the other, but no official communication takes place between the medical officer of the central district and the Poor-law medical officer of that district; or between him and the Poor-law medical officers who act as medical officers of health in the district which surrounds the central portion, and which utilises its sewage; and probably he would not know the inspectors of nuisances in those districts, even by sight. The whole of this area ought to be supervised by one medical officer of health, who would have quite sufficient to do if he devoted himself to the work; and, if the whole was made into one area, there would be a good salary for the officer without materially increasing the charge upon the rates; but, such is the jealousy of interference of the central authority and of each other on the part of the boards interested in the matter, that they will not listen to the proposed arrangement.

The conflict of jurisdiction does not actually arise, for work is let alone which a single officer would perform, and much which ought to be done is not attempted. There are two other anomalies in the district; one is that, whilst in the central parish, houses have their plans approved before they are erected; in the other, there is not the least attempt at supervision; houses are built and roads laid out without reference to sanitary laws; and, as a consequence, large outlay will be required in the future, on the part of the local authority and at the expense of the ratepayers, instead of the speculative owner, to make the houses which are now being put together fit for habitation. The other anomaly is, that the board of guardians have, as the destitution authority, provided admirable wards for infectious cases, in four separate blocks, capable of accommodating sixty-four patients. The accommodation is ample for the whole of the district. The blocks are fairly isolated, and are situated in the centre of the central district, that is the district which has a distinct sanitary authority. Notice has, however, been given to the board of guardians by the Local Government Board not to admit into the infectious wards persons who are not paupers. Instructions have also been sent to the urban authority in whose district the buildings stand, urging them to erect properly isolated infectious wards for non-pauper cases, and a similar notice has been given to the authority supervising the health of the outer ring. Thus, if centralisation ruled supreme, we should have three sets of blocks for infectious cases in a given district, where an amply sufficient accommodation is already provided. The result is, that, in a district of 120,000 persons, as a matter of course occasional cases of infectious disease arise; but the wards are not used, because the reception of non-pauper cases is not encouraged, and there is said to be a repugnance among such people to go into a pauper establishment. It has been suggested that the board of guardians should sell the buildings to the urban authority, and make arrangements with the latter for the reception of pauper cases; but local authorities have not mental power sufficiently elevated to allow them to act for the good of the community at large, when it requires a surrender of petty power to a rival body, and they decline to do that which would make the wards more available to the purposes for which they were erected. It is for the same reasons that they decline to appoint a medical officer of health for the whole of the area, who should be also medical officer of health of the central and rival body. A medical officer of health for the whole of the area would enable the most to be made of the present laws, would bring that officer into immediate and early contact with infectious and epidemic disease, and do much in connection with the command of the infectious wards to prevent the spread of epidemics in the whole of the area whose destitution is supervised by the board of guardians. The instance I have quoted shows that an alteration of the law in the direction indicated would be of much value, and that any idea based upon a calculation of the number of medical officers of health already appointed would be delusive in the extreme.

Taking the district in which I reside as a specimen of the general working of public health administration, I am forced to conclude that, with good imperial laws, those laws are rendered to some extent inoperative by the dead weight of local self-government, which dead weight has its origin in want of proper knowledge. At the present time, the central authority has the power to alter that which they know to be defective by refusing to sanction it, but they have not the will to do it, because they know that it would be resented by the local authority, and be made to reflect upon the Government of the day when a general election came on. With them, expediency is before efficiency.

I have not quite done with the chaos of sanitary legislation in my own district. There is a third power, besides the guardians and the

Local Board of Health, viz., the magistrates. The health of cattle is considered by the legislature as belonging to a different category to that of people. The care of milk-shops, cow-sheds, and stables, are placed in the hands of another authority, who have to be at the same time both prosecutors and judges; a condition of things which ought not to be. This state of the law has had an origin in a desire to protect the farmer at the expense of the ratepayer, and to do that for cows which would not be tolerated if the preamble was applied to human beings or to dead matter. The Contagious Diseases (Animals) Act is perfectly ineffective for the purpose for which it was nominally passed, whilst it must have had an effect in decreasing the stock in the country. I will give you one instance out of several which has come to my own knowledge. Pleuropneumonia appeared in a farmyard among forty cows, which were in one shed. The local inspector isolated the first cow, leaving thirty-nine in the shed in which the case first appeared. Three others fell, one after the other, with the disease, and were taken out, slaughtered, and buried on the premises, but the rest of the herd were left in the shed. The sewage of the shed drained into a covered cesspool, which had no outlet for the gases of decomposition except into the shed itself.

The case came to my knowledge from my having to declare the place infected with pleuropneumonia, and having to make an order preventing the removal of cattle from the farm. I had the curiosity to examine the place, after an inspector from the Local Government Board, as well as our own veterinary adviser, had agreed that proper steps had been taken to prevent the spread of the disease.

Let me put a similar case among human beings. Could anything be more suicidal than to keep thirty-nine unvaccinated people in a building in which a case of small-pox had appeared, taking the case away, but leaving the fomites. Twenty-two of the cows failed with pleuropneumonia, one after the other, in about six weeks, were taken out, slaughtered, and buried on the premises. Ultimately, the owner had the remainder killed to use them as food. If the sanitary arrangements in this case had been in the hands of an able medical officer of health, is there any doubt but that the larger portion of that herd would have been saved, instead of consigning them to ignominous burial. In fifty-four days from the removal of the last case, although twenty-two cases are buried on the premises, they will have the right to be declared free from disease, and they may be again occupied as cow-houses, although the germs of disease must be still there.

It stands to reason that all matters connected with the health of either men or animals should be under one chief, who should be responsible only to one authority in one district. That district should have natural boundaries, and the medical officer of health should be in immediate accord with the veterinary inspector, the medical officer of the board of guardians, and the whole of the inspectors of nuisances, within the district. The latter, indeed, should be his officers. All reports connected with the health of the district should be transmitted to him, and by him transmitted in a condensed form either to a county authority, or to the minister of health. A county board, consisting of a combined area having a board for the consideration of principles, would be the best. This board should have its county medical inspector, who would be like to the colonel of a regiment. It should be an office to which efficient medical officers of health might be promoted, and these commanding officers ought to be in direct communication with the minister of health. Until some such scheme as this be enacted, sanitary laws will not do all the good which is to be expected from them; and such a change cannot be brought about until the people, as well as the profession, are in accord as to the dogma of prevention being better than cure.

BRIDGWATER URBAN AND RURAL.—Mr. F. J. C. Parsons, the medical officer of health for both of these districts, has a somewhat uneventful state of affairs to record for the year 1879. In both districts, phthisis and diseases of the lungs were very prevalent and fatal. The infantile mortality in each was exceedingly small, being respectively 75.1 and 30 per 1,000 births. The drainage of both town and country districts is unsatisfactory, and should receive early attention. The town has the benefit of a public supply of water; but in part of the rural district the question of the provision of a pure and adequate supply is stated to present great difficulties. The removal of nuisances in both areas seems to be carried out with satisfactory diligence, and with little friction. The authorities have provided a hospital for the isolation of infectious patients, which was used with good effect last year. The death-rate for the urban district was 16.3, or considerably less than in the previous year; that for the rural district remained at the same figure as in 1878, viz., 15.1 per 1,000.

ON A CASE IN WHICH ONE-THIRD OF THE CLAVICLE, THE WHOLE OF THE SCAPULA, AND THE UPPER EXTREMITY, WERE REMOVED FOR SARCOMATOUS GROWTH AROUND THE SHOULDER-JOINT.*

By EDWARD LUND, F.R.C.S.,

One of the Surgeons to the Royal Infirmary, and Professor of Surgery in Owens College, Manchester.

THE removal of the whole of the shoulder, not for injury, but for sarcomatous growth around the joint, is so rare and formidable an operation, that I trust a short description of such a case, with a few practical details connected with the operation, may be deemed not unworthy of being placed on record at this meeting of the Surgical Section of the British Medical Association.

The case is briefly this. John Heys, aged 20, a weaver, was admitted into the Manchester Royal Infirmary, under my care, on September 15th, 1879, for a large tumour upon the left shoulder. He was a fine, strong, healthy-looking man, but, unfortunately, when a child had experienced some severe accident affecting the right side of the body, and this had left ankylosis of the right elbow-joint nearly in a straight line with the arm, and atrophy of the muscles in those parts from disuse. From the same cause there was also a slight stiffness of the right knee-joint. It was stated that his family history was good, and that no cancerous affection, or any special form of strumous disease had been known among his relatives. Heys informed me that thirteen weeks before admission to the infirmary, he had sprained his left shoulder in trying to lift some heavy weight, and in doing so it suddenly swelled, so as to prevent him from working any longer on that occasion. It was not apparent that any special treatment had been adopted, and five weeks previous to admission the swelling began to increase very rapidly, and considerable pain was experienced around the shoulder—not along the line of any particular nerve, but a generally diffused pain, which existed at all times, not more by night than by day. On his admission to the infirmary the measurement of the left shoulder was as follows. Just below the folds of the axilla the circumference was about sixteen inches, and round the arm two inches lower down it was about thirteen inches. The swelling extended far back, almost beyond the margin of the deltoid muscle, so as to overlap at least one-half of the breadth of the scapula. The movements of the shoulder, when passively performed, were fairly good; but the man had little power to raise the arm himself, and it was noticed that in such movements there seemed to be an undue mobility, and, as far as we could judge, the centre of motion was below the head of the humerus, and not in the situation of the glenoid cavity. The swelling seemed to fill the cavity of the axilla, but no enlargement of gland could be there detected. The pain did not appear to be very intense, although the patient was never entirely free from suffering. The tumour had a firm, elastic feel; the skin over it was somewhat stretched, but no fluctuation could be detected at any part. In trying to conjecture the exact nature of the case, it appeared to me that there were four possible conditions. It might be that at the time of the sprain some small vessel, most probably a vein, had given way near to the joint, and that we had now to deal with a blood-tumour, in which the blood was tightly compressed by the superjacent tissues, the fluctuation being in this way concealed. Or it might be, as a consequence of this, or from the original injury, that we had to deal with a deeply-seated abscess. Again, being reminded of an obscure case affecting the same part, which from rapidity of growth was thought to be malignant, but ultimately proved to be a lipoma—it occurred to me that in this present case there might have been a fatty tumour or fatty growth beneath the deltoid, which enlarged and grew more quickly after freeing itself from pressure by lifting the border of that muscle. Lastly, as perhaps after all the most reasonable interpretation, I thought the case I had now to deal with might be a sarcomatous tumour of the humerus, infiltrating the surrounding tissues. There was no excess of temperature to indicate the presence of suppuration, and there was no general cachexia to suggest any malignant taint. It was determined, accordingly, on September 26th, after the man had been in the hospital eleven days, lying in bed on account of the weight of the shoulder, that an exploratory incision should be made. Under chloroform and antiseptic precautions, a pretty deep and long incision was made through the deltoid muscle down towards the centre of the joint. No pus or fluid blood escaped, and a small slice of the tumour

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

was removed. After this the finger was introduced, and then it was found that the upper portion of the humerus was expanded and softened, breaking down readily on the slightest pressure, and on microscopic examination of the piece removed, it was found to be a sarcomatous growth, with spindle-shaped cells. We could now understand how the centre of motion of the joint was removed from its natural position; for while attempting to lift the arm we had been bending the softened bone. No further step could be taken on this occasion, as the patient had not consented to any serious operation. In spite of all our care, a slight erythematous flush appeared around the wound the following day; some constitutional disturbance resulted; the temperature rose to 103.4, and continued very high for forty-eight hours. Quinine was given in large doses, and the shoulder was covered with lint moistened with lead and opium lotion, the antiseptic dressings being discarded, as it was probable that in the explorations made, our antiseptic precautions had been violated. On September 30th all redness had entirely subsided, the temperature had fallen to 101.4, and in two days after this it had become normal.

Reviewing all the possible prospects of the case, I determined that if any operation were to be undertaken it should be sufficiently extensive to go beyond the limits of the disease. Having obtained the patient's consent, I proceeded on October 3rd to perform the following. The patient being laid on his back, somewhat inclining to the right side, so as to raise the left shoulder, and everything being carefully arranged for the antiseptic treatment of the case, the first incision I made was parallel to the clavicle, commencing about the junction of its internal and middle third, upon its anterior border. This was continued horizontally outwards to the acromion. A few touches with the scalpel enabled me to raise the tissues and expose the bone. I then took one of the raspatories used for separating the soft covering of the bony palate in operations on the mouth, and with this I more completely detached the parts around the clavicle, keeping very close to the bone, until I had made a passage beneath it, or between the bone and the subclavius muscle. In this passage I inserted a long thin ivory spatula, upon which I sawed through the bone, feeling confident that the vessels beneath would be protected. I then carried an incision from about the middle of the one already made, backwards over the top of the shoulder, dividing sufficient structures to bring into view the edge of the trapezius muscle, and about two inches of its surface. In a similar way, nearly opposite to this incision, I made another in front, in a curved direction downwards towards the axilla; then, raising the loose piece of clavicle, and carefully dividing the fibres of the subclavius beneath it, also the attachment of the lesser pectoral muscle to the coracoid process, and fibres of the larger pectoral muscle, I found that through the weight of the shoulder and arm, which had a tendency to fall outwards, there was no difficulty in obtaining a free space between the two pieces of clavicle. Here, by careful cleaning, I soon felt the pulsation of the subclavian artery. But the vein was concealed from view, as it lay closely upon the rib, still under cover of so much of the subclavius muscle as was still attached by its tendinous portion.

In making some of these early incisions, to prepare the way for exposing the subclavian artery and securing it, I divided the suprascapular artery. I immediately seized the proximal end and tied it, but rather sharp hæmorrhage continuing, it became necessary to ligature also the distal end. This was a fortunate occurrence for me, since it at once suggested that in performing this operation it would be better not to divide any artery without first passing round it two ligatures, and then cutting between them. The arterial anastomosis around the shoulder-joint is so abundant that unless this precaution be taken rapid hæmorrhage is very likely to occur; whereas by pursuing the plan indicated in an operation so serious as this one for the removal of the entire shoulder, the amount of bleeding was extremely small. I cannot venture to estimate exactly what the loss was in the present instance, but I am within the bounds of correctness in saying it did not exceed three ounces, taking venous as well as arterial blood.

Acting on this idea, and guided by the finger, I sought carefully for the pulsation of the subclavian itself, and having exposed it as it emerged from [illegible] muscle, and placed two ligatures upon it, I cut between them without any bleeding following. The vein was afterwards treated in the same way. It was interesting to notice, as the shoulder fell outwards from the mesian line of the body, how very prominent the seventh cervical nerve became, and how closely it was seen to follow the somewhat vertical direction of the third part of the artery. [illegible] I divided with the scissors, taking care to use very sharp ones, as I thought that by so doing the [illegible] would be [illegible].

The next step was to divide the trapezius muscle close along the line of its attachment to the spine of the scapula. The transverse cervical and [illegible] were secured, and cut with the companion veins, as were several other smaller arteries and veins, as they came into view. The cellular tissue within the axillary space was not occupied by the disease, for this seemed to have commenced in the humerus, and spread chiefly along the direction of the deltoid muscle. One or two glands being slightly enlarged, were removed; otherwise no fresh distinct growth could be said to exist in the axillary space. Dividing the latissimus dorsi muscle, and guided by the vertebral border of the scapula when drawn away from the chest, I had no difficulty in separating from it the thin margin of the serratus magnus muscle, with the rhomboids and the levator anguli. The last incision to be made was a vertical one, following the line of the internal third of the scapula, and sweeping forward into the axilla.

In this way I think I have described all the incisions which were required, so as to detach the entire limb from the body. On account of the time occupied in tying each artery separately, the operation was a very tedious one; but when the last incision had been made, little remained to be done besides bringing the edges of the wound together. And here I was struck with the wonderful way in which the skin at the back, beyond the extent of the original growth, could be slipped forwards so as to meet the anterior border of the wound, and cover the side of the chest. This was rendered possible from the fact that the upper part of the chest being conical, when the scapula and the clavicle have been removed, much less skin is required to cover the surface.

The very large wound thus formed was closed with twenty-four sutures. A long drain-tube was placed in front, and another, perforating the posterior flap just where it ceased to be attached to the back of the chest, afforded sufficient exit for any blood or serum which might accumulate in the cavity. The wound was covered with the usual antiseptic dressings, arranged with sufficient amplitude, and secured in position by an elastic India-rubber-webbing-bandage. The visible pulsation of the cut end of the subclavian artery, and of several other smaller branches, fully testified to the condition of the circulation, and the satisfactory way in which the vessels were controlled.

The after-progress of the case was very satisfactory, considering that so large a wound had been produced. From the length of time the operation occupied, and the quantity of chloroform required, there was considerable depression afterwards; but this was relieved by administering an enæma consisting of five grains of quinine dissolved in half an ounce of compound tincture of camphor, mixed with one and a half ounce of thin starch. This was repeated two or three times at intervals of four or five hours. It is a form of treatment, I may observe, in surgical injury, with which I have much reason to feel satisfied, especially where shock from any cause is very excessive. Whether it is the absorption of the opium contained in the tincture, or the stimulating effect of the spirit, or the tonic action of the quinine, I know not; but the combination I have just mentioned has so frequently proved beneficial, that it is a great favourite with me under such conditions.

The temperature in the morning, before the operation, is reported to have been 99.2. In the evening, after the operation, it was 97.0. The next morning it had risen to 102.0. After this it never again rose above 100.4.

The reports are as follows. On October 5th (the second day after the operation), "Sleeps without any narcotic. Takes his food well, viz., jelly, beef-tea, milk, etc." On October 6th, "Patient doing well; pulse good (100 per minute). Wound dressed for the first time; no discharge; no redness or swelling along the line of sutures; a little coloured serum had escaped through the drainage-tube at the back; no pain; temperature 99.6". On the 7th (the fourth day after the operation), "Temperature 99.2 in the morning, 99.8 in the evening." On the 9th, "Eats and sleeps well, wound dressed to-day; eight of the sutures removed; drain-tube at the back removed". On October 11th, "Dressed again; eight more sutures removed; looks remarkably well; union going on favourably". On the 15th, "To-day all remaining sutures removed, and the drain-tube in front discontinued". On the 17th, "No discharge; wound almost healed; upper three inches firmly so; cicatrix supported by narrow pieces of plaister". November 1st, "Up for first time, and dressed to-day". November 8th, "Dressed for last time as a spray dressing; wound entirely healed; to stay a few days longer in the hospital, and then, using boric lint, to go home." This last date, it will be observed, makes thirty-sixth from the day of the operation.

I am happy to be able in this case to bring the patient himself before the Section. On examination, it will be very obvious to you how considerable a mutilation it was needful to subject him to, in order to check the advance of the sarcomatous growth. On making a dissection of the shoulder, the upper half of the humerus was found to have been disintegrated by the progress of the disease, so that any less extensive operation would not have been successful. I was compelled to carry my incisions very far back, as the disease had extended considerably in

that direction, and I believe that if I had not removed the scapula, I could not have covered the wound with healthy skin.

I have not sought with any great minuteness to ascertain whether any similar case has been recorded in surgical works, *i.e.*, where such an operation has been performed, not for injury, but for disease. We are aware that in military practice immense damage has been inflicted upon the parts around the shoulder-joint. Large portions of bone and soft structures have been removed, and occasionally recovery has followed, and a useful limb has been preserved. But here, sad as it is to sacrifice the upper extremity, more particularly when, as in the present instance (as you will see for yourselves when the patient comes in), the use of the right limb is imperfect, the exigencies of the case will, I trust, justify in your opinion the very serious treatment to which I felt bound to subject this poor man.

ON THE *POST MORTEM* EXAMINATION OF THE EAR, AND THE FREQUENCY OF DISEASE IN OR NEAR THE TYMPANUM.*

By DAVID FOULIS, M.D.,
Pathologist in the Glasgow Royal Infirmary.

In the course of *post mortem* research, one is struck by the difficulty which surrounds the investigation of the internal ear, and also by the indifference about it manifested by those engaged in general practice; and yet the diseases of the ear are not only very important in themselves, from the inconvenience caused by pain or by interference with the hearing, but, as is well enough known, ear-disease is a standing menace to the life of the patient, involving as it does the possibility of extension to the meninges or even to the brain. It is important, therefore, to have an easy and sure method of examining the ear in the dead body, in order to increase, if possible, our knowledge of the relation of ear-disease to other diseases of the body, to gain some idea of its relative frequency, and to gather hints for its treatment during life.

Turning now to the best authorities, I do not find any directions given such as are applicable to the ordinary cases of *post mortem* examinations. The latest authority, and perhaps the best on purely pathological anatomy, is Dr. Orth of Berlin. At page 86 of his work, he says: "It is but seldom that the *inner ear* presents conditions which are of interest to the general practitioner; but, if an examination be desired, it may be made as follows. The whole petrous bone should be separated from its attachments by two saw-cuts which come together in the sella turcica; and it may then be removed from its place, put in a vice, and sawn through from the posterior border of the external to the anterior or inner border of the internal auditory canal. The internal parts are thus laid open, and the drum-membrane left nearly intact.....An admirable view of the inner ear may also be obtained by removing the roof of the tympanic cavity, which is easily done by either bone-scissors or mallet and chisel." (*A Compend. of Pathological Anatomy*, by Joh. Orth; American translation; Boston, 1879.) For more minute directions, the reader is referred to Professor Lucae's article in Klebs's *Handbuch der patholog. Anatomie*, Band i, where a careful description is given of the removal of the petrous bone with chisel and saw, and of the mode of dissecting it bit by bit after removal. (See also Virchow's *Archiv*, Band xxix, s. 33.) Very excellent instructions are also given by Toynbee in the *Transactions of the London Pathological Society* (1853, vol. iv), which are, in the main, very similar to those of Lucae. Voltolini gives a method not widely different from the above in Virchow's *Archiv* (Band xviii, s. 38, 1862); and, lastly, von Troltsch details the *post mortem* examination of the ear in his *Lehrbuch der Ohrenheilkunde* (6th ed., 1877), from which I may quote one paragraph. (See also Virchow's *Archiv*, Band xiii.) After telling us to remove one or both temporal bones entire with the saw, etc., he says (page 588): "If it is desired to avoid all and every outward trace of resection of the skull, we might leave the squamous portion *in situ*, and with hammer and chisel separate the pyramidal part from it at the inner half of the external meatus just in front of the membrana tympani.....In the same way divide the connections of the pyramid (petrous bone), and with the assistance of the knife remove it. In doing this, however, fractures of the bone are readily produced in places where they are not wished for; and one must abandon a part of the external meatus, which may interfere with the completeness of our inspection, especially if suppuration or sinuses, with secondary abscesses, exist in or near the external auditory canal. This was the manner in which Wendt was accustomed to remove the petrous bone; but, taking both together, whereby too, while avoiding any external disfigurement, he obtained a full view of the nose and throat." The whole of the petrous bone, tympanum intact, having been removed in one or the other way, full directions are given by von Tröltsch for the further examination of the inner ear in successive portions.

It will be seen that all these authors have in view a very minute dissection of the inner ear; and the details, though varying slightly, have this basis. For aural work, accordingly, where the ear is the focus of attention, or where a previous clinical history has specially attracted notice to it, and where time can be afforded for carrying out these minute instructions, nothing more could be desired. But let any one engaged in pathological work try to put such methods into habitual practice, and he will inevitably find that he cannot apply them in any but a very few cases. The time occupied by them is considerable, regard being had to the many other points which must be noticed in a necropsy; and the restrictions placed by friends of the deceased deter one from very free excision of parts of the skull. I have, therefore, been led to use a simple plan for splitting open the tympanum *in situ*, which, during the last thirteen months, has stood the test of an extended trial so well that, I think, it may be recommended as useful for ordinary *post mortem* purposes; and, as I cannot discover a reference to it in any publication, it is perhaps worth while to record it.

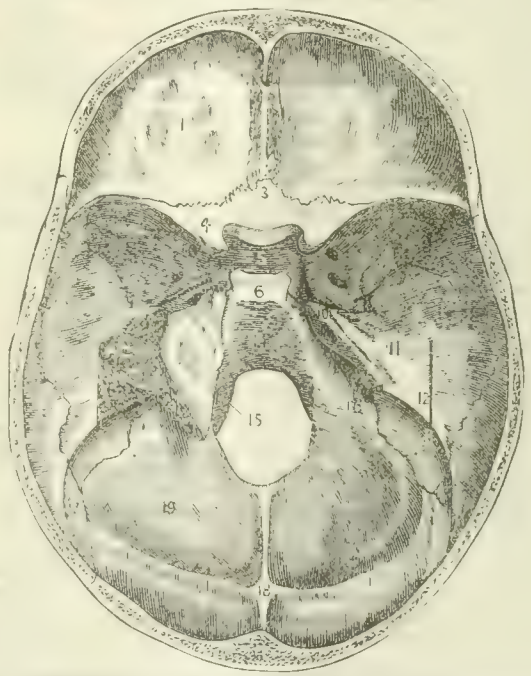


Fig.—Modified from Quain's *Anatomy*, to show the site of the incision and the view obtained by it after the petrous bone has been split open. On the right side No. 12 is placed on the eminence, on the outer slope of which the incision A B is made; and on the left side the bone is shown laid open, and the membrana tympani, etc., exposed.

Referring to the woodcut (adapted from Quain's *Anatomy*), it will be seen that the incision A.B. runs, in an antero-posterior direction, along the outer margin of the eminence caused by the superior semicircular canal on the upper surface of the petrous bone. When the skull has been opened, the brain removed in the usual way, and the dura mater torn off the base, this eminence is, in the great majority of cases, quite distinct; and in those in which it is less well-marked, there is still sufficient indication of it to guide the chisel. The incision is made with the ordinary *post mortem* chisel, the cutting edge of which is applied as along the line A.B., *parallel to the sawn edge of the skull, and perpendicularly to the anterior surface of the petrous bone.* A smart blow or two with the mallet is sufficient to drive the chisel through the bone, and to detach the inner part of the petrous bone, which may then be levered or pulled further towards the middle line of the skull (as shown in the woodcut), so as completely to open up the tympanum. On the outer side, the membrana tympani is left intact with the malleus and incus; while on the loosened piece of petrous bone are to be seen the stapes and the parts forming the inner wall of the tympanic cavity. These parts having been examined, the loosened petrous fragment may be torn out, and, by a further splitting up with the chisel, the state of

* This paper was written in March 1880, when also the method was demonstrated to the Glasgow Pathological and Clinical Society.

the cochlea and semicircular canals can be ascertained in an approximate way. The whole procedure need not occupy more than a minute or two; and, after a few trials, the tympanum can be opened with perfect accuracy.

Following this plan, I have examined the ears of one hundred and twelve bodies, with the result that, in seventeen cases, definite changes have been detected in or near the tympanic cavity. A very brief summary of these seventeen cases will show the nature of the lesion and its relation to other diseases in the bodies. I give them in the order in which they occurred.

1. Stricture of urethra; peritonitis: lining of right tympanum highly injected, and a thin purulent fluid in the tympanic cavity.

2. Disease of knee-joint; abscesses in the cellular tissue of thigh; both tympanic cavities full of muco-pus.

3. Phthisis pulmonalis; tubercular ulceration of bowel; lining of both tympana highly injected, and mucus in both; lining of right tympanum coated with a layer of soft grey lymph.

4. Fracture of skull, clavicle, and ribs; fracture of right petrous bone; right membrana tympani torn; right tympanum full of red blood-clot; left ear normal.

5. Tubercular peritonitis; semicircular canal of left ear seen to be nearly obliterated, and the petrous bone very dense and flattened; tympana normal.

6. Fracture of left side of skull; left auditory meatus full of cerumen; left tympanum normal; right tympanum full of pus.

7. Phthisis pulmonalis; recent pleurisy; left middle ear full of muco-pus, the bone near it dense and ivoried, the ossicles destroyed, the membrana tympani perforated; right middle ear normal.

8. Tetanus; lining of both tympana injected.

9. Phthisis pulmonalis; pus in right tympanum.

10. Wound of scalp; erysipelas of left side of scalp; stricture of urethra; hypertrophy of heart and bladder; chronic nephritis; right ear normal; left tympanum full of pus, membrana and lining injected, of a dull purple colour; no wax in the meatus externus.

11. Pericarditis and pleurisy from exposure to cold; lining of right tympanum injected.

12. Old softening in corpus striatum; lining of both tympana injected and the ossicles matted together.

13. Bronchitis and emphysema; lining of both tympana deeply injected.

14. Sarcoma of leg; amputation; secondary sarcoma of lung; pus in mastoid cells on right side.

15. Wound of face; erysipelas of right half of scalp; lining of right middle ear highly injected, and right tympanum full of viscid mucus.

16. Erysipelas of scalp; mucus in right tympanum, and its lining injected and velvetty.

17. Phthisis pulmonalis; pus in mastoid cells and in both tympana; no injection of lining of tympana.

The numbers are, of course, too small to allow very definite conclusions to be drawn from them; but they indicate that serious disease of the ear may be in progress without attracting attention—for, in most of the cases recorded here, no suspicion of ear-disease was entertained. Then, again, the frequency of the ear-complications is a little startling. Further study can alone decide whether the percentage given (15 per cent. nearly) is usual; but *à priori*, one would not suppose that one in seven of all persons dying had inflammation or other abnormal condition of the ears. Apart from the series of one hundred and twelve hospital cases, I have had opportunities of inspecting the inner ear in a number in private practice, with practically the same results as to relative numbers.

Of the affinities of otitis, etc., the seventeen cases given tell, of course, but little. Five of them were examples of tubercular disease of the lungs or other organs, though in no case were miliary tubercles visible in the tympanic mucous membrane. Three cases of erysipelas of the scalp came to the section table during the year, each of them complicated by an extension of the inflammation into the inner ear of the side on which the erysipelas was most marked. This would be an important point to attend to in the treatment of that condition of the scalp, with a view to early evacuation of mucus or pus pent up in the tympanum. It is also worth noting that three instances are recorded in the list, of inflammation of serous membranes and joints coincident with acute otitis.

The object of this paper, however, is to insist on the propriety of regularly including the inner ear in *post mortem* inspections, and to indicate a means of doing this quickly and fairly accurately, even in the case of a hurried necropsy, without causing any disfigurement. The cases in which the ear is the main object in the inspection I would deal with after the manner recommended by Toynbee and other aurists; for in splitting the petrous bone, as above described, something of the integrity of the part must be sacrificed, more especially as regards the joint between the incus and stapes. But when the ear is a subordinate factor in the case, the method which I use gives a very fair insight into those lesions which have a more direct bearing on the cause of death of the patient.

CLINICAL MEMORANDA.

ATROPIN AS A PREVENTIVE AGAINST THE CARDIO-INHIBITORY EFFECTS OF CHLOROFORM.

I NOTICE, in last week's number of the BRITISH MEDICAL JOURNAL, that, in an account of an inquest on the body of a man who died the week previous, at the West London Hospital, during the administration of chloroform, it is mentioned that after the heart's action had suddenly stopped, besides the employment of artificial respiration, the other means taken to effect resuscitation were the hypodermic injection of atropin, and the application of the galvanic battery to the cardiac region. Now, since it is well known that atropin paralyses the cardiac inhibitory apparatus, and since it is probable that death, in these and similar cases, results from a stimulation of this apparatus, either directly by the drug, or, it may be in some instances, in a reflex manner, by the stimulation of abnormally excitable afferent nerves during the actual performance of the operation, there undoubtedly seems good reason for the employment of atropin. But, clearly, it should always be given immediately before the administration of chloroform, *as a preventive;* for if the heart's action have completely stopped, the circulation having once ceased, of course no cure is possible; and even if the inhibitory action has only much slowed, and weakened the heart without having actually arrested it, the absorption of the atropin would probably be too long delayed to be of any avail.

With regard to the other remedy—the application, namely, of the galvanic current to the cardiac region—the effect of direct stimulation of the heart is so opposite, according to the part which happens to be brought under the influence of the excitation, that it is no exaggeration to say, that the treatment is at least as likely to arrest a beating heart as to set an inhibited one in activity.

My attention has for some time past been directed to the probable value of a prior dose of atropin, as an antidote to the cardio-inhibitory effects of chloroform; and I have made a number of experiments, as yet unpublished, on the subject. Their general result has been to confirm the conclusion which might have been drawn from our previous knowledge of the respective actions of the drugs in question.

The precaution would only be of value in those cases in which, with the greatest care in administration, death is liable to ensue from the sudden arrest of the heart's action; but, since the idiosyncracy cannot be detected beforehand, the atropin should never be omitted. If the vapour of chloroform be inhaled to such an amount as to paralyse the respiratory centre, the prior administration of atropin would not be successful in preventing this result, which ought never, of course, to be allowed to happen.

E. A. SCHÄFER, F.R.S.

Physiological Laboratory, University College, Oct. 5th, 1880.

THERAPEUTIC MEMORANDA.

THE INUNCTION OF CASTOR-OIL AS A PURGATIVE.

IN a case of acute desquamative nephritis in a child five years old, where I wished to act speedily upon the bowels, and had tried to administer the usual purgative powders and draughts (but had failed, owing to the struggles of the child, which neither promises of rewards nor of punishments would subdue), I ordered the inunction, with a warm hand over the abdomen, of one-third of an ounce of castor-oil. The result was a free action of the bowels five hours afterwards, followed by two other movements during the day.

Dr. Ringer, at p. 318 of the latest edition of his *Therapeutics*, does not appear quite satisfied as to the possibility of the oil acting in this manner; and having tried and found it so successful, I wish to record the fact, believing that we have in this method a means of purging children (and possibly adults) which must be valuable to those who suffer from the horrible nausea which usually attends the administration of castor-oil by the mouth.

JOHN MCNICOLL, L.R.C.P. and L.R.C.S.Ed., Ormskirk.

THE Turnbull Scholarship (in anatomy, physiology, and chemistry) has been awarded to Mr. S. Brookfield; and the Charlton and Dickinson Scholarship (in medicine, surgery, and midwifery) to Mr. W. G. Black, who has also gained the Gibb Scholarship (in pathology).

SURGICAL MEMORANDA.

ANTISEPTIC TREATMENT OF ALVEOLAR ABSCESS.

In the August number of the *Monthly Review of Dental Surgery*, I published the results of a number of cases of alveolar abscess, and wholly or partially dead roots, that I had succeeded in rendering aseptic by means of injections, or dressings, of eucalyptus oil and iodoform. The results of my endeavours to apply the antiseptic principle to the treatment of these dental disorders went far beyond my most sanguine expectations; the most obstinate and old-standing alveolar abscesses yielded with astonishing rapidity, and I succeeded in preserving roots that, I think, might have been fairly considered as almost hopeless. I am, however, afraid that I failed to make myself sufficiently clear in the article in question, as I have since received a good many letters asking me for further explanation touching certain points in the treatment which I proposed.

Those who have carefully followed the antiseptic theory as practised and taught at King's College by Professor Lister and Mr. Cheyne, will find no difficulty in believing that, if an inflamed tract can be rendered aseptic or free from, and inaccessible to, germs, that tract will heal; in fact, that it cannot help healing; moreover, if a slough be rendered aseptic, it will not be ejected from the economy by the violent methods of inflammation and suppuration; but, being no longer an irritant, nor in any sense behaving as a foreign body, it will be removed, imperceptibly and gradually, by absorption, and replaced, as imperceptibly, by new and healthy tissue. This will happen as certainly in the case of the dead contents of a pulp-cavity as it will in the case of a slough on the leg or arm, if it can be rendered aseptic. Of course, if the contents of a pulp-cavity be suppurating, and the slough, with its living mass of bacteria, be shut up intact by means of a stopping, an alveolar abscess must ensue; equally certainly, if the bacteria be destroyed, and the stopping inserted, the healing process will be accompanied with no disturbance whatever; the only difficulty is, to find an agent capable of effecting the destruction of the germs. Carbolic acid would do this, but there are two objections to its use in this situation: 1. If used too strong, its destructive effects upon the tissues are too great; 2. If used diluted, its effects are too transient. Now, eucalyptus oil and iodoform are antiseptic agents of a much more powerful and permanent kind, and they cause no irritation or destruction whatever to the tissues; these are the considerations which led me to select these agents.

The two points upon which I have not made myself sufficiently clear, are—1. The method of applying the reagents; and 2. The proportions in which I would use them.

With regard to both points, they depend entirely upon the nature of the case. Either may be used alone, or both together, in any proportions most convenient in the case in hand; where it is necessary to inject, the oil must be used alone. In the case of alveolar abscesses, the best plan is to inject the oil every day with a hypodermic syringe, or any other syringe with a sufficiently small nozzle, the root of the tooth being dressed with wool dipped first in the oil and then in the iodoform. The iodoform will stick to the wool, and subsequently dissolve in it; there is no need to put any mastic or other protecting material over the dressing, as the oil retains its power for several days when unprotected. In the case of a nerve that is partly dead, the cavity may be dressed with wool dipped first in the oil and then in the iodoform, and applied just as creasote would be, with this difference, that it is quite unnecessary to remove much of the dead tissue. Since the publication of my first article, I have had a good many cases confirming my previous results; and my friend Mr. David Hepburn has also found the treatment very rapidly successful in the case of a very old-standing and tortuous alveolar abscess, that had long been a source of great discomfort to the patient. I am going to try the effect of a composition first suggested by Mr. Watson Cheyne of King's College, and used by him in the form of bougies for the treatment of gonorrhœa (BRITISH MEDICAL JOURNAL, July 24th, 1880). These bougies are composed of cocoanut butter, iodoform, and eucalyptus oil, and melt at the temperature of the body (they can be obtained at Bell's, in Oxford Street). I shall cut a small piece off the bougie, and insert it into the pulp-cavity over the dead tissue without any wool, and cover it over with a gutta-percha stopping; this proceeding, if successful, will obviate the presence of the wool, will, of course, be a great advantage.

ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S., Bedford Square.

TYPHOID FEVER is on the increase in Rochdale, and some further deaths have occurred. Since September 9th, there have been sixty-two cases, fourteen of which have terminated fatally.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

LONDON HOSPITAL.

NOTES OF A CLINICAL LECTURE ON AN UNUSUAL CASE OF HÆMOPTYSIS. BY DR. ANDREW CLARK.

(Reported by R. W. BURNET, M.D., M.R.C.P.)

DR. ANDREW CLARK began by remarking that this was one of the most interesting cases he had ever seen, because it gave a complete picture of a state of things in the lung that might very easily be mistaken for tubercular phthisis.

M. A. Y. was admitted into Dr. Clark's wards, in the London Hospital, in March 1878. The patient, a well-built well-nourished woman aged 25, of a remarkable aspect, stated that she had always been strong and healthy; that about a week before her admission, while sitting by the fire, she felt a curious sensation in the throat, accompanied by sickness and unaccompanied by cough. Blood rose into the mouth to the amount of a small teacupful—still without cough. The blood recurred at intervals of two or three days, and, as she became alarmed by it, she sought admission into the hospital. As already stated, she appeared to be strong and healthy, and expressed herself as feeling quite well.

Nothing was found wrong with any organ except the lungs. An examination of the chest showed dulness all over the left lung posteriorly, but especial dulness in the left supraspinous fossa. All over the left back there were heard sonorous and sibilant *râles*, with rustling crepitations and increased voice-sounds. Nothing abnormal was heard on the right side. There was nothing to be found indicative of serious constitutional disturbance. The pulse was quiet, rather small and compressible; the temperature 100°; the urine normal. A few days later, on his first examination of the patient, Dr. Clark added to the above a systolic *bruit*, heard at the pulmonary cartilage, and a *bruit* heard at the apex, also systolic in time; marked dulness in the left supraspinous fossa, with feeble breathing and subcrepitations in that region.

In speaking of the case at the time, at the bedside, Dr. Clark said that, in the great majority of cases of this kind, there were but two things to be thought of—hæmatemesis or phthisis, in some stage, however early. Had this patient, then, been suffering from hæmatemesis? Some things might point in that direction. She felt quite well. The blood was unaccompanied by cough, and was accompanied by sickness; but there was no previous history of gastric disturbance, and there had been none since the attack. The digestive organs were perfectly healthy; and, therefore, Dr. Clark believed there was nothing to justify the idea of hæmatemesis, especially if the other symptoms were sufficient to account for it.

Was the patient, then, in an early stage of phthisis? At first sight, it might look very like it—blood-spitting in a young woman with all the evidences of what seemed the source of the blood at the apex of one lung.

There was this, however, to be said, that she looked remarkably healthy; and there was nothing in her family history, or in her own state, to justify the conclusion that she was the subject of tubercle.

Dr. Clark referred to the state of the heart. There was no murmur heard at first; then one was heard at the pulmonary cartilage and one at the apex. A systolic *bruit* at the apex means mitral regurgitation. Could that have anything to say to the state of the lung? Dr. Clark began to suspect that the blood was due to imperfection of the mitral valve, causing reflux into the left auricle, and hence turning a back tide of blood on the lung. Some of the blood became extruded and infiltrated into the tissue of the lung. Dr. Clark said that this explanation seemed to cover the whole facts of the case, and predicted that the condition was only a temporary one, and that the whole would clear up, the cause also disappearing. What is the further history of the case? Step by step, the symptoms have cleared up. First, the *râles* and crepitations became fewer, and disappeared; the consolidation went; the murmur at the apex became inaudible; and, lastly, the murmur at the pulmonary cartilage. This murmur cannot be heard when the patient is in the erect posture, but can just be faintly made out when she assumes the recumbent position.

The treatment adopted was to keep the patient quiet in bed; to confine her to a somewhat dry diet, in order to avoid throwing much liquid on the system; and to act somewhat freely on the bowels by means of salines.

The case is peculiarly interesting in the view that hæmoptysis may occur, and may be due to infiltration such as this, and that the whole of the symptoms may disappear.

It may be said: Does mitral reflux shut out tubercle? No; it does not. It is exceedingly rare to have the two together, but it does sometimes occur. Again: there was an almost entire absence of cough, but we know that serious lung-disease may exist without much cough. A pneumonia may run its whole course with scarcely any cough present; and hence no cough is no proof that the bleeding was not from the lung. There was nothing in the throat, and nothing in any other organ, to account for it. This case, therefore, seems to show these two things: 1. That blood may be extravasated, and may simulate tubercular-disease; and 2. That temporary derangement of a valve may quickly arise and disappear again.

ROYAL FREE HOSPITAL.

CONTUSED AND LACERATED WOUND OF THE ELBOW-JOINT, WITH FORWARD DISLOCATION OF THE RADIUS: RECOVERY.

(Under the care of Mr. GANT, Surgeon to the Hospital.)

FOR the report of this interesting case we are indebted to Mr. CORDER, Senior Resident Medical Officer.

H. S., aged 53, a lamp-cleaner, employed on the Great Northern Railway, was admitted into the Hospital on July 12th, suffering from a buffer accident to the right elbow-joint. There was some considerable purple discoloration and swelling around the joint; a lacerated wound, about three inches long on the upper and outer side led into the joint, and a smaller puncture at the back of the elbow communicated with this wound. On passing the finger into the joint, the radius was found to be dislocated forwards, the orbicular ligament being ruptured. But little hæmorrhage attended the injury. It was remarkable that no fracture had occurred, although the elbow having been caught between two buffers, had been subjected to direct contusion. The absence of fracture could scarcely have been ascertained by external examination of the elbow, through the surrounding swelling, but the joint could be readily explored with the finger in the wound.

Fully considering the nature of this injury, Mr. Gant decided not to amputate, with the view of saving the limb, unless secondary operation should become necessary. The dislocation of the radius was easily reduced by pressure, with slight extension of the arm inwards; the displacement returning when the arm was left to itself. Having well cleansed the wound of any clots, by syringing with a weak solution of carbolic acid, the sides were accurately closed with fine silver wire sutures, while sufficient adjoining pressure was maintained to exclude the admission of air. The arm was then placed, with the same extension, on an interrupted angular splint, and bandaged above and below. A dry lint compress over the wound, including the posterior puncture, was secured by an intervening bandage.

On the following day the temperature in the morning was 100.5, rising in the evening to 101.4. The patient's rest having been disturbed by a chronic bronchial cough, a draught of bromide of potassium and chloral hydrate was ordered to be taken at night. After this the temperature never rose above 102.4, and in two days it gradually fell, until, on the seventeenth day, it was 98.4, or normal. The pulse remained little affected, averaging about 85 during this period.

On the third day the dry lint pad was removed, and the wounds having been cleansed with weak carbolic acid solution, a similar pad was re-applied. This was done occasionally; and the sutures were withdrawn as swelling supervened. But the wound never reopened, and only a slight discharge of healthy pus issued from a dependent angle; the elbow being kept in position for this purpose, and no drainage tube employed. At the end of three weeks the wound had almost closed, and the swelling had nearly subsided. In a fortnight more (August 18th) the patient left the hospital, and having attended as an out-patient for two weeks he was dismissed; at the end of about seven weeks from the date of injury the wound was entirely closed, and the joint movable.

REMARKS.—Respecting the treatment in this case, Mr. Gant remarked that it was a good example of the efficiency of his plan of wound-dressing by dry lint, with drainage by position; the part being kept at rest. An operation-wound of a large joint was often cited as a test-proof of the efficacy of antiseptic dressings; yet here was a severely contused and lacerated wound of the elbow-joint healing uninterruptedly, and with no marked constitutional disturbance, under almost entirely different conditions, and certainly without the rigorous antiseptic precautions of spray and gauze, and the use of drainage-tube. The clinical career in the case of this patient could not be surpassed by the most successful test-cases accredited to antiseptic dressings. And the parallel results of the two methods of wound-treatment depended on the hygienic conditions of the hospital; *anti*-septic precautions becoming proportionately unnecessary—besides being complicated, tedious, and expensive—as the *pre*-septicism of modern hygiene prevails.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

TREPHINING OF THE SKULL OF A LUNATIC AFTER OLD HEAD-INJURY: COMPLETE RECOVERY.

Under the care of Mr. GEORGE E. WHERRY, Surgeon to the Hospital. SAMUEL S., aged 38, was at work in August 1878, when a hammer fell about six feet on to his head. It did not unsense him; but ever afterwards he felt the effects of the blow. At first, it was as if he had "a cold in his head". In January 1879, he was ill in bed for many weeks. After this, when he tried to work, he was soon obliged to leave off, was attacked by giddiness, by thrills up his back, and by tingling and numbness in his legs. He tried again to work in August 1879, one year after the injury; but had no idea of what he had to do, and could not fix his mind on anything.

In October 1879, he came to the hospital complaining of "scrunching" noises in the ears and dragging pains in the vertex, without rest at night; aching pains in both arms and along the insides of the legs; and cold feet. He was admitted into the medical ward; and it was then observed that, of all the symptoms, the most constant and distinct was the "scrunching" feeling in the vertex; and often he placed his fingers over the stellate and adherent cicatrix which marked the hammer-blow. During the last week in 1879, his symptoms were aggravated; he grew irritable and morose, and talked of suicide. The pupil of the left eye was larger, and he had very little sleep.

On January 1st, 1880, he made a most determined attempt at suicide by throwing himself over from the staircase at the top of the hospital. His life was saved by the courage of a probationer, Miss Stockburn; but he succeeded in jumping from a lower staircase, and fell fifteen feet, damaging his left ankle. On the following day, he was sent to Fulbourn Lunatic Asylum, under the care of Dr. Bacon. The same symptoms continued which have been before described, including the pain in the head in the region of the scar.

He remained in this condition until Dr. Bacon considered that an exploratory operation was to be advised; and accordingly, on March 12th, Mr. Wherry removed with the trephine a piece of parietal bone at the seat of injury, and found the dura mater beneath of a deep purple colour, but apparently healthy; it bulged, with pulsations, into the wound. The portion of skull removed was three-quarters of an inch in diameter, and had not been fractured. Bleeding vessels were tied with fine hemp thread. Silver wire sutures and carbolised cotton-wool dressings were applied. Ether was given during the operation. The wound healed rapidly and well; and the patient's condition so improved that he went to work in the carpenter's shop attached to the asylum four weeks after the operation. He was discharged from the asylum on June 28th, and is now (September 16th, 1880) at his regular work as a wood-carver, earning a living for his wife and family.

The operation was undertaken with the hope of removing some source of irritation to the brain which might be found in the skull or dura mater beneath the scar. The history of the case, and the symptoms, although they were more general than local, pointed to the lesion as the cause of his lunacy; and, although no source of irritation was discovered, the patient recovered rapidly both his bodily and mental powers after the operation of trephining. The reason for this relief to the brain is not easy to explain; but the facts recorded may be of some interest.

BARNSLEY. Notwithstanding an epidemic of scarlet fever, which caused 46 deaths during 1879, and is still continuing, the public health of Barnsley is reported by Dr. Sadler to have been decidedly better than the average. During the year, 641 deaths occurred in the borough, which gives a death-rate of 21.79 on the estimated population. The birth-rate for the same period was nearly 41 per 1,000. Thirty per cent. of the deaths were those of infants, which, though less than the average for Barnsley, is still unduly high. The same remark applies to the death-rate amongst children under five years. The seven principal zymotic diseases caused 81 of the deaths, or 45 fewer than in 1878. The main cause of this diminished mortality was the absence of fatal summer diarrhœa, in consequence of the low temperature. The deaths from diseases of the lungs were 140 in number, or rather more than one-fifth of the whole; whilst 90 were registered from consumption. A good deal of sanitary improvement has been carried out, especially in the ventilation of the sewers, the necessity of which Dr. Sadler urges at some length and with much skill.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 8TH, 1880.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

Mutilation by a Bear.—Notes of this case were read by Surgeon-Major CURRAN.

Locomotor Ataxy.—Dr. GOWERS brought forward a series of five cases of locomotor ataxy in members of the same family, three of whom were exhibited. The father was healthy, but his brother and two half-cousins were insane. The mother had suffered in early life from chorea. The family consisted of nine children: 1. A son, aged 39, with well-marked ataxy, which commenced at 19. He was just able to walk with crutches; there was inco-ordination in the arms, and affection of articulation. Sensation to touch was normal; that to pain was increased. The knee-jerk was lost. 2. A girl, who died of fever, aged 10. 3. A son, aged 35, perfectly well. 4. A son, aged 33, also unaffected. 5. A girl, aged 29, in whom the affection commenced at 18. She could now scarcely stand. There was weakness as well as ataxy in the legs, and inco-ordination in the arms. Speech was affected. Sensation was normal. The knee-jerk was lost. 7. A son, aged 23, considerably affected. The disease commenced at 19. He was now scarcely able to walk. There was ataxy of both arms and legs, diminished sensation, absence of the knee-jerk, and affection of articulation. 8. A son, aged 22, who was said to be healthy, but was found, on examination, to be distinctly affected. Articulation was confluent; there was inability to stand with eyes shut; absence of knee-jerk, and distinct impairment of sensation to touch. The arms were at present unaffected. 9. A son, aged 19, affected in rather greater degree than the last with slight unsteadiness of gait, inability to stand with the eyes shut, distinct impairment of sensation to touch, absent knee-jerk, unsteadiness in writing, and confluent articulation. The state of sexual power was doubtful, the patients being all single. Thus, of eight members of the family who had reached adult life, five were affected, the daughter, and four of the seven sons. The symptoms, allowing for variation in degree, were nearly alike in all, the chief difference being the marked impairment of tactile sensation in the two youngest; while, in the others, although the stage of the disease was more advanced, sensation was normal, except that in one there was hyperalgesia. The only cause discoverable was the neuropathic heredity. This form of ataxy was first described, as a distinct variety, by Friedreich, who recorded two groups of cases. A few other instances had been recorded by Carré and others. Two sisters, evidently suffering from the same affection, were shown by Dr. A. Carpenter to the Medical Society of London in 1872, under the title of Cases of Muscular Anæsthesia, and in that family a brother had since become affected. The cases now described resembled Friedreich's in the early date at which they commenced, the affection of the arms, and the interference with speech. They differed from Friedreich's in the number of males affected, in the absence of nystagmus, and in the affection of sensation in both cases. In none had there been pains in the limbs, nor was there any affection of the iris or of the optic nerve. The pathological changes found in two of Friedreich's cases showed that the disease was similar in its seat and nature to ordinary ataxy.—Dr. ALTHAUS said such cases of ataxy were less rare than was usually imagined. He had seen instances where more than one member of a family was affected, and Carré had mentioned histories of the disease transmitted from generation to generation. Absence of pain was a prominent feature of the disease, but occasionally sharp shooting pains were a distressing symptom. He thought those members of the family described by Dr. Gowers who were unaffected at present, might possibly be so at a distant time. Treatment had, up to the present, been of little service towards curing such cases.—The PRESIDENT suggested that the freedom from pain, the early occurrence of symptoms, etc., might serve to distinguish different kinds of ataxy.—Dr. GOWERS replied that ataxy from inherited taint was a very rare disease, and he was convinced that 75 per cent. of the cases were of syphilitic origin. The proportion, moreover, was as high, or even higher, in the well-to-do classes of society. He did not think the other members of the family he brought under notice would be affected with the disease, it being a feature of it that it was but rarely developed after the twenty-fifth year.

Case of Eyeball Tension.—Mr. SPENCER WATSON read notes of this case. Elizabeth M. B., widow, a dressmaker, aged 46, was operated on by sclerotomy for eyeball tension in 1876. After the lapse of four years and a half, the eye remained free from excess of tension; and its fellow eye, though occasionally visited by chromopsia, remained useful. The eye operated on had a staphyloma as the result of the sclerotomy, but this caused no inconvenience, and seemed beneficial, as affording a means of filtration from the anterior to the surface of the eye. The sight continued good up to the present date.—Mr. HEATH inquired what advantage the operation described possessed over iridectomy. He had a patient under his care who, two years ago, had iridectomy performed by Mr. Critchett, and his present condition was in every way satisfactory.—Mr. WATSON explained that sclerotomy possessed advantages in being a simpler operation, more easily borne by the patient. The incision in each case was similar; but, in sclerotomy, a thin narrow knife replaced that employed in iridectomy. Moreover, no portion of the iris was removed in the former operation. In severe glaucoma, he thought iridectomy advisable. The intra-ocular hæmorrhage, frequent in iridectomy, rarely followed sclerotomy, the tension being gradually relieved by the slow draining away of the aqueous fluid.

Elephantiasis of the Leg treated by Elastic Bandaging.—Dr. STEPHEN MACKENZIE read notes of this case. The patient, a male, aged 33, a native of Rosscar, county Fermanagh, Ireland, had never been out of Ireland till he came to England for treatment. He had worked always as a farm-labourer, and was healthy until his present disease. He never had syphilis, nor eaten largely of fish. His home was about nine miles from the coast. Ten years ago, he had an injury to his leg, which was much bruised and swollen. About three years after the accident, the leg was noticed to be larger than its fellow; and, from that time to his coming under observation, the limb continued to enlarge. About four times a year, with a certain degree of regularity, the leg had become acutely worse. Preceded for a few days by nausea, headache, and shivering, the leg had become sore and painful, feeling extremely hot, looking red, and steaming. After lasting in this state for about a week, the surface of the leg began to discharge a fluid, clear, but of offensive smell. When the fluid escaped, he gained ease; the heat left the leg, the nausea and constitutional disturbance subsided, and he returned to his usual condition; the limb, however, remaining of greater size than before the attack. The limb, when the patient was admitted into the London Hospital in September 1879, was enormously swollen, presenting several large lobulated masses of œdematous tissue, whilst the surface of the limb was covered by abrasions of the cuticle and papillary elevations. The right leg and scrotum were normal in all respects. There were no enlarged glands. No changes in the blood or urine were observed. He was confined to bed simply for the first month, with slight transient subsidence of the swelling. At the end of that time, Martin's bandages were firmly applied to the leg, from the toes right up the thigh. He was kept in bed, with the exception of being allowed to go into the garden for one hour a-day. The diminution in the size of the limb from the time the rubber bandages were applied was almost uninterrupted and very remarkable. All the lobulations subsided, the papillary elevations disappeared. A good deal of fluid exuded from the cuticular abrasions, and the decrease in the limb appeared to be proportionate to the fluid discharged. As the swelling subsided, what appeared to be dilated lymphatic vessels could be felt. The patient had no inconvenience from the treatment. During it, he had one paroxysmal attack, lasting a few days, in which his temperature rose to 103°, and the limb became hotter than its fellow. Whilst the case probably differed in its origin from the tropical ones, and in the absence of filaria in the blood, the disease reached almost as high a grade as the elephant-leg of Barbadoes or India. The case was brought forward to show the good effects of elastic bandaging. There was no novelty in bandaging a limb in this condition, for this treatment was generally adopted alone or combined with other treatment in this disease; but there were not, to the author's knowledge, any published cases in which Martin's bandages have been used for this purpose. The bandages allowed of considerable equable pressure, which was kept up as the limb receded; they were readily applied, and could be washed every day. The results in this case could scarcely have been exceeded by any other treatment, whilst that employed was wholly destitute of the dangers attendant on ligature of the femoral artery. It was found that the swelling recurred when the bandages were removed, so that it was probable that the bandages would have to be worn permanently.

Dr. CROCKER said bandaging had afforded much relief in a very similar case under his care early in the present year.—Mr. NORTON drew the attention of the Society to a case of elephantiasis he had exhibited at its first meeting, and which, treated by iodide of potassium and bandaging, was cured in ten months. Two years afterwards, there had been no relapse, but the patient continued to wear the bandage.—Mr. GOLDING BIRD described a case of ulceration of the leg resulting in elephantiasis, which he had cured by the aid of bandaging. Potassium iodide had also been administered. Relapse occurring, re-em-

ployment of the bandage was found to complete the cure.—Mr. ERNEST HART thought such cases were rarely or never cured. A Philadelphian surgeon, however, had obtained good results by nerve-stretching as a means of improvement.—Dr. DOWSE related the history of a patient, a surgeon, who, in the course of his professional work, acquired syphilis, and eventually his leg presented the appearance of elephantiasis. Potassium iodide and bandaging failing to produce any improvement, he resorted to galvanism, and, under this agent, the limb had become almost well at the present time.—Dr. MACKENZIE replying, said there was no history of the disease being hereditary in the case he had described, injury having been its originating cause. In this country and in Ireland, whence the patient came, the disease was a rare one.

Case of Traumatic Epilepsy treated by Trephining.—Dr. DAVID B. LEES and Mr. E. BELLAMY furnished notes of the case. Stephen C., when seven years old, received a blow on the head from a poker. There was no breach of surface; but the mother found a swelling over the right parietal region. When this subsided, no scar or depression of bone remained. The next day, he complained of headache; and this symptom persisted more or less until after the operation of trephining. About twelve months after the accident, he began to have fits; these occurred at first about once a day, but afterwards more frequently. He attended for several years as an out-patient at the Hospital for Sick Children, Great Ormond Street, but without obtaining relief. On the contrary, the fits became more frequent. It was noticed that they occurred in groups, a period of very frequent fits being followed by an interval in which he had only about one a day. The periods of exacerbation lasted about three weeks; the intervals of comparative quiet about as many months. Four, if not five, of these alternations occurred during the fifteen months preceding the operation. When the fits were frequent, impairment of grasp in the left hand was always noticed, and he sometimes complained of pain all down the left arm. At such times, also, the tongue became thickly furred, and his speech (never very clear, apparently from labial paresis) became decidedly more indistinct. In April 1879 (nearly seven years after the injury) came a period of four weeks in which the fits were more numerous than ever before, averaging from twenty to thirty daily. In the interval between them, he was apparently unconscious. When this period passed away, Dr. Ferrier was requested to see the boy in consultation, with special reference to the advisability of trephining. He found tenderness on pressure over the right parietal region, with loss of grasp in the left hand, and the labial symptoms already mentioned. He advised that trephining should be practised; and that the part of the skull selected should correspond to a spot rather low down in the fissure of Rolando, as the centres involved seemed to be those of the arm and lip, and not of the leg. The boy was admitted into Charing Cross Hospital, under the care of Mr. Bellamy. On the day of his admission, he slipped on the waxed floor of his ward and fell, striking his left knee against the ground. He said nothing of this to anyone but his mother; but she afterwards related that he had told her he had had a bad fall. One June 14th, 1879, two days after his admission, Mr. Bellamy trephined, with antiseptic precautions. The "ligne Rolandique" had been previously marked out on the shaven scalp, according to the directions of M. Fort. The spot chosen for operation was about the centre of this line, and was a little lower down than the point indicated by the mother as the site of the original injury. The piece of bone removed was apparently quite normal. It was thought that the dura mater bulged up into the opening made by the trephine. For eight days after the operation, the boy progressed very satisfactorily. The temperature gradually came down to normal; the headache vanished; and the wound healed uninterruptedly, and mainly by first intention. Twenty-four hours after the operation, the fits ceased, and did not recur for eight weeks. Before the operation, he had not for upwards of three years passed a fortnight free from fits. On the ninth day after the operation, however, the temperature began to rise gradually, and in four days reached 104°. There were no rigors. The boy complained of pain and tenderness in the left hip, thigh, and knee. These symptoms combined with a temperature of 99°-100° during the month of July; and, it becoming evident towards the close of the month that the head of the femur was dislocated, Mr. Bellamy excised the head of that bone on August 2nd. The pain, tenderness, and rise of temperature still continued; abscesses formed low down in the thigh, and invaded the knee-joint. On October 9th, it was found necessary to amputate at the hip-joint, which was done with antiseptic precautions. The boy rapidly recovered from this operation, and gained flesh. Eight weeks after the trephining, the fits recurred. In seventeen days he had twenty-six fits. If this period represented the expected crisis about three months after the last severe crisis in April, it was unquestionably much reduced in severity. Six weeks of freedom from fits followed; they then recurred, but with much less severity. During the sixteen months that had elapsed since the operation, he had passed to the authors' knowledge thirty-seven, and they believe upwards of forty, weeks entirely free from fits. Four convulsive periods had occurred; but the frequency of fits in these had never averaged more than two or three daily, and he had never been confined to bed on account of them. The authors suggested the following points as worthy of discussion. 1. The advisability of the use of the trephine in traumatic epilepsy. They referred to a paper by Dr. Echererria of New York, published in the *Archives de Médecine* for November and December 1878, in which no fewer than 145 cases were cited of traumatic epilepsy treated by trephining. The results in these 145 cases were: cure, 64 per cent.; improvement, 12½ per cent.; no change, 3½ per cent.; made worse, 1 per cent.; death, 19 per cent. Dr. Echererria maintained that the operation was by no means dangerous in itself, provided that no inflammatory symptoms were present at the time. He referred to cases of many years ago, when it was performed more than twenty times on the same patient. 2. The question of the cause of the relief obtained in this case by the removal of a piece of apparently healthy bone. The successful case brought before the Royal Medical and Chirurgical Society last winter by Mr. West of Birmingham was adduced to show that the cause must be the relief of pressure generally, and not any special effect on the motor centres; for in Mr. West's case the lesion and the seat of operation were in the frontal region. 3. The authors wished to inquire whether the periodicity, which formed such a marked feature in the convulsions in this boy, was usually found in cases of epilepsy due to irritation of the brain-cortex. Reference was made to two cases observed at the Hospital for Sick Children, both probably due to lesion of the cortex, in which similar phenomena were observed. 4. They submitted to the surgical judgment of the Society the question of the causation of the osteomyelitis of the femur which followed the trephining. They argued, from the antiseptic operation, from the rapid healing, from the boy's satisfactory progress for eight days, from the gradual rise of temperature, from the absence of rigors, and from the exclusive affection of the left hip-joint and femur, that the cause could not have been pyæmic in nature.

Dr. GOWERS likened the effect of the operation to that produced by the introduction of the ordinary seton.—Dr. BROADBENT thought the result of the operation favourable on the whole. Mr. Heath of Manchester had shown him a somewhat similar case.

TREATMENT OF BRAIN-AFFECTION IN TYPHOID FEVER BY COUNTER-IRRITATION.

IN 1872, I had a fatal case of typhoid fever, the immediate cause of death being diarrhœa. Astringents and opiates were given, as recommended by a well-known physician in his work on *Medicine;* and the failure of the remedy impressed me strongly with the necessity for further study of the nature and progress of the disease, and an altered method of treatment. My reflections led me to place confidence in the adoption of the principle of elimination, as recommended by Dr. G. Johnson for the treatment of cholera. Since then, I have invariably used emetics and calomel purgatives, when called to the cases, within a few days of the appearance of the disease, and, from that time to the present, I have never had cause to regret it, but, on the contrary, have obtained some marked relief and comfort to the patient at once; and this, I think, has told favourably on the termination of the case. The *rationale* of this treatment appears to be, that there is thrown off from the system, at the commencement of the attack, a portion of the virus of the disease, and, as a natural consequence, when complications do arise afterwards, they are not so severe as they otherwise would be. But, notwithstanding these means have been employed, the epigastrium (the chief habitat of the disease for some days after the invasion of the system) not unfrequently becomes the seat of considerable pain, manifested either with or without pressure, and, if not promptly relieved, delirium more or less violent sets in; and, regarding this brain-disturbance as the effect of the previous inflammatory action of the epigastrium, I treat, not the head, but the epigastrium, in such cases by counterirritation, and, when the blister rises, I find delirium has usually begun to subside, and soon disappears. A second blister may be required, but only occasionally. I have also thought that early relief of inflammatory mischief at the epigastrium appears to diminish the liability to any similar attack in the lower part of the intestinal canal. Here, again, when it does occur, the best results may be expected from the prompt application of a blister or blisters. The counterirritation seems to exercise the most powerful effect in arresting abdominal or thoracic mischief in typhoid. Of course, I do not exclude other means, but simply regard counterirritation as indispensable; and I may add that, when indicated, the greatest promptitude in applying it is desirable. Death from typhoid fever has been a very rare occurrence since this treatment was adopted.

G. P. ATKINSON, M.R.C.S., Pontefract.

REVIEWS AND NOTICES.

A "SYSTEM" OF SKIN-DISEASES (*System der Haut Krankheiten*). By Dr. HEINRICH AUSPITZ. Wien: Braumueller. 1881.

A DISTINGUISHING feature of works on diseases of the skin is the constantly renewed attempt to improve the classification of those diseases; and most authors in this department of medicine have endeavoured to establish a new system, which is supposed to have advantages over all those previously propounded. To such an extent has this been the case, that readers who do not follow minutely the rapid changes which dermatologists effect in systems and classifications, have difficulty in giving fair consideration to every new scheme which is propounded. The constant succession of new names and of new meanings to old names conduces but too often to bewilderment rather than to clear thinking. An author of a work devoted to the exposition of a system of skin-diseases who can overcome this prejudice, must either have a name that carries much weight, or produce a book which the well-instructed student of dermatology cannot afford to overlook. This book by Professor Auspitz commands attention on both these grounds. Whatever comes from the pen of this talented dermatologist is calculated to arrest attention, and this new work is worthy of his reputation.

As medicine is a progressive science, and as dermatologists are making rapid strides, both in setting themselves free from superstitious errors, and in acquiring solid knowledge, there can be no easier task than in applying destructive criticism to all the "systems" that have been published. Professor Auspitz's criticisms, which largely consist in contrasting the views that underlie Hebra's classification with the data of modern pathology, are mostly unanswerable. There was a well furnished armoury ready to his hand, and he has wielded the tools with which he was provided with an able hand.

But so little finality is there in all this criticism, and in new systems, that it would not be difficult to point out details of Professor Auspitz's "system" which are inconsistent with the latest researches—researches that must be dated subsequent to the composition of his book. What is really of permanent value in the work is not so much the classification of skin-diseases as the exposition of pathological knowledge, and numerous valuable contributions to dermatology with which the principles of his systems are supported.

Professor Auspitz divides skin-diseases into the following nine classes.

1. Simple inflammations of the skin variously produced (*e.g.*, eczema, scabies, and acne are in this class).

2. Angio-neurotic Dermatoses—dermatoses characterised by extensive disturbance of the vascular tone, with more or less inflammatory congestion on the surface of the skin (*e.g.*, measles, small-pox, medicinal rashes, erythema multiforme, are in this class).

3. Neurotic Dermatoses—dermatoses caused by disease of nerves of sensation, and perhaps trophic nerves (*e.g.*, herpes zoster, decubitus acutus, are in this class).

4. Dermatoses caused by passive congestion (*e.g.*, cyanosis, elephantiasis arabum, and scleroderma are in this class).

5. Hæmorrhagic Dermatoses (*e.g.*, purpura and scurvy are in this class).

6. Idioneuroses of the skin—functional anomalies of the cutaneous nerves, without trophic changes in the skin. (This class contains, amongst others, neuralgia, pruritus, and prurigo.)

7. Epidermidoses—anomalous growths of the epidermis and its appendages (containing, *e.g.*, psoriasis, alopecia areata, hyperidrosis, carcinoma, and pemphigus).

8. Chorioblasts—anomalous growths of the corium and of the subcutaneous connective tissue (containing, *e.g.*, lupus, syphiloderma, lipoma, and striæ atrophical cutis).

9. Dermato-mycoses—containing the skin-diseases produced by the vegetable parasites.

This short sketch will suffice to show that Professor Auspitz's classification is based on a different principle from those with which books on dermatology have made us familiar, and will partially indicate its chief features. The interest of the book lies in the exhaustive criticisms and acute speculations by which the classification is sought to be justified. Many of the views thus expounded are as valuable as they are original. In illustration of this remark, take the following definition of pemphigus. "Pemphigus", remarks the author, "is disease of the epidermis, characterised by a mechanical dissociation of its deeper layers in the form of bullæ, without much inflammatory reaction..... This anomalous change in the vitality of the epidermis may be associated with other asthenic disease, or may occur without being accompanied by any other apparent morbid condition."

The value of the book, which will become a work of reference, would have been much increased by a copious index.

NOTES ON BOOKS.

Archives de Biologie publiées par EDOUARD VAN BENEDEN, Professeur à l'Université de Liége, et C. Van Bambeke, Professeur à l'Université de Gand.—These Archives of Biology are published by the two distinguished professors of the Universities of Liége and Gand, on the lines of the *Quarterly Journal of Microscopical Science* and Schulz's *Archiv*, but including a wider range of natural history subjects. The *Archives* have reached now their third number: the current number contains an interesting article on the nucleus of vegetable-cells, in which it is shown that division of the nuclei may occur independently of the division of the cells; and other articles of value on the albuminoids of the serum of the blood, etc. The illustrations are admirable, and the publication one of great value to biologists.

Professional Book-keeping: a Treatise for Non-Traders. By WILLIAM JOHN GORDON. London: Wyman and Sons, Great Queen Street, Lincoln's Inn Fields.—This little volume, one of Wyman's useful technical series, contains a scheme of accounts which has been designed by Mr. Gordon to meet the special requirements of medical and other professional persons, in whose case gross profits are represented by receipts for services rendered. It differs in many particulars from ordinary methods of mercantile book-keeping, but includes all the details which a professional man who has to keep accounts need generally know about book-keeping. Most of a medical man's transactions are cash transactions. The first record he requires to keep is a memorandum of the amounts he receives, and the sums he pays away; in other words, a cash account. Mr. Gordon especially recommends that all payments should be made by cheque, and made payable to order, for every payment there is then a voucher, and when the paid cheques are returned from the banker, they should be fastened on to their proper counterfoil in the cheque-book. The perfect cheque and counterfoil is then a valid document. All receipts should, on this system, also be paid through the bank as they are received, and then the "received" side of the cash-book equals the "received" side of the pass-book, and the "paid" side of the pass-book corresponds with the "paid" side of the cash-book. The totals will agree, the balance will agree, and the checking of the account is practically worked by the banking staff. A good deal of what is contained in this handbook is more useful to solicitors than to medical men, solicitors requiring to keep somewhat more complicated accounts than doctors; but every medical man who means to keep accounts will find it useful to devise a thorough system of book-keeping, and he has here the key to one which is undoubtedly efficient, if he carry it out in its details.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ALLEN AND HANBURY'S FARINACEOUS FOODS FOR INFANTS AND INVALIDS.

THIS is a new form of malted farinaceous food, based on the principles and formula originally introduced by Liebig, but improved by the aid of the recent knowledge of the methods of technically applying the process of malting. We have taken some trouble to have this food carefully tested by skilled persons, and, for this purpose, have secured the assistance of Dr. Horatio Donkin and Dr. Warner, who have both employed the food in private and in hospital practice; and we have also suggested trials, which have been carried out at *crêches*. The result of Dr. Warner's trials among his out-patients at the East London Hospital for Children was decidedly satisfactory. Delicate children have, in many instances, improved under its use; infants who have thriven under its use fell off when it was discontinued, and it was generally liked by the children to whom it was given. In the same way, Dr. Donkin was able to report very favourably of its influence upon the health, nutrition, and digestion of the children to whom it was administered in his hospital practice. In two large *crêches*, the food has been found very successful; in more than one instance the children who had been subject to sickness being freed from it by the use of Messrs. Allen and Hanbury's food. The food may be prepared either for infants or invalids, according to the directions given; and we have no doubt whatever that this malted farinaceous food will be found very effective, digestible, nutritious, and palatable, wherever it be tried.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 16TH, 1880.

GUY'S HOSPITAL.

THE chronic quarrel at Guy's Hospital has at length reached a stage which, in whatever other aspect it may be regarded, has at least the advantage of affording a solution and of putting an end, for a time at least, to a controversy which has been full of unpleasant incidents, and not altogether creditable to either party. This is not the moment to review the whole history of this deplorable quarrel; its outlines are, unfortunately, only too familiar to the professional and public mind, and many of its details had better be forgotten as soon as possible. In the main, the dispute is one which has been brought about by a lamentable want of judgment, faults of temper and discretion on the part of the treasurer; by a painful inefficiency, arising probably from excess of zeal and defective administrative power, on the part of the lady whom the treasurer selected to carry out reforms in the nursing system; and by pardonable irritation, incomplete harmony, and excessive letter-writing on the part of the medical staff. It is, unfortunately, difficult to find anyone who has been right all through, from the point of view from which the public and the profession are bound to regard this question. It is quite obvious that Miss Burt, in carrying out her reforms in such a manner as to involve the loss of fifty or sixty of the best of the nurses of the place, and in introducing, without prior consultation with the staff, a number of violent changes affecting the nursing and well-being of their patients, in a manner which they consider injudicious and injurious, was guilty of the most serious breach of administrative propriety and duty to the medical officers whom she is placed there to assist. On the other hand, the amount of temper shown by individual members of the staff; the irritating style of their communications to the public papers; the haste with which they separately rushed into print; the angry defiance which they repeatedly hurled at the governors and the treasurer, have done much to bring the question into a position in which principles disappear from view, and personal questions assume an undue magnitude.

The medical staff of Guy's Hospital are, by the constitution of the hospital, placed in a peculiarly disadvantageous position, of which they seemed to be but very imperfectly aware. They are as entirely at the mercy of the governors as the hall porter or the laboratory man, or any of the menials of the hospital. They are, as will be seen by the constitution of the hospital, to which we shall shortly refer, liable at any moment to dismissal, to suppression, and to control of the most absolute kind; they have no voice in the management of their hospital; they have no place in the councils of the governors. They are absolute servants of the governors, with few of the privileges which are generally accorded to the higher class of servants. This is an abuse which has grown up slowly, probably unnoticed and unfelt because previous treasurers have been men who have recognised limits to their authority, imposed by considerations other than those of Parliamentary power. As Mr. Turner, the last treasurer, has, in his excellent letter, recently said, by acting in concert with the staff, by considering their views and deferring to their experience, he found it possible always to administer the hospital in perfect harmony with them, and with a sense of mutual respect, mutual confidence, and combined usefulness. It is obvious, however, with such a constitution as that which exists at Guy's Hospital, the influence of the staff and the usefulness of the treasurer depend entirely upon the maintenance of a good understanding on both sides; these sentiments have been entirely disregarded, and all their powers of usefulness have been squandered in the heat of intense passion. Until the last moment, the staff maintained an absolute, defiant, and irreconcilable attitude, from which it might have been supposed that they had thoroughly calculated the chances, that they were aware of the disabilities under which they laboured, and that they were prepared to brave the all-powerful wrath of this irresponsible board, which holds them entirely in its grasp. This reasonable hypothesis proves, however, to have been entirely without foundation. At the critical moment, they have not been able to find unanimity in their own body, nor have they been able to justify the language which they used. Undoubtedly, a forced and offensive meaning has been put upon the phrase in which they charged the governors with perpetuating a system which had been proved by recent experience to be mischievous. That violent expression has been interpreted in its most uncompromising meaning. It may fairly be held to mean that the past experience of the last few months has shown that the system introduced was one which disordered the constitution of the hospital and interfered with the welfare of the patients; and, as the matron was the person responsible for it, the governors ought to see, in the opinion of the staff, that it was their duty to discharge the matron. The governors have chosen to interpret it as meaning that they are charged with plotting to perpetuate a system which they know to be mischievous; and that they, indeed, knowingly sacrificed public interests to private passion. When the letter containing the inculpated sentences was signed by Dr. Habershon and Mr. Cooper Forster on behalf of the staff, and when it became known to Dr. Habershon, on the morning on which the governors were about to meet, that this interpretation had been put upon the sentence, and that it was held to be offensive, finding it impossible, at so short a notice, to assemble the staff, he personally addressed a letter to the president of the hospital, which was placed in his hands for communication to the governors before the meeting, in which Dr. Habershon and Mr. Forster at once assured the governors that this meaning was not in the minds of those who wrote the letter and those who signed it, and that they had no intention of making any such imputation; and each intimated that they were willing and desirous to modify and withdraw any sentence which could convey that impression. This letter appears, under whatever impulse of anger, or from whatever reason, to have been ignored; and the governors chose to adopt the text of the letter unmodified by the subsequent communication of Dr. Habershon, and to fix upon it the most offensive meaning it could be made to bear. In virtue of this sentence, and of the fact that the staff declined to send two delegates to the proposed taking-in committee, the governors summarily called for the resignation of the senior members of the staff. It must be said that thereupon the staff have acted with a discretion which might with great advantage have tempered their valour before they advanced to battle.

They have withdrawn unreservedly the whole document; and furthermore, having been informed by Dr. Habershon, as the result of an intimation which he has received from the authorities, that the phraseology of the invitation to the members of the staff to attend the taking-in committee is misleading, and that they are, in fact, intended to be members of that committee, that the staff withdraw also their refusal to send delegates to the committee, and will accept the proposal of the governors. This is, of course, an unreserved and unconditional surrender. We are far from blaming it. The staff had placed themselves in a false position, and they found themselves in the hands of a body of governors who had been irritated by the past proceedings to a point in which the usual consideration for high public officers had given way to determination to enforce an authority which undoubtedly exists. It is quite possible that the Guy's Hospital staff felt at the last moment that they had not conducted their side of the question with the same skill and regard to parliamentary expressions, and to discreet forms of business, as

have marked the printed utterances of the governors. The governors have withdrawn their demand for the resignation of Dr. Habershon and Mr. Forster; and the medical staff remain at their posts. But, in retracting their letter, the staff will remember that what has been done in the letter must be carried out in the spirit. They must from this moment, as we think, loyally accept the position which they have created for themselves. They are in the hands of the governors as the servants of the governors. They have acknowledged their right to dictate to them the terms on which they shall meet the matron. They have, by withdrawing this letter, accepted the duty of acting with the matron, and of giving loyal aid in carrying out the system which, after all this painful controversy, has been finally decided by the governors as one which they are determined to put upon trial through the lady whom they have selected for the purpose. Henceforth, therefore, it will be the duty of the staff, now that the governors have accepted the submission which has been made to them, to put behind them the events of the last few months; to endeavour to forget on their part, and to bring about forgetfulness on the part of those with whom they have quarrelled, both the causes of the quarrel, and the manner in which it has been conducted. There should be no more covert fighting on the question; there should not be reconciliation in words, and bitterness in action. The governors of Guy's Hospital are, at the present moment, represented by a number of gentlemen well accustomed to the conduct of high public affairs—such men as Mr. Gibbs, Lord Cottesloe, Lord Justice Coleridge, Sir Thomas Dyke Acland—men who will certainly know how to put aside the bitterness of a past controversy, and to meet the staff of Guy's Hospital with a sense of that which is due to past opponents, who have made very painful amends for whatever cause of offence may have been given. They will certainly feel that the future of Guy's Hospital is more important than victory in a strife; and we have a strong, and we hope a well-founded, belief that we have heard now the last for a long time of the Guy's Hospital dispute. If it should be found on any occasion that the matron is not capable of carrying out the new system of nursing, or that this method of nursing ultimately proves to be incompatible with what the medical officers consider to be for the welfare of the patients, it must surely be possible, in the course of future experience, to produce a calm, deliberate, and convincing statement of facts, which both sides will agree shall form the basis for general action. Henceforth, it may be hoped that anger will cease. When the sharpest recollections of the strife have passed away, it will be time to consider the constitution of Guy's Hospital. There is some reason why this should be considered, because Mr. Lushington himself, as treasurer of Guy's Hospital, was a member of a deputation from the treasurers and authorities of the leading London hospitals, who, a few months since, approached the Home Secretary, in a deputation headed by the Right Hon. W. E. Forster, M.P., with the object of asking the Government to appoint a Commission to consider the question of the management, government, and funds, and general position of all the leading hospitals. The document in question was specially considered by Mr. Lushington, who was one of the spokesmen on the occasion. There can be no doubt on the part of any reasonable person who reviews the present constitution of Guy's Hospital, that it is not only entirely exceptional, but that it is exceptional in the sense of being extremely ill-fitted to meet the exigencies which arise where differences of opinion occur between the skilled medical officers of the hospital, and its lay administrators. That moment, however, has not yet arrived. Principles cannot well be discussed whilst angry differences exist upon matters of detail, nor should a question of great importance be brought to adjudication at a moment when it is complicated with personal difficulties of the most serious kind. For the present, then, let us hope that the staff having, with some loss of dignity, replaced the discussion upon a basis upon which it is at least possible to arrive at a solution, that that solution will be as lasting as possible. It remains only to be said that in the worst event it would have been found that the staff of Guy's Hospital were willing as a body, and almost, if not quite without exception, to have made any sacrifice, even to complete sacrifice of their positions individually and collectively, rather than submit to a state of things which they considered incompatible with their position and the welfare of the hospital, or desert their seniors and spokesmen. It has been thought well to avert this ultimate sacrifice, and we cannot say, looking to all the complications which surround the question, that the decision has not been a wise one.

THE HOSPITAL PATIENT AFTER DISCHARGE.

DR. SIEVEKING brought under the notice of a meeting of the members of the Order of St. John and others, at the close of the summer season, a subject which is well worth the serious consideration of the persons, happily now numerous, who are willing to give time and trouble to the task of setting the unfortunate, the sick, the feeble, the partly disabled, into the best way of helping themselves, instead of merely throwing to them indiscriminate alms. Every physician attached to a public hospital has repeatedly seen patients leaving his wards, or attending his external clinique, who, as the consequence of past illness, or more or less disabling disease, are under the necessity of quitting the occupation of their past life, and of finding some new means of bread-winning. There are many diseases—such as rheumatism, joint-disease, and local muscular atrophy—which render a person helpless, or relatively incompetent, for some trades and occupations, but fit for others; and it will often happen to an able-bodied man or woman to be overtaken with such illness, and, at the close of it, to have no facilities for change of occupation; no funds for emigration; no avenue towards a new mode of life for which alone he may be fitted. There are sempstresses, whose sight has begun to fail them early in life, whose occupation itself induces disease. There are clerks, threatened with local paralysis of the muscles of the hand and arm. There are patients suffering with heart-disease, whose occupation tends to aggravate the condition. In all these cases, it would be of infinite value to the patient if there were attached to each hospital a certain number of active, intelligent, and benevolent persons, who would, on the certificate of the physician or surgeon, use their influence, give their advice and moral support, and, if necessary, help by money, in transferring the disabled patients from the path in life which they are no longer fitted to tread, to one better suited to their walking. This is a kind of organisation of charity which is thoroughly in unison with the intelligent and benevolent views which are now being more and more largely accepted by a truly charitable class, and towards which society at large has given a willing adhesion and active co-operation. Dr. Sieveking, in drawing attention to this subject, has rendered a great service; and it must be hoped that his activity, and that of his friends, will not end here. This is just the sort of subject for which a great many people will be found to speak approving words, and which few will be found to oppose; and that very fact is sometimes found to prove fatal to much real work being done. Where every one approves, it is often found that no one acts; and when there is no opposition found on the one hand, there is little enthusiasm on the other. To make this idea fruitful, it is necessary that work should be done, and done at once, in an organised manner. It might not be necessary to begin immediately with multiplied centres; but the active organisation of the Order of St. John might with great advantage he brought into play for this very practical purpose, and a number of the ladies and gentlemen who have so much interested themselves in the more remote contingencies of accident and injury—who have qualified themselves by ambulance classes to bind up the broken limbs and staunch the bleeding arteries of their possibly injured fellow-citizens—may find at once here a steady, regular, unexciting, but most noble, field for present daily or weekly work. A St. John's committee attached to each hospital, undertaking to investigate cases refered to it, in connection with the local committees of the Charity Organisation Society, might do much, not only to lessen the immediate suffering of the poor, but to dry up sources of pauperism. No one who is acquainted with the history of pauperism but knows that the first step into it is frequently made in passing out of the hospital door, or in leaving the out-patient department. Sickness is the most fertile

source of disabling poverty; and if, to the administrations of the physician, there can be added the intelligent aid of several committees such as these, which will, with due discrimination and without pauperising action, consider the changed circumstances of the patient, brought about by disabling in sickness, a very considerable step will have been made towards lessening preventable pauperism and suffering. What is done, however, should be done discreetly; and, in the first instance, with the aid of thoughtful and experienced persons. It might probably be done in concert with the local committees of the Charity Organisation Society; and great care should be taken that, as far as possible, the action of the committee should be one of unalloyed good; and that it should not either sap the independence of the working-classes, or encourage idle applicants by temporary doles.

ANALGESIA BY RAPID AND FORCIBLE INSPIRATION.

To escape suffering pain, to avoid giving pain, are points of interest and importance to both patient and surgeon. There are many minor surgical operations, such as the extraction of teeth, the opening of abscesses, etc., which are of such brief duration that surgeons are reluctant to incur the risk of chloroform or the annoyance of ether, and which are yet attended with very great, sometimes intense pain. Especially in dental practice nitrous oxide gas has been used quite extensively, and with great satisfaction, but the facilities for its administration are not always at hand.

At a recent meeting of the Philadelphia County Medical Society (reported in the American medical papers), Dr. Benjamin Lee brought before the society the results of some observations and experiments which he had made upon the subject of analgesia induced by forcible and rapid respiration. In his paper published in the *Philadelphia Medical Times*, are stated the following facts concerning the subject:—His attention was first called to the subject by the report of a servant who had been sent to Dr. Bonwill, a well-known dentist of Philadelphia. She said that "Dr. Bonwill had pulled her tooth, and did not hurt her a bit," that "he made her breathe as fast as ever she could, and before she knew it, the tooth was out." There was no pain, although she perceived the jerk, when the tooth was extracted. Not long after this, he had occasion to open an abscess in the perinæum of a young man about twenty-five years old, rather delicate and decidedly nervous. After the young man had made rapid inspirations for about three-quarters of a minute, the doctor made an incision about an inch long, and evacuated several ounces of pus. He continued the rapid breathing for at least a half minute longer, and was surprised to find that the operation was completed. He had felt nothing except a sensation of pressure upon the tumour. A fistulous communication with the urethra appeared in a couple of days, and it became necessary, ultimately, to lay open this fistula. Two bridles, each an inch broad, were divided with scissors on a grooved director; and by the same method perfect freedom from pain was secured, although the operation was, of course, much longer than the former one. In another case where he lanced a felon, there was not the same success. The patient's nerves were completely unstrung from the intense and protracted pain which she had undergone; and she could not be made to breathe with sufficient force and rapidity to secure the desired effect.

Dr. Lee does not undertake to explain how this effect is produced, whether it is a form of hypnotism, or the result of a modification of the cerebral circulation, brought about by the respiratory act. He merely brings forward the result of his observations thus far, believing that they show that by a continuance of rapid and forcible respirations for a certain length of time, it is possible "to induce such a condition of the nervous system that pain shall not be appreciated by the sensorium".

Dr. Bonwill has made use of this mode of securing freedom from pain in dental surgery for several years past, and especially during the last five years. He informs his patients that they will be fully conscious of all that occurs, and perceive every touch, but will feel no pain, if they keep up the inhalations energetically and steadily during the whole operation. The inhalations must be at the rate of one hundred a minute. It is very difficult for a person to breathe more than one hundred times a minute, and "for the minute following the completion of the operation the subject will not breathe more than once or twice". Very few have force enough left to raise hand or foot. Dr. Bonwill claims that the results of his experience are such, that there is no longer any necessity for chloroform, ether, or nitrous oxide, in the dental office, for the purpose of extracting teeth, or deadening sensitive dentine.

Drs. Garretson and Hewson have made use of this system of rapid respiration in connection with the usual anæsthetics in major operations where time is needed, and find a smaller quantity of the drug to suffice than when it is given in the usual way. Dr. Hewson makes use of the rapid breathing to the exclusion of drug anæsthetics in midwifery practice.

Dr. Bonwill's theory of the effect of the rapid respiration is:—1. That there is diversion of the will-force in the act of forced respiration at the rate of one hundred per minute, which involves such concentrated effort that ordinary pain would make no impression while this abstraction is kept up.—2. That there is a speedy effect due to the excess of carbonic acid set free from the tissues by the rapid respiration.—3. That hyperæmia is caused by the rapid respiration retarding the flow of blood from the brain.

THE *Chemische Zeitung* reports that considerable quantities of arsenic have been found on the examination of green carpets at Bonn.

TYPHUS fever is prevalent in Bâle. In the last fortnight of September there were fifty-three fresh cases.

A MAN, aged 43, died in St. Thomas's Hospital on the 2nd instant from hydrophobia, produced by the bite of a rabid dog two months and five days previously.

DR. SYMES THOMPSON, Gresham Professor of Physic, will deliver four lectures on Contagion at the Gresham College on October 12th, 13th, 14th, and 15th, at six o'clock P.M.

SMALL-POX has broken out at Bury, and two deaths are reported. No provision has been made by the corporation for infectious cases. The guardians of the union, after a long discussion, refused to admit any but paupers into the workhouse hospital.

THE death is announced of Dr. Hofrath von Wagner, Professor of Chemistry in the University of Würzburg, and the author of several works on that science, chief of which is *Jahresberichte über Chemische Technologie*. He was born at Leipsic in 1823, and first taught in Nüremberg.

AN important handbook of medical jurisprudence is announced by the publisher (H. Laup, Tübingen), edited by Dr. Maschka, and written by a series of experts, including Drs. Eulenberg, Drogendorff, Oesterlen, Emminghaus, Krafft-Ebing, and other well known names. It will be published in three volumes.

M. GALLOWSKI has informed the Paris Société de Médecine Publique et d'Hygiène Professionnelle, that he has noted fifty cases of serious accidents to the eye in schools, due to the introduction of steel pens into that organ. He is therefore of opinion that the use of metallic nibs should be abolished in educational establishments.

A MOVEMENT, having the approval of the vestry of St. James', Clerkenwell, and the inhabitants generally, has been set on foot with the object of converting the disused burial ground of St. John's parish church, Clerkenwell, situate in Benjamin Street, Cow Cross, into a recreation and play-ground for the parishioners and their children.

MISS MARY ANN HOUGHTON, a middle-aged lady, said to be suffering from ill health, was charged at the Marlborough Street Police Court, this week on remand, with obtaining money by false pretences from Mr.

Stuart Charles Cumberland, by pretending to hold communication with the spirit of Dr. Harvey. At the close of the examination, the prisoner was again remanded, bail being accepted in two sureties of £50 each. The summons has since been withdrawn.

A DISCUSSION took place in the Rochdale Town Council this week, with respect to the poisoned milk supply which is believed to have led to the outbreak of typhoid fever in the borough. The statements represented the sanitary arrangements of the farm whence the milk had come as being very bad, and Alderman Shawcross expressed the opinion that the case was a proper one for a prosecution.

A SERIOUS outbreak of fever has occurred at Church Coppenhall, Cheshire, attributed to the drinking of foul water; and the extraordinary statement is made that, though the Sanitary Committee of the Nantwich Union have put down pipes by which a supply of pure water is brought into the village from Crewe, many of the landlords and tenants have refused to have the water laid on.

THE Medical Officer for Shoreham reported last week, at the monthly meeting of the Local Board, that typhoid fever had made its appearance in the town, and caused four deaths. Samples of water and milk had been obtained, and forwarded to the county analyst, and precautions had been taken to prevent the spread of the disease by disinfecting and flushing the sewers, and by other means.

MEDICAL OFFICERS OF PRISONS.

THE death of a prisoner in Coldbath Fields Prison has again aroused the angry feelings of a British jury; and again, as usual, the doctor is the object of their resentment. The coroner, in summing up, does not attach any blame to anyone, but deplores "the plank bed, the poor food, and the want of skilled medical attendance". The jury finish by advising that, "in future, *post mortem* examinations should not be made by the prison surgeon, but by an independent medical man"—in other words, on the death of every prisoner, the prison surgeon should be put upon his trial. It is not probable that such an absurd proposition will ever be acted on, but it shows what a very responsible post the medical officers of prisons hold; a responsibility which extends not only to their own acts, but includes those of the magistrate who pronounces sentence down through all the executive to the lowest subordinate prison official. This is scarcely just to the doctor, because it makes him responsible for what, in a purely professional sense, he must condemn. No medical man in his senses would advise a plank bed and penal diet as beneficial to health; on the contrary, he knows that health must deteriorate under such conditions; but he is obliged to accept them as facts, and only to interfere when he perceives that, in any individual case, the health is affected thereby. That the medical officer should be held further responsible would be to render his position untenable; unless, indeed, he protected himself by interdicting all penal duty and plank beds—which, if the suggestions of the jury were carried out, would be his only alternative. It is to be hoped that, when such an enormous responsibility is imposed by the public, that the State will see fit to award a corresponding recompense. At present, the services of the prison medical department are as ill remunerated as they are onerous and distressing.

KLEBS ON THE SPECIFIC AGENT OF TYPHOID FEVER.

PROFESSOR KLEBS of Prague believes that he has discovered the micro-organism which constitutes the specific agent of typhoid fever, and developes his views in a paper entitled "Der Ileotyphus eine Schistomycose", published in the *Archiv für Experimentale Pathologie*, t. xii, p. 231, 1880. Professor Klebs has for a long time, assisted by his pupils, been making researches in this direction. He writes that he has been able to find, at the necropsy of twenty-four persons carried off by dothinenteritis, microbes in various organs: in the intestinal mucous membrane, in the thickness of the cartilages of the larynx, in the pia mater, in the foci of lobular pneumonia, in the mesenteric ganglia, in the parenchymata of the liver, and generally diffused in the organs which showed the most decided lesions. These micro-organisms showed themselves in the form of rods, about eighty micrometers in length and 0.5 to 0.6 micrometers in thickness. They have been constantly observed in the bodies of dothinenteric patients since the attention of Professor Klebs was drawn to the subject, and they are always absent from the organs, and specially the intestines, of subjects who have died from any other disease than typhoid.

OPHTHALMOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

THIS Society will meet during the ensuing year at the rooms of the Medical Society, 11, Chandos Street, Cavendish Square. The first meeting will be on Thursday, the 28th instant, at 8.30 P.M., when the rules of the Society will be considered, new members elected, and papers read by Mr. Critchett, Mr. Hutchinson, Mr. Higgens, and Dr. Hughlings Jackson. Living specimens should be in attendance at 8. Applications for membership, and notice of intended communications, should be sent to the Secretaries, Dr. Stephen Mackenzie, 26, Finsbury Square, E.C.; and Mr. Nettleship, 4, Wimpole Street, W.

REGISTRATION OF DISEASE.

THE movement among the registrars of the various hospitals, which resulted in the meeting at King's College Hospital on the 6th instant, is one of which we have more than once urged the importance, and the results are likely to be of no small value. We pointed out in detail last summer, in articles contributed by an able hospital registrar, the necessity of introducing greater uniformity and completeness, and of utilising the now waste material. Since that time, the question has been the subject of much discussion and some further correspondence, and it was suggested that a meeting of the registrars attached to the various hospitals should be arranged; and Mr. Howlett, who has written on the subject, has succeeded in realising this idea. The report of the meeting is given elsewhere. The chief aim was to secure some uniform and trustworthy method of registering disease, so that the reports of the various hospitals should correspond in the kind and arrangement of the information published, and should also possess a similar degree of completeness. The difficulties in the way of obtaining this uniformity seemed to the members present so great that no uniform plan was proposed; but it was resolved that the registrars of the London and provincial hospitals should form an association which should meet occasionally to discuss various matters and to introduce gradual reforms into the present system. That there is great need of reform will be denied by none; for though each individual hospital report may be well executed and full of interesting details, yet, when the published practice of the various hospitals is compared together, it is found that the same kind of information is not conveyed in any two reports. It seems to us that great good may be done in this respect by co-operation of the various registrars. Independently of increased accuracy and completeness in the records, great results might be obtained if the various registrars selected a subject for the year on which to present exhaustive reports—such, for instance, as temperature after surgical operations, etc. If this were done at all the hospitals, there would, at the end of the year, be an accumulated mass of evidence on the subject selected of inestimable value for the advancement of medicine as an exact science. We heartily congratulate the registrars on this movement, and wish them every success. We feel sure that the surgeons and physicians of the various hospitals, seeing the importance of the question, will heartily co-operate and lend their assistance. They may certainly claim with some confidence the assistance of the lay governors of the hospitals; for in the memorial presented last summer to the Right Hon. Sir R. A. Cross, then Home Secretary, by the representatives of all the great metropolitan hospitals, asking for a Royal Commission on the government and condition of the metropolitan hospitals, the necessity for an improved and unified system of hospital registration of disease and the better utilisation of the clinical material, was, at the instance of Mr. Ernest Hart, introduced as one of the desiderata which might thus be attained. The clause was introduced with the assent of the heads of the great hospitals, who were

members of the committee, and who took part in the deputation. Mr. Cross replied, in effect, that much of what was asked could be done by the treasurers themselves and the weekly boards of the various hospitals. It is satisfactory that the registrars are showing the way, in the act of helping themselves, which Mr. Cross recommended to the study of the distinguished memorialists.

OVARIOTOMY IN ITALY.

DR. PERUZZI calls our attention to the fact that, during the progress of the last one hundred cases of ovariotomy in Italy, there were only two incomplete operations, both fatal; and seven laparoto-hysterotomy cases, partial or total, with two recoveries; and one fatal exploratory operation.

ST. THOMAS'S HOSPITAL.

A LONG and animated discussion arose on Thursday last, at the Lambeth Vestry, out of the decision of the Assessment Committee to reduce by one-fourth the sum at which this institution is at present rated, in accordance with the appeal of Mr. Alderman Stone, the treasurer. The standing orders were suspended, Mr. Turner moving a vote of censure upon the Assessment Committee, which he contended had acted illegally. The motion, however, was lost by a large majority.

THE PHARMACEUTICAL CONGRESS.

AT the meeting of the Pharmaceutical Congress, Mr. Greenish said no doubt most of the gentlemen present were interested in this subject—in fact, their very presence there showed their interest in pharmacy; and they would be aware that it was proposed to hold an International Medical Congress in 1881 in London; and he believed, from the active steps now being taken, that that congress would be a very great success. About six years ago, he was appointed a delegate to the International Pharmaceutical Congress in St. Petersburg, when he gave the delegates there an invitation to meet next in London. Five years was the usual interval between the meetings; but the war between Russia and Turkey, and various other things, rendered it inadvisable to meet at the usual time in London, and, therefore, it was postponed. But they now thought it very desirable that, in 1881, this International Pharmaceutical Congress should be held in London. Its first meeting was in Brunswick many years ago, the second in Paris, the third in Vienna, and the fourth in St. Petersburg; and it was with considerable delight, more than he could express, that those who were present at St. Petersburg received the invitation which was again sent from the Pharmaceutical Society on the return of the delegates. Many points of interest would come before this International Congress, one being that much misunderstood question, the International Pharmacopœia. In Germany, there were he did not know how many pharmacopœias at one time, but now there was only one; in Switzerland, there were a large number, but now there was only one; and, therefore, he did not think there would be much difficulty in forming such an International Pharmacopœia as was shadowed forth at St. Petersburg, namely, one in which the active preparations of opium, strychnine, and such substances should be the same in the several countries. In this question, some of the pharmacists and medical men abroad took much more interest than even the pharmacists of this country; and the presence of those medical men and pharmacists in England at that particular time, and the discussions, probably, that would take place, would, he hoped, tend to impress on the Medical Council how very desirable it was for pharmacy to have a certain number of chosen pharmacists to take part in the preparation of the Pharmacopœia.

SANITARY LEGISLATION.

WRITING on the subject of sanitary legislation, Mr. William White, F.S.A., says that the reform most urgently required at the present moment was the extension of the Act which was designed to allow tenants and sanitary authorities, even in the absence of agreement, to compel landlords to amend defects in the drainage of rented houses. The Act was almost inoperative, on account of the difficulties, or supposed difficulties, of exercising the coercive power without expensive litigation; but, apart from that, it contained no adequate provisions for the correction of defective soil-pipes and water-service. He had recently endeavoured in vain to induce the landlord of a house, in which he was interested, to provide a water-service for domestic purposes, apart from the only one which was supplied from a cistern over the water-closet; this closet being served by the customary spindle-valve, with the water-box, which inevitably released the bad air from beneath into the water at the bottom of the cistern. He had appealed to him, further, to remove and to ventilate the decayed and constantly leaking lead soil-pipe (occasionally eaten through by rats from the drain) which ran down inside the house, adjoining one of the sitting-rooms, leaving it in an almost chronic state of stench. And, more than this, he had appealed to the sanitary inspector, but could get no redress in these matters. Some of the inmates of the house had suffered from blood-poisoning, attributed by medical attendants to sewer-gas, but they had no means of leaving the house until Lady-day, and were not in a position to incur the expense of repairing the defects which, many months ago, should have been set right by the landlord.

TAXABLE INCOMES OF PROFESSIONAL MEN.

AT the Social Science Congress, held last week at Edinburgh, Mr. David Chadwick read a paper on a subject interesting to the profession generally. The question mooted was: "For purposes of taxation, what is the most scientific and practicable definition of the word 'income'?" Mr. Chadwick contended that the income of a physician, artist, or engineer is equal to a terminable annuity, in which a portion of the principal is consumed, and that it should be assessed accordingly on the annual interest value, only keeping the capital, of course, intact. The taxable income from salaries and professional earnings should be taken to mean the actual income, less a due allowance for the exhaustion of the life and energy which is the real capital consumed in earning the actual receipts. The scientific method of arriving at the taxable income of a physician or an engineer would be to consider his total annual income as a terminable annuity, to be valued according to his age. He recommended the adoption of a general estimate that incomes earned apart from the use of capital should in all cases be assessed at one half the annual net amount.

PRACTICAL ANATOMY.

WE learn that, at a metropolitan medical school, only one subject had, up till the beginning of this week, been received for dissection; while the number of students of practical anatomy at that school waiting for "parts" exceeded ninety. In the days of the "resurrectionists", such a dearth of material was probably unknown: and one of the objects of the passing of the Anatomy Act was the better supply of subjects. Such a state of affairs surely proves the truth of the assertion in our leader on Practical Anatomy in last week's number of the JOURNAL, that the time has fully arrived when steps should be taken for increasing the number of subjects available for purposes of dissection.

CREMATION.

THE Italians, we read, are resolved to make the system of cremation as perfect as possible. The head-quarters of the institution at Milan have recently received a very singular addition. Its customers were confronted with a difficulty which at first had not been anticipated. The difficulty was to know what they were to do with the ashes of their deceased relatives. It seemed improper that ordinary sepulture should follow so unusual a process as cremation. The management at Milan has at last found its way out of the difficulty. Incineration is, after all, but a revival of an old fashion, and it was only necessary to follow out the usages of its originators in order to cause all difficulty to disappear. The Crematory Temple at Milan is to have an annexe, which will, in fact, be a cemetery. The municipality has already selected its architect, and approved the plans which he has furnished. The cemetery, when completed, will differ as widely from an ordinary graveyard as cremation differs from ordinary sepulture. It will be an Etruscan building, thirty-six feet high by about twenty feet long, and will be

furnished with recesses, one hundred and twenty in number, according to the present design, in each of which several cinerary urns can be placed. The authorities are so confident of the success of the undertaking, that they have ordered vaults or catacombs to be constructed under the nave, and these will become the private property of families. The practice of cremation seems to have made more way in Italy than in Germany, to which two countries of Europe it has as yet been almost entirely confined.

OPHTHALMIA IN PAUPER SCHOOLS.

THE subject of ophthalmia in pauper schools, which in 1874 roused so much attention that the Local Government Board appointed Mr. Edward Nettleship specially to inquire into it, is reported in the just-issued report of the Board to be still "under consideration". The measures taken by the managers of the Anerley Schools to remedy this evil are stated to have now been proved, by an experience of five years, to be efficacious. These measures have been partly adopted by the managing bodies of other schools; and have, in the majority of instances, effected a marked improvement—an improvement which is more apparent in the smaller schools, where the personal supervision of each child is attended with fewer difficulties. Improvements in ventilation, food, clothing, and exercise, combined with the establishment of quarantine or probation wards, have sufficed in these schools to reduce the evil to inconsiderable proportions. In the large district schools at Hanwell, Sutton, and Ashford, the difficulty of eradicating the disease has been greater, though even here it has been reduced both in extent and severity.

THE WATER-SUPPLY OF THE METROPOLIS.

THE blue book of the Local Government Board for 1879, contains the annual reports of Colonel Bolton and Professor Frankland, on their examinations of the water supplied to the metropolis during last year. Colonel Bolton describes the condition of the water, both in the Thames and the Lea, as "generally very bad" during some of the months of 1879, and owing to the frequent heavy floods, the water that had to be taken in by the companies using these rivers as a source of supply was much polluted and extremely difficult to filter. The analyses furnished by Professor Frankland show a larger mean proportion of organic impurity in the Thames and Lea water than has been recorded since 1868, with the exception of 1872, when the water of the Thames was slightly more impure. But although both rivers were much polluted during an exceptionally long period of the year, they were not so intensely polluted in any one month as was the case in some previous years. Dr. Frankland invariably accords a much higher standard of purity to the water of the Kent Company, from deep wells in the chalk strata, than to that furnished by any of the companies dependent upon river sources. Colonel Bolton draws attention to the fact that water often undergoes deterioration after being delivered into the cisterns of consumers, owing to their receptacles not being kept clean. For this cause of impurity, the most effectual remedy appears to be constant supply; and all the companies, (with the exception of the Grand Junction) are reported as having recognised the necessity for such a supply by taking steps to furnish it to all the houses in their respective districts, whose water fittings are in a condition to receive it. At the same time, it appears that little more than one-fourth of the total supply is constant, and until such a supply is general, the attention of all householders should be given to the fittings and cleanliness of their cisterns, as well as to their house-drains and the pipes connected therewith, upon which depends, in a great measure, the purity and abundance of the domestic water supply. The average daily consumption of water in the metropolis is stated by Colonel Bolton to be 32.56 gallons per head of the estimated population, and 238.52 gallons per house. With regard to arrangements for the extinction of fires in the metropolis, it appears that 672 hydrants have been added, during the past year, to the number already in existence; and that, of this addition, 631 have been contributed by the New River Company. The total number of hydrants now in the metropolitan area is 5348; but considering the space to be dealt with, and the importance of the interests involved, this number is very far short of actual requirements. The chief officer of the Metropolitan Fire Brigade reports that about three-fifths of the water used in extinguishing fires was taken from the Companies' mains, and that the instances in which the supply was defective, or otherwise unsatisfactory, were comparatively few.

THE BRAIN OF A MURDERER.

THE necropsy of Menesclou, who was recently executed for a horrible crime in Paris, showed the following cerebral conditions. The brain, though perfectly formed to all appearance, was sent to the Anthropological Laboratory, and M. Chudzenski, who prepares the specimens, noted that the frontal lobe was the seat of unmistakable cerebral softening, attacking both sides symmetrically, and that the first and second convolutions were affected in a similar manner. The first and second temporal convolutions were also softened, but not to the same extent; both sides of the occipital lobe showed traces of softening. In fact, the brain was so much softened that it was difficult to take a cast of it. The arachnoid and the pia mater were very resistent and very dense, as in quadrupeds. The first fold of the occipito-parietal passage was deep, and having a tendency to pouch towards the right; it was normal on the left. Broca has found this malformation in the majority of suicides and in ninety-nine executed criminals, notably in the case of the infamous Prevost. Menesclou's brain weighed 1,382 *grammes*, 32 *grammes* more than the average weight. It has previously been noted that this excess of weight is somewhat general in those brains of assassins of which it has been practicable to ascertain the weight.

A GIANT MEDICAL CATALOGUE.

THE first instalment has just been issued of the catalogue of the library of the Surgeon-General's Office of the United States Army, which has been in preparation for the last seven years. It is a perfect marvel of care, accuracy, and completeness. Although Dr. Billings, its accomplished compiler, modestly disclaims for it all pretensions to a complete medical bibliography, yet the known industry with which the agents of the library in London, Paris, Leipzig, Amsterdam, St. Petersburg, and other great book-marts collect books for it probably makes the catalogue the most complete in the world for medical literature. The present volume, which, though only reaching to the middle of the letter "B", consists of 888 large quarto pages, includes both authors and subjects, the names being arranged in dictionary order in a single alphabet. The volume contains 9,090 author-titles, representing 8,031 volumes and 6,398 pamphlets. It also contains 9,000 subject-titles of separate books and pamphlets, and 34,604 titles of articles in periodicals.

HOSPITAL SATURDAY FUND.

THE collection up to present date amounts to £5,300: this is exclusive of the amounts collected by local committees, and shows a considerable increase compared with the corresponding period of last year.

DEATHS FROM DIARRHŒA.

THE annual death-rate from diarrhœa last week was equal to 0.9 per 1,000 in London, and averaged 3.0 per 1,000 in the nineteen other large English towns; it ranged upwards to 4.8 in Leicester, 5.3 in Salford, and 5.4 in Sunderland. The deaths referred to diarrhœa in London, which had steadily declined from 367 to 110 in the nine preceding weeks, further fell to 64 last week, which exceeded the corrected weekly average by but 4. The 64 fatal cases included 34 of infants under one year of age, 15 of children aged between one and five years, and 9 of persons aged upwards of sixty years. One death was referred to infantile cholera.

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during September, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of impurity in an equal volume of water

supplied by each of the other Companies and by the Tottenham Local Board was: Colne Valley 1.4, Kent 1.6, Tottenham 2.6, New River 3.8, Chelsea 4.1, East London 5.9, Southwark 6.8, Lambeth 6.9, West Middlesex 7.4, and Grand Junction 7.4. All the Thames waters, except that delivered by the Chelsea Company, were unfit for dietetic purposes, owing to their large proportions of organic impurity, notwithstanding efficient filtration in every case. The Lea water distributed by the New River Company was of much better quality, although that sent out from the same source by the East London Company was little better than Thames water; both had been efficiently filtered. The river waters were delivered at a high temperature, which rendered them vapid and unpalatable. The deep-well waters supplied by the Kent and Colne Valley Companies were of their usual excellent quality, but that delivered by the Tottenham Local Board, although far superior to any of the river waters, was below its average quality.—Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town showed a slight increase of organic matter.—The Loch Katrine water supplied to Glasgow is reported by Dr. Mills to have contained but little suspended matter.

SCARLET FEVER CAUSED BY INFECTED MILK.

THE epidemic of scarlet fever in Paddington and Bayswater, to which we last week alluded, has been further investigated by Dr. Broadbent and other medical men. In answer to inquiries in various quarters, we learn that there have been two distinct outbreaks, one at the end of July, the other at the end of September. Dr. Felce, who had not until the end of July seen any cases of the malady for some months, was, within three days of July 21st, called to seven houses in which were either cases of decided scarlet fever or of suspicious sore-throat; and, in all these instances, he found the milk was supplied from one and the same private dairy. Such is the experience of other practitioners of the neighbourhood. Notice of the facts was given to Dr. Stevenson, Medical Officer of Health for Paddington; but the source of the malady, although then suspected to be due to the milk-supply, was not at the time traced home. Scattered cases then occurred during August and the early part of September; and, at the end of this latter month, the second outbreak occurred. One practitioner was called in the last week of the month to cases in thirteen houses, eleven of which were supplied with milk from the formerly implicated dairy. During October, he has seen no fresh cases. Another practitioner was called to eighteen cases within six days from September 26th, and in all of them the milk was supplied by the said dairy. The disease, in consequence of the precautions adopted, has not spread to other members of the various affected families in either the first or second outbreak, and no fresh cases have occurred since the beginning of the present month. The patients have been members of well-to-do families, there having been scarcely any cases amongst the poor in the crowded parts of the parish. These poorer people do not, as a rule, obtain their milk from the dairy in question. Dr. Stevenson has recently asked for particulars of scarlet fever patients from the medical men of Paddington, and has already received notice of eighty-four families in which the disease has recently occurred; these have chiefly resided in Portsdown Road, Warrington Crescent, and the adjoining thoroughfares. He has learnt the source of the milk-supply of fifty-two of these families; and, in forty-two cases, he found it to be from the same dairy. The source of all this trouble now appears to have been traced to certain farms in Oxfordshire, whence the milk was supplied to the dairy in question. Dr. Stevenson, having examined, first, all the *employés* upon the dairy in London, visited several of their dwelling-places, and failed to find any trace of scarlet fever during his research, he next directed his attention to the farms in Oxfordshire; and, early in the present week, made a careful house-to-house inspection of eight farms. Six of these appeared to be free from all infection; but, on the two remaining farms, many cases of scarlet fever, both just past and then prevailing, were discovered. At one farm, the families of three milkers had all had the disease, which had displayed itself in some one or more members, and one child had died of it about three weeks before Dr. Stevenson's visit. On the second farm, where there were five milkers, the families of three had suffered. These eight were all dairy-farms, situated near Thame; and it appeared to Dr. Stevenson that all the children in Tetsworth who were not protected by a previous attack of scarlatina had recently suffered from the disease, mostly in a mild form. The attention of the Medical Officer of Health for Oxfordshire had not been directed to the outbreak. Dr. Stevenson at once gave directions that milk from the infected farms should no longer be forwarded to the London dairy. A curious fact connected with this epidemic is that the firm of dairymen has issued a circular in which is printed a report of Dr. W. Hardwicke, dated October 4th, 1880, in which he states: "I have just finished my tour of inspection of the farms in Oxfordshire and Buckinghamshire where your milk is sent from, and I do not find any clue to infection about the people employed on the farms, or defects in the water-supply; but you shall have a detailed report." We should state that, before Dr. Stevenson went to the farms in Oxfordshire, the dairymen in London had an inkling that all was not right at one of the two infected farms, and had decided not to take milk which came from the cows upon it. We hear, on good authority, that nearly two hundred cases of scarlet fever have occurred within the last few months at Chesham, Buckinghamshire, which lies in a large dairy district.

WORKING OF THE VACCINATION ACTS.

THE final returns showing the state, as regards vaccination, of the births registered in England and Wales during 1877 have just been published in the Ninth Report of the Local Government Board. Considering that these returns were due in the early part of 1879, it is difficult to see why they should not have been published earlier. They afford, however, conclusive evidence of the efficiency with which, on the whole, the Vaccination Acts are working, and may be commended to Mr. Dodson's careful consideration in case he is again contemplating the crippling of the administration of those Acts. Of 887,947 children whose births were registered in 1877, more than 86 per cent. had been vaccinated when the returns were made; nearly 9 per cent. had died early and unvaccinated; and a minute fraction (.013 per cent.) had contracted small-pox without being vaccinated. A further small proportion (about 0.1 per cent.) were certified as "insusceptible of vaccination", and in 0.75 per cent. the vaccination was temporarily postponed, so that the proportion of children unaccounted for was about 3.8 per cent. of the whole. The large majority of these were cases which, on account of the removal of the parents after the registration of the births, the vaccination officers were unable to trace. Thus, of the entire number of children born, only about 4½ per cent. remained unvaccinated. This proportion is larger by a small fraction than that of the children similarly unaccounted for in 1876, but is smaller than in previous returns, the percentage in the six years 1872-77 being 5.1, 4.8, 4.8, 4.3, and 4.5 respectively. Allowing for vaccinated children whose vaccination had not been registered, or were vaccinated after the date of the returns, the proportion of unvaccinated children during those six years may safely be set down as considerably less than 4 per cent. It is in the metropolis, as usual, that the largest percentage of children escape vaccination. No doubt this is to be ascribed, for the most part, to the migratory habits of the lower classes; and nothing short of a house-to-house visitation, at short intervals, would be thoroughly effectual in dealing with this sort of default. Much, however, depends on the promptitude and activity of the vaccination officer; for there is an enormous difference in the results obtained by a vaccination officer who deals with each case of default as soon as it arises, and those attained by one who only seeks for the children when they are seven or eight months old. It is obvious that an annual addition to the population of London of something like 9,000 children of whose vaccination there is no proof, must, so far as they are really unvaccinated, constitute a serious danger, and widen the field of small-pox epidemics. No pains, therefore, ought to be spared to secure greater promptitude in the metropolis in dealing with children as they arrive at the legal

age for vaccination. By way of showing with what completeness a system of vaccination may be carried out by efficient administration, it may be stated that eleven unions, with an aggregate population of more than a million and a half, and in each of which the births exceed 5,000 yearly, showed a proportion of cases unaccounted for less than 3½ per cent., the best six showing a proportion of 2 per cent., or less.

GERMAN REMINISCENCES AND CRITICISMS OF LONDON HOSPITALS.

Dr. Edward Schiff of Vienna, who has lately spent some months in the hospitals of Paris and London, has recently published his reminiscences and report in the *Wiener Medizinische Presse*. Dr. Schiff gives a very correct account of the constitution and administration of our hospitals and schools. There are two things which he censures to which we have often directed the force of public criticism; and it is not unimportant to notice that an intelligent foreigner who visits our schools so quickly observes these faults. The first is the accumulation of various chairs in one individual, who undertakes, perhaps, at the same time, anatomy, physiology, and dermatology—changing at another time to some other subject. Especially he asks, "Is it not surprising to find men of European renown, whose highest glory it would be in every other country to carry on a hospital service, and to surround themselves with a large circle of pupils—men such as . . . . . ., and so many others—voluntarily retire into private medical life and cultivate *praxis aurea*, while they would have still the opportunity of such fruitful scientific work as hospital surgeons and teachers?" We omit the names which Dr. Schiff cites, in order not to give too personal a turn to the discussion of a subject of great professional interest. It is, no doubt, felt by foreigners to be a great reproach to London as a metropolitan school, that the majority of the greatest clinical teachers—those whose names attract foreigners, and who in other cities would be found in the wards of the hospitals every morning, surrounded by a crowd of students—are not to be found except by private patients. Everywhere else the great surgeon and physician finds it his highest honour to give to the training of a clinical class the results of his lifetime of experience; here there appears to be a race for early retirement from public duties. The conditions of practice are too hard. The traditional maintenance of the one-guinea fee for the veterans, as for the juniors, makes it necessary to see vast numbers of patients in order to make up incomes adequate to a great reputation, a title, and the rewards of great fame; and the labours of the lecture-room become intolerable. There may be other reasons; but, if these were put out of the way by the general adoption of a heavier consulting fee for physicians and surgeons of a position equivalent to that of a leading Q.C. of high repute; if the precedent of the bar were followed in medicine; if the physician or surgeon of eminence were to announce that he could see no patient, just as the Q.C. receives no brief, except with a junior in consultation, and for a minimum fee of, say, five guineas,—the fees would be less numerous, but the total income would not be smaller; the time would not be frittered away with the fatiguing detail of a number of trivial cases; the position would be more dignified; and time would be left for public work and for hospital teaching.

A CRUCIAL TEST OF HOMŒOPATHIC MEDICINES.

In the New York *Homœopathic Times* for March 1880, is an account of a series of experiments instituted for the purpose of testing the effects of the thirtieth dilution of tincture of aconite. The project was set on foot in Milwaukee by a homœopathic society, and carried out with great care. In the words of the originators, "the object of this test is to determine whether or not this preparation can produce any effect on the human organism, in health or disease". "A vial of pure sugar pellets, moistened with the thirtieth Hahnemanian dilution of aconite, and nine similar vials moistened with pure alcohol, so as to make them resemble the test-pellets", were given to the prover, who was not to know which of the ten vials contained the aconite. The vials were numbered from 1 to 10, and the prover was to administer them to individuals, sick or well, and to detect by the effects which of the vials contained the medicine. It was provided that "the provers must be physicians of decided ability, who possess a good knowledge of the recorded symptomatology of aconite, and who have faith in the efficacy of the thirtieth dilution." The project was widely announced, and the ten-vial package was sent to each of twenty-five homœopathic physicians applying for them, scattered over a dozen different States. To guard against all possible fraud or trickery, the Rev. George T. Ladd, Professor of Mental and Moral Philosophy in Bowdoin College, Maine, was selected to distribute the vials to applicants, and receive reports from them. Now all this was not only decidedly fair, but it was highly creditable to those who ventured on an experiment involving so much peril to a favourite theory. The result was looked to with much interest. The result, so far as it has transpired, appears in the report of Mr. Ladd, which was not made until after the date allowed for the returns from the provers. By his report it appears, according to the *Pacific Medical Journal*, that only nine of those gentlemen ventured on any answer whatever. Mr. Ladd's report is thus summarised in the general report made to the Milwaukee Academy of Medicine—the body which originated the project—and signed by Samuel Potter, M.D., President, and Eugene F. Storke, M.D., Secretary: Number of tests applied for and sent out, 25; number of tests which have been reported on, 9; number of tests in which the medicated vial was found, 0. These statements do not come from the opponents of homœopathy, but from its own adherents; and not from a local or partial source, but from a select body representing the more intelligent portion of the sect. No notice of this report has appeared, it is stated, except in the journal named. It would appear that a general effort has been made to suppress it. In the meeting of the New York State Homœopathic Society lately held at Albany, the report was refused acceptance. The editor of the *Homœopathic Times* complains of this, saying that common courtesy required its reception, though its adoption might have been refused.

ACUTE SEPTIC POISONING FROM A LEECH-BITE.

Professor Kocher of Bern relates the following unusual case in a Swiss medical periodical. A gentleman, suffering from toothache, applied to a dentist in Bern, who recommended the application of leeches to the gum. This was accordingly done on June 27th, the leeches being applied to the gum on the affected side. Very soon after the application, the gentleman—who, with the exception of the toothache, had previously been in good health—began to feel ill; and in two hours the lip on the affected side was much swollen. Medical aid was not sought until late in the evening of the next day. There was slight œdema of the cheek, and dyspnœa; but examination of the chest gave only a negative result. The temperature was 102.2° Fahr. The next morning (June 29th), the dyspnœa had increased; there was much swelling of the cheek, and considerable exophthalmus. The temperature was 102.2° Fahr., but fell in the evening to 98.6°. The patient was then delirious, had severe dyspnœa, an ashy yellow countenance, blue lips, and cold limbs; he was in a state of collapse. The left cheek showed a diffuse colourless swelling, extending towards the ear and the angle of the jaw. The left eye was much protruded and completely fixed; there was considerable chemosis, with subconjunctival ecchymosis. There was swelling with ecchymosis in the left frontal region. On the gum there was a leech-bite with dark sloughy edges; and here and on the edge of the gum a brownish ichor with bubbles of gas could be pressed out. The patient died soon after this last examination was made. The *post mortem* examination was made by Professor Langhaus, in the presence of Professors Lichtheim and Kocher. It revealed œdematous and sanguineous infiltration of the areolar tissue, with purulent foci, on the anterior surface of the left upper jaw and of the forehead, and of the orbital cellular tissue; phlebitis of the anterior facial vein, with a purulent deposit on the lining membrane, but no thrombi; a recent swelling of the lymphatic glands at the angle of the jaw; a recent splenic tumour; numerous metastatic foci in both lungs, with fibrinous pleuritis on the right side, and ecchymoses on the pericardium. Professor Kocher says that there can

be no doubt death was caused by acute sepsis in the form of embolic pyæmia; and that it had its origin in a leech-bite. It is, however, a question whether the wound was poisoned by the leech itself, or subsequently from some accidental source. As swelling was distinctly ascertained in two hours, and ran a very rapid course, the idea of accidental poisoning by decomposed secretion from the wound is quite untenable.

THE LOCAL INFLUENCE OF FEVER HOSPITALS.

SIR JOHN ROSE CORMACK read a paper this week at the Social Science Association on "Location and Administration of Special and General Hospitals in which Contagious Diseases are received", which attracted much attention. After considering the question of stamping out small-pox and other contagious diseases according to the plan proposed by the late Sir James Simpson, Sir John said that persons stricken with small-pox propagated by intercourse with unprotected individuals, are, and always must be, a considerable section of the general population. It is necessary, therefore, to "isolate" cases of small-pox to prevent the spread of the disease. But is sufficient isolation practicable? Are we to isolate by gathering small-pox patients into special hospitals, or in special wards reserved for their reception in general hospitals? If isolation in appointed places be deemed essential, under what conditions ought the system to be worked, so as to prevent the centres of isolation becoming, in turn, centres of propagation, as they have been in Paris during the present epidemic? He then examined a series of facts which had come under his own observation in the Hertford British Hospital of Paris, and another series of facts narrated by the late Dr. Trousseau in his clinical lectures. These facts, he said, showed that, at least within a certain limited area of contiguity, small-pox is conveyed from person to person by atmospheric agency; and that they likewise suggest that the diffusion of the disease by currents of air, charged with the morbific desquamative epithelium, must be much more common than is generally supposed. They, consequently, proclaim the necessity of adopting measures to prevent the atmospheric distribution of the germs, and suggest the importance of ascertaining the extent of the danger-area which surrounds a small-pox patient. All facts are valuable which lead us to ascertain absolutely, or even approximately, how far from the centre of contagion the morbifically charged epithelial scales and scab-dust may be wafted. Dr. Bertillon, who is at the head of the statistical department of the municipality of Paris, has published a paper which is a commentary on the mortality statistics of Paris for January and February of this year. In these two months, there were 569 deaths from small-pox in all Paris, 57 of which occurred in the Sorbonne *arrondissement*. That *arrondissement* contains about thirty-two thousand inhabitants, which is one-sixty-secondth of the entire population of Paris; so that its proportion of small-pox deaths ought to have been one-sixty-secondth of 569—to wit, 9 deaths; whereas it gave 57 deaths, which is from six to seven times as many. The numbers for January and February, taken separately, give almost the same proportionate results. The constancy of the great excess of small-pox deaths in the Sorbonne *arrondissement*, during the two months reported on, had obviously a cause equally constant. With a view to its discovery, Dr. Bertillon tabulated the small-pox deaths of the *arrondissement* according to the streets and houses in which the deceased were residing at the time of seizure. This proceeding showed that the deaths from small-pox, in place of being regularly distributed throughout the *arrondissement*, were grouped within a space not equal to one-fourth of it. The portion in question lies between the bank of the Seine, which forms the north-east boundary of the *arrondissement* and the Boulevard de Saint-Germain. The population of this portion of the *arrondissement* of the Sorbonne, in which the houses are much crowded, may be estimated at from ten to eleven thousand, which is a little more than one-two-hundredth of the entire population of Paris. The proportion of deaths within that area from small-pox ought to have been a little more than one-two-hundredth of 569, the total small-pox mortality of the city—to wit, 2.84, or about three deaths; whereas the actual number of deaths was 49, or more than sixteen times the proportionate number. Dr. Bertillon naturally concluded that, whatever was the cause of the localised excessive mortality, the cause was limited within the small locality. Pursuing his investigations, he was soon convinced that the contagion radiated from a depôt containing, on an average, 140 small-pox patients, a building called the Annexe of the Hôtel-Dieu, situated, however, at a considerable distance from that well known institution. In one long street, having a range of houses with some of the windows opening opposite the Annexe and some opening on the other aspect, the deaths through small-pox occurred only in the houses which had windows facing the Annexe. It appears, then, that the depôt of small-pox patients in question was really the cause of forty deaths from small-pox in a little corner of Paris, and the cause likewise, of course, of a large unascertainable number of non-fatal cases within the same area. These facts indicate that the Annexe was a centre whence small-pox was diffused by atmospheric currents. He demonstrated from a map the locality of the houses in which the deaths occurred, and pointed out that they were grouped together within a quarter of a mile of the Annexe, and in situations where the windows of the houses opened opposite the windows of that institution. He then gave an account of the influence upon the vicinity of three other Parisian depôts of small-pox during January and February. These additional facts supported the belief in the epithelial drift, and established a variety of points, pointing out the proper and improper sites for small-pox depôts, and the importance of the floor-sweepings being burnt. He maintained that the teaching of the facts which he had adduced is of paramount social importance, and must not be blinked because it is most uncomfortably at variance with views which are in themselves important to public health. It is to the effect that depôts of small-pox patients may easily become sources of danger to the surrounding population by preventing intercommunication of the persons outside and inside the depôts; and for this reason, that the germs of the disease are liable to be carried to a considerable distance by poison-charged epithelial drift. This uncomfortable lesson is, however, far from leading to the conclusion that it is wrong to isolate small-pox patients in depôts; it only intimates that we must be careful where we locate, and how we administer, them. He indicated that there were two chief points to be attended to. First, the depôts must, as far as possible, be kept apart from dirty, crowded, and closely-built districts; nor should they be contiguous to an imperfectly vaccinated community. Second, the prevention of epithelial drift must be guarded against, as far as practicable, by inunction and washing of the patients when desquamating; and a careful burning of the ward-sweepings in fires within the wards. He pointed out that all that had been said of small-pox propagation by epithelial drift was equally applicable to scarlatina and measles. With respect to typhoid, diphtheria, and cholera, he thought that, by the rigorous employment of proper measures, depôts for such cases were not at all dangerous to the vicinity in which they were placed. In respect to typhoid fever in particular, he was convinced, by a large personal experience, that patients affected by it might be fearlessly distributed in well ventilated general wards. Sir John Cormack concluded by saying that the main object of his communication was to point out an enormous and insufficiently recognised source of danger in respect of the location and administration of small-pox hospitals—a source of danger which requires to be dispassionately considered with the least possible delay.

A CELEBRATED CHEMIST.

LAST Sunday was the anniversary of the death of Henry Cavendish, one of the most famous chemists Europe has ever produced. Upon his scientific discoveries it is needless to dwell; but the *Observer* mentions a strange story about his death which is not generally known. He was a man of singularly shy and retiring habits. He would attend the meetings of the Royal Society; but on one occasion, being addressed by a stranger, he immediately ordered his carriage and drove home. His banker once called upon him at his private house, and, being refused admission, stated that he came on business of the utmost importance.

Admitted, he told Cavendish that there were £80,000 lying idle to his credit, and that the money had better be invested. Cavendish, in a vague and absent manner, answered the senior partner of the largest banking house in London to this effect—"That is your business, sir, and not mine. Please invest the money, and do not trouble me again." This strange reticence marked his dying hours. Lying in bed, he rang his bell, and said to the valet who answered the summons, "I feel very ill, and am going to die. Come again in half an hour." The servant, with pardonable anxiety, returned before the time appointed. Cavendish, who was still alive and sensible, observed with some severity, "You have disturbed my last moments. You will please return at the time I ordered." The man returned and found Cavendish dead. There is something Napoleonic in such a frame of mind, and it shows us the stuff of which men of science are made. Fortunately for the world at large, we are not all men of science.

AN UNCOMMON OCCURRENCE.

IN Holland, three triplet brothers—a naval *employé*, a solicitor, and a postmaster—have just celebrated their fiftieth birthday, all being in excellent health.

THE POLLUTION OF RIVERS.

A CASE has been tried at Blackburn County Court, under the Rivers Pollution Act, 1876. The plaintiffs were the mayor, etc., of Over Darwen, and the defendants, Messrs. Shorrock, iron founders. It was admitted that the defendants had caused certain rubbish and cinders to be put into the river, so as to interfere with its due flow. These practices had been openly and as a right carried on for more than twenty years, but Mr. Hulton, the Judge, declared that the defendants had committed an offence against the Act, and issued an order that they should abstain from further commission of the offence.

UNCERTIFIED DEATHS.

A LARGE number of uncertified deaths having come under the notice of the medical officers of health for the Wandsworth and Clapham district during the past year, they have made a special reference to them in their annual reports, presented lately, and the Board of Works, acting upon their suggestion, resolved, at a recent meeting, to send a memorial to the Secretary of State for the Home Department, suggesting that in all cases of uncertified death, where no inquest is held, an investigation should be made, and a certificate of the cause of death given by the medical officer of health of the district, before burial. It also resolved to send a copy of the memorial to each of the vestries and district boards in the metropolis, with a request that they will support the action of the Board in the matter.

OUTBREAK OF TYPHOID FEVER AT ROSEWELL.

AN outbreak of typhoid fever, which has visited nearly every house in the village, and proved fatal in several cases, has occurred at Rosewell, near Bonnyrigg. The water-supply is at present blamed for it, and this will require the attention of the local authorities.

THE GUY'S HOSPITAL STAFF.

AT a meeting of the East Anglian Branch, at Lowestoft, on Friday, October 8th, under the presidency of F. S. Worthington, Esq. (Senior Surgeon of the Lowestoft Hospital), it was unanimously resolved, upon the motion of Mr. John Kilner, seconded by Mr. R. V. Gorham: "That the thanks of the Branch are due to the medical staff of Guy's Hospital for their unanimous, firm, and dignified determination to resist interference with the treatment of the sick, by the attempt of the governors of that institution to thrust upon them a system of nursing of which they did not approve. The question at issue affects the management of all hospitals, and, in the opinion of this meeting, a reform in the constitution of the governing bodies of hospitals is much needed, particularly that every physician and surgeon should be *ex officio* a member of the board of management."

SCOTLAND.

GLASGOW SOUTHERN MEDICAL SOCIETY.

AT the thirty-seventh annual meeting of the Glasgow Southern Medical Society, held on the evening of the 7th instant, the following office-bearers for the session 1880-81 were appointed. President: T. F. Gilmour, L.R.C.P.Ed. Vice-President: Neil Carmichael, M.D., F.F.P.S.G. Treasurer: E. McMillan, L.R.C.S.Ed. Secretary: William Carr, M.B., L.R.C.S.Ed. Editorial Secretary: William McFarlane, M.D. Seal-Keeper: Alex. Napier, M.D. Court Medical: John Niven, L.F.P.S.G., Convener; A. L. Kelly, M.D.; Eben. Duncan, M.D.; James Stirton, M.D.; Robert Park, L.F.P.S.G. The following gentlemen, with the office-bearers, form the Council: A. J. Hall, M.D.; Archibald Pearson, M.D.; William Wilson, L.R.C.S.Ed.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

THE first meeting of the session of the above was held in the Faculty Hall on the evening of the 12th instant, when the President, Dr. Hector C. Cameron, delivered an opening address, "On some of the Medical Complications of Surgical Practice".

SCARLET FEVER IN KILSYTH.

SCARLET fever has become very prevalent in Kilsyth, necessitating the close of the Board-schools in the burgh.

HEALTH OF GLASGOW.

FROM the report of the medical officer of health for the fortnight ending October 2nd, it appears that the death-rate was 19.9 per 1,000 living, as against 18 in the corresponding period of last year. The mean temperature during the fortnight was 53.5° Fahr. Compared with the fortnight preceding, the number of deaths from pulmonary diseases was 100 in place of 111, while the deaths from fever was 13 in place of 15—all from enteric fever. From the infectious diseases of children, 56 deaths resulted in place of 39—viz., 40 from scarlet fever, 8 from measles, and 8 from whooping-cough. In the previous fortnight, there were only 17 deaths from scarlet fever. There has been no such prevalence and fatality of scarlet fever since the autumn of 1874, but the numbers affected are not so great as then. The number of cases of fever registered was 138 in place of 117—viz., 128 of enteric fever, 4 of typhus, and 6 undefined. There are at present in the Hospital at Belvidere 200 cases of enteric fever, 214 of scarlet fever, 28 of typhus, 14 of measles, and 3 of whooping-cough—in all, 459, as compared with 356 on the corresponding day of last fortnight. In accordance with the resolutions already passed, the Health Committee are actively engaged in making provision for this outbreak of enteric and scarlet fever by providing additional accommodation; and it is to be hoped that, with the present cold but seasonable weather, no further increase of fever will take place.

PUNISHMENT FOR CONTRAVENTION OF PUBLIC HEALTH ACT.

THE local authority at Dunblane caused a lodging-house keeper to be prosecuted for overcrowding his rooms, and for refusing admission to the inspector. Sheriff Grahame sentenced him to pay a fine of £10 16s. 1d., including costs, or to go to prison for thirty days.

COOMBE LECTURES ON PHYSIOLOGY.

THE first of the "Coombe Lectures on Physiology" (which was noticed in this JOURNAL some time ago on their foundation) was delivered in Stirling, on October 8th, by Dr. Andrew Wilson, the "Coombe Lecturer". The lecturer directed attention to the views of George Coombe on physiological subjects, and to the advance of knowledge and opinion which had led to the homologation of many of these views. The lecture was on the general structure of the human body, and was suitably illustrated; it was well attended, and listened to attentively.

HOSPITAL FOR INFECTIOUS DISEASES, PETERHEAD.

THE Board of Supervision have written to the Peterhead Police Commissioners concerning the erection of a fever hospital at Peterhead; at the same time, they sent a petition from a number of the inhabitants of Peterhead, praying the Board to compel the Peterhead local authority to proceed with the erection of a fever hospital in conformity with the resolution arrived at in October 1878. It was stated that there were several cases of typhoid fever, scarlet fever, diphtheria, and one case of small-pox in the burgh, and that there was no place in which such cases could be received and treated. The local authority was, therefore, necessitated to provide a temporary hospital, which will be opened at once for the reception of infectious cases. The Police Commissioners have remitted to a Committee to make inquiries, and to report, if they proposed proceeding with the construction of a permanent fever hospital.

LECTURES ON SANITARY QUESTIONS.

IN modern days, when questions of public health occupy so large a share of attention from the medical profession and sanitary reformers, it is not surprising that efforts should be made to educate those who, perhaps, most require such instruction, but who, from their vocation and rank in life, are unable to participate in the doings of medical and sanitary associations, and social science congresses. Such an effort is to be made in Edinburgh in the shape of a course of lectures on sanitary subjects, suited for the poorer classes of the population, to be delivered in the lecture-hall of the Watt Institution in the evening. Professor Fraser, Drs. Angus Macdonald, Russell, Foulis, Smart, and Stevenson Macadam have agreed to contribute to the course by lecturing.

EDINBURGH MATERNITY HOSPITAL.

MESSRS. R. Cathcart Bruce, M.B., and Henry Pullen, M.B., have been appointed House-Surgeons to the Edinburgh Maternity Hospital, in place of Messrs. James Limont, M.A., M.B., B.Sc., and L. Ralston Huxtable, whose terms of office expire this month. Dr. Halliday Croom retires by rotation, and is succeeded by Professor Simpson as Visiting Physician for the first three months of the winter session.

PREVALENCE OF FEVER IN GLASGOW.

THE report of Dr. J. B. Russell, medical officer of health, submitted to the Glasgow Town Council on Monday, showed that there had not been so severe an outbreak of enteric and scarlet fever in the city since the autumn of 1874. It was stated at the meeting that the Parliamentary Road Hospital is being prepared, but that it might not be required, as the hospital at Belvidere would soon be ready, and also because it was hoped that, with colder weather, the cases of fever would diminish.

IRELAND.

AN election for a medical officer to Tuam Workhouse will take place this week, and the following are expected to compete for the vacancy—viz., Messrs. P. J. Bodkin, James E. Turner, Flood, and Bookey.

CORK WORKHOUSE.

AT a late meeting of the Cork Board of Guardians, a communication was received from the Local Government Board, in reference to a complaint from one of the guardians, to the effect that the apothecary of the workhouse was doing the entire duty of one of the visiting physicians who was on leave, and of another who was sick. Mr. Parker, the guardian who complained, stated that there were, at the present time, 1,182 patients in hospital, and that one would suppose that the compounding of medicines for them would occupy the available time of the apothecary. With due allowance for his ordinary hours of recreation and exercise, to place upon him the temporary charge of from three to six hundred patients was an amount of duty which no man could perform with justice to the patients or to himself. He, therefore, suggested that, when the visiting physicians required leave of absence, they should provide a substitute, independent of the resident medical officer. The guardians approved of the suggestions contained in the letter of Mr. Parker; and, later on, when an application was received from Dr. Cremen, who was suffering from an injury, and requested that the house-surgeon should discharge his duty for some time longer, it was refused; and it was resolved that Dr. Magner should be confined to the discharge of the ordinary duties of his office.

HEALTH OF BELFAST.

FROM the report of Dr. Browne, Medical Superintendent Officer of Health, for the month of September, we learn that, during that period, 32 cases of zymotic diseases—viz., typhus fever 1, enteric fever 24, and scarlet fever 7—were returned by the medical officers of the several dispensary districts. Of these, one of typhus and sixteen of enteric fever were removed to hospital, the houses from which they were removed being in every instance carefully cleansed and fumigated, special care having been taken to disinfect or destroy the bedding and clothes used by the sick. The births registered in the five weeks ending September 25th amounted to 643, and the deaths to 476, or a natural increase in the population of 167. The deaths from zymotic diseases showed a rate of 6.3 out of the total mortality; the death-rate from diarrhœa being equal to 4.3 per 1,000. The death-rate in Belfast for the period referred to averaged 22.29 per 1,000 inhabitants on the corrected population. The returns from the medical officers of health are very satisfactory, as proving such a marked immunity from serious contagious diseases among the poorer classes, while the slight mortality from scarlet fever and fever is much below the average.

HEALTH OF PROVINCIAL TOWN DISTRICTS.

THE average annual death-rate per 1,000 represented by the deaths registered for the week ending October 2nd, ranged from 13.0 in Drogheda, to 45.1 in Sligo, 50.2 in Galway, and 71.3 in Waterford. The exceptionally high rate in this latter town is, however, partly explained to the registration last week of ten deaths which occurred in the workhouse during the preceding week. There were, however, 27 deaths registered in Waterford from diarrhœa, a number which included five cases of a dysenteric character.

DR. FAUSSETT OF CLONTARF.

THIS gentleman having recently resigned his position as medical officer of Clontarf and Howth No. 1 Dispensary District, it was last week moved by one of the guardians of his union, that he should receive two-thirds of his late salary, or somewhat above £106, as superannuation. An amendment was, however, moved, that the allowance be £50, on the ground that Dr. Faussett was tolerably well off, and did not require any pension at all; and we regret to state that it was carried by eleven votes against four. Dr. Faussett has been a medical officer of the union for the past forty-three years, and certainly deserved more consideration than he has received from his board of guardians. Notice has been given to rescind the resolution.

CORK FEVER HOSPITAL INQUIRY.

THE Committee of Management who have been recently engaged in inquiring into the management of the Fever Hospital, and into the causes of the alleged irregularities disclosed in the recent investigation, have completed their report, and a public meeting will be held this week to consider the entire subject. The resident medical officer, Dr. Adderley, has forwarded a communication to the General Committee to the effect that, taking into account the strong animus shown against him by the three members of the medical staff, he feels convinced that there is no course left open to him except to resign into their hands the office of resident medical officer. But, in so doing, he confidently appeals to the ample public approbation given to him up to the recent public investigation; and submits that he is still entitled to that approbation, even admitting the errors which the committee consider proved against him, on the testimony of those who are altogether interested in substantiating those charges.

THE MEDICAL CHARITIES ACT.

At a recent meeting of the Sligo Board of Guardians, reports were received from the Sligo and Collooney dispensary districts, to the effect that parties were obtaining medical attendance and medicine who were perfectly able to pay for the same; and that several tickets had been cancelled, so that the medical officers might prosecute and recover their fees. No excuse exists for this practice, as the dispensary medical officers of this union have arranged to take small fees, on receiving information from any member of the dispensary committee. Complaints having been made by Drs. Roe, Denny, and Malony, that a Dublin contractor was most unsatisfactory in the way he forwarded medicines, there being no invoices sent, and various irregularities having occurred in consequence, a resolution was adopted, requiring contractors to send invoices and a copy of their contract to each dispensary medical officer in the union.

REMOVAL OF CONTAGIOUS CASES TO HOSPITAL.

Dr. Townsend, at a meeting of the Queenstown Town Commissioners, held last week, complained that, although he had given an order, at half-past one o'clock, to have a woman in fever admitted to the Fever Hospital, that she had not been admitted until the following morning. The order was sent to the relieving officer; but the commissioners, as the urban sanitary authority, were responsible for the delay, it being their duty to provide a suitable vehicle for the purpose of removing patients. It was stated that this duty had always been performed by the board of guardians; but Dr. Townsend pointed out that the Act of Parliament laid down that the duty should be undertaken by them; and, after some discussion, it was resolved to inquire into the cause of the delay complained of.

PHARMACEUTICAL SOCIETY OF IRELAND.

The quinquennial period of office of the first holders of the examinerships in this Society having nearly expired, notice has been given that its Council will on the 3rd of November proximo proceed to elect four examiners in the following subjects; viz.: 1. Latin, English, and Arithmetic; 2. Materia Medica and Botany; 3. Pharmaceutical and General Chemistry; and 4. Practical Chemistry. The examiners then appointed will hold office until October 1881, but are eligible under the Pharmacy Act (Ireland) for re-election annually for four additional years, at the pleasure of the Council.

QUEEN'S UNIVERSITY IN IRELAND.

At a meeting of the Convocation of this University held on Thursday, the 7th instant, in St. Patrick's Hall, Dublin Castle, the following resolutions were unanimously adopted: "1. That the dissolution of the Queen's University, as contemplated by the University Education (Ireland) Act of 1879, would be a grievous infraction of the vested rights of the graduates of this University, would be injurious to the interests of academical education, and would be in violation of expectations which a series of statesmen and of Parliaments held out to students in Ireland. 2. That an earnest appeal ought to be made to the present Parliament and to the Government to reconsider the position of this University; and that it be an instruction to the Committee of Convocation to take steps, by deputation or otherwise, to give effect to this resolution. 3. That it be a further instruction to the Committee to seek the co-operation of the Graduates' Associations at the Queen's Colleges and in London in deciding who shall constitute any deputation sent forward." Andrew M. Porter, B.A., Q.C., and George Johnstone Stoney, M.A., F.R.S., Secretary of the University, were elected Representatives of Convocation on the Senate of the University.

London Hospital.—In the list of prizes and scholarships for this college, printed last week, the following were omitted: Obstetric Scholarship, Mr. Jennings, Mr. Grün; Dissection Prize, Mr. D. J. Rygate, Mr. T. E. Gordon. The entrance scholarships for this year have been awarded as follows: First Entrance Science, Mr. Frank Hichens; Second Entrance Science, Mr. E. Bryceson; First Buxton, Mr. S. Ashley; Second Buxton, Mr. H. G. Guinness.

GUY'S HOSPITAL.

The following is the text of the recent official communications between the governors and staff of Guy's Hospital.

To the President, Treasurer, and Governors of Guy's Hospital.

My Lords and Gentlemen,—We have carefully considered the report of the Governors' Committee, and the proposals which you have made to us in accordance with its recommendations. We beg to thank you for the further explanations which we have received from the treasurer through Dr. Habershon, and to express our appreciation of the trouble taken by the committee. We regret, however, that we are obliged to decline the proposition which you have made.

We entirely disapprove of the system of nursing which the treasurer introduced last November, without consultation with us, without our sanction, and even without our knowledge. We told the treasurer in December, and the Court of Governors in February last, that the new matron was unfitted for her post, and we asked for her removal. We then warned you of the evils which would ensue if our representations were disregarded. We need not say how lamentably these fears have been realised. Our patients have suffered, the discipline of our schoo has been impaired, the good order and harmony which ought to exist has been gravely disturbed, and the authority of the treasurer has been thrown away. Worst of all, the cherished reputation of Guy's Hospital is in jeopardy.

We should be most happy to aid the Taking-in Committee with our counsel; but, so long as the present matron be maintained in office, and so long as the treasurer continues the course of action which has led to our present disasters, we have no hope of real improvement, and we cannot consent to take part in a system which we and you alike know, by the unhappy experience of the last few months, to be in every respect mischievous.

We cannot but hope, in justice to the governors, that they will even now take the obvious and necessary steps to restore the prosperity and harmony of last October. If our unanimous and repeated protests be disregarded, we must publicly record the facts, which abundantly justify our action, and leave the responsibility of present and future evils upon the treasurer and governors. We shall continue to perform our duties to the utmost of our power, we shall still do our best to obviate the consequences of ill advised action, and we shall wait with confidence for better counsels to prevail.—We are, my lords and gentlemen, your obedient servants,

(Signed on behalf of the medical staff)
S. O. Habershon, Senior Physician to Guy's Hospital.
J. Cooper Forster, Senior Surgeon to Guy's Hospital.
Guy's Hospital, August 13th, 1880.

Extract from the Minutes of the Proceedings of a Special General Court held at Guy's Hospital, October 7th, 1880.

Resolved: 1. That it is essential to the wellbeing of the hospital that the medical staff and nursing department should work in harmony.

2. That the medical staff, having persisted in ignoring the matron appointed by the Court, and confirmed in her appointment after patient investigation of all complaints against her, while she is, on her part, willing to submit herself obediently to the orders of the several physicians and surgeons in all matters directly affecting the treatment of any patient, this Court finds that it is the attitude of the medical staff which impedes the harmonious working of the hospital.

3. That Dr. Habershon and Mr. Cooper Forster, having made themselves responsible for a circular, in which they refuse the means offered them by the Court for bringing all complaints before it, and impute to the governors that they knowingly persist in a mischievous system, are hereby required to resign the posts which they hold in the hospital. (Signed) Henry H. Gibbs,
President of Guy's Hospital.

Extract from the Minutes of a Full Meeting of the Medical and Surgical Staff held at Guy's Hospital on Saturday, October 9th, 1880.

Unanimously resolved: 1. To request permission to withdraw the communication to the governors dated August 13th, 1880, and to express regret that a sentence contained in it should be open to the construction which has been put upon it; and further to offer their assurance that it was not intended by the staff to impute that "they (the governors) knowingly persist in a mischievous system."

2. That, having heard through Dr. Habershon that representatives from the staff are intended to form an integral part of the subcommittee of governors, the staff are prepared to send representatives accordingly.

3. That, as Dr. Habershon and Mr. Cooper Forster signed the communication of August 13th on behalf of the staff, this meeting feels that the staff are collectively responsible for it.

(Signed) SAMUEL WILKS, *Chairman.*

We understand that, at a large meeting of the governors of Guy's Hospital on Thursday afternoon, to which the above resolutions were communicated, it was resolved by the governors, in view of the withdrawal by the staff of their communication of August 13th, that the governors would not insist upon the resignation of Dr. Habershon and Mr. Cooper Forster, who had signed that communication on behalf of the staff. A resolution was also passed, censuring Mr. Bryant for his correspondence with Mr. Lushington and Mr. Gibbs, recently published in the *Times*.

THE SOCIAL SCIENCE CONGRESS.

IN the Health Department of this Congress, recently held at Edinburgh, Dr. John Beddoe, F.R.S., the President, in his address, pointed out that much of the increased death-rate in towns was due to the constantly increasing substitution of machinery for handicraft, and the consequent employment of the artisan classes in circumstances less calculated for healthy living. Leaving the consideration of diseases which, like small-pox, are diminishing, he turned to such as are becoming more common and more formidable. Of most of these, the increase is supposed to be attributable to the greater complexity and struggling character of life, the increase of hurry and worry. They are chiefly affections of the heart and of the nervous system, and the change for the worse is notable especially in men—men in the autumn and summer of their lives. They were met together, not so much to inquire into the exact condition of the public health, as into the practicable methods of ameliorating it. Three ways of doing this were before them for consideration—viz., the best modes of organising and officering their sanitary forces, the best ways of applying their work to existing buildings, and the best ways of preserving or restoring the purity of our streams and water-supplies. He would not presume to enter on these questions; but, in regard to dwellings, though the multiplying of enactments was bad, and the multiplying of officials was worse, increasing expense and making openings for jobbery, he was disposed to favour a moderate extension of legislation, especially in the direction of prohibition of what is certainly known to be mischievous or unsafe. Thus it seemed to him monstrous that men should be allowed to build new houses within ordinary flood-mark, as had been done in hundreds of cases within his own knowledge of late years. There were other offences against the laws of a nature so clearly proved to be such that they were almost criminal, such as carrying a soil-pipe under a house, or placing a water-closet in the middle of it, neglecting to trap a main drain, and so forth. Surely the perpetrator of these things ought to be held responsible in purse or in person. When an overworked or muddleheaded signalman or pointsman committed a blunder which had fatal consequences, he was amenable to the criminal law; much more should the artisan be so who, by scamping his work, brought death into an unsuspecting household. Among the upper and middle classes, there was a great, though vague, horror of "bad drains"; but they had not usually the skill nor the power to protect themselves, the mason's and plumber's work, good or bad, being covered up or concealed. Few principles in building seem more valuable than this—that the whole work connected with the drainage of a house, sinks, soil-pipes, ejects, and so forth, should be so placed as to be readily inspected and investigated. Meanwhile, as the public were incompetent to protect themselves, the liberty of builders and plumbers to do mischief should be closely restricted. On the subject of the spread of infectious diseases, and the best means of preventing it, three very valuable, because thoroughly practical, papers were read: the first by Sir John Rose [illegible], M.D. (Paris), on "Location and Administration of Special and General Hospitals in which Contagious Diseases are received", which is published at page 634; second, by Dr. J. H. Littlejohn, Medical Officer of Health, Edinburgh, on "The Compulsory Registration of Infectious Diseases, as practised in Edinburgh"; the third by Mrs. Johnston (Hastings), on "Volunteer Work in the Prevention of the Spread of Infectious Diseases".

Mrs. JOHNSTON said, in her paper, that in Hastings they were able [illegible] the spread of infectious diseases. By a system of volunteer inspection and nursing, they induced the parents to keep the sick room clear of any person but the mother and the nurse. (This system is described in a paper, "How to Prevent the Spread of Fevers", by Mrs. Johnston, published in the *Sanitary Record* for June 15th, 1880.)

Dr. FARQUHARSON, M.P., was not without hopes that revaccination might be enforced by law; and that, where a parent refused to allow his child to be vaccinated, they might have power to take the child by force and have it vaccinated.

Dr. WALLACE (Greenock) gave an account of the manner in which the system of registration and isolation was worked in Greenock.

Dr. STEVENSON MACADAM moved that it be a recommendation to the Council of the Association that the attention of the Local Government Board be directed to the necessity of powers being obtained for the compulsory registration of infectious diseases, similar to those conferred on Edinburgh and Greenock under their local and municipal acts.

This motion was seconded and unanimously adopted.

HOSPITAL REGISTRATION.

A MEETING of registrars of the metropolitan hospitals, for the purpose of considering the question of uniformity of registration, was held at King's College Hospital on Wednesday, October 6th, Dr. SIDNEY COUPLAND in the chair.

After a few introductory remarks, the CHAIRMAN called on Mr. Howlett to open the discussion.

Mr. HOWLETT first proceeded to explain the causes which had led to the calling of the meeting, and then went on to point out the methods of registration at present in vogue in the different hospitals. These were as follows. On the medical side: 1. Cases recorded by the registrar (two hospitals); 2. Cases recorded by house-physicians, the index alone being kept by the registrar (four hospitals); 3. Cases taken by students subject to supervision by the registrar (five hospitals). On the surgical side: 1. Cases recorded by the registrar (six hospitals); 2. Cases taken by students subject to supervision of registrars (five hospitals). He then drew attention to the different points of merit or the faults in the different systems, laying special stress on the want of control over the students in those cases in which the students took a part in the case-taking, and also the difficulty of obtaining access to the notes in those instances in which the case-books or notes are not kept either in the ward or over the patient's bed. It was further shown that the pathological reports were kept in three different ways. 1. A report of the *post mortem* examination being added to the ward notes; 2. An abstract of the ward notes being attached to the pathologist's report; 3. The pathologist's report entered in a separate book, reference only being made to the ward notes by vol. —, page —. The issuing of annual reports was then briefly alluded to, and their direct bearing on the accuracy of the ward notes. It was suggested that the registrars should form themselves into an association, which should hold meetings two or three times a year, at which any alterations or improvements in the method of registration could be discussed, and attention of registrars drawn to the working out of any special point.

Dr. MAHOMED (Guy's) considered that it would be impossible to establish anything like a uniform method of registration; and of the different systems as now practised, he was inclined to think that one the best in which students were allowed to take part; but, at the same time, he was strongly in favour of registrars having complete control over the students.

Mr. SYMONDS (Guy's) was of opinion that it would be better to allow students only to keep up the daily records of the cases, and that the actual taking of the case in the first instance should be the duty of the registrar. He considered the suggestion of forming an association of registrars a good one, but feared that there would be a possibility of being overburdened in work.

Mr. MOULLIN (London), who stated he had considerable experience of the two methods of registration (1) in which the registrars recorded the cases, and (2) in which the students performed those duties, was strongly in favour of the first method; and objected as strongly to the registrars having any control over, or connection with, the students in the work of note-taking.

Mr. CRIPPS (St. Bartholomew's) also preferred the registrar recording all cases, and stated that, at St. Bartholomew's, the surgical registrars found no difficulty in recording two hundred cases each. He alluded to the faulty method of indexing diseases, and suggested that, if an association of registrars were formed, that this should be one of the first points to which attention be given.

Dr. DUNBAR (St. George's), Dr. GABBIT (London), and Dr. WILCOCKS (King's) also took part in the discussion, the general impression being that it would be impossible to establish a uniform system, but that an association of registrars might do a great deal in directing work or carrying out ideas.

Mr. HOWLETT then proposed: "That an association of past and present metropolitan and provincial hospital registrars be formed, which shall hold occasional meetings, for the general supervision of registration."

Mr. CRIPPS seconded the motion, which was unanimously agreed to.

The meeting then adjourned, with a vote of thanks to the chairman, Dr. Coupland.

The following hospitals were represented at the meeting, viz., St. Bartholomew's, St. George's, Guy's, King's College, London, Middlesex, University College, and Westminster.

The first meeting of the Association of Registrars will be held at King's College Hospital on Wednesday evening, November 3rd, at 8 P.M., for the election of officers and the establishing of uniformity of indices.

OPENING OF THE ARMY MEDICAL SCHOOL, NETLEY.

THE forty-first session of this school was opened on October 4th, in the presence of the military and medical staff of the Royal Victoria Hospital, and the professors of the school. Sixty-nine surgeons on probation, twenty-six candidates for Her Majesty's Indian Service, and five for the Royal Navy, a hundred in all, make up the largest number of candidates for commissions in the medical departments of the public service ever present in any session of the school since its foundation in 1860. The Opening Address was given by Surgeon-General LONGMORE, C.B.

The lecturer gave a brief history of the school from its opening at Fort Pitt, by the late Lord Herbert of Lea; to his memory he paid a graceful tribute, as well as to the other deceased members of the Royal Commission, who were Lord Herbert's able colleagues in the work of organising the school—notably Dr. Alexander, C.B., who was director-general of the medical department of the Army at the time, and who, although prematurely cut off before the work was done, had ably contributed to it; to Sir Ranald Martin, C.B., physician to the Council of India, who not only was a working member of the Royal Commission, but had a seat in the senate of the school, and took a warm interest in its work and progress to the day of his death; to Sir James Clark, physician to the Queen, who, in addition to his great services on the Royal Commission, was president of the commission appointed by the War Minister to look into the working of the school when it was moved from Fort Pitt to Netley; and to Sir James Gibson, C.B., who was Dr. Alexander's successor as director-general, and who honestly tried to promote what he believed to be the best interests of the school, and to raise the standard of professional education in the department over which he presided. Nor did the lecturer forget, in reviewing the past history of the school, to name Dr. Parkes, the devoted founder of the system of study of practical army hygiene at the school, whose world-wide reputation in his profession, no less than his perfect character and benevolent disposition gave him an influence for good that few can realize who were not intimately acquainted with him and his works. To the above roll of distinguished men, the lecturer added the name of the late Surgeon-Major Porter, who for five years was assistant professor of military surgery in the school. Mr. Longmore spoke in terms of well-merited praise of this lamented officer's soundness of judgment on surgical diagnosis, of his skill as an operator, and of his distinguished career in Afghanistan, where he died in the service of his country.

Mr. Longmore gave some interesting statistics of the work done by the school during the twenty years of its existence. Eight hundred and four commissioned officers in the British Army medical department, and 568 in the Indian medical department, have entered the service through the school portals. Candidates for commissions in the medical branch of the Royal Navy came for the first time to Netley in 1871 to attend the course of instruction, and since that date 216 naval candidates have passed through the school. Altogether 1,588 surgeons have entered the public services, giving an average of nearly forty each session. During most sessions, together with the candidates there have been some commissioned medical officers attending the school, amounting in all to 206. The lecturer was unable to say how many of the surgeons who obtained commissions in the three sections of the public service through the school still hold appointments in them, but with regard to the 804 who were commissioned for the medical service of the British Army there remain 583 in active employment at the present time, showing a loss by various casualties of 221—the 221 casualties consist of 115 lost by death, of 76 who for various reasons have left the service, and 30 retired on half-pay.

Mr. Longmore briefly touched on the change introduced by the new warrant, under which surgeons on probation come to Netley with their places fixed by the result of the London examination; "that is," added the lecturer, "in case nothing should occur to prevent you from receiving a commission at all". This rule, the lecturer pointedly said, "may affect some of you injuriously, and even to a certain extent defeat the object of your coming to the school, if you will allow it to do so". For surgeons on probation, the final examination is a qualifying one. The examiners can say "fit" or "unfit", but cannot alter the position of the most or least distinguished on the list. The professor, however, did not fail to point out that last term one gentleman failed to obtain a place for a commission on leaving Netley.

Leaving details of this kind, Mr. Longmore passed on to the subject of antiseptic surgery in military field-practice. We cannot attempt to give even an imperfect summary of the admirable observations on this subject made by the lecturer, which were listened to with the greatest attention. Nor is this necessary, as we hope to see the lecture published *in extenso;* and we are certain that, when given to the profession, it will exercise a powerful influence in introducing Listerism as an established part of field-practice in the British army.

The lecturer was loudly applauded at the conclusion of his discourse, and the company then adjourned to a sumptuous luncheon in the mess of the Medical Department of the Army.

THE OPENING OF THE SESSION AT THE MEDICAL SCHOOLS.

THE Session 1880-1 at the various English medical schools began during last week. The fashion of opening the session by formal introductory addresses would seem to be gradually giving place to one or other of the more convivial kinds of gathering. In fact, nearly half the metropolitan medical schools inaugurated the session without an introductory lecture; and two of the seven provincial schools followed their example. The doings at the several schools—the *conversazioni*, dinners, distribution of prizes, etc.—will be found fully described in the following paragraphs.

ST. BARTHOLOMEW'S HOSPITAL.

This school was opened on Friday, October 1st, with the usual dinner in the evening, which was presided over by Sir James Paget, and attended by an unusual number of old St. Bartholomew's men. In the afternoon, the interesting ceremony took place in the Great Hall of presenting a testimonial to Mr. Holden, in the form of his portrait, painted by Millais, and subscribed for by his past and present pupils and friends. It was presented, in an eloquent speech by Mr. Savory, to Mrs. Holden, who graciously gave it back to the hospital. The treasurer (Sir Sydney Waterlow), in a few appropriate words, accepted the gift in the name of the governors. It will be placed among the portraits of Sir James Paget and other distinguished men. The new dissecting-, and constructed to accommodate four hundred students, is now finished eum, work has begun with a plentiful supply of bodies. The new mus library, and physiological class-room were opened last October; and little now remains to complete the new series of school buildings, begun two years ago, but the anatomical theatre, which is intended to hold five hundred, and is fast approaching completion.

ST. GEORGE'S HOSPITAL.

This school was opened on October 1st, with an introductory lecture by Dr. Cavafy, and the old students, etc., dined at Willis's Rooms in the evening, Mr. Henry Lee being in the chair. Great improvements have been made in the school buildings, which now enable the students to dine at the hospital; an extra reading and newspaper room being also provided. The hospital has just been painted and repaired inside and out.

GUY'S HOSPITAL.

The opening of the session at Guy's Hospital was this year conducted in a particularly practical and undemonstrative way, by the commencement at once of the ordinary winter curriculum. There have been but few changes in the hospital since last year, the one noticeable exception being a capital new *post mortem* room. Guy's Hospital possesses now what is without doubt the best *post mortem* room in London. It contains a steep horseshoe-shaped theatre, on the model of an operating theatre, so that those standing four or five rows back can see perfectly well while the demonstrator in the centre examines the organs. There is a spacious area behind, with room for two or three additional tables. At the back of the theatre, on a level with its summit, is a platform, on which is placed a table with arrangements for microscopical work. The dissecting-room is already active, beginning with fifteen subjects prepared by Mr. Howse's glycerine-process. The number of new entries, all told, was on the 6th instant ninety-six.

KING'S COLLEGE.

The opening of the medical school took place on October 1st, at 4 P.M. The usual introductory lecture having been abolished, there was substituted for it a public distribution of prizes gained during the past winter and summer sessions. The large class-room was well filled with students, mostly new men; and there was also a fair sprinkling of

the lady-friends of the successful competitors. After the prizes had been given, Dr. George Johnson delivered a short address, an abstract of which is printed at page 583 of last week's JOURNAL. The biennial old students' dinner was held in the evening, at the Inns of Court Hotel, and was a great success. An exceptionally large number of old students practising in country districts was present, the meeting being ably presided over by Dr. Peter Eade of Norwich. During the recess, the hospital has been closed for thorough cleaning and repairs, and some important additions have been made. Among these may be mentioned a new out-patient room for ophthalmic patients, and a room for the use of the Students' Medical Society. There promises to be an exceptionally large number of students this year.

THE LONDON HOSPITAL.

The London Hospital Medical College opened its ninety-sixth session with a *conversazione*. The occasion was looked forward to with much interest by the past and present students of the hospital, as the new buildings, rendered necessary by the rapid increase in the number of students during the last few years, were for the first time thrown open. The Medical College was tastefully decorated for the occasion; the various museums, lecture-theatres, laboratories, and other rooms thrown open, and transformed for the occasion from the purposes to which they are designed into *salons* of art and *vertu*. The guests were received by Mr. W. J. Thompson, Chairman of the College Board; Mr. J. H. Buxton, Chairman of the House Committee; and other members of the College Board. At a quarter to nine, Dr. Andrew Clark delivered an address to the assembled guests and students, an abstract of which will be found at page 584 of last week's JOURNAL. At the close of the address, a vote of thanks to Dr. Clark was proposed by Mr. J. H. Buxton, and seconded by Mr. J. Hutchinson. A concert of vocal and instrumental music, conducted by Dr. Wolfenden, with Mr. Huntley as leader, followed. The music was exceedingly well rendered, and reflected great credit on Dr. Wolfenden and his associates, many of whom were students of the hospital. Dr. G. B. Aveling gave a lecture in the anatomical theatre, entitled "A Quarter of an Hour with two American Poets", which was very largely attended and highly appreciated. The Stereoscopic Company exhibited the phonograph; Messrs. How and Co., various interesting objects, and a kaleidoscope with polarised light; Messrs. Ihlee and Horne, luminous paint, etc.; and many others exhibited interesting microscopic objects and microscopes, drugs, chemicals, etc. One of the most attractive features of the evening was a most valuable display of china by Messrs. W. P. and G. Phillips, which alone would have made the evening successful. The additions which have been made to the buildings are the following: a second spacious reading-room for the use of students studying for examination; the chemical laboratories have been greatly extended, and a large and well-lighted room specially built and prepared for the study of practical physiology. The dissection-room has also been added to and improved, special attention having been paid to the ventilation of all the rooms.

ST. MARY'S HOSPITAL.

The introductory address was delivered in the afternoon of October 1st, by Mr. Walter Pye, in the anatomical theatre. In the evening, the students' annual dinner was held, under the presidency of Mr. James Lane, who must have felt, we imagine, sufficiently gratified with the reception which he received. His old friends and pupils put in an appearance from every part of the world, and from districts in England far removed from the Alma Mater; Mr. Woodman (Ramsgate), Dr. N. Moore (Coventry), and Surgeons-Major Myers, Jeffcoat, Wall, and Randall, and Dr. Giles (who has recently passed first into the Indian Medical Service), being amongst the number. In proposing the toast of the evening, Mr. Lane remarked that St. Mary's had this year come out in a new character, viz., that of a nursery for members of Parliament; two of her *alumni*, Dr. Farquharson and Mr. Daniel Grant, having been returned at the last general election. To Mr. Haynes Walton was entrusted the care of the toast of "The Chairman", and his well-chosen words procured a long-continued and enthusiastic applause. Politics being put aside, Mr. Daniel Grant, M.P. for Marylebone, met with a warm greeting at the hands of his fellow-students. He said that he would be ever on the watch for any chance of improving the public medical services. Several part songs by Messrs. Ernest Lane, Benson, F. Mivart, and Wills were given with great taste and effect; while Mr. Hayes, with his marvellous performance on a one-stringed African banjo, and Mr. Lewin, with his quaint and suggestive song, rendered the success of the evening most marked. Never before has there been such a reunion of St. Mary's men. The fact of the dinner being for the first time held in the boardroom of the hospital doubtless had the effect of increasing the number of diners; but, unless we are greatly mistaken, the real cause of the attraction of old students was the knowledge that their excellent friend James Lane was going to preside.

MIDDLESEX HOSPITAL.

The opening proceedings of the Middlesex Hospital consisted of a distribution of prizes gained during last session, by Mr. A. H. Ross, M.P., Chairman of the Weekly Board; a *conversazione;* and the annual dinner in the evening, when Dr. A. P. Stewart was in the chair. At the *conversazione*, among other objects of interest, the following were exhibited:—By Mr. Litchfield—Works of Art; Messrs. Graves and Co.—Paintings; Messrs. Doulton—Doulton Ware and Pottery; Messrs. Verity—Ventilating Apparatus; Messrs. Murray and Heath, Mr. Baker, Mr. Collins—Microscopes, Photographs, etc.; Mr. Hawksley, and Messrs. Krohne and Sesemann—Surgical and Scientific Instruments and Appliances.

ST. THOMAS'S HOSPITAL.

The medical school was opened in St. Thomas's Hospital with an introductory address by the Dean, Dr. W. M. Ord, on Friday, October 1st. This was delivered in the female operating theatre of the hospital, to a large and attentive audience. The floor of the theatre was arranged with chairs, and occupied by the treasurer, governors, and old friends of the hospital, amongst whom we noticed Mr. Simon, Mr. Le Gros Clark, Dr. Alfred Carpenter, and other distinguished members of the consulting staff; Aldermen McArthur, M.P., and Whetham, Mr. Ernest Hart, Mr. Bonham Carter, etc. The rows of seats, rising tier upon tier from the floor to the skylight of this fine and handsome theatre, were filled with old and present students of the hospital. The address, delivered in a partly extempore form, was listened to with great attention, and only occasionally interrupted by rounds of cheering. The substance of Dr. Ord's address was published last week in our columns. After the address, the various departments of the hospital and school were thrown open in working order for the inspection of visitors, and refreshments were provided in the library. The most remarkable features, in this inspection of the hospital and school, were the show of instruments, old and new, in the surgery; and Dr. Stone's splendid collection of physical instruments, which is probably unparalleled in any of the London Hospitals, and entirely provided at his own expense. The materia medica museum, which has been recently rearranged, was also well worth a visit. The old students' annual dinner was held at the hospital, in the governors' hall; Dr. Alfred Carpenter (Croydon) in the chair. About one hundred and ten sat down to dinner. We hear that the entry at St. Thomas's Hospital is larger than usual.

WESTMINSTER HOSPITAL.

The winter session was opened on October 1st. In the afternoon, an introductory address was delivered by Dr. Horatio Donkin, and was followed by the distribution of prizes by Dr. McGrath, Provost of Queen's College, Oxford, to the successful students during the preceding session. Dr. MacGrath brought the proceedings to a close by a short and suitable address to the students. In the evening, the annual dinner was held at the Langham Hotel, under the presidency of Dr. Octavius Sturges, when about thirty gentlemen met together. A few of the toasts appropriate to the occasion were drunk. Dissecting commenced next morning, and lectures on Monday. At present, it is impossible to state definitely the number of new entries; but already sufficient is known to justify the supposition that the number will not show a falling off from the material advance obtained last year.

BRISTOL MEDICAL SCHOOL.

There is no public ceremony at the opening of the session at the Bristol Medical School, which is now well established in the new buildings erected for it last year by University College, Bristol.

LEEDS MEDICAL SCHOOL.

The session commenced on the 1st instant, when Mr. C. J. Wright delivered the introductory address, an abstract of which was printed in the BRITISH MEDICAL JOURNAL of last week. At the conclusion of the address, prizes were awarded to the successful students of last session. In the evening, the annual dinner of the school took place, and was numerously attended. Mr. Wright occupied the chair, and was supported by Dr. Wyatt (Wakefield), Mr. Cullingworth (Manchester), Dr. J. Banks (Liverpool), and many others. The new entries, which were thirty-two up to the 6th instant, augur well for a prosperous year. Four subjects were handy for dissection before the session commenced, and there is a prospect of an abundant supply for the requirements of the session. In other respects, the school seems to be progressing favourably, no alterations of any importance having recently occurred in it.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The winter session of the Liverpool Royal Infirmary School of

Medicine was opened on October 2nd in the Small Concert Room, St. George's Hall, and the prizes were distributed to the successful students of the past session at the same time. The chair was taken by the Right Rev. Dr. Ryle, Lord Bishop of Liverpool, and many gentlemen were present. There was also in the hall a great number of ladies, this being the first occasion upon which ladies were invited to be present. Dr. Caton, the registrar, read the annual statement. The number of students had continued steadily to increase during both the last winter and summer terms, and the work done by the students, and their success at their university and collegiate examinations, had been very satisfactory. Among the changes made during the year was the establishment of a full six months' course of lectures on obstetrics, in place of the short three months' course usual in English medical schools; the establishment of a summer course of pathological histology; and the founding of a school of dental surgery in connection with the school, were also features of the changes. Dr. A. T. H. Waters next delivered the annual address, which was published in last week's JOURNAL. After which, the Right Rev. Chairman distributed the prizes gained last session by the students of the school. The annual dinner took place in the evening, at the Adelphi Hotel; the Bishop of Liverpool, Professor Annandale of Edinburgh, and other guests, and about a hundred members of the profession, were present.

OWENS COLLEGE, MANCHESTER.

The opening of the 1880-81 session at Owens College was marked by the delivery of a lecture by Professor T. N. Toller, on The Oldest English Poetry. The chemical theatre, in which the lecture was delivered, was fairly filled. The chair was taken by Mr. Alfred Neild, who was supported by the principal of the college (Dr. Greenwood) and a large number of professors. Dr. Greenwood read the report of the dean of the medical school (Professor A. Gamgee) for the session 1879-80. At the close of Mr. Toller's address, a vote of thanks to him was passed by the assembly, and the proceedings terminated. In the staff of lecturers there has been but one change during the past year; Mr. T. Jones, M.B., B.S., has succeeded to the lectureship on operative surgery, vacant by the death of Mr. Bradley. It is proposed to extend the medical school buildings. Additional accommodation is to be made for the teaching of pathology and materia medica. A laboratory for the pathological work, and a new museum for the materia medica collection, with a laboratory for the teaching of pharmaceutical operations, etc., are to be provided. The medical department of the college has called for this change owing to its rapid development. On the arts and science side, the numbers during the past year fell about 11 per cent. as compared with the previous year. On the medical side, the numbers increased by about 10 per cent. There has been a good entry this year. About fifty-one new students have already, on October 6th, entered.

QUEEN'S COLLEGE, BIRMINGHAM.

The session opened on Monday, the 4th instant, by an Introductory Address by Mr. T. H. Bartleet. There was a crowded audience of members of the profession, clergy, students—past and present—ladies, etc.; and the address, a very able and interesting one, touching largely on the relations of the profession to the public, was most warmly received, and elicited great applause. The entry of new students promises to be a good one, fully equal to, if not better than, that of any past year. Of late years, the entry has been steadily increasing. There has been no change during the past year in the professional staff. The college buildings during the recess have been completely put in order, and various improvements effected, bearing on the comfort and welfare of the students. At present, the opening of the new Science College (Sir Josiah Mason's) will have no effect on the medical school, the subjects of the medical curriculum not being included in its scheme. There is every prospect of a prosperous and useful career.

SHEFFIELD MEDICAL SCHOOL.

The medical school was opened on Friday, the 1st instant, by an introductory lecture delivered by Dr. Gwynne, which was full of interest, dealing as it did with medical education, the conjoint scheme, and other topics of great interest. After the lecture, the teachers of the school dined together; the President (Dr. de Bartolomé) being, in the chair. The Master Cutler (Mr. Chesterman), and the Chairman of the Board of the Public Hospital and Dispensary (the Rev. H. H. Wright), were present. An agitation for a new school is in progress, and success seems pretty well assured. The school has over three hundred beds, recognised for teaching purposes, a large asylum, close at hand, a new infirmary workhouse and a new fever hospital, which could all be utilised for instruction. The work of the session in the dissecting-room was started with one subject.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

The above college was opened on the 1st inst. by the President, Dr. Heath. Among those present were his Grace the Duke of Northumberland, the Mayor, Sheriff, and Under-sheriff of Newcastle, the Mayor of Gateshead, the Very Rev. the Dean of Durham, most of the professors of the university, the professors of the College of Physical Science, etc. After the opening remarks of the President, his Grace the Duke of Northumberland delivered an eloquent address, in which he dwelt, in pointed terms, upon the privileges and responsibilities of medical students and the profession generally. He then proceeded to present the scholarships and prizes to the successful students, in the presence of a large and brilliant assembly of ladies and gentlemen.

PRIZES IN THE MEDICAL SCHOOLS.

THE following lists of successful candidates for prizes in the Medical Schools during the session 1879-80, should be added to those published at page 604 in last week's BRITISH MEDICAL JOURNAL.

ANDERSON'S COLLEGE, GLASGOW.—*Winter Session*, 1879-80. Senior Anatomy Class: Honorary Certificates (arranged in order of Merit), Harry Lyon Smith, Archibald Burns Gemmel, Alexander Haden Guest, Henry Oakes, Henry Jones, Herbert William White, John Lyon, and Robert W. Lindsay; Honourable Mention, George B. Buttery, Edmund A. Cook, John Aitken, John S. Forrest, Robert Sinclair, Henry A. R. Mathieson, Archibald L. M'Phail, Alexander Cameron, and Donald M'Lachlan. Junior Anatomy Class, First Prize, £3, Oliver Sunderland; Second Prize, £2, Albert Johannes Engels; Honorary Certificates, Oliver Sunderland, Albert Johannes Engels, Thomas Benham Macfarlane, John George Anderson and Henry Holloway Ballachey (equal), Robert Donald, and David Phease Gage; Honourable Mention, John Cable, Hugh Griffith Hughes, William Melville, William F. Elliott, Richard Robert Jones, and Robert Jope. Practical Anatomy (Senior Division): First-Class Certificates of Honour (arranged alphabetically), Edmund A. Cook, George B. Buttery, George Frederick Edwards, John S. Forrest, Archibald Burns Gemmel, Alexander Haden Guest, Henry Jones, Robert W. Lindsay, John Lyon, Henry Oakes, Harry Lyon Smith, and Herbert William White; Second-Class Certificates of Honour, John Aitken, R. M. G. Binnie, Alexander Cameron, Samuel James Campbell, Daniel C. M'Kinlay, Donald M'Lachlan, Archibald L. M'Phail, H. A. R. Mathieson, Robert Rudland, Robert W. Sclater, Robert Sinclair, and Thomas Weis; Class Prosectors, George Frederick Edwards and Herbert William White. Junior Division: First-Class Certificates of Honour, John George Anderson, Henry Holloway Ballachey, John Cable, Albert Johannes Engels, David Phease Gage, Hugh Griffith Hughes, Richard Robert Jones, Harold Charles Ling, Thomas Benham Macfarlane, Edmund J. Nuttall, and Oliver Sunderland; Second-Class Certificates of Honour, Robert Donald, William F. Elliott, John C. Edmiston, Alexander Fraser, John Alexander Gordon, James Hogg, William Llewellyn Jones, Robert Jope, William Melville, David Porteous, and William Somerville; Class Prosectors, John Cable and Oliver Sunderland. Chemistry Class: Medical Students' Prize (£2 10s.), Harry Lyon Smith; First-Class Certificates of Honour, Harry Lyon Smith; Second-Class Certificates of Honour, David Phease Gage and Thomas Benham Macfarlane. Physiology Class; First Prize, Henry Oakes; Second Prize, Archibald Burns Gemmel; First Class Certificates of Honour (arranged in order of Merit), Henry Oakes, Archibald Burns Gemmel, George B. Buttery, Herbert Wm. White, Robert Sinclair, Henry Jones, and Harry Lyon Smith; Second-Class Certificates of Honour (alphabetically arranged), John Aitken, Alexander Cameron, John S. Forrest, Robert W. Lindsay, and John Lyon. Surgery Class: First-Class Certificates of Honour, Herbert William White, John M. Watson, Robert W. Lindsay, Edmund A. Cook, Henry Jones, James Houston, Archibald L. M'Phail, John Lyon, John S. Forrest, Robert Roberts; Special Certificate, George William Till; Second-Class Certificates of Honour, Alexander Cameron, John Aitken, Shapurji de Bhabha, Alexander M. Murdoch, Donald M'Lachlan, Colin M'Donald. Practice of Medicine Class, Prize, George William Till and Alexander Woodburn Heron (equal); First-Class Certificates of Honour, George William Till, Alexander Woodburn Heron, J. Barker, Shapurji de Bhabha, Edmund A. Cook, William Jeffrey, Colin M'Millan, John Huntly Peck, John M. Watson, Robert Wallace; Prize in Clinical Medicine, Edmund A. Cook, Joseph Thornley. Materia Medica Class, First-Class Certificates, George William Till, John M. Watson, Colin M'Millan, Robert Roberts, James Houston, Thomas W. Hughes; Distinguished by high marks, Alexander M. Murdoch, Samuel M'Ilwraith, Lewis Jack; For excellence in prescribing, Prize, George William Till; Hon. Certificate, Alfred E. Scanlan. Midwifery Class, *Summer Session:* First-Class Certificates of Honour (arranged alphabetically), Timothy C. Downes, Alexander M. Murdoch, Vincent Adolphe Passanha, John Huntly Peck, George William Till; Second-Class Certificates of Honour, William C. Leitch, John Lyon, Samuel M'Ilwraith. Medical Jurisprudence Class, First-Class Certificates of Honour (arranged in order of merit), John M'Donald, Thomas Anderson Dickson, Henry Jones; Second-Class Certificates of Honour (arranged in order of merit), Robert Roberts, John Sommer Forrest, David Forsyth. Medical Scholarships: £20 Scholarship, George William Till; Kerr Bursary, £12 (tenable for two years), Henry Oakes. Medical Students' Society (for the best essay read during the session), Joseph Thornley.

QUEEN'S COLLEGE, BIRMINGHAM.—Medicine: Medal and First Certificate, William E. Alldridge; Second Certificate, Henry Walter Smith. Surgery: Medal and First Certificate, Arthur T. Holdsworth; Second Certificate, Henry John Blakesley. Pathology: Medal and First Certificate, Richard A. Fitch; Second Certificate, Cecil Birt. Anatomy (Senior Division): Medal and First Certificate, Henry Shillito; Second Certificate, Thomas Edwards; (Junior Division): Medal and First Certificate, John D. Price; Second Certificate, Thomas Birt. Practical Anatomy (Senior Division): Medals and First Certificates, Septimus Sunderland and John Howard North (equal); Second Certificate, Henry Shillito; (Junior Division): Medal and First Certificate, Arthur William Scott; Second Certificate, Thomas Birt. Physiology: Medal and First Certificate, Septimus Sunderland; Second Certificate, Henry Shillito. Practical Physiology; Medal and First Certificate, Henry Shillito; Second Certificate, John F. Edwards. Chemistry: Medals and First Certificates, John Headley Neale and Charles John Evers (equal); Second

Certificate, Arthur William Scott. Botany: Medal and First Certificate, Charles John Evers; Second Certificate, John Headley Neale (highly commended). Materia Medica: Medals and First Certificates, Charles John Evers and John Headley Neale (equal); Second Certificates, Frank Parry and John D. Price (equal). Forensic Medicine (no award). Midwifery: Medal and First Certificate, Septimus Sunderland; Second Certificate, James Charles Bradshaw. Practical Chemistry: Medal and First Certificate, Charles John Evers; Second Certificate, John Headley Neale. Brackley Scholarship (1st): R. A. Fitch. Clinical Prizes: Senior Medicine, R. A. Fitch; Junior Medicine, no candidate; Senior Surgery, First Prize, Arthur T. Holdsworth, Second Prize, C. E. Strickland; Junior Surgery, Frank Leslie Phillips; Clinical Midwifery, Richard A. Fitch. Resident Hospital Appointments (gained by Competitive Examination): Resident Dresser, Queen's Hospital, Richard A. Fitch; Resident Medical Assistant, General Hospital, T. Lambert Hall; Resident Surgical Assistant, General Hospital, E. Gidson; Resident Dressers, General Hospital, W. R. Awdry and W. C. Humphreys; Resident Dressers, Queen's Hospital, J. C. Grinling and Andrew Fuller; Resident Medical Assistant, General Hospital, H. W. Smith; Resident Surgical Assistant, General Hospital, Walter R. Awdry; Resident Dressers, General Hospital, Henry L. Swinson and Cecil Birt; Resident Dresser, Queen's Hospital, Henry John Blakesley.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.

THE next meeting will be held at the Red Lion Hotel, Dorking, on Thursday, October 21st, 1880, at 3.30 P.M.; Mr. C. W. CHALDECOTT in the Chair. Dinner, price 6s., exclusive of wine, at 6 P.M.

The following papers have been promised. Dr. Bristowe, a paper; Dr. Ord, a paper; A. A. Napper, Esq., a case of severe Dyspnœa from foreign body in the lungs.

A. ARTHUR NAPPER, *Hon. Sec.*

SHROPSHIRE AND MID-WALES BRANCH.

THE annual meeting of the above Branch will be held at the Salop Infirmary, on Tuesday, October 19th, at 2.30 P.M. (and not on the 12th, as previously stated).

The annual dinner will take place at the Lion Hotel, at five o'clock precisely.

Members intending to read papers, or bring forward subjects for discussion, are requested to communicate with

HENRY NELSON EDWARDS, *Honorary Secretary.*

SOUTHERN BRANCH: DORSET DISTRICT.

THE next meeting will be held at Sherborne, on Wednesday, October 20th, 1880. The business meeting will be held at the Yeatman Hospital, at 2.30 P.M.

Agenda.—Election of Officers for 1881; Election of New Members; Discussion—Difficult Parturition and its Treatment; Cases of Compound Fracture and Wounds of Joints treated with Glycerine and Carbolic Acid, by Dr. Griffin; Specimen by Mr. Nunn.

After the business meeting, opportunity will be afforded of seeing the Abbey and the King's School. Dinner at the Digby Hotel, at 5.30 P.M.; charge 5s. each, exclusive of wine. Members intending to be present, and who have not already notified the same to Dr. Lush, are requested to send notice thereof to Dr. Williams, Sherborne, on or before Monday, October 18th.

WM. VAWDRY LUSH, M.D., Weymouth } *Honorary Secretaries.*
C. H. WATTS PARKINSON, Wimborne }

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 21st, at a quarter-past five o'clock. The following question has been settled by the Council as the one on which members should be invited to express their opinion at the said meeting after dinner: "What, in your opinion, is the best method to be adopted by the Profession, the Public, and the Sanitary Authorities, in order to check the spread of Infectious Diseases?"

Members having any communication to bring before the meeting are requested to send notice of its title to the Honorary Secretary; they will further oblige by informing him, before the day of meeting, if they purpose being at the dinner.

Dinner, 5s. a head, exclusive of wine.

W. M. [illegible], M.D., *Honorary Secretary.*

YORKSHIRE BRANCH.

THE autumnal meeting of the Yorkshire Branch will be held at the Grand Hotel, Scarborough, on Wednesday, October 27th, at 3.15 P.M. Subject for discussion: "Paracentesis in Pleurisy". Members wishing to read communications on the subject are requested to communicate at once with

ARTHUR JACKSON, *Hon. Sec.*

STAFFORDSHIRE BRANCH.

THE seventh annual meeting of this Branch will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, October 28th, at 4 P.M.

An address will be delivered by the President, Mr. W. H. FOLKER.

Dinner at half-past five. Tickets (without wine), 7s. 6d. each.

VINCENT JACKSON, Wolverhampton } *Honorary Secretaries.*
J. G. C. WEST, Stoke-upon-Trent }

Wolverhampton, October 1st, 1880.

THAMES VALLEY BRANCH.

THE next meeting of this Branch will be held at the Griffin Hotel, Kingston, on Thursday, October 21st, at 6 P.M.

Dr. Atkinson will read a paper.

The dinner will take place after the meeting, at 7 P.M.

EDWARD L. FENN, M.D., *Honorary Secretary.*

Richmond, Surrey, October 6th, 1880.

LANCASHIRE AND CHESHIRE BRANCH.

A MEETING of this Branch will be held at St. Helens on Thursday, October 28th, at 2.30 P.M. Dinner at 5.30 P.M., at the Fleece Hotel.

A. DAVIDSON, M.D., *Hon. Sec.*

BORDER COUNTIES BRANCH.

THE autumnal meeting of this Branch will be held at the Infirmary, Dumfries, on Friday, October 29th, at 1 P.M.

Dinner will be provided at the King's Arms Hotel, at 4 P.M.; charge, six shillings (exclusive of wine).

Gentlemen who intend to read papers are requested to communicate with one of the Honorary Secretaries.

J. SMITH, M.D., Dumfries, } *Hon. Secs.*
J. K. BURT, M.B., Kendal, }

SPECIAL CORRESPONDENCE.

OTOLOGICAL CONGRESS OF MILAN.

[FROM A CORRESPONDENT.]

THE Otological Congress held here has been a success; although, of course, much limited in numbers, it attracted many distinguished specialists of various countries. The congress met under the presidency of Professor Sapolini of Milan; Moos, Politzer, Loewenberg, Delstanche, Morpurgo, were among the vice-presidents. England was unrepresented. The most interesting pieces shown were those of Politzer, in connection with his memoir on the anatomic and pathological examination of the ear, and the labyrinth in particular. M. Politzer describes an acute inflammation of the labyrinth (labyrinthritis) independent of meningitis, and cites in support of this theory a number of cases. Both his preparations, and those of M. Vollipin, illustrating the osseous parts of the internal ear, and the methods of rapidly operating upon the labyrinth and of making coarse and microscopic preparations, attracted great attention.

A discussion on the antiseptic treatment of inflammatory affections of the auditory canal, similar to that opened at Cambridge by Mr. Cassells, was opened here by M. Loewenberg, who has always found microbia, for example, in the discharge from furnuculi of the ear, and who is Pasteurian and Listerian in his views on the genesis and treatment of the affection. Like Mr. Cassells he has employed, with good effect, the boracic acid or carbolic acid treatment. Nearly all the Italian aurists present concurred in this view, and had employed simple substances in powder or solution. Novaro of Turin favoured weak chloride of zinc lotions. M. Moos endeavoured to raise the same question concerning the deafness or defects of hearing of railway officials, as has been advantageously raised concerning their colour-blindness and defects of vision. He affirmed, after statistical examination of a great number of stokers and railway engineers, of which he gave numerical details, that these *employés* are more subject than others to certain affections of the ear, and to such an extent that the safety of travellers is endangered by it. He concluded his paper by a recommendation that all such railway servants should be examined as to their hearing prior to engagement, and subsequently periodically examined. This resolution was formally adopted by the congress in the form of an expression of a wish addressed to the various Governments.

Boracic acid again cropped up as a remedy in M. Ménière's paper on the treatment of chronic discharge from the ear, which very warmly recommended its employment as the remedy. Professor Politzer read

the results of a study of paracousia by the aid of a powerful diapason. Paracousia is the name given to that form of deafness in which the patient hears more distinctly in a noise as when sitting in a railway train, or in any other sonorous medium which powerfully impresses the hearing. Politzer by placing this strong diapason on the cranium of his patients, finds that they hear much better, no doubt because the vibrations of the diapason succeed under these circumstances in conquering the chain of ossicles, which is always very considerable in cases of paracousia.

A good many other communications were read, of much clinical interest, but none of them involving any feature of novelty. The sittings were, however, fully occupied, and the meeting was well satisfied. The next congress will be held in 1884 at Bâle. English otology is at present at a very low ebb in foreign estimation, and was practically unrepresented at this congress.

CORRESPONDENCE.

WOOLSORTERS' DISEASE.

SIR,—As a member of the Commission on Woolsorters' Disease, I crave permission, in common fairness, to make a few observations on your leader in the JOURNAL of September 25th. And, in the first place, I think, sir, the opening sentence contained in that article requires very considerable qualification. It is therein asserted that four *distinct* instances of woolsorters' disease have come *under the observation of the Commission*. Were this statement allowed to pass unchallenged, it might be supposed that most of the members of that body had seen the cases, and had arrived at the conclusion that there was no doubt about the diagnosis. Such, however, is not the case. Without entering unnecessarily into minute details, I maintain, as a broad fact, that the Commission, as such, with one or two exceptions, has had nothing whatever to do with these cases, altogether owing to lack of information, which, in some instances, might have been readily supplied.

Many gentlemen, like myself, were anxious to see the cases; but we never had the opportunity, either before or after death—consequently we, and I believe I may say the majority of the members of the Commission, cannot possibly endorse the tone of your article.

It is thus manifestly unfair, not to say incorrect, to state that these instances have come *under the observation of the Commission*. I venture to affirm, without fear of contradiction, that the prevalent feeling here is that your article is altogether premature, and has a tendency to choke or frustrate what might otherwise become a very valuable inquiry. In the second place, permit me to offer one or two remarks on the cases given as illustrations. They are termed *distinct* instances of so-called woolsorters' disease. As it seems to me, any other epithet would be more appropriate than "distinct". Let your readers judge for themselves.

As regards the first case, "there was valvular disease of the heart—a cause in itself sufficient to account for death"; and the cause was so certified by Mr. Denby, a very able Bradford practitioner. Some *forty hours after death*, another medical man happened to go into the room where the corpse lay, and noticed considerable discoloration of the body. From the appearance of the body, he suspects woolsorters' disease, and, having found "bacilli" in the blood, and serum, concludes that this is the case. Such evidence appears to me at any rate insufficient to establish the diagnosis. I may here mention that, within the last few days, I have seen "swarms of bacilli" in the blood and serum of a patient of my own who died of heart-disease at the Infirmary. These were exhibited to me by my friend Mr. Tacey, who was kind enough to examine the fluids for me. It is only right to mention here that he is a gentleman who has devoted upwards of twenty years to microscopic work, more especially in investigating the lower forms of animal and vegetable life. Well, this body was highly discoloured forty hours after death, during warm muggy weather, and in a very close and crowded room. Taking into consideration this combination of circumstances, together with the extensive heart-mischief and the suddenness of death—both of which facts have, at any rate, a certain amount of significance—surely there was no great cause for surprise at the discoloration of the body.

In the second case, a youth (on the 4th instant) was playing at cricket, felt ill, and went home. On the 6th, he became feverish, and complained of headache and pain in his right side. There was then dulness at the base of the right lung, and crepitation limited to inspiration. On the 8th, diarrhœa set in, which continued till his death on the 13th. The *post mortem* examination revealed recent pleuritic adhesions, a small quantity of fluid (about half a pint) in the pleura, and extensive pneumonic disintegration, with commencing suppuration in the right lung. There were also coagula in the heart.

Putting out of the question, for a moment, woolsorters' disease, there could not have been the slightest doubt as to the diagnosis or nature of these cases. But woolsorters' disease is suspected; the blood and serum are examined; and, in both cases, "swarms of bacilli" discovered. So they were in my case of heart-disease. "The presence of the bacillus", you maintain, "leaves no room for doubt." This is just one of the points upon which the Commission is engaged at the present time. There seems to be ample room for doubt on this question, inasmuch as the bacillus anthracis and the ordinary bacillus of putrefaction are very similar—the great difference (according to Bollinger) being the motile character of the putrefactive bacillus and the non-motile character of the anthrax bacillus. Now, we are told (because this difference will not suit all cases) that the non-motile bacillus may, under certain circumstances of cultivation or otherwise, become motile; and that, under the same circumstances, the motile may become non-motile. Whatever other differences may exist, this of motility is apparently valueless. If I have been correct in my observations, and I believe what I have stated to be the truth, it is clear that the *nature* of woolsorters' disease is by no means satisfactorily settled, as would appear from your article. That such a disease exists, I firmly believe; but evidence is still wanting to prove that the two illustrations before mentioned were examples of it.

The Commission is waiting for opportunities which, as yet, have not been afforded it, of examining so-called cases of woolsorters' disease, both before and after death.

The importance of the subject, and my position as a member of the Commission which you have mentioned in so prominent a manner, are, I trust, sufficient reasons for troubling you with this communication. Apologising for the length of this epistle, I am, sir, your obedient servant,

EDWARD T. TIBBETS, M.D.Lond.,
Physician to the Bradford Infirmary.

Bradford, September 28th, 1880.

THE TEACHING OF HUMAN ANATOMY AND PHYSIOLOGY AT OXFORD.

SIR,—In your recent article upon "The Lost Medical School", I find the statement that "neither anatomy nor physiology as required for a medical curriculum is taught by any professor or lecturer at Oxford at this date"; and in a previous article upon the same subject some time back, I found the still stronger statement that "the Linacre Professor abhors the teaching of human anatomy". Having been initiated into human anatomy and physiology while at Oxford by the Linacre professor himself, I should be much obliged if, in justice to him, you will allow me to qualify the above statements by a short account of my own experience of the Oxford teaching of anatomy and physiology. I took my degree in December 1877, and having applied to Professor Rolleston, I was soon set to work at dissection in one of the dissecting-rooms at the Museum. Three other graduates were beginning human anatomy with a view to medicine at the same time with myself. We were given a good subject well injected, and the dissecting-room in which we worked was well provided with bones, as well as diagrams and books of reference.

In the morning, at about 10 A.M., almost without fail, the Linacre Professor came in to start us with our work, and two or three times during the day he used to look in to give us any help we might want. Moreover, so far as I could see, the Professor did not give himself all this extra trouble merely as one who, against his own inclination, felt bound, in consequence of the lost school agitation, to teach some human anatomy. On the contrary, his frequent visits, and the obvious zest with which he gave his demonstrations, were quite irreconcilable with the supposition that he abhorred teaching human anatomy.

I also attended several of the Professor's lectures, and can testify that, although he intended them primarily for the men who were working at general biology, and consequently made them more general than the lectures of a medical course would be, yet they were not unprofitable to a commencing medical student, and no opportunity was lost of directing attention to arguments from pathology, or to the medical bearings of the subject of the lecture. In the way of informal classes, too, and in conversation, I always found the Linacre Professor able and willing to give any sort of help which a medical student beginning human anatomy and physiology under his direction might want. Such, then, was my experience of the Linacre Professor as a teacher of human anatomy and physiology, and your readers will not fail to notice that it was not that which they would have been led to expect by the articles in the BRITISH MEDICAL JOURNAL. But further, even if there were no possibility of human anatomy and dissection at Oxford, it would

still be incorrect to say that no teaching such as is required for a medical curriculum is given; for, as a matter of fact, much of the work done in the Biology School is just such as any medical student has to do. Indeed, a man who has been working for honours in biology, leaves Oxford after having done more work in practical microscopy than most medical students do, and after having read as much of minute anatomy, development, and physiology, as he is likely to require for most of the examinations to which medical students are subjected.—I remain, yours, etc., R. J. R., Guy's Hospital.

*** It would be difficult to afford a more complete verification of our statements than that which is here offered by way of qualifying them by this friendly apologist. If this represents the classes of descriptive human anatomy and course of lectures on human physiology, the systematic dissection and demonstration, which form the elementary provisions of teaching those subjects, it is hard to see how such an interpretation of the duty of carrying out Lee's intentions can have a shadow of justification.

OBITUARY.

THE HONOURABLE JOHN IMRAY, M.D.

WE much regret to have to record the death of this distinguished West India practitioner, which occurred in the island of Dominica, on Sunday, August 22nd last, of dysentery.

Dr. Imray, who was closely connected with Dr. Porteus—one of the most celebrated Bishops of London—was born in the north of Scotland on January 11th, 1811; and he received his medical education in Edinburgh, where, in 1831, he obtained the diploma of the College of Surgeons. He soon afterwards settled in Dominica, in which island his elder brother, Dr. Keith Imray, who was well known in the profession in those days, was then practising. By skill and hard work, Dr. Imray soon became the leading physician in Dominica; and he retained this honourable position until a few years ago, when he retired from the active exercise of his profession.

In 1838, he published, in the *Edinburgh Medical Journal*, an article on Epidemic Yellow Fever; and, three years afterwards, he contributed to the same periodical a long paper entitled, On the Nature, Causes, and Treatment of Yellow Fever. These articles deservedly attracted considerable attention, and his clear and accurate description of a disease which was then but little understood caused him to be considered an authority on the subject. He was, in fact, the first English practitioner who drew attention to certain pathological characteristics of this fatal disease; and the learned Dr. Copland frequently quoted him in the article on yellow fever, in the celebrated *Dictionary of Medicine*. It may here be mentioned, as an important fact in the present day, that Dr. Imray's views in regard to the non-contagiousness of yellow fever underwent an entire change, for of late years he was impressed with the idea that the disease occasionally, if not always, manifested contagious properties.

In 1848, he published, in the *Edinburgh Medical Journal*, an able article On the Characters of Endemic Fever in the Island of Dominica; and, subsequently, he published several articles in the pages of this JOURNAL, his last being On the Treatment of Tetanus by Opium and Hydrate of Chloral in Combination. In addition to writing these valuable papers, he was the author of the Memoir on Yaws, published, in 1873, in Dr. Gavin Milroy's *Report on Leprosy and Yaws in the West Indies*. This "memoir", which gives evidence of much learning and deep reading, gained for Dr. Imray the distinction of being held to be the first living authority on Frambæsia.

When it is remembered that a medical man, practising in a small island in the tropics, was able to make for himself a reputation as an authority on several diseases, he must be considered to be a man of more than ordinary intellect; but when, in addition to this, such a man is able to carve out for himself a name as an able botanist, to leave his mark as a successful politician, and to be famed throughout the tropical world as the most enterprising and successful agriculturalist in the West Indies, he must be held to be remarkable; and, indeed, Dr. Imray was a remarkable man, and one that the profession has need to be proud of.

For nearly half a century, he was the friend and correspondent of Sir William Hooker, and his son, the present director of the Royal Gardens at Kew; and many plants have been named in his honour by Lindley, by the Hookers—father and son—and by other botanists. He was also a well known and able contributor to the pages of the *Gardener's Chronicle*, the *Technologist*, the *Journal of Applied Science*, and *Nature*.

At the time of the International Exhibition of 1862, his efforts as chairman of the Dominica Committee caused the island's show to eclipse far richer colonies; and to him the jurors awarded two medals, one for special services, and the other for his valuable collection of the native woods.

His introduction into Dominica of the cultivation of limes and of the Liberian coffee, whilst enriching himself, helped to bring forward once more the ancient prosperity of the island; and it is already proposed by an admiring public to erect some permanent memorial to one who has proved such a benefactor to the colony.

In the politics of the country, Dr. Imray, until lately, took a prominent part; and, as the leading member of the Executive Council, he was the trusted and honoured adviser of all the governors. As chairman of the Board of Health, he on several occasions prevented the introduction of contagious diseases from the neighbouring colonies; and the establishment of the Rosean Infirmary, of which institution he was the medical officer for over thirty years, was mainly due to his exertions and monetary aid.

In practice, as well as in public life, he was the type of the English gentleman. Upright and honourable in all his dealings, his word once passed was his bond; and never, from the time of his landing in the island to the day of his death, was he known to have committed a wrong act. Always of a religious disposition, he was a prominent member of the Anglican Church; and, at its disestablishment in the island, he subscribed very largely for its maintenance.

His private charities were innumerable, though for the most part secret; and, as a necessary consequence, his death is bewailed by the poor throughout the length and breadth of the island.

To his immediate friends—he was unmarried, and without relations in Dominica—his death came as a terrible blow; for his kindly disposition, his flowing wit, and his highly cultivated mind, had raised up in those who had the privilege of his friendship, an affection, the depth of which was unknown until the good old doctor was no more.

SIR WILLIAM LINTON, SKAIRFIELD.

SIR WILLIAM LINTON, of Skairfield, near Lockerbie, Dumfriesshire, whose death occurred on Saturday at his residence in Scotland, after a very short illness, from an attack of apoplexy, was the eldest son of the late Mr. Jabez Linton, of Hardrigg Lodge, Dumfriesshire, by his marriage with Jane, daughter of Mr. William Crocket, of Grahamshill, in the same county. He was born in the year 1801, at Kirkpatrick Fleming, in Dumfriesshire, and was educated at Edinburgh University. During the summer vacations of his attendance at the university, he served for four successive years as surgeon in a whale-ship in the Arctic regions. He entered the Army Medical Department in 1826, and took his M.D. degree at Glasgow in 1834. He became staff-surgeon of the first class in 1848. He served in Canada, the Mediterranean, the West Indies, Turkey, the Crimea, and India. He was Deputy Inspector-General of the First Division of the Army in the Crimea, was present in every action until the fall of Sebastopol, and had the care of the great hospital in Scutari in 1855 till the British forces came home. He was appointed Inspector-General of Hospitals in 1857, and Inspector-General of Hospitals in India in the following year. He was appointed an honorary physician to Her Majesty in 1859, and retired from active service in 1863. He was nominated a Companion of the Order of the Bath in 1856, and was advanced to the dignity of Knight Commander of that Order in 1865.

MR. F. SUTTON, Public Vaccinator, Willingham District, Gainsborough Union, has been awarded £8 15s. for efficient vaccination in his district, for the third time in succession.

ST. ASAPH RURAL.—While the number of births in this district continues progressively to increase, the number of deaths remained in 1879 about the same as in previous years. There was an increase in the infant mortality; but the causes of this are stated by Dr. Lloyd Roberts to be found chiefly in the general diseases, though there is a marked increase in the deaths from zymotic diseases among infants. The diseases of this class that had the greatest and most fatal prevalence were scarlatina, whooping-cough, and diphtheria, which caused in all 22, 10, and 4 deaths respectively. St. Asaph, where much sanitary work was done during the year, was subject to zymotic diseases during the earlier months, there being a series of cases of scarlet fever, one case of typhus fever, and a few cases of an unnamed "continued" fever. The general birth- and death-rates were 28.5 and 22.6 per 1,000 respectively.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 7th, 1880.

Atterbury, Walter, Acacia Villa, Oppidans Road.
Davis, Edward, 1, Lustre Square.
Jay, Melville Richard Hopkinson, Adelaide, South Australia.
Nance, Henry Chester, Launceston, Staff Hospital.

The following gentlemen also on the same day passed their Primary Professional Examination.

Green, Henry, St. Mary's Hospital.
Powell, Simpson, King's College Hospital.
Shelley, Robert Williamson, Charing Cross Hospital.
Whitcombe, Charles Henry, King's College.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

PALLINROBE UNION—Medical Officer for Hollymount Dispensary District. Salary, £100 per annum, with £5 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 18th inst.

BOLTON UNION—Medical Officer to the Sharples District.

BORRISOKANE UNION—Medical Officer for Borrisokane Dispensary District—Salary, £100 per annum, with £10 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 18th instant.

BRIGHTON AND HOVE LYING-IN INSTITUTION—Honorary Surgeon. Applications, with testimonials, on or before November 5th.

CARLOW DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent. Candidates must have a double qualification, and be registered. Applications to the Under-Secretary, Dublin Castle, to the 18th inst.

*CHARING CROSS HOSPITAL—Assistant-Physician—Applications, with testimonials, on or before October 30th.

*CHARING CROSS HOSPITAL—Assistant Surgeon. Applications, with testimonials, on or before October 30th.

CHELTENHAM GENERAL HOSPITAL AND DISPENSARY—Resident Surgeon. Salary, £125 per annum, with furnished house, gas, coals, etc. Applications, with testimonials, not later than October 15th.

COLCHESTER UNION—Medical Officer to the Third District.

ELLESMERE UNION—Medical Officer to the Hordley and Dudleston District.

*GREAT NORTHERN HOSPITAL—Physician for Out-Patients. Applications, with testimonials, on or before October 30th.

*LONDON FEVER HOSPITAL—Assistant to the Resident Medical Officer. Salary, £[illegible] per annum, with apartments, etc. Applications, with testimonials, to the Secretary not later than October 20th.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY—Resident Medical Officer. Salary, £130 per annum, with furnished apartments, etc. Applications, with testimonials, to the Secretary on or before October 15th.

*ROYAL FREE HOSPITAL—Assistant Physician. Applications, with testimonials, to the Secretary on or before October 27th.

*ROYAL FREE HOSPITAL—Senior Resident Medical Officer. Salary, £104, with board and residence. Applications, with testimonials, on or before October 20th.

*ROYAL SOUTH HANTS INFIRMARY, Southampton.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before October [illegible].

*ST. THOMAS'S HOSPITAL—Resident Medical Officer. Applications, with testimonials, on or before October 29th.

ST. MARYLEBONE PARISH—Medical Officer of Health and Public Analyst. Salary, £400 per annum. Applications, with testimonials, on or before October 28th.

SLIGO UNION—Medical Officer for Carney (No. 2) Dispensary District. Salary, £120 per annum, with £20 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 20th inst.

THINGOE UNION—Medical Officer to the First District.

*WESTMINSTER GENERAL DISPENSARY—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, gas, and attendance. Applications, with testimonials, on or before October 23rd.

WHITEHAVEN UNION.—Medical Officer for Whitehaven District. Salary, £58 per annum. Applications, with testimonials, not later than October 20th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DAPTON, Travers E., A.B., M.B., appointed House-Surgeon to the West Kent General Hospital, vice F. W. H. Davis Harris, resigned.

BIRCH, R. C., M.R.C.S., L.R.C.P.Lond., appointed Visiting and Medical Officer to the Manchester Dispensary for Sick Children, *vice* J. A. Mackenzie, M.B., resigned.

BISS, Cecil V., M.B., appointed House-Physician to the Western General Dispensary, *vice* A. T. T. Wise, M.D., resigned.

*BLUMER, Percy, L.R.C.P.Ed., L.R.C.S.Ed., appointed Medical Officer to the West District of the Bingham Union, Notts, *vice* Arthur Graham, L.R.C.P.Ed., resigned.

BOYD, Stanley, M.B., B.S., Univ. Lond., M.R.C.S.Eng., appointed Surgical Registrar to University College, London, *vice* Silcock, resigned.

HOWLETT, Edmund Henry, F.R.C.S., appointed Resident Surgical Officer to the Manchester Royal Infirmary, *vice* G. A. Wright, F.R.C.S., resigned.

HUNT, Joseph, M.R.C.S., appointed Acting Surgeon to the Children's Hospital Birmingham, *vice* G. H. Evans, M.B., resigned.

O'CONNOR, T. Browne, appointed Medical Officer to the Army and Navy Club, Pall Mall, *vice* W. Miller, M.D., resigned.

RUTHERFORD, R. L., Senior Assistant Medical Officer, Durham County Asylum, has been appointed Assistant Medical Officer to the Devon County Asylum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

STIVEN—THOMSON.—On the 9th instant, at All Hallows, Allerton, Liverpool, by the Rev. F. W. Farrar, D.D., Canon of Westminster, assisted by the Rev. N. F. Y. Kemble, Vicar, Edward W. Flemyng Stiven, M.D., of Sunderland, to Annie, eldest daughter of Walter Thomson, Esq.

DR. T. E. MACLEAN will this winter practise at Cairo instead of Luxa.

GUY'S HOSPITAL MEDICAL SCHOOL.—The open entrance scholarship of 125 guineas in science has been awarded to Mr. H. W. Pigeon, and that of 125 guineas in arts to Mr. R. Moody Ward; Mr. G. E. C. Anderson *proxime accessit.*

THE examiners for the medical entrance exhibitions at University College have recommended Mr. P. J. Edmunds, Mr. J. W. Carr, and Mr. J. H. E. Brock for the exhibitions of £100, £60, and £40 respectively. Mr. E. H. Thanes also obtained the number of marks qualifying for an exhibition.

BEQUEST.—The late Mr. John Skerrow Wright, M.P. for Nottingham, has bequeathed £200 each to the General Hospital, Birmingham, and the Queen's Hospital, Birmingham.

PUBLIC HEALTH.—During last week, being the fortieth week of this year, 5,227 births and 3,637 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living. The annual death-rate was 21 in Edinburgh, 20 in Glasgow, and 33 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Plymouth, 15; Brighton, 16; Sheffield, 17; Birmingham, 17; Oldham, 18; Portsmouth, 19; London, 20; Leeds, 21; Bristol, 22; Wolverhampton, 22; Norwich, 22; Newcastle-upon-Tyne, 23; Bradford, 23; Manchester, 23; Hull, 25; Nottingham, 25; Liverpool, 31; Salford, 31; Sunderland, 34; and the highest rate, 35, in Leicester. The annual death-rate from the seven principal zymotic diseases averaged 4.3 per 1,000 in the twenty towns, and ranged from 2.7 and 2.9 in Portsmouth and London, to 10.4 and 14.3 in Salford and Sunderland. Scarlet fever showed the largest proportional fatality in Sunderland, Brighton, and Salford; and measles in Leicester. Enteric fever showed an excessive death-rate in Salford, Plymouth, and Leeds. In London, 1,398 deaths were registered, which exceeded the average by two, and gave an annual death-rate of 19.9. The 1,398 deaths included 5 from small-pox, 16 from measles, 63 from scarlet fever, 15 from diphtheria, 19 from whooping-cough, 25 from different forms of fever, and 64 from diarrhœa—being altogether 207 zymotic deaths, which were 38 below the average, and were equal to an annual rate of 2.9 per 1,000. The deaths referred to diseases of the respiratory organs, which had increased from 124 to 199 in the four preceding weeks, further rose to 266 last week, and exceeded the corrected weekly average by 42; 149 were attributed to bronchitis, and 69 to pneumonia. Different forms of violence caused 55 deaths; 47 were the result of negligence or accident, including 19 from fractures and contusions, 5 from burns and scalds, 10 from drowning, 2 from poison, and 7 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 50.5°, and 2.6° below the average. The direction of the wind was variable, and the horizontal movement of the air averaged 11.6 miles per hour, which was 1.4 above the average. Rain fell on six days of the week, to the aggregate amount of 3.07 inches. The duration of registered bright sunshine in the week was equal to 14 per cent. of its possible duration. The recorded amount of ozone showed an excess on Tuesday, but was below the average during the rest of the week.

YESTERDAY, Mr. Langham held an inquiry into the death of DR. Thomas Hunter, late of the 4th Hussars. Deceased, who died very suddenly at the Army and Navy Club, on Thursday last, was seventy years of age, and held the post of Deputy Inspector-General of Hospitals. He served in the Eastern campaign of 1854 and 1855, and was present at the battles of Alma and Balaclava, and the siege of Sebasto-

pol, for which he received the Crimean medal with three clasps, the Turkish medal, and the Fifth Class of the Order of the Medjidie. Dr. G. Jackson, who made the *post mortem* examination, stated that death was due to an effusion of serum on the brain, and the jury returned a verdict accordingly.

DURING the thirteen weeks which ended on 2nd instant, the death-rate in the metropolis averaged 21.3 per 1,000, against 19.3, 22.1, and 18.4 in the corresponding periods of 1877, 1878, and 1879.

THE ORDER OF ST. JOHN IN ENGLAND.—The annual report of this order, which has just been issued among its members, shows that the ambulance work, which it originated some three or four years ago, still continues to increase, new centres of instruction and aid having been formed during the past twelve months at Croydon, Waltham Abbey, Shoeburyness, Cheltenham, Liverpool, Hereford, Mansfield, Eckington Collieries, Birmingham, Sydenham, Wakefield, Ipswich, Twickenham, Colchester, Ross, Leicester, Manchester, Woodford, Eton, Tonbridge, Hastings, Welwyn, Darlington, Blandford, Bournemouth, Stratford, Monmouth, Ambleside, Windermere, and Dublin. Detached classes, under the control of the Central Committee, have been also held, pending the formation of local centres, at Dorking, Harrow, Glasgow, Clapham, Petersfield, Portsmouth, Dulwich, Lincoln, Wokingham, Denmark Hill, Putney, Richmond, Bath, Hexham, Wellington, Hayward's Heath, Worthing, etc. Advanced classes for ladies who have passed through the elementary course of instruction have been also held in the hospitals of St. Mary's, Paddington, and the North-West London Hospital, in three of the chief metropolitan districts, and at Oxford, Harrow, Woolwich, Liverpool, Putney, Wimbledon, Dorking, and other places. In the country, the instruction given has generally been approved by the chief constables and the local magistracy; and among those persons who have consented to preside over such local centres have been Prince Christian at Windsor, the Duke of Beaufort at Bristol, Lord Derby at Liverpool, Lord Chichester at Hastings and St. Leonard's, the Duke of Rutland at Leicester, and the Duke of Portland at Mansfield. In six other centres, the bishops have acted as presidents, and in others the local mayors. It is added that, during the last two years and a half, no fewer than seventy-eight of the "St. John's wheel-litters" have been supplied to various police-stations, dockyards, and hospitals. The revenue of the order has been a little over £2,530; its expenditure at head-quarters, about £2,020. The central offices of the order are now permanently located at St. John's Gate, Clerkenwell.

GLASGOW.—The death-rate of Glasgow for 1879 was 6 per 1,000 below the average of the preceding ten years. This improvement was most marked in the earlier years of life, the death-rate below five years being 28 per 1,000 below the average. The meteorological and vital characteristics of 1879 were a low temperature, high summer but low total rainfall, and a diminished death-rate, especially among children. The mortality amongst infants has fallen 22 per cent., as compared with the previous decade; and, as the later years of childhood always sympathise in their health with the condition of the first, it may be taken as proved that the diminished infantile death-rates represent actual improvement in child-health. During the year, the general death-rate was 23 per 1,000, the birth-rate being 37 per 1,000. The proportion of deaths under five years to the total deaths was 42 per cent., and of the deaths under one year 20 per cent. Of the total deaths, 89½ per cent. were certified, and 41 per cent. were in friendly societies. A comparison of last year with the preceding six years shows an improvement all round, but chiefly in the fatality of infectious diseases. The epidemic of 1879, as of the year preceding, was whooping-cough, which alone caused 482 deaths. Fevers were never so little fatal; and since 1869 these diseases have, with a trifling check in 1875, fallen year by year. During the last five years, only twenty-two lives have been lost from small-pox in Glasgow. The question of the proportion of the deaths enrolled in friendly societies is one of no little moral as well as sanitary interest. The highest proportion of friendly society deaths was in a district inhabited largely by labourers, living mostly in a very inferior class of tenements. As Dr. Russell observes, "the very large proportion of the children of tender years who are enrolled in these societies can hardly be regarded with perfect comfort, in view of the high child-mortality. As to illegitimates, it is a very sinister fact that the proportion enrolled is nearly three times greater in the worst than in the best districts, especially in view of the fact that the proportion certified is so much less. The fact of such children by their death bringing a sum of money in excess of the necessities of their burial into the hands of their guardians cannot be regarded with approval, in view of the general evidences of neglect which surround their decease—i.e., in respect of certification by medical attendants."

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M. Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Opnthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Opnthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 2.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 2; Eye, M. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., daily, exc. W. S., 1; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 2; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.15.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 3; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. J. Hughlings Jackson, "Cases of Remarkable Visual Symptoms of Organic Brain Disease".

TUESDAY.—Pathological Society of London, 8.30 P.M. Dr. Norman Moore (1) "Cases of Disease of the Central Canal of Spinal Cord; (2) Disease of the Ureter and Kidney". "Myeloma, Paralysis, and Death". Mr. Sidney Jones (1) "Fatty Degeneration of Heart, Kidneys, and Liver". (2) "Fatty Degeneration of Heart". Mr. Morrant Baker (1) "Case of Tumour"; (2) "Case of Wound of Ventricle of Brain". Dr. Goodhart, "Case of Hæmorrhage complicated with Leucocythæmia".

THURSDAY.—Harveian Society of London, 8.30 P.M. Mr. Lee, "Ivory Exostoses". Mr. Mansell Moullin, "Cases illustrating Surgical Pathology". Dr. Murchison, "Cases illustrating Digestion".

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Clement Lucas, "On Cross-Legged Deformities (Nélaton's Legged Deformity), the result of Double Hip Ankylosis"; Dr. Greenhow, "A Case of Intestinal Obstruction caused by a Hernia through the Mesentery of a Meckel's Diverticulum which had retained its connection with the Umbilicus". Mr. H. Morris, "Nævus (Cirsoid) with a Pulsating Tumour in the Temporal Region successfully treated by Ligature of the External Carotid and Subclavian Arteries". Mr. Arthur, "A Case of Ligature of the Common Carotid and Subclavian Arteries for an Aneurism, supposed to be of the Innominate Artery". Quekett Microscopical Club, 8 P.M. Dr. M. C. Cooke, "On New Fresh Water Algæ found during the year".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE MEDICAL PROFESSION AND INTEMPERANCE IN ALCOHOL.

SIR,—A medical friend has just shown to me a letter in your number for September 25th, where a large amount of abuse is heaped upon my head by a gentleman to whom some friend of temperance had sent a paper I wrote a few years ago, pleading with the doctors not to order stimulants to women, but to seek for remedies in illness less dangerous in their after-effects. The abuse I have no wish to return; but as the accusation of mendacity touches a more important matter than my personal character, I feel sure that you will not refuse me permission to reply, as briefly as I can, to the letter of your correspondent. He challenges me to bring proof of what I say; to name those on whose authority I assert that either man or woman, when dying from drink, denounced the doctor who had brought them to such a fearful death. I will do so, my difficulty being, not to find such cases, but to choose among them those whose names I may make known. I can promise him one which exactly meets his requirements. Another is the first case in the little paper I enclose to you; but she is not yet dead. She may live for years in shame and misery, for she is still young. It is but rarely that we can give names and places; but this case is so extensively known that I may venture to tell it to any medical man who desires it—not for publication, of course. Another is also living: not perhaps likely to die soon, though she is an old woman now; for alcohol often keeps its victims in a sort of living death for many years. She has wept and prayed against her besetment, but in vain. A third is the mother of young children, to whom, her husband told me, stimulants were prescribed in her confinements until she learnt to love them; and now she sets him and all else at defiance. Three or four times he has been compelled to break up his home. He came to me to ask if I could do anything. He was, unhappily, of the opinion of your correspondent, that the abuse of alcohol is no reason for its disuse; and he still drinks in moderation, while asking aid from teetotalers to cure his wife of her besetment.

There is another branch of the same subject to which I would earnestly call the attention of medical men: the prescription of alcohol to reclaimed drunkards. In two cases known to myself, I told the medical men what they had done, and they expressed the sorrow which every humane man must feel; they were no more angry with me for my interference than a waggoner would be if I called to him to stop lest he should throw down and crush under his heavy wheels a lame foot-passenger who stood in his way. A third doctor I did not tell of the ruin which he had effected, because he was old and had retired from practice; and no doubt he is, if still living, in happy unconsciousness of his work. Of this case, I may give name and place.

It is probably not often that doctors are made acquainted with these dire results of their alcoholic prescriptions. The appetite which they have planted generally takes many years to grow to its full and irresistible strength. But every medical man is well aware of the property possessed by alcohol, in common with tobacco, opium, and other narcotic poisons, of making itself loved, of creating an appetite for itself difficult to resist. And no one will for a moment suppose that the fact of its being swallowed by medical prescription can act as a charm to prevent natural results following from natural causes. I could give you instance after instance, which have come under my own observation or that of my friends, but I must not trespass on your space.

I earnestly hope that this letter of Mr. Baker may be the means of calling attention to the subject. I am sure that large numbers of medical men would at once cease to prescribe medicines of this sort, if their attention were called to the frightful danger, and that those who still persist in prescribing them would, at any inconvenience, and at all risk of displeasing their patients, clearly tell them when they must cease to take the alcoholic dose, as they do of any other medicines.

I must add that I quoted from printed speeches of Dr. Richardson and Dr. Edmunds without first asking their consent. If my doing so should bring upon them a share of the obloquy showered upon me, I should greatly regret it. For myself, I am well content to bear anything, if by any means I can bring more and more medical men earnestly and seriously to consider this question, and thereby save some, especially those of my own sex, from the horrors of a drunkard's death.—I am, sir, truly yours,

HELLENA RICHARDSON.

Foley Cottage, Redland, Bristol, October 8th, 1880.

F.R.C.S.Ed. (Glasgow).—We have brought the subject to the attention of the physician in question, who has afforded us proof that the paragraph in the *Christian World* was written without his knowledge, and that the layman who wrote it deeply regrets his error.

A CORRECTION: THE LATE THROAT AND EAR HOSPITAL, NEWCASTLE-ON-TYNE.

SIR,—Under the article "Otitis Externa Parasitica", which appeared in last week's JOURNAL, my name was appended as Surgeon to the above Hospital. As this is liable to mislead, no such institution now existing in this town, the premises having been converted into a private provident dispensary, I shall feel much obliged by your allowing this insertion to appear in the issue of Saturday, the 16th inst. I am, yours faithfully,

ROBERT TORRANCE.

7, Savile Row, Newcastle-on-Tyne, October 12th, 1880.

ENQUIRER should address Sir Charles Trevelyan, Bart., Cambo, Wallington; or T. Holmes, Esq., F.R.C.S., 18, Great Cumberland Place, Hyde Park.

PAPAINE.

SIR,—As the subject of the digestive action of the juice of carica papaya, is attracting some attention at the present time, the following remarks may perhaps prove of interest to the readers of your valuable JOURNAL.

For some time past, I had been endeavouring to obtain the juice of the plant in a satisfactory condition for commercial purposes, but without success. I then had a quantity of the leaves over, most carefully dried in the sun, and packed; but it was found, by experiments conducted by Mons. Petit of Paris, that they no longer possessed the requisite digestive properties. I therefore imported the seed, and grew a number of the plants; and then a curious circumstance attracted my notice: all the other seedlings and cuttings of other plants in the same frame rapidly rotted and dried off. I should be glad to learn from those who have been long acquainted with the plant whether this is a usual occurrence, and whether it is due to the action of the digestive principle of the plant.

Quite recently, I have heard from Ceylon to the effect that the papaw is used by the natives in that island only to procure abortion; and as I have not met with this statement before, I have written for further particulars, which I shall be happy to communicate on a further occasion, if desired.

I may state that I shall be pleased to supply a living plant, gratis, for experiment to any hospital where it is desired to try its properties.—Yours truly,

September 24th, 1880. THOMAS CHRISTY, F.L.S.

COUNTRY SURGEON.—The Calendar of the Royal College of Surgeons of England contains all the papers set at the College examinations during the past year, and may be obtained at the College for the sum of one shilling. The text-book we consider most suitable for students is *The Outlines of Physiology*, by Professor McKendrick, published by Maclehose of Glasgow.

MIDWIFERY ENGAGEMENTS.

SIR,—In the case referred to you for decision by G., and answered in your impression of September 25th, may I ask if, considering that G. and myself have always attended each other's midwifery cases in our respective absences, or in case of inability to be present, and have left the whole fee to the one with whom the engagement was made, have I not a valid claim upon the fee paid to G.?—Yours truly,

L.

*** Our comment on the letter from G., published in our issue of the 25th ultimo, was based on the statements put before us. It now appears there existed a mutual understanding between L. and G., whereby they attended each other's patients, the fee passing to the gentleman engaged. If this be correct, then G. is bound in honour to surrender the fee. We still, however, are of opinion that, under all the circumstances, a division of the fee would best meet the requirements of the case.

SIR,—It is, I hope, unnecessary to assure you that it is in no captious spirit that I venture to dissent from your decision (to which my attention has just been directed) on the question referred to you by "G.", in the JOURNAL of the 25th ultimo, page 535, column i, the correct solution of which will, I believe, be found in the second paragraph of your editorial remarks, and not in the subsequent one, as expressed; for it should be borne in mind that Mrs. W. engaged the personal services of L. (not of his locum tenens) in her confinement; and as he failed to fulfil his part of the engagement, he cannot justly claim a fee from her husband. Bearing in mind, moreover, that G. and L. were on such terms of professional intimacy as to have been accustomed to attend each other's patients in their respective absences, G., in the unavoidable absence of L. from illness, would, in my opinion, have done well to have attended the case for him, and been content with a division of the fee, in accordance with the general principle enunciated in the *Code of Medical Ethics*, published by Messrs. Churchill.—I am, yours truly,

L. M. D.

T. S. SUTTON.—The tariff of the Medico-Ethical Society of Manchester is published, and may be had by writing to the Secretary, Dr. Haddon.

PORTABLE DISINFECTING APPARATUS.

SIR,—Please kindly tell me where the best portable disinfecting chamber can be got.—Yours truly,

THOMAS LAFFAN.

Cashel, Ireland, October 11th, 1880.

*** Excellent portable disinfecting apparatus are made by Mr. Soper, 283, Clapham Road, and by Frazer Brothers, Commercial Road, E. Mr. Jarrow of Leek has invented a new form of disinfecting chamber, which is highly recommended by Dr. Rushton of Nottingham; a full description of it will be found in the *Sanitary Record* of July 15th, 1880.

TO REMOVE PLASTER-OF-PARIS FROM THE HANDS.—Dr. Wilcox, surgeon, U.S.A., says that a little bicarbonate of soda or potassa, added to the water in which the hands are washed, after applying plaster-of-Paris bandages, immediately removes the unpleasant feeling left by the plaster.—*Toledo Med. and Surg. Journal.*

PRURITUS SCROTI.

SIR,—I shall be very much obliged to any of my professional brethren who can inform me of a cure for this most worrying complaint. I have a patient who has suffered from it for more than twenty years, and now one of his sons, a lad of seventeen, is sorely afflicted with it. Both are otherwise in perfect health. All remedies hitherto tried, both local and general, have proved ineffective in giving more than very temporary relief.—I am, etc.,

M.R.C.S.

Bristol, October 7th, 1880.

R. M. B. should, we think, read first some of the most recent text-books, and then put a more definite query, as his query, as it at present stands, is far too indefinite.

CONTAGION FROM FLIES.

SIR,—If your correspondent "Musca", writing in the JOURNAL for this week on Contagion from Flies, will use his microscope with a quarter-inch lens, he will find the "fungus", as he says, which surrounds the dead flies on his window with a "circle of half an inch radius", consists of multitudes of the eggs of that insect, each of which is of the shape of an old-fashioned honey-pot, and contains a central nucleus. These are beautiful objects, and are best seen floated in a little distilled water or white of egg. Like most female insects, the mother fly dies after giving birth to her numerous brood, though she takes some time to deposit the whole.—Réaumur has some interesting particulars on this subject.—I am, sir, yours truly,

Hounslow, October 2nd, 1880. EDWARD YOUNG, M.D.

SIR,—Will anyone kindly explain how it is that the College of Physicians require attendance in surgery during two winter sessions, while the College of Surgeons are satisfied with one winter session? *Vide* page 418 Educational Number of BRITISH MEDICAL JOURNAL.—I am, sir, yours truly,

119, Shaw Street, October 7th. BENJAMIN BLOWER.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE GENERAL PRACTITIONER.

SIR,—Permit me a word with my *confrères*. The time is approaching when the various branches of the British Medical Association will commence their sessional meetings. It is not improbable that even now many a hard-worked general practitioner is in the agonies of composition, laboring to evoke from the depths, or shallows, of his consciousness some ideas which may be true, if not new, on the stale subject of *post partum* hæmorrhage, or the yet staler subject of placenta prævia. It is the misfortune of the family physician that he never seems able to get beyond the discussion of some elementary fact in midwifery. Or if, in an evil hour, he is tempted to try higher flights—such, for example, as the treatment of pneumonia, or the differential diagnosis of measles—it is with infinite labour, and a resultant sense of cerebral exhaustion, which effectually deter him from further exertions.

The approach of the winter session brings with it a sad foreboding of melancholy listening to threadbare platitudes, and polite attention to profitless experiences. "How weary, flat, stale, and unprofitable" is an ordinary meeting of a Branch Association! How tedious the orator; how listless the audience; how dull the debaters! No wonder that the attendance is small; that Smith is too busy to be present, and that Brown instructs his wife to send an urgent message for him when the pipes and coffee are coming to an end. Is it possible to persuade the Ruperts and the Pitts of medical debate to forego the contemplation of their favourite subjects for a while, and to give a little of their attention to others, which, though less scientific in sound, have the advantage of being more novel and more immediately interesting to the general practitioner? The Association of the trade of a druggist with the art of the physician; the professional fees of the family doctor; the establishment of private medical clubs, called provident dispensaries; these and other like subjects demand immediate and serious consideration.

The time has come for the settlement of the question, whether the family doctor is to be a physician, or a tradesman with a medical qualification. Can he dare to rest his claims for daily bread and social recognition on his knowledge and skill in medicine, or must he still be a compounder of drugs and an apt manipulator of bottles and sealing-wax? The highest class of general practitioners has already answered this question, by bidding farewell to the shop, or, as it is more politely termed, the surgery. It remains to be seen whether the rest will follow their wise and dignified lead; or whether the profession must be further subdivided into consulting physicians, family physicians, and nondescript hybrids, who are neither druggists nor doctors, but a very disagreeable mixture of both—neither fish, flesh, fowl, nor good red herring. This subject, along with others, we may hope to see discussed during the coming winter by many Branch Associations, but especially by those of the metropolis. London, which affects a superior style of practice, and displays a lofty kind of pity towards "the country, you know", seems to have a monopoly of third- and fourth-rate practitioners. Nowhere else are you startled at the corner of every street by a flaming red lamp, and a house painted in humble imitation of the nearest gin-palace. Nowhere else can you see numbers of shop-windows all ablaze with "Advice gratis", "Medicine, sixpence", and other similar advertisements expressive of the fine taste of a portion of the medical profession. Things are done in all parts of the metropolis which country practitioners would be ashamed to acknowledge. Let us hope that the metropolitan Branches will soon begin to display a little more regard for the dignity of their order, and strive to bring up the methods of their practice to a level with the demands of modern times. They have a fine opportunity of placing themselves at the head of a progressive movement. Are they capable of a further stage of development? or shall we see in them a conspicuous example of retrograde metamorphosis?—I am, sir, yours faithfully,

ESPRIT DE CORPS.

Muddleton Magna, September 22nd, 1880.

THE USE OF ESMARCH'S BANDAGE.

SIR,—Might I be allowed to suggest that Esmarch's bandage is not altogether an unmixed blessing. The arteries of the body (or the capillaries into which they branch) may be represented collectively by a tube of a certain diameter. Through that tube it is the heart's function to force a fixed amount of fluid. Encircle the thigh with a tourniquet; a femoral artery is compressed, the diameter of the collective tube is diminished, but blood remains in the limb, so that the quantity of fluid to be propelled is proportionately diminished. Apply an Esmarch's bandage and squeeze the blood from a limb; a femoral artery is occluded, the diameter of the collective tube is decreased, but there is no relative diminution in the quantity of fluid to be driven through it. The heart's labour is therefore increased. It is noticeable that, in the case recounted in your columns last week, death occurred during the application of Esmarch's bandage. The patient, notwithstanding his weak heart, had upon two previous occasions taken chloroform without accident. Is it not possible that, in the last instance, Esmarch's bandage may have turned the scale? The bandage when applied, squeezes blood from the smaller branches into the arterial and venous trunks. Arterial tension is, therefore, immediately greatly increased, and may prove too much for a faltering heart.—I am, yours truly,

[illegible] Hill, Clifton, September 27th, 1880. [illegible] Bird (junior).

[illegible] (British) not correctly addressed. 2. Mr. Holmes, or Dr Joseph Rogers; or Mr. Allom, Secretary, Metropolitan Provident Association, Bedford Street, Covent Garden.

MOUNTAIN ASH.

SIR,—Your [illegible] inquirer respecting "mountain ash" will find a [illegible] Gray's *Manual of Botany*, [illegible] Lindley's *Vegetable Kingdom*, [illegible] Loudon's *Encyclopædia of Trees and Shrubs*, [illegible] mountain ash, quercus, [illegible] ilex; fraxinus, [illegible] fraxinus wards; fruit astringent, dried and powdered makes a kind of [illegible] chocolate; inner [illegible] bark tans better than [illegible] leaves, [illegible] and [illegible] valuable [illegible] by [illegible] and as [illegible] from an equal weight of cherry laurel leaves; fruit yields malic acid.—I am, etc.,

[illegible] Ellison Road, London, S.W., October 7th, 1880. E. L. GRESWELL.

[illegible] A Paper. The paper will appear in due course.

ADVERTISEMENTS OF BUSINESS OR MEETINGS.

[illegible] A letter at 4 Bedford Square [illegible] which is [illegible] and [illegible] advertisements [illegible] Journal [illegible] Thursday. Advertisements [illegible] Journal [illegible] Thursday.

C. [illegible] Surrey, M.B. [illegible].

VACCINATION FOR CHRONIC ECZEMA.

SIR,—In your issue of September 25th, Mr. Edward Crickmay says that my "relation of chronic eczema cases having been removed by vaccination is nothing new". Will Mr. Edward Crickmay kindly refer me to any papers that he or anyone else has written on the subject? I have looked up all the authorities I have at hand, but can find no mention of the proceeding; and I can only say that it would have saved me a good deal of anxiety if I had known before that this method of treatment had been recommended. Judging, however, from the conversations I have had with several medical men lately, and from letters I have received on the subject, I am inclined to think that Mr. Edward Crickmay is wrong, and that the result of [illegible] is something new, and that vaccination as a cure for eczema in children is only now brought out through the publicity you kindly gave my letter in the JOURNAL of September 4th. Hebra does not mention such a method of cure, and he especially condemns *deriventia*, under which head vaccination must come, unless it is granted that the vaccine virus itself acts as a specific, which it can hardly do, if Mr. Edward Crickmay has seen its beneficial effects in a variety of skin diseases. I feel quite sure that Mr. Edward Crickmay would confer a boon on the profession if he would give some particulars of the cases of the "number of children" he remembers "in whom the practice was perfectly successful", and also of the "variety of chronic skin-diseases" in which he has "frequently advised vaccination".—Yours truly,

CHARLES D. HILL DRURY, M.D.

3, Bucklersbury, E.C., October 5th, 1880.

DR. DAVIES, Hillside House, Ebbw Vale, Glamorganshire, will find the information which he desires as to cottage hospitals in a work published by Mr. Burdett (Churchill and Co.).

W. P. S. A. had better communicate with Dr. Buchanan at the Local Government Board, where there is probably special experience in such a matter available.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Leech, Manchester; Mr. W. J. Walsham, London; Dr. T. Churton, Leeds; Dr. A. M. Buchanan, Glasgow; Mr. R. Pye-Smith, Sheffield; Dr. Burnet, London; Mr. B. May, Birmingham; Mr. G. Eastes, London; Dr. M. Skerritt, Clifton; Dr. L. Armstrong, Newcastle-on-Tyne; Our Edinburgh Correspondent; Dr. Graham Brown, Edinburgh; Dr. R. L. Rutherford, Durham; Dr. Henry Stedman, U.S.A.; Dr. W. Brown, Plymouth; Miss H. Richardson, Bristol; Mr. Coppin, London; Dr. T. E. Maclean, Cairo; Mr. A. W. Kempe, Exeter; Mr. W. H. Walter, South Petherton; Mr. E. W. Alabone, London; Dr. William Carr, Glasgow; Country Surgeon; Mr. James Parette, Breconshire; Dr. W. Williams, Liverpool; Dr. W. B. Hadden, London; Mr. G. F. Hodgson, Brighton; Mr. R. W. Wilcox; Mr. R. P. Sampson, Weymouth; Dr. M. O. Coleman, Surbiton; Dr. W. Mearns, Gateshead-on-Tyne; Dr. J. M. Wilson, Doncaster; Dr. T. Laffan, Cashel; Messrs. E. Moses and Son, London; Mr. F. Sydney Smyth, London; Veritas; Mr. W. Martindale, London; Dr. Prosser James, London; Our Dublin Correspondent; Dr. Campbell, Torquay; Mr. H. Nelson Hardy, London; Our Glasgow Correspondent; Mr. E. Nettleship, Merton; Mr. G. P. Atkinson, Pontefract; Mr. A. W. M. Robson, Leeds; Mr. T. Spencer Wells, London; Mr. H. M. Davies, Warrington; Mr. F. F. Moore, Somerset; Mr. Shirley F. Murphy, London; Dr. Samelson, Manchester; Mr. J. Evans, Farnborough Station; Professor Rutherford, Edinburgh; Dr. Mahomed, London; Mr. K. Terrance, Newcastle-on-Tyne; Dr. Warner, London; Dr. D. Newman, Glasgow; Dr. K. W. Foss, Stockton-on-Tees; Dr. Tayler, London; Dr. E. B. Joll, St. Ives; Mr. Edwin Fenn, Dover; Dr. William Murrell, London; Mr. Holloway, London; Dr. John Cochrane, Edinburgh; etc.

BOOKS, ETC., RECEIVED.

St. Thomas's Hospital Reports, 1879. By R. Cory and W. Mason. London: J. and A. Churchill.

Cottage Hospitals, General Fever and Convalescence. By H. C. Burdett. Second Edition. London: J. and A. Churchill.

A Text-Book of the Physiological Chemistry of the Animal Body. By A. Gamgee, M.D. [illegible] Macmillan and Co.

Trinity College, London. Calendar for the year [illegible]. W. Reeves, 185, Fleet Street, E.C.

The Atomic Theory. By A. A. Wurtz. Translated by E. Clemenshaw, M.A., F.C.S. London: C. Kegan Paul and Co.

Practical Blowpipe Assaying. By George Attwood, F.G.S., A.I.C.E., etc. London: Sampson Low and Co.

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AN ADDRESS
ON
ELEMENTAL PATHOLOGY.

Delivered in the Pathological Section at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

By SIR JAMES PAGET, F.R.C.S., D.C.L., LL.D., F.R.S.,
Sergeant-Surgeon to H.M. the Queen, Consulting Surgeon to St. Bartholomew's Hospital; President of the Section.

[*Concluded from page 614 of last number.*]

THE resemblances which, in human pathology, we trace between the processes of repair and some of those of Inflammation are well-marked in plants. Of course, in speaking of inflammation in plants, we must be nearly limited to the essential parts of the process. In ourselves, we look to its so-called signs — heat, redness, pain, swelling, and disturbed function: but these are not of the essence of inflammation, and, even in ourselves, one or more of them may be absent when yet the real process of inflammation is active. For the elemental pathology of inflammation, as for that of decay and of repair of injuries, we must study the altered relations between the elemental formed parts and the varying formless materials about them; and these, let me repeat, may be seen more nearly in plants than in animals, in which it is hardly possible to isolate any parts from the influence of stagnant or wandering corpuscles or of circulating blood and nervous systems.

The signs of inflammation, I have implied, cannot well be observed in plants. Increased heat in the part has not, I think, been noticed; yet I suspect that, with so rapid organisation as sometimes ensues in gall-formations, it might be detected. Redness is often present, as in the galls and curled leaves of which I shall speak presently; but it is in a fallacious likeness to the redness of congestion of blood; it is only the colour of imperfection which one sees in many immature and many decaying leaves. Pain we cannot suppose in plants; and yet it may be through some change like to that of transmission of nerve-force that we must explain what I find told by Frank*; that in many green parts of plants there appears, some few minutes after wounding them, a change in the normal position of the chlorophyll-grains and the protoplasm in cells at a distance from the wound—a change which, as he says, must be regarded as due to the transmission of a stimulus of some not well known kind from the wounded to the intact living cells. Slight slowly ensuing swelling is often evident in the inflamed parts of plants, and is due, as in animals, to new formation and to increased afflux of nutritive matter—an afflux, be it observed, not due to any vaso-motor nerve-change. Disturbed function is evident enough.

But the likenesses between the inflammations in plants and in animals are best shown in their visible structural changes; and these have been admirably traced by Waldenburg.† He has applied various irritants to leaves, fruits, and stems—such as foreign bodies, setons, crushings, cauteries, and others. The results, speaking very generally, are that, as in ordinary wounds, the cell-structures actually involved in the injury perish and dry-up; that those most nearly adjacent suffer degeneration, indicated by their protoplasmic contents becoming turbid and their chlorophyll becoming yellow or brownish; while in those next to them, and within distances varying according to the injury and the texture of the part injured, enlargement of cells ensues, and increase by division and thickening of the cell-walls.

In these changes you may study, with comparatively easy experiments, imitations (as near as difference of texture will allow) of the most constant constituents of inflammation in animals, especially those of the least acute of the productive interstitial inflammations, leading to thickening, opacity, induration, and other such changes. The defective maintenance of some of the natural structures of the part is evident; so is an increased afflux of nutritive material; so is an increased production of lowly organised structures, not widely different from the natural structures.

But, of all morbid processes in plants, none, I think, are so suggestive as are those produced by parasites, whether vegetable or animal. The whole subject would be far too large to speak of, even if I were familiar with it; it is, indeed, a subject of the gravest national importance; but, keeping to the design with which I started, and which was only that of pointing-out where useful pathological knowledge may be gained, I will speak of only some of the changes which are produced by insects. The most remarkable of these are the galls;* and, among the many hundreds of them that have been described, I may assume that you know some in their natural mode of growth—such as the common oak-apple, with which some celebrate the restoration of our monarchy; and the bedeguar of the wild-rose; the bright crimson oak-spangle; the currant-gall, or the artichoke-gall, or the gall of pharmacy. But, besides the hundreds of different true galls, there are still more hundreds of changes of structure in leaves and stems and roots, all produced by the irritant secretions of insects, and all such as may justly be ascribed to processes of inflammation. In some, as in the "curl" of the leaves of the whitethorn, you find thickenings of leaves which are lifted, rolled, or curled into chambers which serve for defence of the aphides or other insects; in some, the thickened and distorted clusters of leaves, in buds or twigs, roll up and are mutually fastened so as to form the walls of similar defensive lodgings; in some cases, leaves become swollen as with a kind of œdema; in some, their layers separate as if with blistering; or leaves, or stems, or fruits, or clusters of flowers, buds, or roots produce variously shaped and variously constructed growths of cellular parenchymatous tissue and cork and, more sparingly, of woody tissue or of cells whose thick walls become as hard as wood. Besides, some of the monstrous growths of parts of plants, and some of the viviparous variations, and of the undue metamorphoses of leaves, are to be referred to the influence of parasites.†

It may seem bold to speak of so many hundreds of widely various morbid processes as having any essential character in common, or as fit to be included under one name; yet, I think we may regard the whole of these as being such as, in our pathology, we should call inflammatory hypertrophies or hyperplasiæ. They all show a rapid increase of lowly organised structures, by derivation from, and in continuity with, those pre-existing. There is, as in the products of our inflammations, a general likeness among these new structures, whatever be the part of the plant from which they are derived, and all bear a general likeness to the structures formed after injuries of actively growing parts. In the morbid growths formed by these new structures, the deflection from the natural shape and construction of the part, in continuity with which they have grown, is often not complete; they often retain marks of characteristic normal forms, and sometimes acquire marks of natural variation from the species.‡ Moreover, all these morbid growths have their origin in what may justly be called "irritation" of the part on which they grow; and in all of them, I think, we may note signs of degeneracy from natural conditions, either in the absence of stomata or similar structures, or in the presence of the red, or yellow, or other colours commonly noticed in decay.

Here, I believe, are reasons enough for regarding all these galls and gall-like products of disease, generated in plants by insects, as analogous with a large group of the products of inflammation which we study in our own pathology; and the analogy is not the less because neither group can be circumscribed with any exact definition.

I will not be tempted to speak long, but I beg you to think long, of the marvellous facts of natural adjustment which we have here, in this intense example of the "*sic vos, non vobis*". Here are the bare facts. Each species of these parasitic insects can compel some part of a plant into such disease as shall supply good food, or well-built and well-placed lodging, or both, for itself or for its eggs and larvæ, or even for part of the life of its complete offspring. Each insect selects, by instinct, the very part of the plant which is adapted to its purpose. The provision made at the cost of the plant is exactly adapted in quality to the welfare of the insect or its offspring, and in quantity as well; for

* *Encyklopädie der Naturwissenschaften*, Abth. i, Lief. 12, p. 338, from a paper by him in Pringsheim's *Jahrb. für wiss. Bot.* viii, p. 220.

† Virchow's *Archiv*, Band 27, 1863, p. 145.

Many growths like galls are produced by fungi and other parasitic plants; but those I omit. Many are described by Schroeter, *Beiträge zur Biologie der Pflanzen*, Band i, p. 4; and by Beijerinck. The best essays on the minute structures and modes of growth of galls are those of Lacaze-Duthiers in the *Ann. des Sciences Naturelles, Botanique*, 1854; of Prillieux, in the same, *Botanique*, 1870; and of Beijerinck, *Beobachtungen über Morphologie der Pflanzengallen*; Utrecht, 1877. But I am most indebted to Miss E. A. Ormerod, who, by her admirable works on Entomology and Meteorology, sustains the scientific reputation of the name so well known to pathologists. Since the Address was sent to press, I have received the second part of Frank's essay in the *Encyklopädie der Naturwissenschaften*, containing a much fuller account of galls and gall-like growths than, I think, had before been published. With this, or with the soon-coming second part of his separate *Pflanzenpathologie*, and with Beijerinck's essay, the whole subject may well be studied by any human pathologist. But, I hope that it will soon be yet more clearly illustrated by Dr. Arthur Ransom.

† Among them are the "witch-brooms" of the birch, pine, larch, etc. Miss Ormerod has described the "Phytoptus of the Birch-knots" in the *Entomologist*, 1877. A long list of the teratological forms due to parasites is in Beijerinck, *loc. cit.*, page 32; with this should be studied Dr. M. Masters's volume on Vegetable Teratology.

‡ As Darwin pointed out in the likeness of the mossy covering of the common wild-rose-gall to the calyx of the moss-rose. There are, also, instances in which galls imitate small cones or other structures of the plant.

both the lodging and the food are made sufficient for any necessary time—for days or weeks, often for many months; in some instances, for two or even three years. Nay, more than this, the gall, of which the growth has been provoked by the virus of one insects, may be fit for the food and lodging of another, which, when all seems complete, can penetrate the gall-cavity, and there, as with theft or murder, obtain food and lodging perfectly suited to itself or its progeny.* And the whole process in the plant, though it be one of disease and, in a sense, unnatural, is yet so regular, so constant and specific, that the form and other characters of each gall or other morbid product are, usually, as constant and characteristic as are those of the insect itself, and the differences among the galls are at least as great as those among the insects. Is there, in all the range of natural history, a more marvellous group of facts than may here be studied? If you would like to work out a problem in evolution, find how it has come to be a part of the ordinary economy of nature that a gall-insect compels some part of a plant to grow in a manner which, while injurious to the plant, becomes useful to one insect not yet born, and to another who will, in due time, kill this one and feed on it.

But now, of the relation between galls and our specific diseases, such as our eruptive fevers, syphilis, cancer, gout, and others.

In these galls and other similar diseases in plants, we have, it seems, hundreds of specific diseases due to as many hundreds of specific morbid poisons;† for the most reasonable, if not the only reasonable, theory of these diseases is, that each insect infects or inoculates the leaf or other structure of the chosen plant with a poison peculiar to itself. The poison may be merely deposited; but, in the instances best for study, it is inserted in the plant-structure, whether leaf or any other; and the wound for inserting it, the poisoned wound, may be made either with part of the oral apparatus, or, as in most of the true galls, with the ovipositor through which one or more eggs are passed with the virus, and are left among actively living structures of the plant. The little wound closes; the virus, whether an oral or an ovarian secretion, remains; and the result of its influence on the plant structures and their contained protoplasm is the formation of the gall or other morbid product. The whole process may be compared with the local consequences of the insertion of vaccine lymph, or any such morbid poison, in ourselves or other animals. I say the local consequences, for we have no clear evidence of what might be called general infection or constitutional disease in the plants. In the absence of quickly moving fluid, such as lymph or blood, the virus infects only the part in or very near to which it is inserted. A single oak-leaf may have fifty "spangle" galls on its under surface, but the structures between them may be quite healthy; and when in any instance a general damage is done to a plant by gall-growths, it seems to be only as a remote consequence of the spoiling of considerable portions of its structures. And this appears to be true, even though the virus may continue active for a long time, as in the galls which begin to grow soon after the insertion of the virus with the ovum, and continue to increase during the whole—sometimes long—development of the larvæ; or even, in a few instances, after the larvæ have deserted them.

But, while plants supply no occasions for studying fever, or any other of the constitutional phenomena of specific diseases, they are all the more fit for illustrations of some of the local characteristics. Let me suggest some things for study in them, in addition to the inflammatory changes of structure.

We find hundreds of different forms of galls, and we may be nearly sure that there are as many kinds of morbid poisons produced by the gall-insects, each form answering to a different virus. This may suggest that we may be too grudging in thinking of the number of morbid poisons, or of their modifications in the blood, to which diseases in ourselves may, at least in part, be due.

It is true that the galls are produced by many species of insects on many species of plants; and that the differences among these species may be as wide as those between ourselves and any other mammalia. But, even among closely allied species, there are many and very different forms of galls. Mayr,‡ ten years ago, described and figured ninety-six kinds of galls found on the oaks of middle Europe, all but two of them being produced by different species of gall-wasps. Of those ninety-six kinds, thirty-two are formed on the leaves alone; and, even on similar parts of one oak-leaf, it is not rare to find three or four different forms of galls.§

We have, thus, clear evidence of a very large number of morbid poisons, each of which is capable of producing, in an appropriate subject, a distinct specific disease with a characteristic morbid structure.

We may safely believe that, for each of these morbid poisons, there is no test yet possible except that of the disease which it may produce; and so we may as safely believe that there may be many morbid poisons or morbid conditions of blood in ourselves which may be indicated by very different products of disease, though they may be beyond detection by any other, even the most refined, method of research.

Further, though it may be impossible by any other means to detect any differences among these morbid poisons, yet the diseases which they severally produce may be widely different; as unlike as are a pustule and a goître, or a vaccine vesicle and a carbuncle, or as any of the morbid changes due to gout or rheumatism.

It may be observed, however, that these great differences are marked in outer shape and construction much more than in minute structure. As, in human pathology, there are certain general characters and degrees of likeness in all inflammatory products, however differently they may be constructed—in pustules, vesicles, thickenings, opacities, adhesions, scars, fibroid, and other changes; so, in galls, there are certain likenesses in minute structures, even among those that are, in their construction, size, and outer shape, most unlike.

It may be well to learn from this a lesson on the imperfection of our methods of minute research. As we cannot doubt that the differences in outer shape and method of construction of the products of specific diseases are associated with differences of chemical composition and ultimately minute structure, so it must be in those yet greater differences on which we frame our distinctions of species in all living nature. The coarse, visible, and tangible distinctions may be well marked; the really material differences with which these are associated, and to which, probably, they are due, are beyond our reach.

Again, in the study of specific diseases in ourselves, we see many variations due to the differences in the parts, or even in the persons affected with them. In the study of galls, similar variations may be seen. As a general rule, each gall-insect lays its eggs in one part of one plant—as the leaf, leaf-stalk, bud, fruit, or root of this or that species; but if, as rarely happens, one lays in different parts of the same plant, there is usually a very close agreement in the characters of the resultant galls. A few exceptions to this rule are known, one of them being in the very different galls produced on the roots and on the leaves of vines by *phylloxera vastatrix*; but the rule is generally observed, and accords with the fact of certain features of general likeness being observed in the products of our several specific diseases, wherever they may be seated.

When the same insect lays in similar parts of different plants, the galls may be all similar;* but I believe that they more usually are different, and that their differences are such as bring them severally nearer to the distinctive characters of the plants on which they grow; just as, in ourselves, a specific disease may be modified by the personal conditions of each patient.

In similar analogy, the differences are yet greater when the eggs are laid in different parts of different plants.

Very rarely, the same insect may produce on one leaf different forms of galls.†

In all these points, you may, I think, find help in the study of specific diseases. I will add only one more. Usually, the gall begins to grow directly after the deposit of the egg; but sometimes there is a long delay, a long period of suspense, an "eiruhe",‡ which may last for many months before the growth begins. What is going on during this time? I believe we may see here an instance of events very difficult to study in our own pathology, in which two or more conditions must concur to the production of some disease, and one of them must wait for the complete efficiency of the rest. In the case of these long delayed galls, either the egg, after being laid, requires a long time for the completion of changes ending in the production of the necessary morbid poison, or the plant-structure in which it is laid requires the

* The Ichneumons, Tunnicthen, hodgers, or (as they might be called) burglars, are usually destructive to the wasps or gall-mixers, though not themselves "gall makers".

† Kaltenbach (quoted in the *Entomologische Jahresbericht*, 1874, p. 150), gives the total number of the known species of galls at present known as about 1,250, of which one fifth belong to the Coniferæ.

‡ *Die mittel-europäischen Eichengallen*, 1870.

§ We [illegible] the various oak leaves from a sapling on which are [illegible] in several instances, on one leaf.

* *Fr. Löw. Ueber Gallmücken*; in *Verh. der K. K. Zool.-botan. Gesellschaft in Wien*, 1877.

† Beijerinck, *loc. cit.*, p. 21, from whom, also, the two preceding sentences are quoted. He cites from Winnertz the case of Ceridomyia tremula, which may produce on the same leaf of the white poplar four different forms of galls; but I would suspect that there may be as many differences among the eggs, just as there are among those of some Lepidoptera, in which, out of the same brood of eggs, all laid in the same place, some are hatched in the next following season, others in one, others in two, seasons later. Of course, these eggs are not all alike, though no other difference besides that proved by the times of hatching may be discoverable in them, or in the insects produced from them.

‡ Schenk, *Beiträge zur Kenntniss der Nassauischen Cynipiden*, p. 24. He cites the case of Trigonaspis megaptera, which lays its eggs in May, and the galls do not appear till the next April; others lay in buds, and the galls appear at the time of opening of the leaves. Hartig mentions similar facts (*Zeitschr. für die Entomologie*, Band ii, p. 176, 1840).

time for changes to make it susceptible of the poison; or both egg and plant may need to change. So, in us, two or more conditions must concur. A tendency to gout may be inherited, and the blood may have slowly acquired the necessary morbid condition; but no structure may be susceptible of gouty disease till a blow, or a strain, or some disturbance of nervous force makes it so. So with cancer; a general tendency may be inherited, but it must wait till the material of some structure is, by age, or injury, or long continued "irritation", changed into fitness for concurrence in morbid action with the material on which the general tendency depends. Then, when the two materials meet in mutual fitness, the result may be a change so great, that we may compare it with that from an act of impregnation. I have often thought of this comparison, when seeing the almost sudden appearance of cancer in a breast or a tongue or in a scar long irritated. In the growth of these galls, the comparison may seem less far-fetched. At least, it may be difficult to suggest any nearer comparison for a process in which the meeting of two living materials from different organisms is immediately followed by such a change in the method of life of one of them, as ends in the production of a definite new growth exactly adapted to the method and purpose of the life of the other.

But it is more than time that I should have done with galls. If I have been tedious, let me assure you that I am myself ashamed to have gathered so little from the rapidly increasing records concerning them to which the botanists, and still more the entomologists, of our time are contributing. And, even for that little, I feel as if I deserved to be compared with one of those burglars of whom I spoke feeding on the results of others' labours. Let it be my apology to them, that I believe I have taken nothing they would have used. I have only taken, from their rich stores of facts, some that may be much more useful in pathology than in natural history. And I am sure, from all I know of naturalists, that they will gladly let any of you into their fields, though you may use them for your own purposes much more than for theirs. It would be difficult to find a field for the study of the very principles of pathology larger or richer than this offers to you. The objects are within easy reach; hundreds of morbid processes are at hand for deliberate study; experiments may be made at will; and, during many months, thousands of insects, as natural vivisectors, will be at work for you; and it must yet be some years before they will be required to take out licences.

I will speak of only one more of the subjects of general pathology—that of tumours; and on this I may be very brief.*

I do not know if there be any morbid growths in plants which may justly be compared with our cysts or cystic tumours. Foreign bodies lodged in them usually give rise to such changes in the immediately surrounding textures as produce layers of cork-tissue, which may be compared with the capsules of connective tissue similarly formed around foreign bodies in animal structures;† but I do not know if there be any such diseases as cysts filled and enlarging by the increase of secretions or growths from their own walls.

Growths which may be coarsely—and only coarsely—compared with our cheloids are common on elms and other trees, especially on apple-trees. They are called cankers, or in Germany by the same name as cancers—*Krebs*.‡ They are usually rounded and coarsely nodular masses of wood covered with bark, sessile singly or in clusters on branches, and depressed at the middle of their projecting surfaces. Thus, in form, they are not far unlike masses of scirrhous cancer projecting from the breast or axillary glands; and the likeness is the nearer when, as is usual, the depression on their surface leads into a cavity bounded by decaying wood. The imitation of an ulcerating cancer may justify the use of the same name; but, in the canker of the trees, the central cavity usually indicates the beginning, not the advance, of the disease; for cankers, like most cheloids, are formed after wounds—whether from frost, or blow, or injury of parasite, or any other cause. Around these wounds, layers and bosses of wood are annually heaped-up, as if with an exaggeration of the process of repair, and with concentric growth they may close in and complete the likeness to the cheloid. But, more commonly, while the outer part of the canker is annually increasing, its inner part is constantly decaying, under the attacks of the parasites which the wound let in, and which plants seem to have no power to expel. Thus, within a kind of shell of laminated wood, outstanding like a tumour on the branch, you may find a great hollow space filled with rotten wood and other residues. It may look very like a mass of cancer with central softening and decay; and the likeness is even greater when, as not rarely happens, the central decay keeps pace with the formation of new wood. Then is formed what some call an open cancer, others gangrene or brand. In these, an uneven surface of rotting and dead wood is surrounded by an undulating, knotted, and everted or overhanging border of the wood annually formed, but in its turn destined to decay, and thus to imitate the constantly enlarging cancerous ulcer with its nodular uplifted borders.

It is impossible not to be struck by these likenesses between cankers and cancers; and I commend them to your study, though I fear they are much more apparent than real. The nearer, yet still distant, likeness seems to be that to cheloid growths; for these also appear as morbid troubled processes for repair, and they are so far like to tumours that no line of definition between them seems yet clear.

The growths in plants which may, I think, be deemed most nearly like to our tumours, are those which are called exostoses,* knours, or wens. They may, indeed, be regarded as only prominent examples of that disorderly growth of adventitious buds which produces the various strange and beautiful knots and veins in ornamental woods; but they are too like tumours for me to pass them by. You may find plenty of them on the trunks of the beech, hornbeam, ash, birch, holly, and cedar. The best specimens appear as ovate or nearly spherical masses of hard wood partly covered with bark, which is reflected on them from the continuous bark of the trunk on which they rest. They range from a few lines to many inches in diameter, and are attached sometimes broadly, sometimes by short narrow pedicles continuous with the wood of the tree. Some are without pedicles, and lie as free encapsuled masses in the growing wood.

In many of these conditions, there is a very strong resemblance between these growths and some of the bony exostoses after which they are named. Especially when one breaks them off the trunk of the beech, or the holly, or cedar, and sees their pedicle of attachment and the bark, like integument and periosteum, continued over them, one cannot but compare them with the narrow-based ivory-exostoses of the skull or the pedicled exostoses which are common on the femur and humerus, or with the sessile fibroid uterine tumours.

On section, they show themselves formed of very hard wood; and their pedicles appear as cylinders of wood passing from their centres into continuity with the normal wood of the trunk. Through these pedicles, while they last, the exostoses probably obtain some of their materials for growth; when detached, they wholly subsist and increase on materials derived from the cambium spread out over them. In this continued growth, when encapsuled, they resemble the typical tumours of our pathology more than do any other morbid growths on plants; and they may continue to grow so long as nutritive material is supplied to them.

Now, the history of these growths is very suggestive to us. They are derived from buds, which remain, as Trécul says, in a sort of lethargic state for several years, and then become active, and form either a little branch or a *loupe* or exostosis, which, in its increase, will project more and more beneath the bark. Surely, they may thus confirm that theory of tumours which regards those whose structure does not differ widely from the natural structures as growths derived from portions of germinal substance remaining, though one knows not why, for years "lethargic", and then becoming active, growing in their own method, and subsisting on materials derived from the living parts around them.†

Before I end, let me briefly say some things in apology and self-defence.

If I have seemed to speak as a botanist or any kind of naturalist, I have erred. It is more than forty years since I was a botanist, and any one familiar with the science as it now is may justly say that I know nothing about it. He may detect at once my ignorance even of the language in which I have tried to tell where, in the field of botany, good facts for pathologists may be found.

I have not tried to deal with the whole subject of the diseases of plants. It is far wider than I could learn, even if the duty of my life were not to study those of men. I have not tried to learn more from them than may help to give me, and perhaps you, a clearer and wider view of human pathology and the duties it imposes upon us.

In dealing with even this narrow range of the diseases of plants, and in referring to the vastly greater number of those which occur in them—especially in the plants which we, to our own not their advantage, cultivate—I may seem to have been giving evidence against belief in

* What is here said of morbid growths, and some of the deductions from the study of galls, were, for the want of time, omitted in delivering the address.

† See Arloing in *Ann. des Sc. Nat.*, 1874, tome iv, p. 27.

‡ Sorauer, *Handb. der Pflanzenkrankheiten*, 1874, p. 199, etc.; Göthe, *Ueber die Krebs der Apfelbäume*; Leipzig, 1877.

* Berkeley in *Gardener's Chronicle*, 1845 and 1857; Trécul . . . des Loupes et des Broussins in *Ann. des Sc. Nat.*, t. xx, 1853. An excellent account of the knots and veins of wood to which they are related is given by Frank; *Die . . . Maserbildung*, p. 344.

† I think that many examples of "club" on the roots and stems of cabbage and other species and varieties of the same order may illustrate the growth of tumours. But some are certainly insect-galls, and the parasitic origin of others is suspected.

the influence of nervous systems in the production and methods of organic diseases. I have had no such design against any reasonable belief of the kind; I have long held, and often declared, belief in the trophic influence of nerve-force. An alteration in the nervous force in a part can surely alter its method of nutrition, even without altering the condition of its blood-vessels, as much as an alteration of its temperature; and, to cite no others, the facts which Brown-Séquard and Hutchinson brought before us yesterday, tested as they have been, are beyond refutation. Only, let us learn from a pathology more nearly elemental than that which we can study in ourselves, that many processes of disease, even the most various, may occur when there is no nervous system; and that there are many processes of degeneracy, and of repair, and of disease, of which the essential features are alike whether in the presence or in the absence of a nervous system. The study of such processes in plants, and even in crystals, may help us towards learning the real relation between the nervous force and the processes of organic disease. A certain normal condition of nervous force abiding in each part accessible to it may be deemed a necessary condition of the healthy life of that part; as a certain normal temperature is a necessary condition, and perhaps even a certain electric state. But we are bound to recognise the distinctions between the conditions of life and the essential properties of living things; and, as I proposed when beginning, so now I hope I may have succeeded in showing that it will be very useful if you will study pathology in bodies less complex than our own, especially in such as are not subject to those conditions of our own elemental organic life, which are of all the most difficult to estimate—the conditions, namely, of a nervous system and a quickly circulating and quickly changing blood.

And now let me, only for a minute, claim the position of a senior in our profession, that I may tell how the study may be useful for something more than the direct advancement of knowledge.

I hold it to be very desirable that every one of us should, all his life long, study some science in a scientific manner. There seems to be no equally good method for maintaining the temper and the habits which, by making us always good students, will make us as good practitioners as we can be. There is no method so good for maintaining a constant habit of inquiry, with accuracy and perseverance in research, the power of weighing evidence, of calmly judging, and of accurately speaking; none better for cultivating the love of truth, the contempt for fallacies, whether others' or our own, the gentleness and courtesy which are appropriate to the consciousness of the imperfection of our knowledge.

You may say that we can study science in the practice of our profession. So we may: at least, some of those among us may, who, before getting into practice, spent many years in scientific pursuits, and acquired habits which it is very hard to lose; but, even for these, the study of science in their practice is too much like that which, I suppose, an astronomer may pursue in some stormy night on a railway-journey. For really scientific study, we need repeated observations in unchanged conditions, the right to watch deliberately the course of natural events, sometimes to change that course when and how we please, to set down our descriptions of the objects of our study, even while we watch them, sometimes to have them at home and readily at hand for revision and refreshment of memory. These and many other conditions for scientific study cannot be had in our practice, in which our first and never-ceasing duty must be to do, as soon as we can, all the good we can, though in doing it we may lose or spoil all the best opportunities of acquiring fresh knowledge.

If, then, I am thus far right, that we all are always bound to study a science in a scientific manner, and that it is very hard to do this in our practice, let me again commend to you this elemental pathology. In any fragment of it, studied in those fragments of time which we are all too apt to waste, you may find ample opportunities for observation and experiment, for recording, collecting, and comparing facts, for generalising, for imagining and testing; thus you may gain the happiness and reputation of discovery; and, without ever leaving the paths of duty, you may refresh and strengthen your minds in the study of stores of beauty, wonder, and utility, such as, in all ages, have attracted the wisest and the best of men.

BEQUESTS, ETC., TO MEDICAL CHARITIES.—Mr. John Skirrow Wright, M.P. for Nottingham, bequeathed £200 each to the General Hospital, and the Queen's Hospital, Birmingham.—The Hitchin Infirmary has become entitled to £50 under the will of Mr. Thomas Veasey of Baldock, and £300 further after death of his widow.—Mr. George Checkland of Hawkswick, bequeathed £100 to the Leicester Infirmary, and £50 to the Leicester Dispensary.—The Marchioness of Westminster has given £30 additional to the Royal Hospital for Women and Children.—The Great Northern Hospital has received £100 from "T. A."

THE DUTIES OF MEDICAL OFFICERS OF HEALTH IN RELATION TO THE PREVENTION OF DISEASE.

Being Abstract of an Introductory Address delivered before the Society of Medical Officers of Health.

BY JOHN S. BRISTOWE, M.D., F.R.C.P.,
Physician to St. Thomas's Hospital; President of the Society.

ANY intelligent layman, on becoming impressed with the fact that the mortality of a certain district was exceptionally high, would remark that the sanitary authority had neglected its duties, or its efforts had been paralysed by those on whom it devolved to carry his recommendations into effect. If it were shown to him that the deaths were due to diseases over which the medical officer of health had no direct control, he would probably acquiesce under protest, and take his final stand on the deaths from infectious diseases. Here, at any rate, he might say, How is it that the authorities have permitted so many deaths from small-pox, so many deaths from scarlet fever, cholera, diphtheria, enteric fever, measles, and whooping-cough? Here, surely, is evidence of neglect. I fear it would not be very easy to convince him that he was in error; and if he were convinced, he would say, I convict you of incompetence to deal with the essential matters of which sanitary science professes to take cognizance. I do not agree with his argument or conclusion.

I think it will be considered that sanitary science has done much to diminish the prevalence and mortality of at least three of these diseases. I mean small-pox, cholera, and enteric fever.

The practice of vaccination has reduced the mortality of small-pox, and the horror with which it was formerly regarded, to a degree which, at the present time, it is almost impossible to appreciate; and these benefits are maintained, even though weak-kneed politicians not only hesitate to make vaccination strictly compulsory, but actually seem to contemplate, in deference to ignorant and unreasoning prejudice, the granting (as Sir William Jenner puts it) of licences to contract and propagate the disease. But, much as vaccination effects for the prevention of small-pox, one cannot but deplore how utterly inefficient it is, as at present practised, to accomplish what was expected of it. As the law now stands, we have power to enforce a single effectual vaccination upon every infant, and nothing more; yet even this obligation may be evaded by any parent who chooses to pay a fine or undergo imprisonment. But all sanitary authorities are now agreed that, powerfully protective as one efficient vaccination is, there is a tendency for the protective influence to die out in course of years. It is essential for the maintenance of safety, that the operation be repeated at the age of puberty; and again, long experience has shown that even a second vaccination is not in all instances absolutely protective; and that, if it be required to check the disease effectually in a household of whom one is already suffering from it, the only effectual remedy is to revaccinate all those who are exposed to contagion. We have all witnessed how often, when small-pox appears in a crowded household, the disease spreads even to some of those who have been vaccinated; and yet it is a fact which is beyond dispute that, at the Small-pox Hospital, which has been established for nearly one hundred years, not one of the nurses has ever contracted the disease, because every nurse has to submit to vaccination at the time of her appointment. It is certain that, if infantile vaccination were made absolutely compulsory; if it were made absolutely compulsory that revaccination should take place not later than early puberty; and if, further, whenever small-pox has broken out in a house, revaccination were made compulsory on the members of the household, or with exceptions to be determined only by some competent authority, it is certain, I say, that such disappointing epidemics of small-pox as we have recently been battling with, would either never arise, or would be strangled in their birth. The carrying out of the Vaccination Act does not rest with us, and I do not pretend that we should administer this more effectually than it is done under the direction of boards of guardians; but it is, at any rate, disheartening that we, the officials on whom the public chiefly rely to prevent the outbreak and extension of epidemic disease, have no legal power whatever, when small-pox is raging, to enforce the only measure for its arrest which has any real efficacy.

With regard to enteric fever, again, sanitary science has made discoveries which are of great practical importance: that the poison of the disease is contained mainly in the alvine discharges of the patients who are ill of it; and that it is by the pollution of drinking-water and food by these poisonous evacuations that the disease is propagated. It

is largely for this reason that our present system of sewerage is superior to cesspools and middens; that the water of the water-companies is safer than that of superficial wells. These improvements have involved a diminution of enteric fever in London; and that enteric fever is the one disease in regard to which medical officers of health are directly serviceable, is beyond dispute. It is one that can be kept in abeyance by careful attention to sanitary conditions. I need scarcely call attention to the frequency with which enteric fever has been traced to adulteration of milk with impure water. In matters of this kind, the work which we accomplish is likely to be of great sanitary benefit.

The prevention of cholera constitutes one of the greatest sanitary triumphs; the fact that, when cholera has lately come amongst us, it has been strictly localised, is undoubtedly due to the sanitary measures that have been taken. I refer, of course, as regards London, to the almost complete abolition of superficial wells, and to the presence of a purer water-supply than that with which we had formerly to content ourselves. But what can be done for the limitation of cholera when it appears among us? No doubt, we can trace it to its source, and rectify that; and I doubt not, many would add, carry out the measures which have always been adopted, with reputed success, of establishing dispensaries for the treatment of premonitory diarrhœa. But I can see no reason whatever for believing that the progress of a case of cholera can be arrested by any form of medical treatment; the belief that cholera can be arrested in its early stage is a legacy of a former generation.

I do not think that we have any special proof that the contagion of diphtheria resides in the emanations from sewers. And, though we admit that typhus is largely fostered by overcrowding, and relapsing fever by starvation, there is nothing as yet to show in what way overcrowding or famine acts in these cases; and, at any rate, the preventive measures to be adopted when typhus or relapsing fever prevails, are only those that we should endeavour to enforce in the prevention of any other serious epidemic.

We have various powers of disinfecting the house and clothing, and of punishing the infectious person for the wilful exposure of himself in a public place. These powers we all put constantly in force, with much benefit to the public; but, unfortunately, owing to defects in the Acts, and to the apathy and antagonism of those whose duty it is to aid, our efforts are counteracted at every step. In the great majority of cases, no information, except in the case of death, reaches us; doctors and the family prefer to hush the matter up. But here, again, if the doctor at the proper time would only use the power given to him, of certifying that a house, or part of one, required disinfection, it would be the duty of the sanitary officer to see that it was carried out.

Passing from the subject of infectious fevers, I will briefly touch upon our relations to diseases of other kinds. Among diseases which kill, are inflammatory diseases of various kinds. What influences can we exercise upon the prevention of these? All the powers we possess are given us by the Local Management, Nuisance Removal, and some supplementary Acts. They comprise the effectual draining of houses and privies; the providing properly trapped and water-supplied closets; the securing (within certain limits) a sufficient and wholesome water-supply and apparatus; the providing of dustbins, and the periodical removal of the contents; the seeing that houses are in wholesome cleanliness and repair, and are properly ventilated. I am certain that damp rooms tend to cause rheumatism and inflammatory affections, and that the removal of dampness tends to improve the health of inmates in this respect. I am certain that foul walls and ceilings are injurious in many ways. But what, after all, is the influence of damp rooms, compared with that of daily exposure to cold and dirt and draughts on the doorstep and in the gutter? I might easily run through the list of nuisances, and show how, in nearly every instance, the beneficial effects which might be expected to follow from their abatement are neutralised or destroyed by the action, neglect, or habits of those in whose interest we are acting.

I take a very different view from that which most of my friends take with regard to the meaning of mortality-tables and the fluctuations of the death-rate. It is not that I undervalue the returns made to us by the registrars. I look upon them as invaluable guides to us in the performance of our duties; they yield us important information upon the distribution of diseases and the time of their occurrence; they give us early intimation with respect to epidemic outbreaks. But I regard them also as a tangled web of complex problems. It is easy, of course, to flatter ourselves, in the presence of a falling death-rate, that here is the proof of the beneficial influence of the sanitary labours we have been carrying on concurrently with it. I need scarcely remind you of the difficulties which attend the determination of the death-rate, especially in relation to a small area and district. It is necessary, in the first place, to form an estimate of the mean population for the year. Now, this can be fairly well ascertained for large populations like that of London, in which the fluctuations of one district are corrected by the fluctuations of another district; but the same rules do not apply to small places.

My last subject is the relation of medical officers of health to the vestries and district boards which employ them, or perhaps I should rather say, of sanitary officers to the bodies under whom they act and to the populations for whom they act. The wish has often been expressed, both privately and publicly, that the local authority which appoints should not have the power of dismissing the medical officers whom it appoints. I feel that, as regards the medical officers of rural combined districts, there is some justification for entertaining such views. There is no doubt that it is a very unfortunate thing, both for them and for the populations after whose sanitary welfare they are supposed to look, that the tenure of their office should be insecure, and that the duties they perform are thus rendered liable to interruption and neglect. But would matters be mended in the interests of the public, or even in our own, by making our appointments permanent? I think not. In the first place, if the salaries be not assured to us, we could as easily be got rid of, if it were thought necessary, by the diminution or discontinuance of our salaries as by direct dismissal; and, in the second place, when we consider how imperfect are the Sanitary Acts under which we work, and how specially difficult, therefore, it is to enforce this in the teeth of the active opposition of those who are in authority, and of the constituencies who place them there, it seems obvious that, with such opposition constantly in operation, our action might effectually be paralysed.

But I would ask my colleagues, How often have the vestries exercised their powers arbitrarily or unjustly in this respect? The truth is that, in the metropolis, the medical officer of health and the members of the vestry are brought into constant contact with each other; and it would be surprising, under these circumstances, if men of tact, of ability, of special knowledge, and having an honest determination to carry out the duties entrusted to them, did not, sooner or later, acquire confidence and respect.

As regards the general public, our duties are twofold. The one is to carry out the legal powers entrusted to us honestly, thoroughly, yet with discrimination; the other is to use such moral influence as we possess for the furtherance of the objects of the appointments we hold; and I am sure it will be admitted by all officers of health that much more can often be effected in this way, than by straining the legal powers vested in us to the utmost.

Our position in relation to the medical practitioners of our districts is a difficult one. To a considerable extent, they look with suspicion upon us; and, at any rate, very few cordially co-operate with us. It clearly behoves us not to do anything to justify any attitude of this kind; not to interfere in any way (as I admit has occasionally been done) with the due relations between them and their patients; to treat them and their opinions with proper respect, and never to do anything to injure the position they hold in relation to the public. But, on the other hand, I venture to think they often might—and in some instances I know they purposely do not—utilise the machinery provided by the vestry for the disinfection of houses, bedding, and linen, and the prevention of the spread of infectious disease. It may be contended that they should be remunerated for the information thus required of them. I confess I do not see it. They should utilise, not so much for the general good as for the benefit of their patients and in their own interests, the machinery which by law is at their disposal. I do not refer to the question of the compulsory registration of infectious diseases.

In conclusion, I have to reiterate what I have already asserted in other words: that the position which a medical officer of health holds in his district depends mainly on himself. It is not the law which he administers that gives him the chief power for good, but the moral influence he acquires amongst those with whom and for whom he acts. I need not look beyond my audience for conspicuous examples of the truth of my assertion.

SOUTH DURHAM AND CLEVELAND MEDICAL SOCIETY.—The annual meeting for the election of officers took place on Tuesday, October 12th, at the Stockton Hospital, when the following were chosen for the year 1880-81. *President:* R. W. Foss, M.D. *Vice-Presidents:* G. Middlemiss; W. J. Williams, M.D. *Committee:* J. R. Fothergill, M.D.; J. Farquharson; T. R. Pearson, M.D.; C. Young, M.D.; J. Rawlings; J. W. Eastwood, M.D.; J. E. Peacock; J. A. Malcolmson, M.D.; Robert Smith, M.D. *Honorary Secretary:* J. R. Morison, M.B.

THE Norwich Guardians have increased the salary of Mr. Frederick C. Bailey, M.R.C.S.Eng., as medical officer to the workhouse, from £120 to £150 per annum.

ON A CASE OF RECOVERY FROM ORGANIC BRAIN-DISEASE.*

By J. HUGHLINGS JACKSON, M.D., F.R.C.P., F.R.S.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed.

THE case I have to bring before this society is one of great practical interest as regards both diagnosis and treatment. In one sense, it must be unsatisfactory, as there is no completion by necropsy. I do not ask anyone to believe that there is or has been local gross organic disease. We learn from the case, however, that a patient may recover from an exceedingly grave symptomatic condition which is often fatal, and such an one as usually does depend on local organic disease. Besides, although incomplete in one way, the case is complete in another, in the very pleasant way of recovery—temporary recovery, at all events. I speak of local gross organic disease. I add the adjective gross, as I do not believe that there is such a thing as a symptom independent of organic change, although of course I admit that the changes may be slight and recoverable, or that they may be undiscoverable *post mortem*.

I read a heading giving the most important symptoms of the case, mentioning some which may not be part of the ailment for which she was treated, and also certain symptoms conspicuous by their absence. The notes of the case were taken by Dr. J. R. Jones and Mr. Sheard.

CASE. *Supposed Hysteria. Double Optic Neuritis, with nearly complete Amaurosis: Severe Headache: no Vomiting: Loss of Smell: No Pertussis: Reeling Gait: Absence of Patellar Tendon-Reflex: Doubtful Lightning Pains; Recovery under Iodide of Potassium and Mercurial Inunction, except for Anosmia and Absence of Patellar Tendon-Reflex.*—Annie L., aged 22, was admitted into the London Hospital, December 22nd, 1879. She was well nourished. She had no disease of thoracic, abdominal, or pelvic viscera; and, when she came round from the miserable state into which she had fallen up to the date of her admission, she was found to be very intelligent, and also cheerful. Her family history, so far as we could get to know it, presented no noteworthy features. Her menstruation was regular, and always had been. There was "a good constitution", an important thing in a case requiring "vigorous treatment". We obtained no evidence of syphilis, although no direct questions were asked her on this matter. The following is the history of the case.

History.—In August 1878, a butcher's cart ran over her, but her legs only were hurt, a little above the ankles; there was a wound of one of them, of which the scar persists. She went into domestic service in May 1879, being at that date quite well, except for what she called a weakness in her legs; she bandaged them up to her knees "for support". The so-called weakness slowly increased; two days before admission, she could not stand at all, and took to bed. During the week before admission, there was a weakness of the right arm, which would go and come; afterwards, "pins and needles" in this limb; and then weakness of her left arm set in. Her sight began to fail two or three weeks before admission. She was sent in for hysteria.

Symptomotology.—The following is the symptomotology of the case on the girl's admission, and for some time afterwards. The symptoms may be divided into, 1. Those which are the best evidence towards the diagnosis of gross local organic disease within the cranium; 2. Symptoms which localise.

There may appear, at first glance, some inconsistency in the wording of these last two remarks. There is in reality none. From certain symptoms—those in the first list—we often do conclude correctly that there is local gross organic disease, and yet are unable to say what the locality is. Then as to localising symptoms; we may feel sure that a certain symptom localises, although we may not know to what locality it points. If a man has had a hundred seizures of epilepsy, each beginning by a noise in his left ear, we may be confident that the "discharging lesion" is of some particular part of his central nervous system, although we may not know what that part is, and may not discover morbid change anywhere *post mortem* (it is true enough that, from Ferrier's experiments, we should, in the particular case instanced, have [illegible] for inference). If local symptoms do not imply local lesions, localisation is a dream.

[illegible] Gross Organic Disease: *a.* Double Optic Neuritis (with more perception of light). *b.* Intense Headache. It is important to note the absence of symptoms. She had not a third symptom, which often goes with optic neuritis and intense headache; there was no vomiting. An examination of her eyes was made by Mr. Couper, January 7th. They were examined by myself and my assistants; but Mr. Couper's examination is more valuable, as well as more authoritative, than mine. "*Left Eye.*—Great œdema and swelling of disc, with large blood-extravasations. The œdema extends some distance into the retina, adjoining to the disc and macula, giving to the retina there an opaque, yellowish-grey, mottled look. The macula stands out as a deep blood-red patch, the surface of which is obviously cupped as regards the adjoining retina. The macula is emmetropic, the most prominent part of the disc hypermetropic. Although the swelling of the right disc is more than that of the left, the œdema of the adjoining retina is much less; the natural colour of the choroid is seen all round the disc. The chief alteration at the macula is the atrophy of its pigment, which makes it difficult to recognise by its pigmentation; and this difficulty in finding the macula is increased by the patient being blind. The sides of the disc form an abrupt declivity towards the retina. There are numerous hæmorrhages, somewhat radially arranged. The retinal veins are large and tortuous, and the tortuous arrangement is traced far out towards the equator (similar changes, although less in degree, are traceable in the veins of the left disc and retina)." *c. Anosmia.*—On her recovery, we ascertained that smell was entirely wanting; she averred that she used to smell things well before her illness. I do not know whether anosmia is in her case a localising symptom or not. I do not know whether it may have been owing to pressure, direct or indirect, on the olfactory bulbs, or, what is quite hypothetical, to an olfactory neuritis.

To anticipate for one moment: it seems most likely that in this case there was, and may be still, tumour of the cerebellum. In a few cases of tumour of the middle lobe of the cerebellum, I have found loss of smell; but in those cases there was enormous increase of intracranial pressure by effusion of fluid in the lateral ventricles, and this is not likely to have been so here. Although she said she could smell well before her illness, we must not be sure that she could. We know that some patients are unaware of any such loss; they often think it is their taste which is defective.

2. *Localising Symptoms. a. Absence of Patellar Tendon-Reflex.* This is an exceedingly important symptom, especially so since her gait was abnormal, and yet not ataxic, nor, I may say at once, paraplegic either. We examined into this matter with very great care, as did also my colleague Dr. Stephen Mackenzie. I put it in the list of localising symptoms, because (since the researches of Westphal and Erb) I believe it to be in many cases a very valuable help to the diagnosis of sclerosis of the posterior columns—the pathological condition for tabes dorsalis, or, as it is commonly and yet inconveniently called, locomotor ataxy. This reflex was still absent when she left the hospital (March 23rd). It may have been absent long before she had the other symptoms. Of this matter, by the nature of the symptom, we could, of course, know nothing. *b. Pains in the Limbs.* At one spot a little above the left knee, she had occasionally a dart of sharp pain, followed by dull aching; it would come and go. She had no severe pain except in the head. We inquired about pains in her limbs, on account of the absence of patellar tendon-reflex; but I cannot affirm that the pains were the characteristic pains of tabes dorsalis. It is well to mention, as Pierret and Buzzard have pointed out, that there may be "lightning pains" about the head in tabes. Her head-pain was not of this character. *c. Reeling Gait.* We noted her gait most carefully. On admission, she could scarcely walk at all, and not without help. Her gait, then, so far as it could be observed, was not like that of locomotor ataxy. As she improved a little, we could analyse it better; it was evidently a reel—a drunkenlike walk. She swayed from side to side; tended to fall forwards or backwards; one leg would cross in front of the other. Shutting her eyes at these trials could make no difference, as her sight was almost *nil*. She had apparently good power in her legs. Using popular and, as I think, inexact language, there was disorder of co-ordination without paralysis. *d. Other Symptoms.* There was some slight weakness of the left arm; only a very slightly feeble grasp. These symptoms were very slightly marked indeed. There was some tenderness of the lower part of the spine. No very local tender spinal spot was revealed by a hot or a cold sponge, or by manipulation; there was no spinal curvature. There was no atrophy of any muscles, and no defect of sensation. There was no vesical trouble of any kind.

Progress: Rapid Recovery.—We prescribed at first five grains of iodide of potassium three times a day; but on January 4th mercurial inunction was ordered in addition. (The dose of iodide of potassium was smaller than I usually give in such cases.) Under this mixed treatment, she rapidly improved. From what was practically blind-

ness, she became able to read, on January 26th, No. 1 of Snellen, the smallest of test-types, at six inches, with her left eye; but with the right only No. 3. On the day she left the hospital (March 23rd) she could read No. 1 very easily with the left eye, and could read it with but slight difficulty with the right. Practically, her sight was quite good. She felt quite well; and, except that patellar tendon-reflex was still absent, and that she could smell nothing, we considered her to be entirely free from symptoms. A second ophthalmoscopic examination by Mr. Couper (January 31st) showed remarkable clearing up of her optic discs. "*Left Eye.* No swelling of disc; vessels of normal size; sheaths much thickened both on disc and on adjoining retina; choroidal margin of disc indefinite; disc pale and intranslucent. These appearances are consistent with great increase of connective tissue. The pigmentation of the macula is generally good, except that there is an irregular circlet of minute pale punctiform patches there. There are other similar pale patches between the macula and disc, and all of these are probably produced by partial choroidal atrophy. *Right Eye.* Disc as pale as left, and with probably more connective tissue change. Sheaths of all large vessels much thickened. The positions of the finer vessels are concealed as they dip backwards into the substance of the disc. The connective tissue change spreads a little way into the retina, giving a 'woolly' edge to the disc, and obscuring its choroidal boundary. There is some atrophy of pigment at the macula; the groups of minute punctiform patches are more numerous; and there is more general defect of pigmentation. The rest of fundus in each eye normal." Mr. Couper adds: "There is nothing pathognomonic of specific disease in the changes now seen in each fundus. At the same time, the circular shape of the little atrophic patches resembles that often seen in specific disease of the choroid."

I have already placed the symptoms in two groups, but, in remarking further on the case, I shall consider some of them in other particular relations. By doing so, I shall have to consider the same symptom several times, and yet from a different standpoint each time. I also speak of some collateral topics necessary to be considered in scientific diagnosis.

Remarks on Symptoms.—Hysteria.—Importance of Routine Use of the Ophthalmoscope in Cases of Brain-disease.—This patient was sent in for hysteria. I say nothing in blame here. Such a diagnosis has been made in the early stages of serious, and sometimes fatal, cases of brain-disease, by the best clinical observers. Diagnosis in the earliest stage of severe intracranial disease is often very difficult indeed. In this case, the affection of sight might possibly, until it became lost, have been put down to hysteria. The ophthalmoscope would have shown optic neuritis doubtless long before sight failed, and thus that the case was, if the girl were hysterical, something more than one of hysteria. Several times have I known the diagnosis of hysteria refuted by the discovery of optic neuritis. I have several times been helped to a correct diagnosis by finding double optic neuritis in patients whom, before ophthalmoscopic examination, I had supposed to be either hysterical or hypochondriacal. We must never forget that this condition in the fundus oculi may exist for a long time without any defect of sight. Although optic neuritis is spoken of as a symptom, it is really a visible pathological condition, with which there may or may not be the symptom defect or loss of sight.

I may at this juncture most conveniently mention the case of a young member of our own profession, who, some years ago, consulted me for severe headache and double optic neuritis (he had caught syphilis at a midwifery case). Later on, he attended a meeting of this society, seeing perfectly well. He had still double optic neuritis, and was examined by several people. He was examined by Mr. Brudenell Carter, Dr. Buzzard, and Dr. Broadbent; all agreed that this patient, who could see well, had well-marked double optic neuritis. Later, he became paraplegic; ultimately he recovered, and now feels and looks perfectly well. He never had any defect of sight of any kind. This I believe to be a case of recovery from organic brain and spinal disease of syphilitic nature. My impression is that optic neuritis is nearly always present in a very marked degree before sight fails, and as this medical man's case shows well it may not fail at all. In the girl's case, the subject of this paper, neurites might, I believe, have been discovered long before sight even failed. Indeed, it is commoner for us to see in the medical wards, optic neuritis with good vision, than with even impaired vision. Very rarely do I, a physician, see cases of loss of sight with optic neuritis, almost never, if those patients sent to me by ophthalmic surgeons be excepted. If we find optic neuritis either with or without defect of sight, we may be certain that the case is not hysteria—not hysteria only I mean—for plainly, a woman with symptoms of organic brain-disease may be hysterical.

Optic Neuritis and Headache.—I have so often spoken of these symptoms that I will say little now. They are the best evidence of local gross organic disease within the cranium. This statement implies that they are not decisive evidence of such disease. I have published many cases of intracranial tumour with optic neuritis, and I have published a case of optic neuritis without any sort of local gross organic disease inside the head. My colleague, Dr. Stephen Mackenzie, has recently published such a case.

Tabes Dorsalis?—This diagnosis was in no way tenable, at any stage in which we saw the patient, as an explanation of the whole case. The comparatively rapid onset of the difficulty in walking, the quickly reached climax, inability to stand, and prompt recovery on treatment, show that this was not a case of tabes dorsalis. Again, the gait was not that of such disease. Moreover, the sex was not masculine, as it is in most cases of tabes dorsalis. Further, whilst defect of sight from simple atrophy of the optic nerves is not very uncommon in tabes dorsalis, optic neuritis does not, so far as I yet know, occur as part of the process of that disease. Atrophy follows neuritis in some cases, but nearly always it is ophthalmoscopically to be distinguished from that occurring in locomotor ataxy; moreover, while sight does not return in atrophy of the optic nerve in tabes, it came back under treatment in this case. Nevertheless this woman had one symptom which is often of great value in helping us to the diagnosis of tabes dorsalis. There was no patellar tendon-reflex. This is the only thing pointing to disease of her posterior columns, except the somewhat indefinite account of pains in one part of one of her thighs. The absence of this reflex is a very important symptom. We owe a deep debt of gratitude to Westphal and Erb for their discovery of its significance, and for further researches on the matter to Grainger Stewart, Buzzard, Russell, Byrom Bramwell, and Gowers; and here I gladly acknowledge that I have learned much about this symptom directly from my colleague, Dr. Buzzard. So very rarely is this reflex present in tabes, either in the developed form of the disease, or in cases of lightning pains, or in simple atrophy of the optic nerve before gait is abnormal, that I think it very likely that this woman's posterior columns are diseased, although, as I say, I do not think the other symptoms are attributable to any pathological change there seated; at any rate there must be some break in the loop betwixt her patellar tendon and her quadriceps; for as a certain kind of reflex action is absent, there must be a flaw in at least some one of the parts subserving it—tendon, afferent nerve, centre, efferent nerve, or muscle to be moved. There is an omission to be acknowledged, I can find no note of the condition of the pupils. It is known that in many, if not in most cases of tabes, the pupil does not act to light, and yet usually acts somewhat during accommodation (Argyll Robertson's phenomenon). Buzzard and Erb have suggested that the loss of reaction of the pupil to light is analogous to loss of tendon reflex.

Atrophy of the Optic Nerves and Absent Patellar Tendon-Reflex.—This woman's optic nerves are doubtless a little damaged by the past neuritis; a few fibres are no doubt lost, although the defect of sight is insignificant. We cannot suppose that the severe pathological condition of the nerves observed by Mr. Couper, on January 7th, did no permanent damage at all. But if there remained great defect of sight, and if there were conspicuous atrophy, the changes in the disc, as Mr. Couper describes them on his second inspection, are those after a neuritis; any one would infer that, who knew nothing more of the case than from reading his examination of January 31st. I have now seen a number of cases of atrophy of the optic nerves with absent patellar tendon-reflex, and with lightning pains in the legs, but this is the first time I have known that reflex absent with optic neuritis, or with atrophy after it. The atrophy which may precede, go with, or occur late in cases of tabes dorsalis, is simple, is non-inflammatory; there is, at any rate, nothing usually called inflammatory. I asserted that the optic atrophy in cases of tabes dorsalis differed from that after optic neuritis fifteen years ago (as others abroad had done before me), and was met with some contradiction.*

Reeling Gait.—My opinion is, that the abnormal gait was owing to disease of the cerebellum. It is not, however, of much use speaking of localisation of disease in a case with the complications mentioned, where there is no opportunity of verification or disproof of diagnosis. I do not underrate the symptom, because I do not here comment on it. I read a paper last session describing the case of a patient who reeled, and who died of cerebellar tumour (*Lancet*, January 24th, 1880).

Nature of the Disease and Effect of Treatment.—Whatever the pathology of the case may be, it is quite certain that the patient had the symptoms which are the best, although not decisive, evidence of gross disease of some part of the encephalon. She had another symptom—the reel—which, in chronic cases without ear-disease, nearly always, if not always, points to disease of some part of the cerebellum. It may be asserted that, since antisyphilitic treatment was followed by re-

* See *Lancet*, June 10th and August 26th, 1865; and *Medical Times and Gazette*, September 1st, 1866.

covery, the disease was syphilitic. This inference is by no means valid. There was no evidence of syphilis, except that of which Mr. Couper speaks doubtfully after making his second ophthalmoscopical examination. I do not say that there was not syphilitic disease. All I deny—and I deny it strongly—is the assertion that recovery from such symptoms after antisyphilitic treatment points necessarily to recovery from syphilis. It is certain that recovery for a time from grave conditions, with intense headache and double optic neuritis, occurs when subsequent *post mortem* examination shows local gross organic disease of other kinds than syphilis. I treated her energetically for syphilis, partly on the chance of syphilis being present. I should, however, have adopted the same treatment could I have been certain that there was no syphilis. For the optic neuritis in this case, and, no doubt, the pathological condition for some other symptoms, as in cases of undoubted local gross disease of the encephalon, are secondary change; optic neuritis is, I think, amenable to treatment, whatever kind of gross local organic disease leads to it.

Here, urging the thing *ad nauseam*, as I have been doing for very many years, I repeat that optic neuritis may exist with good sight; and my impression is that, if found in an early stage, iodides or mercurials would prevent sight from failing. I know that the changes often clear up under treatment. That they would not without I do not know, as I never run the risk of not using either the iodide of potassium or mercury, or both. Nevertheless, my impression is that there would be fewer blind people if, by routine use of the ophthalmoscope in cases of severe headache, optic neuritis was discovered early and treated promptly.

Everybody knows that there may be an abscess or a tumour in the brain of a patient who has no symptoms which lead him to seek medical advice, and that we sometimes find local organic brain-disease, which, during life, we never suspected. It is certain, too, that a patient may have an acute illness from local organic brain-disease, and recover—usually, but not always, with some incapacity, mostly defective sight. (Children with atrophy of the optic nerves are brought to us, with the statement that they became blind during "bilious" or "gastric" fever.) These recoveries, partial or complete, or recovery to good general health, are sometimes put down as so much recovery from meningitis. Without denying that meningitis is the cause in some, I believe they are more often recoveries from acute illness dependent on local gross organic disease. I know some of them to be so. We had a man under care in the London Hospital for severe headache and optic neuritis, who got quite well to all appearance; his sight had never been affected. He was about the wards, and read the newspaper regularly. One day he had hæmorrhage from a brain-tumour, and died. Very many years ago, there was under my care a boy who had an acute illness, with severe headache and optic neuritis, who recovered, except that the sight of one eye was much impaired. He was well enough to attend as an out-patient in the ophthalmic department at Guy's; but later on, brain-symptoms appeared again. At this juncture the case diagnosed itself: a tumour, cancerous, opened its way through the base of the skull into the mouth; we saw the rest of it inside the head *post mortem*.

The statement that there could not be tumour in a case of recovery, at least temporary recovery, from the symptoms alluded to, is a theoretical one. The fact is, that recovery does follow when there is tumour. Whilst we may not like to affirm that the girl whose case I have related has still intracranial tumour, still, he would, I submit, be a very rash man who would say she had not.

I will mention, too, that tumour may exist for years from the first symptom. A patient of mine had epileptiform seizure limited to the right arm for about six years. He had then no headache, and no neuritis. These symptoms come on later; he died, and tumour of the brain was found. I have seen a boy about seven years before he died with tumour of the middle lobe of the cerebellum for double optic neuritis (with good vision) and reeling gait. In fact, the boy was killed; he had meningeal hæmorrhage from a fall. I may mention that a correct diagnosis was made in this case at the very first by my friend Dr. Young of Aldershot.

Absence of Deafness.—It is very remarkable that, whilst blindness is common in intracranial disease, deafness is rare. (We are not speaking of cases where deafness depends on organic disease of the ear, and in which the ear-disease causes cerebral or cerebellar abscess or meningitis. Most of them are cases of "bone-disease" causing intracranial disease, not of deafness resulting from intracranial disease.) I think that persistent deafness of nervous origin, in a case of intracranial tumour, is a localising symptom; that it points to disease involving or compressing, directly or indirectly, the auditory nerve. I would not deny, however, that disease of Ferrier's auditory (cerebral) centre on both sides might entail some deafness. With this exception—and I have yet not seen such a case—deafness of nervous origin has an entirely different diagnostic value from amaurosis from optic neuritis. The former may be of localising value, the latter never is. The former, by itself, is of no value as to kind of brain-disease; the latter, by itself, is of much value towards the diagnosis of local gross disease.

ON ANTHRAX AND ANTHRACÆMIA IN WOOLSORTERS, HEIFERS, AND SHEEP.*

By JOHN H. BELL, M.D., Bradford.

FOR nearly forty years it has been known in the worsted district around Bradford, that sorters of alpaca and mohair not unfrequently died from a peculiar and rapidly fatal disease, the cause and nature of which were not understood. Although unaccountable, the deaths were generally certified as from ordinary forms of disease. Many deaths from this disease were not recognised as such, and, when they were, single deaths with some weeks' interval were not much noticed; but, when three or four occurred within as many weeks, of men working in the same room or for the same firm, the sorters became alarmed; public interest was excited; *post mortem* examinations, investigations, reports, and recommendations followed; but all ended without any satisfactory result. The number of deaths increased in proportion to the quantity and quality of these materials which were used. It appears strange that, during all this time, the knowledge of the existence of this disease should scarcely have passed beyond the immediate neighbourhood of Bradford; or that it has not been detected in other towns, where similar wools and hairs are used. I believe it will be found, if looked for, not only among hair- and wool-sorters, but also among other workpeople who are known to suffer occasionally from anthrax or malignant pustule, which is the external form of this disease.

My attention was first directed to this disease three years ago, in consequence of a man whom I knew well dying within seventeen hours from the apparent commencement of his illness. He was at work in the morning; but, feeling weak, left during the forenoon, walked two miles and a half to his home, went to bed, had no rigor, cough, pain, vomiting, or purging—only a feeling of exhaustion, with quickened breathing, low external temperature, and collapse, terminating in death the same night. Since then, in consequence of repeated and positive statements in the local papers to the effect that these deaths might easily be prevented, several inquests have been held on some who have fallen victims to the disease; juries have made recommendations to employers; public attention has been aroused; numerous paragraphs and cases have appeared in the medical periodicals; the Local Government Board have sent down Mr. Spear to investigate and report upon it; the Bradford Medico-Chirurgical Society have appointed a commission to inquire into the causes, nature, prevention, and treatment of this and other allied affections; and Professor Greenfield is doing important work in his special department; so that by-and-by we expect to have full and reliable knowledge respecting it.

During the last few months, I have seen several cases of external anthrax in persons who have come into contact with mohair or dry wools. This has not previously been associated with "woolsorters' disease"; it is, however, the local or external form of this disease, and is caused by the introduction of the poison at the part affected. The constitutional form of anthrax, as it affects woolsorters, is not generally attended by external or internal pustule. It is a general blood-disease, caused by the introduction into the circulation of the spores of the *bacillus anthracis* derived from the fleeces of animals which have died from this disease. As there is no anthrax, I have called the disease anthracæmia. It is sometimes epizootic in the countries where these hairs and wools are grown. It affects persons who come into contact with the animals; but their illness and rapid death are not attributed to this cause. The blood of a person suffering from woolsorters' disease or anthracæmia, when injected under the skin of a rabbit or other animal, produces death in two or three days; and the blood of these, when examined shortly after death, sometimes swarms with the bacillus anthracis.

As illustrations of different forms of woolsorters' disease, I will mention very briefly some cases which have come under my notice during the last two months.

Case 1. External Anthrax without Constitutional Symptoms.—J. G., aged 36, for three months had been sorting Persian and Bokhara wools. On Tuesday, June 15th, he noticed a small pimple or heat-spot on the outer surface of the left arm, over the elbow-joint. On the fourth day, it was inflamed and painful. On the seventh day, there

* Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Cambridge, August [illegible].

was a bulla one inch in length, three-quarters in breadth, with an irregular outline and a dark-coloured base. For an inch and a half surrounding this, the tissues were hard. The skin was inflamed upwards to near the shoulder, downwards to near the wrist, and extending two-thirds round the arm. He did not complain of feeling ill. Pulse 68. He slept well, took his food as usual, and walked out about home. Two days afterwards—that is, on the ninth day—the bulla had gone, and a black eschar remained; but surrounding this was a rim of small vesicles, which disappeared in a day or two. The inflammation rapidly subsided, and the eschar separated. When convalescent, his pulse was 68—the same as when the arm was most inflamed. Fluid taken from the bulla on the seventh day contained a few bacilli. Tubes were sent to Professor Greenfield, who reported that "inoculation with the clear serum produced anthrax in a guinea-pig, which died fifty-four hours after inoculation". Blood taken from the indurated tissue immediately surrounding the eschar did not appear to contain any bacilli, and immediate inoculation with it failed to produce any effect.

CASE II. *External Anthrax with Severe Constitutional Symptoms.*—W. E., aged 15, was employed about a mill where mohair was used, which had recently been fatal to several sorters. On June 23rd, 1880, during dinner-hour, he went into the sorters' room to see his brother, and, feeling tired, lay on some Van mohair. Two days afterwards, he experienced a slight tickling sensation on the left temple; and on the seventh day a small pimple appeared. The eyelids, side of the face, and neck were much swollen. He went to work, but could not continue it. On the ninth day, he was very ill, and Dr. Logan of Bingley was sent for. He had then a vesicle of the size of a sixpence, with dark base, on the left temple, one inch from the external canthus; much swelling of eyelids, parotid and submaxillary glands. Pulse 130, with delirium. In a few days, the severe symptoms declined; the swelling gradually subsided, and the eschar separated. This local form of anthrax in woolsorters and others who come into contact with hairs and wools is rare; but fatal cases have recently occurred. The more common form of "woolsorters' disease" has no local manifestation; but, as it is produced by the same material as anthrax, I have called it anthracæmia. When the poison is introduced through the lungs, it produces pulmonary anthracæmia; when through the alimentary canal, it produces enteric anthracæmia.

CASE III.—J. G., aged 49, a mohair-sorter, on July 17th got wet, and thought he had taken cold, as during the following few days he felt sickly, and his bones ached. On July 22nd, he left work about noon; went home to bed; said he ached all over. He had no sharp pain, but had slight cough, some expectoration, oppression at the chest, and did not sleep much. The following morning, he sent for his doctor, who visited him at ten o'clock. He was perspiring freely; pulse small, rapid, and intermitting; hands cold; mind clear. He died about noon, twenty-four hours after leaving work. A *post mortem* examination of the body was made by Mr. Spear, the Medical Inspector of the Local Government Board. Bacilli were found in the blood and other fluids.

CASE IV.—S. F., aged 33, a mohair-sorter for the same firm as the man whose case I have just given, on July 25th, 1880, complained of being unwell, and said he had an aching pain across his chest. On the second day, he was easier, but had a slight cough. On the third day, he was seen by several doctors, some of whom thought he had a little pneumonia, but certainly not "woolsorters' disease". Pulse 130; respirations 24; temperature 101.6°. Lungs fairly resonant; right somewhat duller than left; vesicular sounds subdued and distant; no bronchial or moist sounds. He died twelve hours afterwards. A *post mortem* examination of the body was made twenty-nine hours after death. The external discolorations peculiar to blood-poisoning were present. The right side of the chest contained four pints of clear, pale, straw-coloured serum. The posterior part and base of the right lung were inflamed; the bronchial glands on the right side much enlarged and soft, containing fluid of a dirty colour. The mucous membrane of the trachea was of a dark claret colour. The pericardium contained six ounces of fluid. The valves of the heart and the lining of the large vessels were stained of a bright cherry-red colour. There were no decided subserous blood-spots, but some ecchymoses. The spleen was somewhat larger and softer than natural; other viscera normal. Blood taken from the finger twelve hours before death did not appear to contain any bacilli. None were found in serum removed from the chest by hypodermic syringe twelve hours after death. Fluids removed at the *post mortem* examination were found to contain very numerous non-motile bacilli.

I must now conclude with a word or two on anthracæmia from mohair in heifers and sheep.

At a village in the neighbourhood of Bradford, where several sorters have lately died from woolsorters' disease, the hot water or sud after washing the mohair is run into tanks and neutralised by sulphuric acid, to extract the grease. The water then passes into the common drain of the village, and is utilised to irrigate some fields near.

During the second week of May last, five healthy heifers (of a herd of twelve), which had been in adjoining fields for the previous three months, were turned into the sewaged pastures. In about three weeks, one of them died after a few hours' illness; and three others were ill, but recovered. The sewage was suspected; four other heifers were added, and they were allowed on the sewaged fields twelve hours daily. On June 29th, the remaining heifer of the first lot which had not been ill died suddenly, after a short illness. They were then all removed from these pastures; and on July 4th, six days after removal, a third, which had not been previously ill, died similarly. During the same period, several sheep were found dead in the fields.

Post mortem examinations were made of several of the carcases of the heifers and sheep. The blood and fluids were found to swarm with the bacillus anthracis, the spores of which are supposed to have been derived from the mohair, and conveyed with the sewage to the land. They then gain access to the alimentary canal with the food and drink, and develop what I have called enteric anthracæmia, because the pathological changes are mostly found in the intestines and spleen.

CASE OF IMPERFORATE RECTUM, WITH A SUGGESTION FOR A NEW METHOD OF TREATMENT.

By NEIL MACLEOD, M.B.Edin., Shanghai.

A FEMALE child was born May 26th, 1879, apparently well developed, of rather a deeper pink colour than usual, and weighing 5¾ lbs. On the following day, the bowels not having moved, a probe was passed into the anus, which was found to communicate with a *cul-de-sac* about half an inch in depth. The probe was then passed into the vagina for nearly two inches; it could be moved about with freedom, and felt readily from the anal *cul-de-sac*, where the rectum should have been. There was no bulging in the perinæum. The child had passed urine of natural colour several times since birth, and did so during the examination, when also a thick, white, mucus-like material was seen to issue from the vagina, the orifice of which was large enough to admit the tip of the finger, and surrounded by a thick fringe of mucous membrane, which was all that was present for a hymen; the bony outlet of the pelvis seemed natural. The abdomen was slightly distended, and perhaps more so in the left iliac region than elsewhere, and there was no tenderness. The child had vomited two or three times, the nurse said, a clear stuff like mucus, and cried but little. Dr. Little saw the case in consultation, and agreed with me as to the advisability of operating at once. With his assistance, therefore (on the afternoon of the same day), the child having passed urine during the examination made immediately before operation, I made perineal exploration for the rectum, cutting carefully in the middle line to a depth of an inch and a quarter without being able to feel with the finger anything like a bulging loaded bowel. The wound bled freely; a plug of carbolised lint was inserted in it, when the oozing ceased. I then performed Littré's operation, with complete antiseptic precautions. Two vessels in the abdominal wall bled freely, and were tied with catgut. When the peritoneum was opened, about half a drachm of clear serum escaped, and a piece of bowel presented itself, healthy, distended, fluctuating, and crossed transversely by several large vessels. Careful exploration was then made with the finger, which passed down as far as the pelvic brim along the bowel, and round what appeared to be the end of it, forming a *cul-de-sac*, from the corner of which, near the middle line, a thin cord-like body dipped into the pelvis behind and fore from the uterus. Sutures were then passed through skin and gut, one on each side forming a loop, with a bite of fully half an inch of both skin and bowel, and there being held tight. On opening the bowel between, meconium could not find its way into the peritoneal cavity. The sutures were then fished out of the bowel with a blunt hook, cut, tied, and a few more applied. A large quantity of fluid meconium escaped. Carbolised sponges, gauze, etc., were applied to the wound. Though the child had lost a quantity of blood during the operation, and evaporation from the spray had cooled the surface considerably, it presented a natural pink hue. The child was then wrapped in cotton-wadding, the nurse being ordered to keep it very still, and to give it by spoon milk supplied by a wet-nurse. Four hours afterwards, I found the child blanched and pulseless, bleeding having taken place from the abdominal wound, the nurse meanwhile carrying and swaying the child in the arms. On removing the dressing, the bleeding, which had taken place from the wound in the groin, had ceased, and the abdomen was flattened considerably by the escape of a large quantity of meconium. The child

had taken several spoonfuls of milk, and had not vomited. Death took place nine hours after the operation, early the following morning, more meconium having escaped, but no further hæmorrhage.

Necropsy, fifteen hours after death, permission having been obtained with difficulty to examine only the abdomen.—The wound in the groin looked healthy; the peritoneal cavity was perfectly free from any trace of inflammation, blood, or meconium. The perineal wound did not communicate with the peritoneal cavity. The rectum was completely imperforate, being represented by a slender impervious fibrous cord running down from the descending colon, almost in the middle line, into the pelvis behind the uterus, and attaching itself to the posterior wall of the vagina opposite the os uteri. It could be traced for three-quarters of an inch along the posterior vaginal wall, where it spread out and became lost thereon. The descending colon ended in a *cul-de-sac* at the pelvic brim, greatly distended, being about three times the diameter of the colon three or four inches higher up. The vagina was long and roomy, and had very thick walls. The cervical portion of the uterus had a diameter twice that of the fundus uteri. The bony pelvis was normal.

Remarks.—I performed the ano-perineal operation in this case with but little hope of finding the rectum, from the absence of bulging in the perinæum and the very roomy vagina, which extended far backwards and upwards. When the child cried, the perinæum scarcely bulged at all.

The objections to Littré's method of operation are these: hæmorrhage, opening the bowel in the wound leading to the risk of escape of meconium and blood into the peritoneal cavity, and the very grave one, if the patient live, of having an artificial anus in the groin. Probably, there are but few parents who would be anxious that a child should live to experience the discomfort of such a condition. I would, therefore, suggest the following method of procedure, which seems to me likely to lead to more satisfactory results. Having performed the ano-perineal operation, and failed to find the bowel from below, make an incision in the abdominal wall of convenient length between the umbilicus and pubes in the middle line (or a little to the left of it to avoid the urachus and hypogastric artery). Next introduce the forefinger of the left hand into the abdominal cavity, examine the descending colon and rectum to discover the seat and relations of the upper *cul-de-sac*, then pass the same finger down into the pelvis in the middle line (behind the uterus in the female, the bladder in the male), and pressing the tip of the finger against, push outwards the floor of the pelvis, cut upon the tip of the finger as a guide, thus opening into the peritoneal cavity from below. Next introduce the right forefinger through the perinæum, and, guided and assisted by the left, hook the right finger round the gut, and pull it downwards and out through the perineal incision. Stitch the opening in the abdominal wall, then open the gut and stitch its edges to the edges of the perineal wound in the manner before described. Should the difficulty arise from mesenteric relations, of bringing the bowel down from the pelvic brim (only in the worst cases) to the perinæum, the mesentery could be torn or cut through and vessels tied. Whatever the nature or degree of malformation, the rectum on the right side, partially or completely imperforate, opening into uterus, vagina, bladder, or urethra, by the means I suggest (failing the ano-perineal operation) the condition could be more perfectly ascertained and more perfectly dealt with, and even in some cases there would be no necessity for opening the peritoneal cavity from below.

The whole operation should be done with complete antiseptic precautions, thereby lessening greatly the result of interfering with the peritoneum. The hæmorrhage would be less than in Littré's operation. The bowel would be opened practically outside the body, and the risk of escape of meconium, etc., into the peritoneal cavity done away with; while the after result as to the position of the artificial anus would be certainly better. On the other hand, there would be more bruising of the peritoneum and an opening from below: but with the help of antiseptics, the additional risk might, I think, be more than counterbalanced by the advantages.

Extensive peritonitic adhesions would be a bar to the operation, but these are not likely to be met with if the condition be recognised and treated early, as in the case just recorded. Little hope of success can be entertained with any operation when peritonitis has set in. Should such another case come before me for treatment, I shall certainly give the above method a trial.

Bequests.—Legacies have been left by the late Mrs. Susan Gorely of Dover to the following medical charities: To the Margate Sea-Bathing Infirmary, £5,000; the Dover Hospital, £1,000; the Hospital for Diseases of the Throat, Golden Square, £500; the Kent County Ophthalmic Hospital, £1,000; King's College Hospital, £5,000; the Kent and Canterbury Hospital, £2,000.

CLINICAL MEMORANDA.

AN EXTENSIVE CARBUNCLE.

On August 18th, 1880, I was called in to see John J., aged 53, a man of sanguineous temperament and plethoric constitution, who was foreman in a sailcloth factory; and, on questioning him, he informed me that, for the previous five or six weeks, he had been suffering from a succession of boils on various parts of the body; but that, until within the last day or two, he had felt pretty well, and therefore had not sought any medical advice.

He had now lost his appetite, and felt altogether out of health; and the pain he had suffered had, to a considerable degree, broken his rest. On examining what he called his "big boil", I found a carbuncle on the nape of the neck, measuring about two inches in diameter, which had already given way at several points, with the usual ash-grey sloughs appearing, and a fair amount of unhealthy discharge issuing from it. As it did not appear to be tense, and the pain had somewhat lessened, I did not adopt the incision treatment, but ordered poultices of linseed-meal and yeast, to be constantly changed. The bowels being confined, and the liver inactive, I prescribed podophyllin and rhubarb pills, to be taken when necessary, and a mixture of rhubarb and nitro-muriatic acid three times daily.

I could discover no symptoms of kidney-disease, and his urine was free from albumen and sugar. He appeared to improve in health, meanwhile the carbuncle still extending, until August 30th, when he began to exhibit signs of exhaustion, and his nights were restless, and the pain considerably increased.

I now prescribed a mixture, each dose containing quinæ sulph. gr. iij; liq. strych. ♏ iv; and tinct. opii ♏ v, to be taken every four hours, and a quarter-grain pill of morphia at night; at the same time keeping up his strength with nourishment suited to his case. The carbuncle, however, still extended; and, on September 10th, it reached from ear to ear, and measured nine inches from the occipital protuberance downwards, extending to about the third dorsal vertebra. His mixture was changed to cinchona and ammonia every three hours, with the morphia at night, besides which I ordered him a teaspoonful of brandy, with liquid nourishment every hour. But from the latter date (September 10th), he gradually sank.

The healthy parts of the wound were dressed with unguentum resinæ, the sloughs being poulticed as before, and were well washed with carbolic acid lotion as each poultice was removed. The local treatment was somewhat serviceable, as the wound healed rapidly at its upper part, but extended at the same time on each side of the neck, until, on September 18th, it was completely encircled; and the walls of the chest were also attacked, causing severe pulmonary congestion.

The nourishment, stimulant, and medicine were continued, but the patient grew weaker until his decease, which occurred on the night of September 21st.

In conclusion, I should be glad to know if any of the readers of the Journal have met with a similar case in which the disease made so extensive a progress.

William Henry Walter,
South Petherton, Somerset.

FŒTID SWEATING OF THE FEET (BROMO-IDROSIS).

I am pleased to see that Dr. George Thin has called attention to a very common affection of the skin of the feet, associated with horribly fœtid perspiration. He rightly lays stress on the great importance of the subject; and I have no doubt most medical men are able to endorse all he says in his article in the Journal for September 18th, 1880, with reference to domestic servants, who often find it impossible, on account of this loathsome affection, to follow their calling.

I have been for some years specially interested in the treatment of this diseased condition, and wish to make a few remarks on the subject.

The disease begins as a small, irregular-shaped patch, usually situated at the back part of the sole of the heel, and is generally symmetrical, though one foot is sometimes affected rather before the other. The patch has a well-defined margin, is of a pinkish colour, pours out sweat profusely, and, during the day, has a sodden appearance, but in the morning, on first rising, is bright red, dry, and shiny. In a short time, the whole of the skin of the sole may be affected, including the plantar surface of the toes; and, in aggravated cases, there is usually superadded some amount of eczema. The affected parts are, from the very first appearance of the disease, tender; and, after a time, the tenderness is so great, that all walking or standing is painful. The complaint usually occurs in adolescents, and I have seldom seen it after the age of twenty-five. I think it occurs with equal frequency in both sexes.

As to the precise nature of the affection, I do not pretend to speak. I cannot think that it depends entirely on some peculiar putrefactive change in the exuded sweat, for it clearly commences as a little patch which spreads, and no similar affection occurs, so far as I am aware, even among those who have no regard for personal cleanliness, on any other part of the body; while surely the axilla and perinæum, one would imagine, must afford ample opportunities for bacteria to thrive and produce their worst results. However that may be, my chief reason for writing is to direct attention to a method of cure which is more simple than Dr. Thin's, and which is rapidly and certainly successful. All that is necessary is to strap the affected portions of the sole of the foot as smoothly as possible with tolerably wide straps of ordinary adhesive plaster—either emplastrum saponis or emplastrum plumbi. Every part should be completely covered, and with two layers of plaster if the complaint be very bad. The plaster should be taken off and renewed in three or four days, and once again at the expiration of a week, when the skin will be found to be quite healthy, having its normal yellowish appearance, and will also be quite dry. The odour ceases from the first application, and the patient will walk away in comfort.

I do not know how it acts so beneficially, but one may with confidence predict, even in the most severe case, a perfect cure in the time I have mentioned.

There seems to be in some persons a tendency to relapse after an interval of some weeks; but, on the slightest sign of reappearance of the disease, it is only necessary to cover the patch with a single strap of plaster, which will at once arrest its progress, remove the fœtor, and speedily exert its curative influence.

I am indebted to Dr. A. B. Duffin of King's College Hospital for first suggesting to me, many years ago, this method of treatment, which, unlike Hebra's, does not require confinement to bed.

R. Lewis Willcox, M.R.C.S., L.R.C.P.Lond.,
Warminster, Wilts.

OBSTETRIC MEMORANDA.

CASE OF RESUSCITATION AFTER TWO HOURS AND TWENTY MINUTES.

On September 12th, 1877, I was called to a lady in labour in South Kensington, and found that her child had been born nearly an hour. Though there were two married women in the room, the child had been allowed to turn on its face, and so became asphyxiated. I found a slight flutter at the heart, which ceased in a few minutes. The child was partially wrapped in flannel and placed in front of the fire, whilst I adopted Dr. Silvester's method for suspended animation. After a little more than an hour, it gave a catching kind of sob. I persevered, and, at the end of two hours and twenty minutes, the child breathed perfectly; and has grown to be a fine healthy child.

R. J. Maitland Coffin, F.R.C.P.Ed.
Barons Court, West Kensington, Oct. 9th, 1880.

A CASE OF PLACENTA PRÆVIA.

About 9 P.M., I was called to a case of labour in a woman whom I had not seen before. Word was left that the patient was very ill, and had lost a considerable deal of blood. Being absent from home, I was not able to attend till 11.30 P.M. On making examination, I found the funis external, and what I supposed at first to be a large clot, but which proved to be the placenta. My patient at this time had recovered from the exhaustion from loss of blood. The left foot fortunately presented, and was within reach, so that I had no trouble with the delivery. The child was, of course, born dead.

I desire to report this case as being one of rather unfrequent occurrence, and attended with very peculiar circumstances. Her labour began on the 24th July, when we had in this locality a most violent thunderstorm. The patient was progressing as usual, with, as she said, no bleeding to signify, when a violent peal of thunder occurred, by which she was very much excited, after which she had great hæmorrhage, with the sudden expulsion of the placenta and the immediate cessation of bleeding. The case is progressing favourably.

Joseph Lightburne, M.D., Rosemount, Newry.

Naval Medical Appointments.—The following appointments have been made. Fleet-surgeons: John Frederick Mitchell to the *Téméraire;* William A. Lloyd, M.D., to the *Nankin;* Daniel O'Connor to the *Superb.* Surgeons: John Hunter to the *Flamingo;* Alexander R. Joyce and John A. M'Adam to the *Superb;* Arthur W. Russell to the *Zephyr;* John Alexander Spencer, to be surgeon and agent at Rutland, Arranmore, Cruit, and Cruit Head.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

UNIVERSITY COLLEGE HOSPITAL.

SARCOMA OF THE SCAPULA: REMOVAL OF THE GROWTH, TOGETHER WITH THE BODY OF THE SCAPULA: DEATH FROM SEPTICÆMIA.

(Under the care of Mr. Berkeley Hill.)

James H., aged 25, a clerk, was admitted to the hospital on April 16th, 1879. He was a pale, delicate-looking young man, well nourished, and of good muscular development, considering his employment. He stated that he had become somewhat thinner of late, and suffered from occasional aching pain about the right shoulder-blade. On examination, a tumour was apparent, about as large across as the palm of the hand, occupying the infraspinous fossa of the right scapula, forming a rounded prominence, most marked about two inches above the angle. The margins of the growth were ill-defined, especially about the posterior border of the bone, which it overlapped; the angle and the suprascapular fossa were uninvolved. Its surface was broken up into smooth lobules; to the touch, it was firm and elastic; deep pressure gave rise to slight pain. The scapula moved freely and painlessly over the subjacent parts, and there was no visible wasting of the muscles attached to it. The skin over the tumour was unaffected; and there were no signs of generalisation of the growth.

The swelling was first noticed about two months before admission. No history of syphilis or injury could be obtained. His grandfather was said to have died of cancer, and his relations on the mother's side were phthisical.

On April 23rd, the patient having been placed under the influence of ether, one incision (five inches in length) was made over the posterior border of the bones, and another (four inches long) over the upper border, meeting the first at an obtuse angle. The flaps thus marked out were raised; the muscles attached to the posterior border of the bone were divided, and the latter turned outwards—thus bringing into view the ventral aspect, with a large mass of growth springing from it, continuous with that on the dorsum around the posterior border. The upper portion of the spine and the neck were next cleared, as far as possible—the former being sawn through near its junction with the acromion, and the latter at about the same level. The muscles attached to the inferior costa, with the subscapular artery, were divided last of all. The whole of the body of the scapula, with the growth, was thus removed. The operation was performed with Lister's antiseptic precautions, the arteries being secured with catgut ligatures, and the wound finally washed out with a solution of chloride of zinc, previously to the application of the dressings. The amount of blood lost was considerable, the operation lasting one hour.

Three hours afterwards the dressings were removed, as free oozing appeared to be going on; five or six ounces of clot were found in them, but, as the hæmorrhage had ceased, they were reapplied without disturbing the wound. At this time, the patient was much collapsed, his radial pulse imperceptible; but, after the administration of large quantities of stimulants and a hypodermic injection of morphia, he rallied. At 11 P.M., his pulse was 140 per minute; temperature 97° Fahr.

On the 24th, at 11 A.M., his temperature had risen to 100° Fahr.; pulse 140, small, irregular. A soft systolic *bruit* was audible at the apex of the heart—both sounds very weak. Respirations, 36. The dressings were changed, a moderate amount of sweet sero-sanguinolent discharge being found in them. He complained of aching pain in the back, and was apathetic and drowsy, being partly under the influence of morphia. Later in the day he became very restless, and vomited after taking some brandy.

At 8.30 P.M., he lapsed into unconsciousness, his pulse being very feeble. Three ounces of blood were transfused into a superficial vein of his forearm with good effect. He immediately became conscious, his pulse much improving. At 4 A.M. on the 25th, he had again become unconscious, and three ounces and a half of blood were transfused. On this occasion, however, although he regained consciousness for about half an hour as a result of the operation, his condition was not materially improved. When seen at 10 A.M., he was evidently moribund; his skin and mucous membranes blanched and cyanotic; respiration, gasping; and radial pulse imperceptible. At 11.40 A.M., he died, forty-five hours after the operation.

The blood transfused was on each occasion taken from a healthy man, and the operation performed by means of Roussel's apparatus.

On dissection of the parts removed, the growth was found to be unencapsuled, resembling brain-substance on section, widely infiltrating the subscapularis and infraspinalus muscles; as though, during life, it was attached to both surfaces of the bone, but covering a larger area of the ventral than of the dorsal surface.

GUY'S HOSPITAL.

UNUSUAL CASE OF "EPISCLERITIS".

(Under the care of Mr. C. HIGGENS.)

MARY ANN L., aged 27, a half-caste, came to the ophthalmic out-patient department at Guy's Hospital on June 11th, 1880. She stated that her right eye had been inflamed and rather painful for nine months. She was a married woman, and had an infant suffering from purulent ophthalmia, and evidently syphilitic. Excepting that the eye had been rather troublesome, her health had been good. The conjunctiva of the right eye was injected throughout, but intensely so over the outer two-thirds of its ocular portion. Beneath it were three large bosses, the largest being situated about the insertion of the external rectus muscle; the other two were placed one above, and the other below, the largest one. The appearance presented was that of staphylomata near the equator of the eyeball. There was slight iritis. Vision was little or not at all affected; the eye read Snellen type 0.8 at ten inches; the tension of the globe was normal. The note made was "growth?"

She was ordered to have atropine drops applied three times a-day. R Potas. iodidi gr. viij; tr. cinch. co. ℥xx; aquam ad ℥j, three times daily; and a blister to the right temple.

June 15th. The swellings were rather less.

June 22nd. There was some increase of the swellings. She was ordered pil. hydrarg. gr. ij; pulv. opii gr. ½ in pill three times daily. Guttæ repetantur.

June 25th. She had much pain, and could not sleep. She was ordered to take a grain of powdered opium in pill at bedtime.

June 29th. The pain had subsided. She was ordered to take mercury and opium pills as before.

July 6th. The upper swelling had entirely disappeared; the others had diminished in size; the gums were sore.

July 20th. The two remaining swellings were as large as ever, the gums very sore. She was ordered to omit the mercury and opium pills, and to continue the atropine drops.

July 27th. The swellings were still large, and very tender to the touch. She was ordered potas. iodidi gr. viij; potas. bromidi gr. x; tr. cinch. co. ℥xx; aquam ad ℥j, ter die.

July 30th. The mixture and drops were repeated.

August 3rd. The medicine did not agree with her; she was, therefore, ordered to take instead of it 15 minims of liquor ferri dialysati, and to repeat the atropine drops.

August 6th. The swellings were still increasing, and were very painful. The lower one being punctured, only blood escaped.

August 10th. The punctured swelling was much larger than the other. She was ordered an ounce of mixture of perchloride of iron three times a-day.

August 17th. There was a superficial circular ulcer on the conjunctiva at the point of the puncture. The mixture and atropine drops were ordered to be continued.

August 20th. The pain was almost unbearable. The swellings were much increased; and the patient was anxious to have the eye excised. Vision was still unaffected. She was ordered a grain of powdered opium in a pill at night, and two leeches to the temple.

August 27th. She was still in great pain. It was decided to give an anæsthetic, and cut into the swellings.

August 30th. The patient became very much alarmed at the first inhalation of the anæsthetic (chloroform, alcohol, and ether mixture). She struggled violently, and was allowed to go, and did not attend again until—

September 10th. She was then in great pain, and the swellings were larger than ever. She was ordered pot. iodidi gr. x, et inf. quassiæ ℥j ter die. Three leeches were ordered to the temple. A grain of powdered opium, in a pill, was given at night.

September 14th. Dr. Brailey saw the patient, and ordered belladonna lotion and lint, and the eye to be covered with lint soaked in the lotion, and kept bandaged. Ten grains of pilula hydrargyri were ordered to be taken every night, and belladonna ointment to be rubbed into the forehead. Haustus sennæ was ordered to be taken in the morning. This treatment was continued until Mr. Higgens's return.

September 28th. Both the swellings were very much smaller; there was a puckered cicatrix in the position of the puncture made on August 6th. She was ordered 15 minims of liquor ferri dialysati three times a-day, and belladonna lotion as an application.

October 5th. She was nearly well; the ophthalmoscope showed nothing abnormal.

The nature of this case was for some time rather obscure: it was at first thought to be a growth; but the subsequent behaviour of the nodules showed them to be only inflammatory.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.

EYEBALL-TENSION (BILATERAL) IN A CHILD A YEAR OLD, TREATED BY PARACENTESIS, SCLEROTOMY, AND IRIDECTOMY, WITH A GOOD RESULT.

(Under the care of Mr. W. SPENCER WATSON.)

ALBERT S., aged 1 year, came to the hospital on May 10th, with both eyeballs enlarged and prominent, and with expanded and nebulous corneæ. The sclerotics were thinned and discoloured, but not congested, and the pupils and irides not distinguishable, their position only being indicated by a dull purplish aspect of the corneæ. The child's mother stated that the eyes were quite natural in appearance at birth, but had gradually become distended and dim. On admission, there was extreme tension (T 3) in both eyeballs. The age of the child made it impossible to ascertain whether any of the subjective symptoms of eyeball-tension were present, but its cries and gestures indicated some amount of pain, and almost total loss of vision.

For three days after its admission, eserine drops were used, but without producing any appreciable alteration in the aspect of the eyes. Three-grain doses of grey powder were then given every night, and the eserine continued for five days longer.

May 20th. Tension continuing, the anterior chambers were tapped in the usual way.

May 24th. In the right eye, tension was normal; that of the left eye was half a degree in excess. There was blood in the anterior chamber of the left eye.

June 7th. Tension having returned, the anterior chambers were again tapped. Mercurial ointment was applied round the abdomen.

June 11th. Paracentesis was repeated, on account of return of tension.

June 18th. The tension remained almost normal, and the eyeballs were much more healthy in appearance, the sclerotics being less discoloured, and, in the left eye, the pupil being visible.

June 21st. The corneæ were decidedly clearer, but tension had returned to T 1. Sclerotomy was performed in the left eye.

June 29th. The tension of the left eye was normal; in the right, tension was T 1. Sclerotomy of the right eye was performed.

July 5th. Tension was normal in both eyes, and vision evidently improving. The size of the eyeball had diminished.

July 12th. The tension of the left eye was still in excess. Iridectomy of the left eye was performed. The piece of iris removed was a mere membrane, almost transparent, and with no appearance of vascularity or normal texture.

October 11th. Since the last note, there had been a steady improvement. Both pupils were visible, and the haze of the corneæ had much diminished. The child gave evidence, by running about freely, and in other ways, of having useful sight.

REMARKS.—The rarity of this condition, which has been hitherto described as hydrophthalmus or buphthalmus, seems to justify the recording of the case. Mr. Watson has seen three or four similar cases in children, but has never yet had the opportunity of following them to a point of decided improvement. The repeated paracenteses of the aqueous chamber were employed as tentative measures, and led to the subsequent adoption of sclerotomy. There was so very marked a diminution of tension after each tapping, that it encouraged the hope of more permanent results after sclerotomy. The adoption of iridectomy after the apparent failure of sclerotomy in the left eye, led to the discovery of a condition of the iris, not altogether unexpected, but of great interest in a pathological point of view. Here was a case of obstinate eyeball-tension with atrophied iris. Now it is impossible that, in this case, the excess of tension could have been due to the excessive secretion of fluid from the surface of the iris. It offers, therefore, an argument of some weight against the theory that the excess of tension in glaucoma is due to excessive secretion from the iris, and that the value of iridectomy depends upon the removal of this over-secreting membrane. At the same time, the whole case points very strongly to the greater comparative value of sclerotomy; for, though the last operation was termed iridectomy, it is plain that the removal of the iris could have had only an infinitesimal influence on the result, seeing that this membrane was a mere diaphanous film, and that its function as a

secreting or absorbing or muscular organ must have been entirely lost, if it ever possessed it; so that the iridectomy in this instance was practically only a repetition of sclerotomy.

The pathology of the case is very obscure. The mother of the child was a healthy-looking, well-nourished woman, and her history gave no evidence of any syphilitic taint.

REVIEWS AND NOTICES.

THE BRAIN AND ITS DISEASES. Vol. I: SYPHILIS OF THE BRAIN. By T. S. DOWSE, M.D. London: Baillière, Tindall, and Co. 1880.

A WORK by a physician of experience on such a subject as syphilitic disease of the brain is sure to attract the attention of the profession; for this disease is one of great importance, and is not unfrequently met with. It is a condition which has been brought into prominence only within recent times, and one in many cases curable or remediable when correctly understood. In many particulars, the clinical aspects and pathology of syphilitic disease of the brain require much work, and afford extensive and promising fields for investigation. After carefully reading through the volume under notice, we have to ask ourselves, what have we learnt from it? and what are the most important points insisted on by the author? As to the frequency of syphilis among the population, Dr. DOWSE affirms that, of "over ten thousand patients coming under his care at the Central London Sick Asylum, he has no hesitation in saying that three-fourths were, more or less, the subjects of acquired or hereditary syphilis". Is this fact provable by statistics? The fact being proven, is it attributable to special and exceptional conditions of practice? Speaking on the general question of the action of the syphilitic virus, we are told of cases where, "in addition to the gumma and roseola, coexistent, there have been pulmonary hæmorrhage, and albumino-fibroid changes going on in the viscera; the urine loaded with albumen, retinal extravasations, localised cerebral thrombosis, and eclampsia; these patients rapidly getting well under treatment, but not necessarily by iodide of potassium or mercury". It would have been satisfactory to see such general and important statements appended to cases narrated as proofs. Contrary to the usual experience, many of the author's cases have developed the nervous symptoms coincidently with the roseolar rash. This is important, and such an experience may possibly in part be attributable to the debilitated and depressed condition in which many of the patients lived.

Two forms of syphilitic lung-disease are referred to: one met with early in the course of the disease, shown by pulmonary hæmorrhage and pneumonia, and consisting pathologically of changes situated centrally in the air-cells, and also primarily affecting the epithelioid lining of the vessels; such cases are curable by mercury. The second form of lung-disease consists of chronic perivascular changes and peribronchial cell-proliferation. The author then says: "If, in the secondary stage of syphilis, we have an active pneumonia, I should unhesitatingly characterise this as syphilitic." This dictum seems reasonable, and in accordance with facts. Many useful hints are given, as aids to determining whether a nervous pathological condition is syphilitic or not. "Choroiditis is an almost undoubted indicative of old standing syphilis." This statement appears too general to be so strongly insisted on. "If two disconnected paralyses give evidence of two cerebral growths, then syphilis may be suspected." "If we are not sure that our patient has syphilis, but if he presents some objective signs, even of ancient syphilitic invasion, and if there are no vascular changes with increased arterial tension, or signs indicative of renal disease, as ischæmia of the optic disc, or of an especial gouty habit of body, or other special predisposing cause, I think we may then fairly infer that the cerebral degenerations are due to arterial disease, which has syphilis for its origin." We regret to find in a modern work such expressions as head-pain of the "congestive kind", which is said to be frequent in syphilitic disease of the pia mater; for it is one of the problems yet to be solved, to determine what are the signs of cerebral congestion. It is quite in accordance with the experience of other physicians, to lay stress upon the disturbance of the muscular sense, and cramps of isolated groups of muscles in syphilitic disease. The more gradual invasion of the syphilitic lesions is compared with non-syphilitic cases, the palsy in the former, though coming on gradually, usually disappearing rapidly. Many other points of general interest in this class of lesions are given; some we may briefly indicate. "The nervous system once tainted with syphilis, any accident occurring is likely to cause injury of nerve-centres or peripheral nerves, as the result of that taint." This is probably quite true, but we are hardly prepared to grant with the author, that "a brain once organically diseased means a brain impaired for ever, and it never regains its original condition". This is probably true; but, in a given patient, we cannot usually make such an absolute diagnosis as to exclude the hope of a practical recovery. Similarly unsatisfactory is it to be told that local bleeding is never to be forgotten "in the stage of congestion", when we are left in doubt as to the signs which indicate the congestion. The general statement then made, that "it is rare to find a true paraplegia unassociated with brain-disease seven years after the primary manifestation", is well worth remembering, and coincides with experience. The volume is illustrated by thirty-two cases, well selected and narrated, and these form certainly the most interesting portion of the volume.

Dr. Dowse's style of writing is often not clear, though in most places very suggestive. We are advised that, in epileptiform seizures, dependent on syphilis, "The bladder must be well looked after, and the iodide of potassium must be given every four or six hours in full doses"; two important injunctions certainly, but it is hardly necessary to crowd them into one sentence. Personal experience in the matter of treatment always gives a claim to respect for the views founded thereon; and in the present instance, the author expresses views considerably different from those generally received. Speaking of the general state of syphilisation, the usual practice recommended is to preface the administration of perchloride of mercury by a course of iron; this may be satisfactory when the symptoms are not urgent, but it is often necessary to bring the patient under the influence of mercury as rapidly as possible. As a rule, brandy is recommended to the extent of four ounces daily; alcohol being spoken of as, under certain circumstances, being the backbone of treatment. No special value is attached in syphilitic brain disease to administration of mercury by injection, inunctions, or mercurial-baths. Speaking of iodide of potassium, Dr. Dowse says that, having used it in small and in excessive doses, over a wide area, and for varying periods of time, and having noted its effect in both functional and organic disease, it has been only in the minority of cases that good results have been traced to its immediate specific action. When there is a painful neurotic affection of the peripheral nerves, it is recommended that chloral be added to the iodide of potassium mixture; in some cases, a hot solution of chloral applied to the surface relieves local neuralgia. An interesting case is given, in which a hemiplegic patient, becoming comatose, with loss of all cerebral power, and with stertorous respiration, was saved from death by galvanising the calves of the legs, the patient being thus aroused from the threatening condition of asthenia.

In the chapter on hereditary syphilis, the question of the relation of scrofula and syphilis is raised, and the author expresses his own conviction that scrofula is the outcome of syphilis. The opinions of other authors are quoted, but no strong evidence is brought in support. Important cases are narrated, in which obstructive disease of the cerebral vessels was found in a case of marked hereditary syphilis. A chapter is devoted to syphilitic epilepsy, that is, epilepsy in syphilitic subjects; and their causation by syphilis is thought to be of very frequent occurrence. The final chapter is devoted to pathology. One of the most interesting facts here recorded is this; in five cases, Dr. Dowse found lesions of the membranes of the brain, while the roseolar eruption was freely diffused over the body.

The volume concludes with copies, with permission, of a few of Liebreich's ophthalmoscopic plates. The work is of a certain amount of value, as adding to the accumulation of material and experience, rather than as giving definitely new information. The volume is the outcome of much labour, and is well worthy of careful study by clinical physicians and practitioners. There is much material upon which opinions may be grounded. It is a great desideratum in medical literature, that cases should be arranged so as to illustrate some point, or form steps in a line of argument; that the bearing of facts upon one another should be strongly indicated; and in this direction we hope that Dr. Dowse's future volumes will show some advance.

LECTURES ON DIGESTION: AN INTRODUCTION TO THE CLINICAL STUDY OF THE DISEASES OF THE DIGESTIVE ORGANS. By Dr. C. A. EWALD, Lecturer in the Royal University of Berlin. Translated from the German by ROBERT SAUNDBY, M.D.Edin. London: Williams and Norgate, 1880.

THIS work is to a certain extent unfortunate in its second and explanatory title, which leads us to expect in it what is not to be found. The lectures have the merit of proceeding from a man thoroughly conversant with the latest results of observation and experiment in the various stages of digestion. They do not, however, possess to any preponderating extent the practical tendency implied in the title. The author's physiological bias has been too much for his evident intention of writing from the standpoint of the physician rather than of the physiological chemist.

Apart from this, Dr. EWALD's practical familiarity with his subject gives to the lectures an interest not possessed by a simple compilation. And, in addition, he embodies in his lectures the results of the latest researches: among which we may notice specially his own examination of the gastric secretion in fever patients, showing the therapeutic indication of hydrochloric acid, notwithstanding a high acidity from abnormal acids. We must say, however, that notwithstanding an excellent translation, the style of these lectures is so defective as to detract very much from their value as an exposition of the facts of digestion.

In the appendix, Dr. Ewald gives a few practical therapeutic points, *e.g.*, his method of washing out the stomach, and his application of enemata of cold water to check diarrhœa in children. His examination of artificial digestive preparations results in the recommendation of Witte of Rostock, and of the preparations of pepsin by Simon of Berlin; and in the establishment of the fact that pancreatin, being itself an albuminoid, and therefore digested in the stomach, is as an artificial digestive ferment absolutely ineffective.

NOTES ON BOOKS.

God's Acre Beautiful: or the Cemeteries of the Future. By W. ROBINSON, F.L.S. London: The *Garden* Office, Southampton Street, Covent Garden.—In this book, Mr. Robinson has set forth a side of the question of cremation which may probably do much to remove some of the prejudice by which the discussion of the question has been impeded. The book itself is prepossessing in aspect, being charmingly printed, artistically bound in vellum and gold, and illustrated with some very charming plates. The cemeteries of the future crematoria are to be permanent, unpolluted, and inviolate; and Mr. Robinson has no difficulty in showing that, with urn-burial, permanent and beautiful cemeteries are possible. The ground not being occupied with bodies, there is no need to close the cemetery at any time. By the common consent of mankind, God's acre is most fitly arranged as a garden; and, as the place for open burials need not occupy more than one-fourth of the space of a large cemetery, the whole central or main part will be free space for gardens and rows of trees. The cemetery will not only be a garden in the best sense of the term, but the most beautiful and most cared for of all gardens. The present graveyard is not a place of rest, but only of temporary use; neglect and desecration of the resting-place of the dead, after a few short years, is almost inherent in the present system, but would, in Mr. Robinson's view, give place, under the adoption of cremation, to one of unremitting and loving care; for the same reason, each succeeding generation would be as much interested in the preservation of the cemetery as those who had gone before were at any previous time in its history. Through urn-burial, noble and enduring art would be made possible, ugliness abolished, and inscriptions and memorials preserved from decay. In urn-burial, all religious or beautiful ceremony is easy, and burials in and around churches and public buildings might be practised to any extent. Cemeteries would be beautiful and permanent public gardens; and an attractive picture is given of the cemetery of the future and its buildings. The entrance to the temple columbarium is shown in a peculiar poetic picture. Free and simple burials for the poor might be secured, or private burial-places for the rich. Mr. Robinson has collected many of the most severe indictments against the present practice of burial, which he describes as a horrible practice, adopting the opinions and words of Professor Gross of Philadelphia, who has written: "There is something eminently repulsive to me about the idea of lying a few feet underground, for a century or perhaps two centuries, going through the process of decomposition. When I die, I want my body to be burned. There is nothing repulsive in the idea of cremation. People's prejudice is the only opponent it has had. If they could be awakened to a sense of the horror of crowding thousands of bodies underground, to pollute, in many instances, the air we breathe and the water we drink, their prejudice would be overcome, cremation would be taken for what it truly is, a beautiful method of disposing of the body." In another appendix, Mr. Robinson deals with the only serious objection which has been urged from any quarter against the prompt and harmless reduction of the body to its inoffensive parts, and that is the supposed immunity it would give to poisoners. He adopts the view of Sir Henry Thompson and that which has been proposed in Paris, which includes the appointment of an official *médecin inspecteur*, and a careful system of precaution that such officer could easily adopt. Mr. Robinson's book is written in short sections, dealing each of them with a separate subject; and it is eminently popular in its character. The opposition to cremation is mainly a matter of sentiment, and there is probably no better method of meeting it than by enlisting art, feeling, and sentiment of the most delicate kind on the side of cremation. Such a book as this is eminently calculated to attain that purpose; it is none the less full of good sense and good philosophy. Mr. Spencer Wells has lately taken an active part in reawakening public and professional opinion to the interest of the solution to the difficult question of interments by the substitution of cremation, and he will find a powerful ally in Mr. Robinson, whose reputation as a horticultural authority, and as a man of letters and taste, naturally led him to regard the subject from that point of view which will secure him a hearing among classes of society less disposed to accept as valid the purely scientific argument.

Palliative Medicine and Palliative Treatment in Surgical Cases.—Under this head, Mr. Edward Lund reprints a short address which he gave at the Manchester meeting of the Lancashire and Cheshire Branch, as President. Without introducing any subject of novelty, he refers with flowing pen to the advantages of employing palliative means for relieving pain and suffering where no more radical methods can be adopted. He speaks highly of the use of powdered iodoform locally on the surface of discharging cancerous ulcers, and insists on the thesis that, where we cannot cure, it is our duty to seek to mitigate suffering, and prolong the life of the patients under our care by measures purely palliative in their nature. He considers that generally practitioners who are, so to say, tied to their patients, and continuously in contact with the case in all its phases, are more likely to be able to offer hints or suggestions for the improvement of palliative medicine and palliative treatment in surgical cases than consultants, and suggests that they should turn their attention to the collection and publication of their experience in this respect.

SELECTIONS FROM JOURNALS.

MEDICINE.

ACUTE ARTICULAR RHEUMATISM.—Thoresen (*Norsk Magazin for Lägevidensk.*, 3rd series, Band ix; and *Nord. Medicin. Arkiv*, Band xii), has analysed the conditions of 277 cases of acute articular rheumatism, which have been under his care during the last twenty-five years. He has not been able to find any connection between the frequency of the disease and the state of the weather, the temperature, or the amount of moisture; and, after distributing the cases of the disease among the different months, he cannot assign to articular rheumatism any place as a representative of a fixed morbid constitution. On the other hand, he has found that the cases of rheumatism diminish in proportion to the height above the level of the sea, and increase in proportion as this is approached. His professional colleagues practising in the higher regions have informed him that acute rheumatism is almost unknown to them. He believes that acute articular rheumatism is an infective disease, which, like intermittent fever, belongs to the diseases of low lands; cold, he thinks, has been overrated as a cause. The good effects of salicylic acid are regarded by Thoresen as confirmatory of his idea that rheumatic fever is an infective (malarious?) disease.

OPHTHALMOLOGY.

COMPLETE SEPARATION OF THE CORNEA AFTER SIMPLE LINEAR EXTRACTION OF CATARACT.—Dr. E. Fuchs relates in the *Centralblatt für prakt. Augenheilkunde* (May 1880) the case of a woman aged 30, on whom discission of the right capsule of the lens was performed with a view to the maturation of a diabetic cataract. The attempt succeeded; and, five weeks afterwards, the softened lens was removed by von Gräfe's method of linear extraction. On the third day, the cornea became opaque, especially at the periphery; and chemosis appeared. On the seventh day, the entire cornea could be removed from the eye, as if it had been cut loose with a knife along the corneo-scleral junction. Some days later, the iris also fell off; and the woman died three weeks afterwards of pulmonary tuberculosis. On microscopic examination of the cornea, it was found that the whole of the inner layers were necrosed in consequence of an invasion of micrococci; in the outer layers, they extended to a distance of about a *millimètre* from the wound. The immigration of the micrococci is regarded by the author as having been primary, and the inflammation and separation of the diseased part as secondary.

ON the 13th instant, elections for a medical officer to Tuam Workhouse, and Tuam No. 1 Dispensary District, took place, and created considerable interest, forty-five guardians having attended for the purpose. Dr. James Turner was elected to the workhouse, and Dr. Patrick Bodkin to the dispensary; both offices having been held by the late Dr. Turner.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 23RD, 1880.

THE ADMINISTRATION OF GUY'S HOSPITAL.

THE peculiarly worded declaration by the Governors of Guy's Hospital of their determination to do as they like with their own hospital, makes it certainly desirable that the governors should no longer be allowed to remain an unreformed corporation. At the present time, the governing body consists of sixty self-elected members—a considerable majority of whom have never attended to the duties devolving upon that body; and probably have seldom, if ever, visited the hospital at all. It has thus come to pass that, until a year ago, the present treasurer, and an insignificant minority of the sixty self-elected governors, ruled the hospital. Since the arrival of the new matron, a connection of some of the governors, the heat of a nursing crisis has naturally secured a somewhat larger attendance at the governors' meetings; but, unless réport is wholly erroneous, the proportion of the whole body of governors present at some of the most important of the late meetings formed but a minority, or less than one-third of the whole number. That such was the case is indicated by the reticent accounts of the proceedings, which have been published by authority. Instead of giving the names of all the governors present, or stating the actual number, a few noble lords and others are alone mentioned.

Recent occurrences go a long way to prove that, under the present unreformed system, an aggressive treasurer can practically do exactly what he likes at Guy's Hospital. The treasurer, during this last twelve months, by assuming the despotic powers of an Indian administrator, has been permitted to pension a chaplain, after brief service, to enable the former official to replace the latter by a gentleman who shared his own high church views. He has altered the system of nursing without reference to the medical staff. He has closed eighty beds; in striking contrast to the management of Mr. Turner, the former treasurer, who not only increased the accommodation for patients, but added £80,000 to the estates. He has spent £3,000 on his own official dwelling, when the hospital is sadly in need of funds. He has witnessed the resignation of an independent President (Lord Cardwell), who valued the interests of Guy's Hospital and its patients more than the wishes of its treasurer. Finally, the present treasurer's year of office has been signalised by the threat of the governors to dismiss the Senior Physician and Surgeon, by exercising the unique powers conferred by a clause in the ancient Act of Parliament, known as the Guy's Hospital Act, which the public interest requires to be speedily repealed.

The government of English hospitals is vested, with the exception of Guy's Hospital, in a committee or board of governors, who are elected for stated periods and at regular intervals. They are governed, in fact, upon the representative principle. Thus, St. Thomas's and St. Bartholomew's hospitals are managed by a body of governors, whose acts have frequently been examined and controlled by the Court of Common Council of the City of London. The voluntary hospitals—*e. g.*, the London, Middlesex, Westminster, Birmingham, Leeds, and so on—are under the management of a committee, which is appointed yearly at an annual meeting of the governors, who amount in all cases to upwards of two thousand. At Guy's Hospital, whereas the original founder showed by his will that he intended a considerable proportion of the governors to be members of the medical profession, it has come to pass that this element has been gradually eliminated, and that the present sixty laymen are self-elected. At all other hospitals, provision has been made for the adequate representation of the medical profession in the governing bodies. The lamentable results of the Guy's system have recently been too painfully apparent. At every hospital where the medical staff have been adequately represented, efficient and economical management has, from time immemorial, endorsed the wisdom of the principle. At every other hospital in the country, except at Guy's, the regulations relating to the honorary medical staff recognise that the holders of these offices are entitled to the treatment of gentlemen. Thus, at the London Hospital, the by-law says: "If a physician or surgeon intends to be absent from the hospital for any length of time, he shall communicate that intention to the house committee, stating the probable duration of such absence, and naming a substitute." At the Westminster Hospital, the managing committee consists of thirty-six governors, of whom ten must be practising members of the medical profession; and of these, one-half at least must be medical officers of the establishment. At the Birmingham hospitals, the governors have no power to dismiss any member of the honorary medical staff, and this is the universal rule; nor can they summon a special general meeting of subscribers to consider the conduct of any of these officers, unless a majority of at least three-fourths of the board of governors present, and voting, at a meeting convened or made special for that purpose, shall consent to such a line of action. English hospitals, with the sole exception of Guy's, are governed on the principle, that the gentlemen who devote the best part of their lives to the relief of the sick in these establishments are entitled to the most generous treatment. They receive, in fact, the honourable confidence of the lay governors, who provide arrangements for associating the medical officers with them in the management of the hospital.

The laws of Guy's Hospital form a striking contrast to this principle, which will be found to be elsewhere generally recognised. The self-elected governors of this unfortunate charity have the power "to appoint, displace, or remove, at their will and pleasure", all or any of the honorary medical staff. The senior physician and surgeon, and their colleagues, "are required", before fixing the date of their annual holiday, "to communicate the fact to the treasurer. An annual vacation, not exceeding four weeks, is allowed to each member of the honorary staff for recreation"; but no one may avail "himself of this privilege before he has communicated his wish to the treasurer; and the treasurer's sanction must be obtained before the proposed holiday is entered upon". The regulations from which these extracts are taken contain those relating to the office of the back gate porter. This important functionary is not subject to any such restrictions; no doubt he is more worthy of confidence. The name of Guy's Hospital has of late been too much before the public; but, before it is likely to resume its normal position in the public mind, the overbearing and inconsiderate restrictions to which the medical staff are at present liable must be brought into harmony with the spirit of modern times. The present treasurer has, at any rate, done one service to the medical profession and to the public. He has induced the governors to so use the exceptional and undesirable powers which they at present possess, that neither the profession nor the public will rest satisfied until a new Act of Parliament has been obtained, which will place the management of Guy's Hospital upon a sound and safe basis. It is consoling to reflect that, if Parliament had the power to pass the Act which has permitted so many abuses to be perpetuated, it also has the power to speedily cleanse the stable. One board of guardians has already decided to petition Parliament with this view. Other similar bodies—together with the whole of the medical profession—will, no doubt, take prompt steps with the object of speedily obtaining this much needed reform. The scandal has become grievous.

The very last utterance of the governors shows that little or nothing can be expected from them—such as might fairly have been looked for—in the way of spontaneous effort to rectify a constitution which is palpably bad in itself, and has been productive of an unheard-of scandal. The motive power must come from without; and it is natural that the medical profession should take a part in the desirable public proceedings.

PROFESSOR RUTHERFORD ON MEDICAL REFORM.

PROFESSOR RUTHERFORD, with something of the sharply controversial tone of a bygone period, to-day challenges our criticism of his Edinburgh address. He thus does good service to our cause. There are certain data which may be postulated. It may be conceded, for instance, that there are nineteen medical licensing bodies in Great Britain and Ireland, which confer between fifty and sixty different qualifications, entitling their holders to be placed upon the *Medical Register* as legally qualified practitioners; that a qualified practitioner should be one whose knowledge of medicine, surgery, and midwifery, has been duly tested by examination; that certain of the bodies conferring these qualifications are prohibited by law from examining in surgery, and that certain other bodies examine in little more than surgery; that an university degree can be obtained from a Scotch university by an attendance there of something less than forty-eight hours; that the diplomas of these nineteen bodies vary in cost from a few shillings to many pounds; and, lastly, that these unequal tests alike confer most important and exclusive privileges on their holders, in which the interests of the public, if not of the profession, are deeply involved. Too much consideration, therefore, can scarcely be given to the entire subject, with a view to correct the exceeding anomalies which we have thus briefly sketched. For this reason, we desire to ask from our readers a careful perusal of the communication from Professor Rutherford, in reply to our remarks of October 9th on his recent address at the University of Edinburgh. Professor Rutherford thinks that we gave a one-sided indication of what he really said. Those who are interested in the subject, and will take the trouble to compare what we then said with what Professor Rutherford now says for himself, will probably agree with us in thinking that there is no material difference between the two statements—an opinion in which, we anticipate, Professor Rutherford himself will agree before the conclusion of our comment on his arguments.

The real question which requires to be discussed and decided is, how the *Medical Register* should be made to contain the names of those only who are fully qualified for the practice of their profession. This was the object aimed at by the Government, in passing the Act of 1858; and the attempt to fulfil it is admitted to have proved a notable failure. Various methods have been suggested for remedying this lamentable state of matters. The simplest method would be, that the name of no person should be placed on the *Register* who had not passed a complete examination by a board appointed by the State for that purpose. Twice at least, if not more often, has the Medical Council declared by decided majorities that it was absolutely essential that there should be a special examining board by whose examination admission to the *Register* should be obtained. Three times have Bills passed the House of Lords and arrived at the period for a second reading in the House of Commons, in which a board of this kind was more or less provided for. On each of these occasions interested obstruction has been successful in stopping what many highly skilled persons thought to be necessary.

Professor Rutherford exhibits great aptitude for framing schemes. Certain schemes of curious construction he in imagination attributes to others; whilst the scheme of his own particular construction, to which we will again refer, provides an university portal and a corporation portal to the profession. But first, we would notice one of the points on which he says we have failed to understand his meaning. For this, probably, we are scarcely to blame. We did not for a moment suppose that the distinguished Edinburgh professor, when he spoke "metaphorically", was addressing the assembled University of Edinburgh in "humorous banter" with reference to so important a subject as medical licensing and conjoint boards of examination. He tells us now that when he spoke of "the busybodies of medical London gathered together", of "a medical mountain" and a "little mouse", and so on, he alluded to what London reformers recently proposed in their Bill of 1878. As we knew nothing, and still know nothing, of medical London having had any special connection with the Bill in question, which was the work of Government, founded on information derived from many quarters, very largely provincial, and as we did know that medical London—or, rather, medical England—had met and devised a complete conjoint scheme of medical education and examination, we are scarcely to blame for believing that it was this, and not some creature of his imagination, to which Professor Rutherford alluded. The Bill no longer exists; and if it did exist, and were before Parliament, it could not bear the character which Professor Rutherford assigns to it. That Bill would have legalised the English scheme; it would likewise have legalised any scheme framed for Scotland or Ireland before the passing of the Bill. But the Scotch were obdurate then as now, and would frame no scheme, and consequently the whole question has still to be dealt with.

Professor Rutherford, like everyone else who knows anything about the question, admits that the present state of things cannot be allowed to exist. He has, however, his own plan now produced. It is to be regretted that it was held back from public attention and criticism during the long period of wearying debate and tentative legislation through which we have passed. He suggests that there should be a higher portal of admission to the profession through the universities, and a lower portal through the corporations. Thus he would place the Fellowship of the Royal College of Physicians of London on a lower level than the M.D. of the University of St. Andrew's. Professor Rutherford is probably aware that there is scarcely a hospital of importance in England which would admit to the office of physician an individual, even if in possession of an university degree, as a qualification, who did not also hold the diploma of the Royal College of Physicians, which he proposes to reduce to the rank of an inferior qualification. Professor Rutherford calls this a simple reform (the simplicity is perhaps hardly confined to the reform), which would assign to the several corporations an inferior position to that of the universities, and would place the high degree of his own university, or that of the University of London, on an equal level with that of the University of Durham or of St. Andrew's. The change would be far more radical than that proposed by the English licensing bodies. They knew and felt that, sooner or later, there must be an examination-test, for the information and safety of the public, of those who are to be placed on the *Medical Register*. They accepted the opportunity afforded them, and they have agreed upon a scheme by which their several examinations would be combined in one; arranging that, on those who passed that examination, the diplomas and licences of the Colleges of Physicians and Surgeons, and of the Apothecaries' Hall, should be conferred as now, leaving the degrees of the universities to be conferred as honorary distinctions, on the evidence of such further education and examination, if any, as might be thought fit. By the method proposed, a complete examination-test would have been established. The student would have been spared loss of time and loss of money, involved in examinations in various places; the examining bodies could have conducted their examinations with greater facility and economy; and the interests of the public would have been protected. We really believed that it was to this scheme of examination and education that Professor Rutherford alluded, and not to the immature ideas contained in the Bill of 1878, which, after all, was admitted to have been only put into form to be modified and corrected in its progress through Parliament. We should have read with pleasure Professor Rutherford's views on the English plan; and we should have learned what his objections to it were—if any. We fear it will be found in one of the sentences contained in his present communication. It is but, after all, what Sir Dominic Corrigan used to call "the battle of the shops". Professor Rutherford says: "Had all the practitioners of Scotland been compelled to become legally qualified practitioners by passing a lower level examination than that of the universities, can anyone be so foolish as to suppose that seventy per cent. of them would have paid for the degrees of universities, if these had been robbed of their powers as licenses to practise?" Thus it is really the licence to practise which is supposed to be the object of obtaining an university degree, and not the honorary distinction which it confers? If our friends in Scotland would take the trouble to study the English conjoint scheme, they would no doubt find in it

materials for constructing a scheme for Scotland like it, though not identical, for the circumstances are not the same. The sooner they accomplish this the better, for, if there cannot be agreement as to conjoint boards or to direct representation, there must be submission to the Government, whose duty it is to regard the interests of the public. In our former article, we pointed out that the interests of the army and navy were cared for by a test-examination. Professor Rutherford denies this, and says that the examination is a competitive examination, and not a test-examination. He ought to have known that, full often, the number of candidates seeking admission to the services is not equal to the number of vacancies; and yet that, in such examinations, candidates are rejected for their incompetence, who, being placed on the *Medical Register* by the degrees or diplomas already in their possession, would be declared qualified to treat the diseases of the public. It is merely a question of time, as to how long an abuse like this can be allowed to exist. The fact of registration is by law an evidence of qualification and competence, as much as the stamp at the Mint is an evidence of the purity of the material which bears the impress. Everyone admits that, as the *Register* is at present constituted, the pure and the alloyed metal bear the same impress and apparent value. This state of things has but to be fully understood, to demand and obtain a remedy.

ELEMENTAL PATHOLOGY.

THOSE among our readers who had the privilege of listening to the most brilliant and successful address delivered by Sir James Paget at our Cambridge meeting will be glad of the opportunity of reading it in a complete and revised form. Those who were not so fortunate as to be present will be able to realise in some degree the singularly vivid impression which was produced by its oral delivery. We say in some degree, and not wholly; because there is something in a spoken address by any one who possesses, as Sir J. Paget does, in a high degree the natural gift of language, which the printed copy never completely reproduces. The unforced eloquence; the happy art which gives the results of long study and reflection as if they were the spontaneous prompting of the moment; the perfect succession and linking of ideas, which made every succeeding statement or illustration seem only the natural consequence of that which had gone before,—these are lost, even if we gain by seeing more clearly the unity of plan which runs through the whole. But our object now is not to praise; rather to show in what respects this address of Sir J. Paget's appears to us to be of importance to the science of pathology.

In the pathology of the last half-century, two schools, or, more correctly speaking, two streams of thought, have been predominant, and to some extent rivals; the one tending to explain all morbid changes in parts by reference to a *central* organisation—that is, either by disturbances of the circulation and changes in the blood, or by alterations of the nervous system; the other laying more stress on the changes in the parts or tissues themselves, and especially in their minute elements. The one might be called the school of vascular or nervous pathology; the other that of textural, cellular, or, to adopt the name now suggested by Sir J. Paget, elemental pathology. The former was the way of looking at the subject necessarily adopted by the older pathologists—at least, since the discovery of the circulation—and reached its highest point in the pathology of John Hunter, where almost everything is referred to the action of the vessels and changes in the blood. It was also systematically developed in the earlier editions of Rokitansky's text-book. Till the discoveries of Schwann and Schleiden had shown the minute structure of animal tissues, it was hardly possible to conceive of any activity in the tissues themselves independent of the influence of the circulating blood. When the older pathologists recognised something to be an independent activity in any morbid process, as in cancers and new growths, they could not but regard these as something parasitic. In a well-known passage of his book on *Generation*, Harvey compares cancers and tumours to "mushrooms and plants growing on trees", and ascribes to them "their own proper vegetative souls". When the physiology of the nervous system was sufficiently advanced, the theory of nervous influence was in many cases substituted for vascular in the explanation of local morbid processes; but to this day neuro-pathology consists of isolated facts and plausible hypotheses, and no one has succeeded in framing a general theory of nervous influence in the causation of disease.

At first, the discovery of the cellular composition of animals and plants did not greatly interfere with the central system of pathology. For, cells being thought to originate in a blastema, which blastema was formed by the blood, it was still possible to conceive of all diseases as depending upon a general cause; that is, on the composition of the blood; and the attention of pathologists was still diverted from the consideration of the changes in the actual elements of the tissues.

It was only after several observers, such as Goodsir, Remak, and others, had prepared the way, that Virchow was able to give, in the *Cellular Pathology*, a general theory of the relations of the elements of the tissues to disease. This was at the time, and is still, the most important statement of the elemental side of pathology; but it never succeeded in entirely replacing the vascular theory, and of late years the cellular pathology has undergone serious curtailments, especially as respects the theory of inflammation, and the importance of the connective tissue.

All these theories, then, still remain; no one has yet completely superseded the others, and the science of the future will probably rather combine them all than select from among them. It is clear that none can be rejected. We want cellular or elemental pathology to explain processes common to organisms which possess, and those which do not possess, a nervous system and a circulation; and to explain those which take place in nonvascular parts. But, on the other hand, we want central pathology also, for the cellular school has always been apt to forget the unity of the organism. In the higher animals, and especially in man, it is certain that the minute elements are not independent of the influence of each other, and of the central nervous and vascular systems. It would be a hopeless task to attempt to explain all pathological processes as resulting from the "irresponsible activity" of an enormous number of self-contained and self-controlled elements or cells. The two systems, which we might call, borrowing a political phrase, those of individualism and centralisation respectively, are necessary to the development of a complete science of pathology.

We have deferred speaking of the relation of Sir James Paget to these rival or concurrent systems of pathology. His position in this science was won chiefly by the publication of the *Lectures on Surgical Pathology*, a work which made an epoch in English pathology, and had considerable influence on the progress of medical science in other countries. The principles of these lectures, which might be considered in some respects a continuation of the work of John Hunter, were essentially those of the blood or vascular pathology. Although the lectures contained some valuable facts and hints in the direction of elemental pathology, their first publication occurred just a little too early to profit by the new fields of investigation opened up by the researches of the German pathological histologists, and in succeeding editions the introduction of new matter bearing on the subject has not essentially altered the general plan.

In the address now published, Sir James Paget has shown that he knows how to value that side of pathological science with which his lectures did not professedly deal; and has developed that side in some respects even further than the professed leaders of the other school. Professor Virchow, indeed, has always done ample justice to comparative pathology and to the lessons to be derived from the study of morbid processes, even in plants. Some interesting observations on this subject will occur to any one who has read the *Cellular Pathology*, such as the comparison of cell-growth in the syringa to proliferation of cartillage; but this subject has been little followed up by professed pathologists, either in Germany or elsewhere. Very numerous and elaborate observations have been made on the diseases of plants, and to many of these Sir James Paget refers; but we do not find in any of the recent

German text-books of pathology that these discoveries have been followed up or applied to the elucidation of human diseases. The path is, therefore, from a medical point of view, almost untrodden. By his masterly sketch of the subject, Sir J. Paget has not only indicated a new and most attractive field of research, but has himself led the way. We do not pretend to discuss the subject in detail, or to undertake the superfluous task of giving an analysis of what may be read, in language admirably clear, on other pages; but a few points in vegetable pathology may, perhaps, call for some notice.

Sir J. Paget has drawn attention, in graphic language, to the inferiority of plants to animals in the power of repairing lost parts. Mr. Herbert Spencer, in his *Principles of Biology*, has made the same remark, and also without suggesting any explanation, though he has pointed out that there is also in plants a minimum of *waste*, so that waste and repair may stand in some sort of mutual relation. This difference is clearly not dependent upon the existence of a nervous system and blood-vascular apparatus in animals, since the power of repair is seen most strikingly in some of the lowest animals, such as the *hydra*. We are, in fact, led to see in this, as in other cases, that plants (at least the higher) do not differ from animals merely in being more simply organised; for the higher plants are far more complex than the simpler animals, though still presenting the characteristic physiological differences between plants and animals. The relation between higher animals and higher plants is rather one of contrast or polarity than of inferiority and superiority; and perhaps it is for this reason, that the morbid processes in the two are very different, or, at least, that much difficulty has been found in bringing them into relation. Among the diseases referred to by Sir James Paget, the class in which the greatest amount of similarity may be seen—that is, those which affect plants and animals more nearly alike than any other—is that of epidemic parasitic diseases. The potato-disease, and others affecting cultivated plants, offer many valuable hints towards the elucidation of human epidemics. For instance, in such diseases as plague, diphtheria, and other specific fevers, it has always been difficult to explain the apparent latency of the disease between one epidemic and the next. This was also a difficulty in the potato-disease; and the problem can hardly be said to have been satisfactorily solved till the discovery, a few years since, by Mr. Worthington Smith, of the "resting-spore" of the potato-fungus—a spore, that is to say, by which the parasitic fungus continues its existence in the ground outside the plant it affects. If the specific fevers are really caused by anything in the nature of fungi, there must, apparently, in some cases be something analogous to the "resting-spore" by which the life of the fever-fungus is preserved between one epidemic and another. It has, indeed, been shown with great probability that, in the case of the anthracoid disease of cattle such a germ does exist, and is preserved in the soil, beside the germs which inhabit the blood, and which can be transmitted from one animal to another. But to discover the actual form in which specific fevers exist outside the body, appears now a still more difficult task than that of identifying the germs of disease within the body. The study of plant-diseases may, however, be of some service in this difficult research.

In conclusion, we may be permitted to express the satisfaction with which younger men will have seen our veteran pathologist returning, after many years of professional activity, to his old pursuits, and giving us, in his masterly address, not a mere continuation, still less a correction or revision of, but a worthy complement to, the *Lectures on Surgical Pathology*.

THE PHYSIOLOGY OF THE NERVOUS SYSTEM.

DR. BROWN-SÉQUARD gives an account, in the *Gazette Médicale de Paris*, of numerous experiments, of which some were performed more than a year since at his course of lectures at the College of France. They have, he considers, yielded decisive results in contradiction of several of the doctrines accepted in regard to sensibility. He goes on to cite those facts which have most interest from that point of view, on animals of three kinds—dogs, guinea-pigs, and rabbits, but especially the last-mentioned. He first divided, transversely, a lateral half of the pons Varolii, immediately behind one of the middle cerebellar peduncles. The effects of this lesion were very varied, even with regard to the disturbances of sensibility. Nevertheless, amongst the animals thus operated on, and especially amongst the rabbits, he often found, with regard to sensibility, the effects which he has pointed out as the ordinary results of transverse hemisection of the spinal cord. There was a greater or less increase of sensibility on one side (that of the lesion), and a more or less notable diminution, and sometimes complete loss, of this property on the other side. These two effects, hyperæsthesia and anæsthesia—were especially noticeable in the pelvic limbs. The section of the pons having been made on the right in these experiments, Dr. Brown-Séquard, as we have already stated, found that the pelvic member of the same (right) side was hyperæsthetic, whilst the pelvic limb of the other side (the left) was anæsthetic. After having thoroughly assured himself of these facts, he divided transversely the left lateral half of the spinal cord and at the level of the tenth dorsal vertebra. He soon found, after this second lesion, that the left pelvic limb, which had more or less completely lost sensibility after the first lesion, had become not only sensitive, but much more so than in the normal condition. Anæsthesia was replaced by hyperæsthesia. On the contrary, the right pelvic limb, hyperæsthetic after the first lesion, had become anæsthetic after the second. Dr. Brown-Séquard is careful to add that the hyperæsthesia of the side of the lesion of the spinal marrow was quite as marked in these cases, as when this lesion was inflicted on an animal which had not been submitted to any other lesion.

In another series of experiments, after having divided the right lateral half of the encephalon at the level of the anterior extremity of the cerebral peduncle, and after having found a more or less considerable diminution, and sometimes loss, of sensibility in the limbs of the opposite (left) side, he made a transverse section of the left lateral half of the medulla oblongata in two rabbits, or of the spinal marrow in six others. He then found hyperæsthesia in the left pelvic limb, which had been anæsthetic; and anæsthesia in the right pelvic limb, which had been hyperæsthetic. Here, also, as in the first series of experiments, a second lesion neutralised the effects of the preceding one, and caused the appearance of absolutely contrary effects.

If to Dr. Brown-Séquard's experiments be added the very remarkable facts pointed out by M. Vulpian, of the cure of anæsthesia in man by the application of galvanic currents, even in cases of organic lesion of the encephalon, as well as the extremely interesting facts of transfer and anæsthesia in the human subject, published by M. Charcot, M. Dumontpallier, M. Debove, and other observers, we are perforce led to reject the notion that the anæsthesia due to an encephalic lesion necessarily depends on the change and destruction either of perceptive centres, or of conductors transmitting sensitive impressions to these centres.

The production of anæsthesia and hyperæsthesia in the two series of experiments reported by M. Brown-Séquard may easily be explained by the aid of the new ideas expounded in two recent communications to the Academy (*Comptes Rendus*, 1879, tome lxxxix, pp. 657 and 889). He has shown that certain points of the cerebro-spinal centre possess a great power in causing the properties of other parts of the nervous system to disappear by an inhibitory influence (*influence d'arrêt*); and that the same points, or others, are endowed with another property hitherto not studied, and in virtue of which the irritating lesions of these points may augment the activity, the property, or the action of the more or less distant parts. It is a dynamogenic influence which manifests itself in this latter case. The facts contained in his present communication may be easily explained, if the anæsthesia be considered as the effect of an inhibitory influence exercised over the sensitive elements of the medulla, and the hyperæsthesia as the effect of a dynamogenic influence over the same elements.

The conclusions drawn from these facts by Dr. Brown-Séquard are these. 1. The appearance of anæsthesia after a lesion of the encephalon no longer affords reason for concluding that the affected part is a per-

ceptive centre, or a path for conductors of sensory impressions. 2. Notwithstanding the very numerous facts which have led him to propose, and to cause to be admitted, the theory that the conductors of sensitive impressions of the limbs cross each other in the medulla, this theory should be rejected. 3. A lateral half of the base of the encephalon might suffice for the transmission of sensitive impressions on both sides of the body, since, in the experiments reported by him, one half of the base of the encephalon transmitted, first, the sensory impressions of the right limbs only, then those of the left pelvic limb, only.

M. LEGOUEST has been elected Vice-President of the Paris Académie de Médécine, in place of the late M. Paul Broca.

MR. W. J. WALSHAM, of St. Bartholomew's Hospital, has been appointed Examiner in Anatomy at the University of Aberdeen.

THE Harveian Lectures will be given by Dr. James E. Pollock on December 2nd, 9th, and 16th, "On the Prognosis and Treatment of Chronic Diseases of the Chest in relation to Modern Pathology".

DR. GEORGE ROPER has resigned the post of Physician to the Royal Maternity Charity, which he has held for ten years. He will be succeeded by Dr. Hermann, one of the assistant-physicians.

DR. G. C. HALL has recovered damages from the *Indian Medical Gazette*, for publishing an article imputing to him unprofessional conduct in soliciting subscriptions for an Eye Infirmary at Allahabad with which he is connected.

THE two large asylums at present existing in Staffordshire are incapable of accommodating all the lunatics. The Court of Quarter Sessions this week, in consequence, voted £35,000 for enlarging the Stafford Asylum.

DR. MATHIAS DUVAL, *agrégé* of the Faculty of Medicine of Paris, has been named director of the Laboratory of Anthropology and Professor of the School of Anthropology, in the place of the late M. Paul Broca.

A FRESH outbreak of typhoid fever has occurred at Burley, in Wharfedale, Yorkshire, where, eighteen months ago, there was a rather severe epidemic. The medical officer of health has promised to make a house-to-house inspection of the district for the discovery of sanitary defects.

DR. E. J. SPARKS, who was formerly Assistant-Physician to the Charing Cross Hospital, died last week of phthisis, at his brother's house. He had lately been practising during the winter at Mentone. He was editor of Binz's *Therapeutics*, and had just published a work on *The Riviera and its Climate*.

THE medical charities of Leeds will benefit by the recent successful Musical Festival to the extent of £2,000. It is proposed, however, that, in future, a portion of the receipts of these musical festivals should be set aside for the promotion of musical science, as well as for the benefit of hospitals. This is an innovation against which there is little to be said.

THE estate of William Birks Rhodes, the benefactor of the Royal Free Hospital, known as the Hounslow miser, who died in 1878, has only just been wound up. A sum of £78,000 has been realised, chiefly from investments in gas-shares. This was bequeathed in equal parts to the Life-boat Institution and the Royal Free Hospital, Gray's Inn Road.

THE Duke and Duchess of Connaught have consented to lay the foundation stone—although the building is approaching completion—of the Hospital for Consumption, Mount Vernon, Hampstead, on Saturday (to-day). Presentations of purses of £5 and upwards for the hospital will be made to their Royal Highnesses.

THE premature decease of Dr. Pearson Irvine, following so soon after the melancholy death of Mr. Amphlett, has caused a profound feeling of grief at Charing Cross Hospital. Dr. Irvine was a physician of great and varied accomplishments. To scientific acquirements of no mean order, he added the powers of a successful novelist and dramatist. His lectures were much admired; and he was greatly loved by the students, who followed his body to the grave with every demonstration of affection and respect. Dr. Pearson Irvine was not yet forty years of age, and had before him every promise of a successful medical career.

DR. ROBERT KING has resigned his appointment as Physician to the Middlesex Hospital. Dr. King is still a young man, and was an energetic worker in the medical school; and his resignation will be much regretted by the students.

DR. ARTHUR EDIS, Assistant Physician-Accoucheur at the Middlesex Hospital, has resigned the post of Physician-Accoucheur at the British Lying-in Hospital, which he has held for ten years.

DR. LEES having recently migrated from Charing Cross Hospital to St. Mary's Hospital, to fill the vacancy caused by the resignation of Dr. Robert Farquharson, M.P., there are now two vacancies for assistant-physicianships at Charing Cross Hospital, and one vacancy for the post of assistant-surgeon.

THERE are also now vacant, by the above-mentioned resignations, the office of assistant-physician at the Middlesex Hospital, for which it is presumed that Dr. Murrell and Dr. Donald Hood will be candidates; and the office of physician to the British Lying-in Hospital, for which Dr. Mansell Moullin is mentioned.

A RECENT dispute between the medical staff and the board of governors at the Hospital for Consumption and Diseases of the Chest at Brompton, on the question of a proposed addition to the number of physicians without consulting the medical board, was the occasion of a lively scene at the last meeting of the governors. Dr. Quain, however, successfully vindicated the right of the medical staff to be consulted on such a subject; and, the staff firmly upholding their professional right to be consulted, the governors—not without some hot contest, on the Guy's model—gave way to arguments of which the force could not be resisted, when urged with dignity and unanimity; and rescinded their former resolution.

IT is reported that Dr. Habershon and Mr. Cooper Forster are very desirous of tendering their resignations of their appointments at Guy's Hospital, and have only been prevented from doing so by the urgent representations of their colleagues. It may well be understood that the excessively ungracious and unmannerly addition to the resolution of the governors, passed last week, is such as can only be regarded with indignation by men of the prominent position of the senior medical officers of Guy's, and that their natural impulse would be to resent by resignation language so harsh and unbecoming. Isolated resignations, however, at the present, might only produce further disorganisation; and it is well that the medical staff should face the existing state of things as an united body. Only by harmonious and combined action can further progress be made in restoring to the staff its due influence in the control of the wards and the regulation of the treatment and nursing of the patients.

WE understand that the lady recently appointed as nursing superintendent of the London Hospital was the lady superintendent of the Pendlebury Hospital, Manchester, during the period of the Humphreys episode. It is to be hoped that there will be no repetition of the most unpleasant differences with the medical staff which then caused so much trouble.

THERE are some changes this year among the British physicians practising at foreign health-resorts. Dr. Marcet, F.R.S., who has for some years practised during the winter at Cannes, will henceforth prac-

tise exclusively in London. Dr. Charles West will reside and practise during this winter in Nice. Dr. Litton Forbes of Spa will, during the winter season, practise in Rome.

THE *Guy's Hospital Gazette* says the medical wards are still in a somewhat chaotic condition, in consequence of the closing of so many beds. By the removal of patients from Stephen to Bright, ten male beds have been closed. It is rumoured that Samaritan Ward is to be wholly or partially shut up. The nursing difficulty will be altogether obviated when the hospital is emptied of patients. "They made a desert and they called it peace."

THE same journal considers that the new regulations for the Licentiateship of the College of Physicians should make that excellent diploma far more popular than it has been amongst students. Instead of being obliged to take up all the various subjects together at the end of the hospital curriculum, they can now go in for chemistry and materia medica during any part of their hospital career.

AN outbreak of enteric fever is reported from Epsom. At least some of the cases are believed to be associated with the water-supply of the town.

NO further cases of small-pox have occurred at Bury during the last fortnight. It is to be hoped, however, that the recent outbreak will have the effect of stirring the Town Council into providing a proper hospital of their own, instead of relying upon the infectious wards at the workhouse, the use of which for non-pauper cases is both illegal and improper.

AT Caister, near Great Yarmouth, the sanitary state of which is described as "disgraceful", typhoid fever is stated to be prevailing. The water-supply of the village has been reported by the medical officer of health as unfit for human consumption, and the drainage, also, is bad. The sanitary administration of the place is vested in a body euphemistically styled the "Directors and Acting Guardians of the Poor of the East and West Flegg Incorporation", who, being self-elected, utterly neglect the district under their charge.

BEXHILL, a village of about two thousand persons near the Sussex coast, has lately been the scene of a somewhat sharp outbreak of typhoid fever. In all, sixteen persons have been attacked by the disease, and one has died. The origin of the outbreak does not appear to have been satisfactorily traced; but, close to the door of the person first attacked, was an opening made in the main sewer by the owner of the cottages, from which opening there was a large flow of sewer-gas. There were, moreover, several insanitary conditions in the locality affected, the water-supply especially being much polluted.

THE public health of Surbiton is a matter of no little moment to Londoners, seeing its greatly increasing popularity as a residential neighbourhood. It will be, therefore, of general interest to learn that the death-rate of the district, which was last year at the very low figure of 11.4 per 1,000 of the estimated population, has been still further reduced this year, the rate for the last three months being as low as 8.4 per 1,000 *per annum*.

M. WOILLIEZ made an interesting communication to the last meeting of the Paris Académie de Médécine, on the utility of cold baths in the treatment of cerebral rheumatism. He said that, thanks to refrigeration—whether obtained by the wet pack, wet applications, or M. Dumontpallier's apparatus—cerebral rheumatism, so frequently a mortal disease, may now nearly always be cured.

SOME curious examples of county extravagance were quoted at the Farmers' Alliance meeting this week. In one case it was made a matter of complaint that the medical officer of a county lunatic asylum, who had been receiving a salary of £700 *per annum*, on his retirement at a comparatively early age, was awarded a superannuation allowance of £552. Considering the excessively exhausting and dangerous nature of the duties of the resident superintendent of a lunatic asylum, this complaint, that twenty years' continuous service entitled him to a superannuation, is a singular example of the workings of the agricultural mind.

DR. PATRUBAN, formerly Professor of Anatomy in Prague, and well known for his scientific acquirements and studies, has lately died. His career was marked by political difficulties which, in 1848, compelled his withdrawal from Prague, and subsequently embittered his relations with his colleagues, and injured his position.

MORALS would seem to be at a very low ebb in Antigua. The Registrar-General for the island reports that, in 1879, the proportion of illegitimate births was no less than 72 per cent. of the total, and in one parish nearly 81 per cent. Doubtless this state of morality helps very importantly to swell the deaths amongst infants, which constituted last year 36.6 per cent. of the total deaths, the latter being equal to 33.9 per 1,000 of the population.

ON the occasion of the silver wedding of the Austrian Emperor, a prize was offered by the Society of Physicians of Lower Austria for the best work on the subject of the Laws of Health for the People. The prize was awarded to Dr. Franz Hœber. The prize essay has been printed and published by the firm of Fäsy and Trick, Vienna; and the Minister of the Interior has issued a circular recommending its use in all the district schools and public institutions throughout the empire.

AT the last meeting of the Paris Academy of Sciences, M. Bochefontaine read a paper on the Physiological Action of Conium Maculatum. His conclusions were: that coniin diminishes or abolishes the physiological properties of the nervous centres before acting, like curare, on the "nervo-muscular junctive substance" (Vulpian). In the dog and frog, it eventually abolishes the nervous excito-motricity if given in sufficient quantity, and it is fatal to batrachia as well as to mammalia. Thus hemlock may act like curare, but it has additional physiological effects.

THE NURSING QUARREL AT THE LYING-IN HOSPITAL.

THE General Lying-in Hospital, Lambeth Road, is still in a state of interregnum. The Committee of Investigation reported at the end of July last, but the report has not yet been presented or considered. The medical staff resigned in June last, in consequence of a quarrel, of the Guy's Hospital type, arising out of their objections to the course pursued by the matron countenanced by the board.

TYPHOID FEVER AND INFECTED SEWERS.

AN outbreak of typhoid fever is reported at New Swindon, the sanitary administration of which has recently been reported by Dr. Blaxall, of the Local Government Board, as very defective. The medical officer of health is of opinion that the outbreak is due to the foul air of the sewers, which, according to Dr. Blaxall, are only ventilated at one single point. The sewers have been flushed with carbolic acid; and, with this and the recent fall of rain, the medical officer of health feels "reason to hope that a better report will soon follow". Whether this hope will be fulfilled remains to be seen; but the district cannot expect to be free from similar visitations until it fully and properly ventilates its sewers.

THE CONJOINT BOARD AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Vice-Chancellor of the University of Cambridge has received the following communication from Mr. Edward Trimmer, the Secretary of the Royal College of Surgeons of England.

"I am desired by the President to forward to you, for the information of the University of Cambridge, the annexed copy of a resolution adopted by the Council of this College on the 10th of June, and confirmed on the 8th of July, viz.: 'That, in view of the uncertainty that prevails as to the compulsory establishment of a conjoint scheme in each division of the United Kingdom, the Council give notice to the several medical authorities in England of their intention, whether alone

or in conjunction with other bodies, to make arrangements for the institution of a complete examination to be passed by all candidates for the diplomas of Member and Fellow of the College.'"

The proposal of the College of Surgeons is a very inadequate remedy for a very great and admitted evil, which would have been altogether obviated by the arrangements for a conjoint board which had been fully agreed upon by the English licensing bodies. We understand that the College of Physicians loyally adheres to the agreement entered into between the several bodies, and is not willing to accept the partial substitute proposed. Should the College of Surgeons extend its examinations with a view to rendering them complete, it will be a further addition to, and complication of, the already too numerous examinations.

HOSPITAL SUNDAY IN CUMBERLAND AND WESTMORLAND.

THE eleventh annual report of collections made on Hospital Sunday for the benefit of the five principal medical charities connected with Cumberland and Westmorland, has just been issued; and it appears that the amount obtained this year was £1,176 13s. 11d. Of this sum, the Cumberland Infirmary has received £516 14s. 2d.; the Carlisle Dispensary, £126 8s.; the Carlisle Fever Hospital, £115 2s. 6d.; the Silloth Convalescent Institution, £249 7s. 3d.; and the Whitehaven Infirmary, £156 1s. 11d. The expenses of the year were only £15 6s. 10d. Since the fund was first established, the sum of £10,349 2s. 11d. has been divided among the five above-named institutions.

SCARLATINA AT LOUGHTON.

AN epidemic of scarlatina, of considerable proportions, has occurred at Loughton, in Essex, the scene of the cases of violet-powder poisoning, which attracted so much attention in the spring of 1878. The actual number of scarlatina cases has not been definitely stated; but, by the end of last month, at least sixty had occurred in about thirty families, and eight of them had proved fatal. Most of the houses where the disease has appeared have had sanitary surroundings—the lack of wholesome water being especially marked. Scarlatina appears to have first shown itself in Loughton some time in July or August, but it was not until the latter half of September that it became epidemic. It seems to have been wholly spread by personal contagion, the schools having been active agents in the propagation of the infection. It was not, however, till the end of September that the schools were closed, and meanwhile the disease had spread all over the village. Acting upon the advice of Mr. Spear, one of the Government medical inspectors, the local authority, who had at length become alarmed at the dimensions of the outbreak, opened one of the schools as a temporary hospital (there being no permanent provision of the kind in the district), and hired trained nurses from London. In addition, other steps were taken for disinfection and for the repression of nuisances; and, since these measures were taken, there has been a gratifying diminution in the number of cases of the disease, which is believed to be now virtually stamped out.

CONSULTATIONS AND PRESCRIPTIONS IN HOSPITALS.

IN connection with the recent inquiry at the Cork Fever Hospital, the committee have drawn up a report, of which the greater part calls for little remark from us. The report, however, includes the following two paragraphs, which are of serious import.

"11th. The physicians shall in future hold consultations, and, when necessary, summon formal consultations in the hospital book which contains the records of deaths. We direct that a statement be made of each case, as to whether a consultation was held or not.

"12th. No physician attached to the hospital shall prescribe or administer any medicine that is not named in the *Pharmacopœia*, approved of by the medical staff, and sanctioned by the committee."

What may be the exact meaning of the former of the two clauses, we find it difficult to say; but it is apparently meant to lay down some sort of rule as to consultations, which is, on the one hand, too vaguely stated to have any clear meaning; and on the other, may apparently be used on emergency as a means of annoyance and a ground of censure. The discretion of a physician as to "holding consultations" must always be unlimited. It is wholly within his own mind to determine whether any case presents any such features of difficulty, rarity, or doubt, as to suggest the utility or desirability of a consultation with his colleagues. No rule can settle this for him; and the attempt of a committee to determine it for him beforehand is greatly to be deprecated. Consultations in medical cases are extremely rare in our hospitals; and we venture to think that such a rule as this is as mischievous and silly as it is unprecedented. The objections to the twelfth rule are still stronger; and to pass such a rule without first submitting it to the report of the medical board, is a sad example of the little thought which is often given by laymen in presumptuously legislating on subjects very vital to the interests of patients, and requiring for their decision precisely the technical knowledge which they lack. To prepare a pharmacopœia for the hospital, which shall include all the preparations approved by the staff, would be a very heavy and constantly new task. A hospital pharmacopœia is usually a very small matter indeed, and is drawn up by the staff to include a few useful formulæ to save the time of the dispenser and the pockets of the governors. If the governors propose to limit the staff in any way to the use of drugs included in an official list, and to be found in their pharmacopœia, they will greatly limit the chances of recovery of the patients, and largely diminish the usefulness of their medical staff. This sort of grandmotherly legislation, by which they seek to avoid future discussions, is the surest way to give rise to still greater dangers. There is no physician of any skill who does not employ a dozen medicines and scores of preparations outside any official lists. These lists are only revised at long intervals; and to tie down their medical officers to the oldest, instead of the last, methods of treatment, is an extremely "Irish" device for securing the welfare of the patients. Better select at once officers not under sixty years of age, and with the undertaking to adopt the medical treatment of their grandfathers; or provide that the weekly board shall be present at the consultations, and shall "approve" the prescriptions.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE inaugural address in connexion with this society was delivered on the 15th inst., by the President, Dr. Bristowe, at 1, Adam Street, Adelphi. An abstract is published at page 652. On the motion of Dr. Tripe a cordial vote of thanks was passed to Dr. Bristowe, and with that the business of the meeting was brought to a close.

SCARLET FEVER IN PADDINGTON.

THE epidemic of scarlet fever in Paddington produced by milk has subsided. We learn that Dr. Stevenson has not yet made his report to the vestry upon the causes and character of the outbreak. The district medical officers of Paddington have only been called to two cases of scarlet fever during the past fortnight.

THE DEATH-RATE OF SCARLATINA AND MEASLES.

DR. VIGGO BENDZ of Copenhagen has compiled a very interesting statistical report of the prevalence and mortality of scarlet fever and measles in that city, during the twenty-five years 1855-79. It is founded partly on the returns of disease furnished weekly by the medical men in Copenhagen, and partly on the death-returns. It is, indeed, not absolutely correct, especially as regards measles, as many mild cases of the disease did not come under professional treatment; and the weekly lists, especially at the commencement, were not filled up by all the practitioners. Beyond, however, making the death-rate somewhat too high, the omissions are not of importance. Scarlatina was constantly present, except during a few weeks; there were several extensive epidemics, at somewhat irregular intervals. Altogether, there were 22,036 cases of the disease, with 2,698 deaths, or 12.2 per cent. The mortality, however, varied much in different years; thus, in 1855, it was 22.7 per cent.; in 1873, 21.9; in 1874, 1.7; and in 1878, 2.3. These differences were not in constant relation to the extent of the disease. There was a great mortality, not only in epidemic years, but in years in which there were very few cases; and, on the other hand, in several years of both categories the death-rate from scarlet fever was

below the average. In the three years, 1869-70-71, during which the disease was epidemic, there were 4,563 cases, with a mortality of 10.5 per cent.; and, during the epidemic prevalence of the disease in 1873 and 1876, there were 1,754 cases, with a death-rate of only 8.6 per cent. One of the most striking examples of the difference in the rate of mortality in sporadic outbreaks of the disease is afforded by the two years 1873 and 1874, in which there were respectively 242 and 237 cases; in the former year, however, the death-rate was 21.9, and in the latter 1.7, per cent.—the former being the highest but one in the twenty-five years, and the latter the lowest. These examples show how little the mortality can be depended on as an indication of the extent of the disease. Tables are appended, showing the mortality at different ages: viz., under one year; from one to five; from five to fifteen; and above fifteen. Dr. Bendz has been able to obtain materials for these tables only from the year 1867; but he believes that the numbers are sufficiently great to show that the danger to life diminishes as age advances. Thus, from 1867 to 1879, there were 241 cases in infants under one year, with a mortality of 28.6 per cent.; 4,254 cases in children above one and under five years, with a death-rate of 13.2 per cent.; 5,137 between five and fifteen, with a death-rate of 5.8 per cent.; 1,138 above fifteen, with a mortality of 4.7 per cent. Dr. Bendz attributes the small proportion of cases in children under one year, not so much to their lower susceptibility to the disease, as to the fact that they are less exposed to infection than others. Of measles, there were, in the twenty-five years, 52,115 cases, with 1,559 deaths = 3 per cent. The greatest death-rate was in 1858, when, with only 9 cases, there were 3 deaths. The epidemics of measles return at shorter intervals, and are of briefer duration than those of scarlatina; the intervals, however, are very irregular. As with scarlatina, the mortality shows no absolute connection with the extent of the disease. Thus, taking years of greatest prevalence, the number of cases and the death-rate per cent. were: in 1879, 10,483 and 2.8; in 1873, 5,320 and 4.3; in 1875, 5,098 and 5; in 1860, 4,370 and 2.7; in 1864, 3,460 and 4.2; in 1866, 3,105 and 1.4; in 1862, 3,061 and 2.9; in 1872, 2,990 and 1.4; in 1869, 2,900 and 1; in 1868, 1,883 and 2.7. While, among 10,770 cases of scarlet fever, there were only 241 in infants under one year, in 30,581 cases of measles there were 1,855 cases at the same age—the percentage being 2.24 in scarlet fever, and 6.06 in measles. The mortality from measles, like that from scarlatina, was proved to diminish with age—the death-rates per cent. being: under one year, 14.23; from one to five years, 4.23; from five to fifteen, 0.60; above fifteen, 0.45. It will be seen that the diminution is much more marked than in the case of scarlatina.

TYPHOID FEVER AT NEWLYN EAST.

AN outbreak of typhoid fever of the most startling and shocking kind is raging at Newlyn East, a neglected fishing village in the eastern part of Cornwall, and in the St. Columb Sanitary District. Although the disease only appeared about three weeks since, there have been no fewer than eighty cases, some of them very severe, in a population numbering only a few hundreds. The single medical man in the place, Mr. Vigurs, has been fighting manfully and untiringly against the epidemic; but the sanitary authority seem to have been criminally apathetic in the matter. A nurse has been lent by the governors of the South Devon and East Cornwall Hospital, but further nursing power is sorely needed. The cause of the epidemic is not yet accurately known; but every conceivable condition fostering its spread is present in the village, and the only wonder is, that the outbreak has not come before. The population consists of extremely poor and ignorant cottagers, whose wages do not usually exceed eleven shillings a-week. Their houses are dilapidated, dark, unventilated, overcrowded, and shockingly filthy. Of privy accommodation, there seems to be little or none; and, as a consequence, filth is scattered about anywhere and everywhere. What little drainage there is has been ineffectually and injudiciously constructed, and it is brought into dangerous proximity with the main source of water-supply. This supply—a well—has now been cut off by order of the authority, on the ground of its being polluted. As a consequence of this, water has been obtained from a considerable distance, instead of being brought to the houses, as, in the present emergency, it clearly ought to be. With the exception of this questionable step, the authority seem to have done nothing, no attempt having been made to abate the manifold nuisances in the village. It is curious that men and children have been the especial victims of the disease, and that the women have been comparatively exempt from it. The epidemic is evidently one for the prompt interference of the Local Government Board, who would do well indeed to make inquiry into, and insist upon, improvements being made in the sanitary state of the whole of the fishing villages on the Cornish coast.

STIMULANTS IN WORKHOUSES.

THE consumption of alcoholic liquor in Helston Workhouse is less, probably, than in any similar establishment in the kingdom. For a whole year the drink bill amounted only to twelve shillings; and for the past six months one pint of brandy, of the value of four shillings, was all that was brought into the house. Even this was not used medicinally, but a portion of it was taken by attendants while engaged in nauseating work. The average number of inmates is above one hundred and fifty, and these enjoy good health, making due allowance for such aged and infirm people as are usually found in workhouses. Dr. Wearne, the medical officer, is to be congratulated on the success which has attended his management of this department.

THE TYPHOID EPIDEMIC AT ROCHDALE.

THE epidemic of typhoid fever at Rochdale, which is locally ascribed to infected milk, seems now to be at an end; no fresh cases, according to the medical officer of health, having been reported during the last few days. An inquest has been held on the bodies of two of the victims; but, owing to the narrowing of the inquiry by the coroner to the circumstances attending the deaths of these two persons only, not much of value as to the real cause of the epidemic was elicited. The verdict of the jury left it uncertain whether, in the particular cases, the milk or an infected sewer was at the bottom of the mischief; but it seems to be the distinct opinion of the medical officer of health, Dr. Joseph Henry, that it is to contaminated milk that the outbreak was due. Dr. Henry stated at the inquest that, from September 1st to October 13th, there had been in the borough fifty cases of typhoid fever, thirty-five of which were in a particular district. There had been ten or eleven deaths from the disease—the cause in one case being somewhat doubtful. Out of the thirty-five cases, twenty-six had been supplied with milk from a particular farm. Eight of these cases had been fatal, and another case has ended fatally since the inquest. About the middle of September, the attention of Dr. Henry was directed to the increase in the number of cases of typhoid fever reported; and, on inquiry, it was found that the cases were chiefly in one road, and that the majority of persons affected had been supplied with milk by one milkman. On inspection of the premises of the implicated farm, a woman was found suffering from typhoid fever in a cottage between the farmhouse and shippon. The person in attendance on this woman stated that she had buried the stools a few times in a field opposite the door, but that more frequently she had thrown them over the wall opposite the door into a cesspool, and from this cesspool the dip of the soil inclines towards the well used for all culinary purposes at the farm, and for the washing of the milk-cans. Inasmuch, moreover, as there was a difference of ten per cent. of water in the milk at the farm and the milk as delivered in the town, it seems very possible that it may have been diluted before distribution with the water from this (probably infected) source. The well is underneath the kitchen at the farm, and is about fifteen yards deep. The report of the analyst shows the water to be grossly polluted, and the well is known to be unpuddled and to be partly filled by surface-water, so that it is not an unfair inference to suppose that the soakage from the infected cesspool may have had access to it. It is but just to add that the surveyor questioned at the inquest the possibility of the soakings from the cesspool percolating into the well, though he was unprepared with any other explanation of

the evident contamination of the water with sewage. Locally, moreover, a question has arisen whether the water stored in the reservoirs of the town (which are admittedly liable to contamination from the drainage of certain farmsteads and houses) has not been concerned in the outbreak. It is not, however, easy to understand, with the information before us, why, if this has been the case, the outburst has been confined to one particular locality. Evidently the whole of the facts with regard to this distressing outbreak have not yet been published, and we must wait for the final report of the medical officer of health before pronouncing a final judgment as to its causation.

SCARLATINA SPREAD BY MILK.

In view of the general interest excited in the epidemic of milk-scarlatina in London, traced to a private dairy, the facts of a somewhat similar outbreak which occurred at Newcastle-on-Tyne last year become important. In the annual report of Mr. H. E. Armstrong, the Medical Officer of Health for Newcastle, the circumstances of this outbreak are detailed at length; and there seems but little doubt that infected milk was closely associated with it, since Mr. Armstrong is able to exclude every other condition likely to have caused the disease. It appears that, during the month of June 1879, several remarkably sudden and rapidly fatal cases of malignant scarlatina occurred in the higher half of the sub-district of Westgate; and attention was more particularly directed to these cases by the fact, that scarlet fever had not for some time previously been reported in the locality, and that several of the children attacked were struck down at or near the same time. In the particular area, fourteen households were invaded by scarlatina during May and June, and twenty-three persons (ten of whom died) were attacked. At an early stage of the inquiry, attention was drawn to the fact that several of the invaded households were supplied directly with milk by the same dairyman, who kept a farm in the country. Others obtained their milk, through retailers, from the same source. It was known that the household first affected was supplied by a different dairyman, also from the country; but it was not discovered until later that this and the other families obtained their milk from the same neighbourhood, and probably from the same source. On inquiry, it was found that these two farms adjoined each other, and that the two dairymen were in the regular habit of accommodating each other with milk. Lists of the customers of each dairy being furnished, it was discovered that, with one single exception, all the households attacked within the area derived their milk, directly or indirectly, from one or other of these dairies—all the households, except two, being supplied from one of the dairies. Most, if not all, of the patients were in the habit of taking the milk in an uncooked state. The most rapidly fatal case was that of a child, who became ill soon after drinking freely of the milk. In another family, three children fed with the milk became ill, and one of them died; the fourth child, supplied (for special reasons) with milk from a particular cow at a different dairy, escaped. The grouping together of the cases as regards date of occurrence indicated some common cause, which, as Mr. Armstrong shows other causes to have been inoperative, was probably milk. This hypothesis is supported by the fact that, several times during May and June, the milk was complained of as having an unpleasant taste, and as not keeping well. It was observed on different occasions that this milk rapidly became sour at a time when other milk ordinarily kept well. The circumstantial evidence, therefore, leads to the conclusion that the communication of the disease was intimately associated with the milk-supply. But, as to the manner in which the specific infection of scarlatina was introduced into the milk, no evidence is, unfortunately, forthcoming. A most minute and careful inquiry was made, but without eliciting the slightest information that any one on either of the farms had suffered from scarlatina, or had been in contact with any infected person. Though scarlatina cannot be traced to any of the dairies, however, it is known to have been prevalent at no great distance from them not many months before the outbreak amongst the consumers of the milk. Moreover, both the farms immediately adjoin the highway to Newcastle, and thus the opportunities for intercourse between infected persons and those engaged in the dairy business, and the probability in this way of the direct specific infection of the milk, may be readily understood. This short and sharply defined, though virulent, outbreak so closely corresponds with the distribution of a particular milk, that it would appear almost impossible to regard the two otherwise than in the light of cause and effect. Mr. Armstrong reports that the circumstances of the production of the milk were such as, directly or indirectly, to favour its contamination with organic matter; and there are the complaints of consumers, as well as Mr. Armstrong's own observations, that on several occasions it was so contaminated. In this condition, it would rapidly promote the development and intensify the virulence of any zymotic poison that might come in contact with it. Although there is no direct evidence of such contact, the conditions and surroundings of the dairy business at the two farms, as described by Mr. Armstrong, justify the conclusion that there was great risk of such an occurrence.

THE ETIOLOGY OF TYPHOID FEVER.

We hear, from numerous sources, of a quite unusual number of outbreaks of typhoid fever in various parts of the country. The outbreaks are reported as mostly occurring in small rural communities, whose system of excrement-disposal is by pit-privies, and whose water-supply is derived from wells dug in the vicinity of the houses, and, therefore, of the privies. There is usually no history of any previous case before the outbreak begins; and, unless the latter is to be accounted for on the pythogenic theory, which does not receive general acceptation, the reason for the outbursts which seem so common at this time of year must be found elsewhere. The most natural explanation would seem to be that which rests upon the presence of old germs of the disease lying latent in the soil. A prolonged drought, such as was experienced this summer, dries the subsoil, and sinks considerably the level of the water in the wells. A heavy rainfall comes, which, in rapidly filling the wells, percolates quickly through the dry subsoil, and carries with it, unaltered, those germs which, under the ordinary condition of things, would pass so slowly through the soil as to be oxidised and made innocuous before they reach the well. So many outbreaks have occurred, and are occurring, for the origin of which the only rational method of accounting is to be found in some such explanation as this, that it seems important to insist upon the vitality of disease-germs, and to warn investigators that they must not too readily accept the *de novo* theory, because no recent previous case can be discovered to account for the appearance of the disease.

FACULTY OF MEDICINE IN PARIS.

The winter session of the Faculty of Paris begins on November 3rd; and the following is a list of the professors who are to lecture. M. Gavarret, Medical Physics (Biology); M. Gariel, General Physics; M. Jaccoud, Medical Pathology; M. Sappey, Anatomy; M. Bouchard, Pathology and General Therapeutics; M. Wurtz, Medical Chemistry; M. Leon Lefort, Operative Surgery; M. Robin, Histology; M. Laboulbène, History of Medicine and Surgery. Clinical Medicine: M. G. Sée, at the Hôtel-Dieu; M. Lasègue, at La Pitié; M. Hardy, at La Charité; M. Potain, at the Necker Hospital. Mental Pathology: M. Ball, at Ste. Anne. Diseases of Children: M. Parrot, at the Hospice des Enfants Assistés. Syphilitic and Cutaneous Affections: M. Fournier, at St. Louis. Clinical Surgery: M. Gosselin, at La Charité; M. Richet, at the Hôtel-Dieu; M. Verneuil, at La Pitié; M. Trélat, at the Necker Hospital. Ophthalmology: M. Panas, at the Hôtel-Dieu. Obstetrics: M. Depaul, at the Hôpital des Cliniques: Medical Jurisprudence: M. Brouardel, at the Morgue. Practical Anatomy: M. Farabeuf, at the École Pratique.

THE ODOURS OF PARIS.

The Council of Public Health of the Seine having deputed a commission to inquire into the causes of the intolerable smells which have afflicted the population of Paris, the report of this commission has now been presented. It contains, amongst other recommendations, a

representation of the necessity for instituting a thorough and frequent cleansing of the sewers, and of hastening for this purpose the termination of the works intended to bring a larger supply of water into Paris. In the course of the discussion to which this report gave rise, M. Alphaud, the chief engineer to the municipality of Paris, detailed the works actually in progress, and those projected by the city of Paris. The principal cause of the bad smells in Paris being known—viz., the system of permanent cesspools, the method of emptying them, and the consequent necessity of large night-soil depôts—the first project of improvement decided on by the Council and the municipal administration of Paris is the suppression of the system of permanent cesspools, for which the plan of sewer-removal of all liquid excreta, by means of apparatus dividing the liquid from the solid excreta, is to be substituted. But to render this system as wholesome as possible, and to shield it from the objections which have already been made to it, two conditions are essential to prevent the reflux of noxious smells by the soil-pipes, or their diffusion by the mouths of the sewers into which the liquid excreta are discharged. These conditions can only be fulfilled with the assistance of large quantities of water, both for domestic use and for flushing the sewers; so that the excreta should reach the sewer and traverse the intermediate distance in a state of great dilution only. To attain this necessity, the Municipal Council of Paris has decided on abstracting 500,000 cubic *mètres* of water daily from the Loire, by a canal for navigation and irrigation. But, as this project will take time for its realisation, to the 110,000 *mètres* already appropriated to the use of Paris, the water from a fresh source, to the extent of 140,000 *mètres* of pure water, limpid, fresh, and fit for domestic use, is to be added. The necessary works for bringing this needed supply into Paris will be set on foot without loss of time, and, it is hoped, will obviate the more pressing hygienic evils from which that city has of late been suffering.

STATISTICS IN BERMONDSEY.

In his last exeellent report, Dr. Dixon writes that, during the year ending December 31st, 1879, there were 5,484 births. Of these, 413, or 7.5 per cent., died unvaccinated. The deaths under one year of age were 14.7 per cent. of the births. Half of all the children who died during the first year of life were not vaccinated. Of the 5,071 which remain after deducting the deaths, 4,767, or 94 per cent., were successfully vaccinated; 6 were insusceptible; 68 had the vaccination postponed on account of illness; and 227 had removed. The population of the union is about 150,000; the number of births exceeds 5,000 a-year; and the vaccination officer reports that, during the thirteen years he has held the post, he has only been obliged to prosecute in about 20 cases. The popular prejudice against vaccination is much less than has been represented. Dr. Dixon points out that, during last year, 65 per cent. of all the deaths from small-pox occurred in the hospitals; and that the experience of these institutions is the best evidence we can have on the mortality from small-pox, because the number of cases is large enough to prevent those erroneous conclusions which might be arrived at from observations on a limited number of possibly exceptional cases. In three years, the number of deaths in hospitals among the vaccinated, representing about 95 per cent. of the population, was 1,008; and the number of deaths among the unvaccinated, representing about 5 per cent. of the population, was 1,669; or a greater number of total deaths, to the extent of 65 per cent., from one-twentieth the number of individuals. This is a fact of great importance, because it takes into consideration the entire population. Dr. Dixon thinks that the protective power of vaccination is most clearly shown by the different rates of mortality observed in those who have been vaccinated, being always in direct proportion to the excellence or imperfection of the vaccination itself. The number and kind of the marks, and the comparative severity of the cases, are evident to any observer who may be desirous of testing the question for himself. The mortality in the vaccinated was 88 per 1,000, and in the unvaccinated, 444 per 1,000. The high death-rate in the unvaccinated must not be compared with the lower rate in the vaccinated, nor with the general mortality from small-pox before the discovery of vaccination, without a fair consideration of all the facts which may help to arrive at a just conclusion. There is a great difference in the intensity and virulence of different epidemics, both in small-pox and in other zymotic diseases. It is probable that a larger proportion of unvaccinated persons is to be found among the ignorant, dirty, and wretched inhabitants of the slums of London, and very few indeed among the educated and better fed members of society. The disease is much intensified by overcrowding. Vaccination absolutely prevents an immense number of cases of small-pox in persons who, if not vaccinated, would take the disease in a mild form, or at periods of life when the mortality from small-pox is lowest. If we suppose these cases to be added to the unvaccinated, the number of cases of this disease might be four times as many, and the number of deaths twice as many, and yet the percentage rate of mortality would be reduced one-half. This explains why the mortality in the unvaccinated is higher than it was in the last century.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

The annual meeting of the above association was held at Sheffield on the 19th instant. There was in connection with the meeting an exhibition of sanitary appliances and other objects of special interest to members. Among them were models and drawings of the destructor, the concentrator, and the carboniser, as used at Manchester and other large towns. There was also a great variety of disinfectants. The general meeting of members was held at the Council Hall, over which Mr. S. W. North presided. The report stated that during the year they had lost their secretary, Dr. Barry, who had accepted the appointment of Chief Sanitary Officer in Cyprus; and Dr. Wilson of Doncaster was recommended as his successor. The society now numbered sixty-seven members, and an earnest desire was expressed that the association should include the entire body of medical officers of health throughout the county. Mr. North was re-elected President; Dr. Scott and Dr. Drew, Vice-Presidents; Dr. Wilson, Honorary Secretary; and a Committee. The report was adopted. Dr. Hime, medical officer of health, read a paper on the recent outbreak of diarrhœa in Sheffield, and Dr. Drew of Chapeltown on "Sanitation in Utopia".

INFANT MORTALITY IN THE NORTH.

The question of infantile mortality in Cleveland and South Durham is becoming a very serious matter. The reports of the medical officers of the two largest towns—Middlesborough and West Hartlepool—show that in Middlesborough there were last month 178 deaths, a death-rate of 36.21 per 1,000, and only 11 more than the number of births for the same period. The point to be noted is that, out of the 178 deaths, there were not fewer than 78 of children under one year old, whilst the deaths of children between one and five years brings the total mortality of infants for Middlesborough last month to the frightful number of 132 out of the total deaths of 178. The death-rate of Middlesborough has not been so high since 1874. At West Hartlepool, for the past quarter, a death-rate, comparatively low, of 19.6 per 1,000 was reported; but, out of the total deaths (147), there were 96 under one year, and 22 between one and five years of age, so that over three-fourths of the deaths were those of infants. In each of the reports of the medical men that give these figures, it is either partly hinted or stated that the high infantile mortality is attributable to improper food. These two towns are, we are sorry to find, but types of many in the district named, Darlington, for instance, having been frequently alluded to for its unfortunate prominence in this matter.

BLIND SCHOOLS IN RUSSIA.

One good result has already sprung from the late crop of international congresses; the Russian Government has awoke to the conviction that blind children are, in most cases, as capable of being thoroughly trained and educated in useful pursuits as their more fortunate compeers. At the present time, although it is known that there are many thousands of blind children in Russia, there are but four institutions for their care and instruction, capable of containing altogether about

one hundred inmates, in the whole empire. It is now, however, proposed to form a society for the proper training and instruction of blind youths; and, as a preliminary step, a lady-teacher has been sent to Dresden, to study the method of instruction carried out in that city.

EXTIRPATION OF THREE OVARIES.

In the *Allgemeine Wiener Medizinische Zeitung* (No. 36), is a short notice of an operation performed by Dr. Fritz Keppler, a German physician settled in Venice, which was undertaken for the purpose of removing what appeared to be ovarian and tubal degenerate growth of both sides. In the course of the operation, however, it appeared that there was a fully formed third ovary and tube, which were also the seat of disease, so that it was necessary to perform extirpation of the three ovaries and three tubes. Such an anatomical anomaly is, it is stated, previously unknown; so that the case is one of great anatomical as well as surgical interest. The operation was performed with the assistance of Professor Pajasco and others, and was entirely successful.

LOCAL MERCURIAL FUMIGATION.

The great advantage of mercurial vapour in its local effects on obstinate syphilitic ulcerations has long been known, but the want of a simple apparatus which would also localise the action has restricted its use very much. The *San Francisco Western Lancet* notices with satisfaction the introduction of a method of mercurial fumigation, which for simplicity and direct effect leaves nothing further to be desired. It was invented by Dr. F. B. Kane, formerly of Dublin, and now of San Francisco; and the following is a description, in the author's own words, from his published *brochure*.

"Having often observed the advantages derived from this method of medication, and at the same time experienced the difficulties, inconveniences, and expense, attendant on the use of any apparatus, at present obtainable, I was led to devise a fumigator having many advantages over those now in use. Its cheapness and facility of construction are unequalled. By it, organs, such as the tongue, palate, tonsils, etc., can be fumigated, and in one minute the largest ulceration can be covered with a coating of freshly sublimed calomel, which, on account of its minute division, has a particularly active effect on the sore."

A glass tube ten inches long, one half-inch in diameter, open at both ends, one end being drawn out to a fine point, has a slight bulb blown about the middle. Under the bulb is hung, about two inches below it, by two wires, a small metallic cup for holding alcohol and cotton—a short, one-quarter inch diameter glass tube, to which rubber tubing is fitted by means of a perforated cork to the larger end of the large tube.

"In using the apparatus five or ten grains of calomel, according to the size of the sore, are introduced into the glass tube through the large end on the point of a pen, and placed in the bulb. The large end of the glass tube is then closed with the cork; and to the end of the small glass tube is attached the India-rubber part of Richardson's spray apparatus. A small bit of rolled up lint wetted with alcohol is now placed in the metallic cup and lighted. Whilst the calomel in the bulb is being sublimed, a gentle current of air is forced through the tube, carrying the sublimed calomel with it, to be deposited on any moist surface before which the fumigator may be held. The distance from the ulcer the nozzle should be held, during the fumigation, varies from one to three inches. A certain proportion of the calomel will be deposited in the drawn out half of the tube, but can be removed when necessary by a quill."

This method has been extensively used by the author with great success in sores refusing to heal under any other treatment. Is anything known of this method here?

THE ACTION OF ARSENIOUS ACID.

When a solution of arsenious acid, or of its neutral salt, is injected under the skin of an animal, no local inflammation ensues. If the poison do not cause death too rapidly by paralysing the heart, it will be found, after some hours, that the stomach and small intestines have become severely inflamed. The explanation of the action of arsenious acid Binz and Schulz believe to be as follows. The protoplasm of the cells oxidises the arsenious acid into arsenic acid; and this becomes again reduced and again oxidised, and so on; the arsenic only acting as a carrier, just as nitrogen does in the case of nitric peroxide; and thus there results a violent oscillation of the oxygen-atom, and consequent destruction of the tissues. As a basis for this theory, these physiologists point out that, when arsenic acid is mixed with fresh fibrin, brain, white of egg, vegetable protoplasm, etc., and digested at 98° Fahr., much arsenious acid is formed; and this in the absence of fermentation. On the other hand, when arsenious acid is digested with pancreas, arsenic acid is formed. (These results were first published in a preliminary form in the *Centralblatt für die Med. Wissenschaften*, 1879, p. 17; and subsequently in the eleventh volume of the *Arch. für exp. Pathologie und Pharmakologie.*)

EDIBLE FUNGI.

Colonel Harington Stuart, in the course of a lecture on the edible fungi, given at the exhibition of the Cryptogamic Society in Glasgow, referred to the *Boletus Edulis*, which he described as a large umbrella-shaped fungus, with a dim yellow colouring on the outer skin. It grew in a variety of places, but he had found that it was principally to be met with in sandy soils, under oaks, beeches, and chestnuts, and he dared say under other trees. The period of growth ran from August to October. The cooking of it could be done in a variety of ways. The simplest was to cut away the stalks from the cap, then remove the outer skin from the latter, which next should be cut into slices of the thickness of one's little finger, and fried. The taste was just like beefsteak. The properties of meat entered largely into the composition of fungi, and more or less of the flavour of meat was to be found in all of them. Fungi were at their best when at middle growth. When young, they had not attained full flavour; and when old, they were not quite wholesome. As long as fungi retained their umbrella shape, they were good to eat; but after they attained a certain stage they began to roll up—in place of being convex, they became concave, and then should not be eaten. To be wholesome, fungi should also be firm, and they should never be pulled in wet weather. Though they required a great deal of moisture to bring them up, still rain rendered them unwholesome for immediate use. He added that no fungi should be kept more than twelve hours after pulling, because there were so many chemical properties in their composition that after twelve hours such changes took place that, instead of being wholesome, they frequently became poisonous. The common mushroom should never be kept for more than twelve hours. He then spoke of the *Agaricus Heterophyllus*, which, he said, could not be mistaken for any other, owing to its great variety of colour, which comprised purple, lilac, and green. It was generally found under beechwoods in great profusion, and in the months of July and August. This fungus was very agreeable to the palate, and was one of the finest to be had. It could be cooked in the ordinary way, after being skinned as stated already; but the easiest method was to place the fungus between two plates and place it in an oven. There were a variety of this class of fungi which were poisonous, but these were all red on the top, and therefore could not be mistaken. Possibly another objection to this class was that slugs and moths were very partial to them; therefore, they should be cooked at once, for, if kept long, the gentry referred to made serious inroads upon them. There was a very ready way of distinguishing between poisonous and wholesome fungi. All fungi that were eatable were mild to the taste, and when mild they would do no harm. But it did not follow that all mild fungi were worth eating. All poisonous fungi were excessively acrid and very bitter indeed, and should be discarded at once.

AINHUM.

Ayun is a word in the Yoruba language, of West Africa. Ainhum is a disease, which was found affecting both little toes of an African black, aged 40. The disease was first described, in 1867, by Dr. J. F. da Silva Lima, of Bahia, Brazil. It is a disease peculiar to the African race, consisting in a slow, progressive, fatty degeneration, generally with considerable increase of volume, of the toes, especially the smallest, it extends itself through almost all their anatomical elements, and results from a nearly linear strangulation, caused by a narrow strip

of contracted and hardened skin, that embraces at first a part, then the whole, of the circumference of the toe, on a level with the digito-plantar fold. This constriction, after the lapse of from four to ten years, forms a deep circular furrow, which determines the absorption of the phalanges and the obliteration of the vessels, and the inevitable dropping of the toe by any accidental blow, or by gangrene. We have received from Dr. Patterson of Bahia, who is now in Edinburgh, a woodcut taken from a photograph of the feet of a negro affected with this disease.

A BISCUIT-RATION FOR SOLDIERS.

THE French War Minister has ordered the introduction into the army, after numerous experimental trials, of a daily biscuit-ration of 100 *grammes*, with a bread-ration of 620 *grammes*, in lieu of the present bread-ration of 750 *grammes*. The object is to accustom the soldier to the use of a kind of food which in the field is often necessarily continuously served out.

SURGICAL PRESSURE ON ARTERIES.

DR. B. A. PALMER reports *(New York Medical Record)* a method which he devised of employing pressure in cases of traumatic aneurism, which possesses some elements of novelty. He asserts that it is effectual in controlling the action of the artery, and accomplishes its object without any constriction or pressure of the soft parts, other than the spot at which the pressure is desired. It consists in the application of a broad band of plaster-of-Paris around the limb, with an aperture in it directly over the part of the artery to which it is desired to apply the compress. Through this opening the compress is to be adjusted to the limb, and tightened and fixed in place by an elastic roller, which envelopes the limb outside the plaster shell, and is placed over the projecting portion of the compress, with sufficient tension to check the circulation in the artery to the desired extent. "The idea", he says, "occurred to me in the case of a traumatic aneurism of the femoral artery, in the thigh of a butcher, caused by the accidental plunging of a long narrow pointed butcher-knife into about the middle of the thigh. The patient is a very robust and muscular young man, and the aneurismal tumour, an hour or so after the accident, was very large—about four inches across and about three inches thick, with pulsation. I immediately applied the plaster-of-Paris band, as before described, using a compress of cork covered with chamois leather, and projecting an inch and a half above the surface of the band. This was applied about two inches below the profunda, and the roller of elastic webbing brought around the band and over the projecting compress, tightening it at every turn until the pulsation in the tumour could be no longer felt. The pressure caused very little uneasiness, and was kept up for twenty-four hours; after which time it was removed, and pulsation in the tumour did not return. The compress was kept on, more lightly applied, for three days longer, when the patient (contrary to my advice) returned to his shop. The wound was inflicted on the 25th of April last, and, on examination of the leg two weeks since, I found absorption complete and the patient well."

PHTHISIS AND DAMPNESS OF SOIL.

THE effects of dampness of soil upon the prevalence of phthisis, first demonstrated by Dr. Buchanan in 1867, had usually been regarded as well proved; but, when so competent an observer as Dr. Charles Kelly questions the reality of the relation between the two things, there would seem reason for a further examination of the question in the light of the statistics which have accumulated since Dr. Buchanan made his report. Dr. Kelly, in his last report as health-officer for West Sussex, shows that, in each of his districts, there has been an enormous reduction in the death-rate from consumption. Even allowing that some cases of what used to be called phthisis are now included under some form of lung-disease, yet even when the two series are added together there is undoubtedly a much less fatality than at former periods. Dr. Kelly observes: "If the above improvement in these rural districts had occurred in a large town, which had been drained at the commencement of the period under consideration, it would probably have been pointed out as a proof of the advantages gained by drainage in reducing the amount of consumption. But, in these rural districts, there has been no change whatever in the drainage; and, as far as the removal of subsoil water is concerned, the houses are in much the same state as they were twenty years ago." Dr. Kelly thinks that the diminution is, in reality, probably dependent upon several causes—the improved state of the cottages; the rise of wages, leading to the children being better clothed and fed; the increase in railway communication, tending to diminish intermarriage, and to cause more interchange of population. To all these changes, social as well as sanitary, Dr. Kelly ascribes a share in the improvement. A table is given, showing the number of deaths from phthisis on the several geological formations of the district, and this seems to bear out Dr. Kelly's criticism. The lower greensand beds are certainly not so damp as the weald clay, yet the mortality recorded is higher. It is true that the chalk, a dry soil, has a low rate; but the numbers living on it are small, and a few deaths make an great difference in the rate. Most of the impervious beds of the district are to the north of the south downs, and consumption seems most common in places that are bleak and exposed, as well as damp. Midhurst, Petworth, and Henfield are all towns with an unduly high phthisis-rate, and they stand upon ground with ample and easy slopes, but exposed to cold winds. In Dr. Buchanan's report, a list of fifty-eight unions was arranged in the order of the frequency of consumption in them during the ten years 1851-60. Had the comparison been made for the next decade, the position of nearly all the West Sussex Unions would have been materially altered. A comparison, also, of the deaths in the district from consumption at the ages of 15 to 55, for the periods 1851-60, 1861-70, and 1875-9, leads to the same conclusion. Dr. Kelly argues, therefore, that, whilst the phthisis death-rate has been distinctly lowered in recent years, the facts he brings forward do not seem to show that dampness of soil has a very intimate connection with the disease: because great variations occur in the prevalence of the disorder, while very little, if any, change has taken place during the same period in the drainage of the soil.

CHOLERA IN ASSAM.

LAST year, cholera was very fatal in the province of Assam. Out of a total of 57,844 deaths registered in the province, 17,415, or 30.1 per cent., were due to cholera. The deaths caused by it in the two previous years were, in 1877, 11,377; and, in 1878, 6,732; but even these figures greatly understate the mortality from the scourge. The disease was particularly prevalent in the Darrang and Nowgong districts, in the Mangaldai subdivision of the former district, and in the tract between the Kalang and the Brahmaputra rivers in the latter. These two tracts face each other on opposite banks of the Brahmaputra; and the periods of prevalence, and, so far as could be ascertained, of the origin, height, and decrease of the epidemic, were the same in both. In the Mangaldai subdivision, where registration seems to have been tolerably exhaustive, there were 3,342 deaths out of a total population of 120,503, or 27.73 per 1,000. The disease may possibly have originated in the district, for it seems always to be smouldering there; or it may have been imported by cargoes of tea-coolies "terribly infected with cholera", who had been passing up the river on board the Brahmaputra steamers, and may thus have introduced the disease in the outlying villages, without its being possible to obtain evidence of the fact. This is the view which Dr. De Renzy, the Sanitary Commissioner, seems to favour. The sanitary arrangements of the whole of the native part of the province are, it need hardly be stated, of the most barbarous kind. One of the most destructive of the epidemics broke out at Shillong and neighbouring villages, some of which were almost entirely depopulated. The natives have the greatest dread of cholera, and most of them persistently refuse to take European medicines when attacked by it. On the appearance of the disease, they fled away, leaving their dead unburied, and their nearest relations to their fate, merely placing a little rice and water within their reach. They then

remained for weeks scared in the jungles, feeding themselves and sustaining life as best they could, afraid to return to their homes. Contaminated water was a condition common to all the affected villages; and, in one case, the almost complete immunity enjoyed by a suburb of a town which suffered severely was ascribed to the superiority and excellence of the water-supply.

THE CALCUTTA MEDICAL INSTITUTIONS.

In reporting upon these institutions for the first time, Dr. A. J. Payne, the newly appointed Surgeon-General of Bengal, states that, though the number of sick persons in hospital was less in 1879 than in the previous very unhealthy year, it was still a high number, and, in the Campbell Hospital, greatly exceeded the number of ordinary years. The cases of small-pox treated were even more numerous than those of 1878; and, though the disease became less fatal as the epidemic expired, it accounted for ninety-four deaths. Cholera, though less prevalent in the town generally, showed some slight excess in the hospitals, and caused twenty-eight additional deaths. This was due to the reception into the Campbell Hospital in 1879, for the first time, of coolies from suburban emigration-depôts suffering from cholera. Malarious fevers were less fatal than in 1878, as well as less prevalent. Diseases of low condition, as anæmia and debility, were of equal prevalence, but much less fatal in 1879. Cases of dropsy were received in usual number, but were very fatal. It does not appear that the name includes cases of the "acute œdema" (beri-beri), which have created some sensation lately; indeed, nothing is said of this affection in the hospital reports of the town. Respiratory affections, with equal prevalence, were less fatal than in 1878. Cases of dysentery and diarrhœa were less numerous than in the former year, but showed a very high death-rate. A fatal form of dysentery is particularly noted among seamen; but it was by no means confined to them. In fact, a high death-rate from dysentery distinguished the year under review throughout the town and suburbs.

STATISTICS OF DISEASE IN COPENHAGEN.

A systematic registration of disease has for several years been carried out in Copenhagen, and a summary is published each year. The report for 1878, drawn up by Dr. P. A. Schleisner, is abstracted in the twelfth volume of the *Nordiskt Medicinskt Arkiv*. During the year, 31,259 cases of epidemic disease (or 140 in each 1,000 inhabitants) were reported by a weekly average of 164 practitioners. The proportion of cures per 1,000 was less than in 1877, when it was 150; the prevalence of epidemic disease was also less than in the former year, and the mortality was also somewhat lower. Of small-pox, only 7 cases and 1 death were reported; of varicella, 883 cases; of measles, 83 cases with no deaths; of scarlet fever, 298 cases (with increasing frequency towards the end of the year) and 7 deaths; of diphtheria and croup, 815 cases and 139 deaths (the numbers in 1877 having been 633 and 72); of whooping-cough only 164 cases and 13 deaths (the numbers in 1877 having been 1,562 and 153); and of mumps 519 cases. Gastric fever was reported in 1,729 cases, and typhoid fever in 569, with 71 deaths (the corresponding numbers in 1877 having been 1,460, 350, and 40). During the eight weeks from August 20th to October 15th, 338 cases of gastric, and 255 of typhoid fever were reported, with 16 deaths. Of exanthematic typhus, there were only 3 cases, 2 of which occurred in ships in the harbour. Of dysentery, there were reported 194 cases, of which 61 occurred in an epidemic in the General Hospital in February, March, and April; this disease caused 21 deaths. Of cholerine and acute diarrhœa, 8,018 cases were reported (against 5,379 in 1877), the greatest proportion (4,297) being in the third quarter; 1,650 children under one year were attacked (952 in the third quarter). These two diseases caused 474 deaths, of which 417 were in children under one year, 158 being insufficiently fed, or wet-nursed children. Of facial and other forms of erysipelas, 996 cases and 42 deaths were reported; of puerperal fever, 143 cases and 38 deaths; of ague, 246, and of influenza, 147 cases. Acute bronchitis, pneumonia, and sore-throat furnished respectively 8,540, 1,287, and 4,824 cases; there died of acute bronchitis 63, of capillary bronchitis and catarrhal pneumonia 129, and of pneumonia 233; the numbers in children under one year being respectively 36, 86, and 54. Of acute articular rheumatism 976 cases, and 13 deaths were reported. Of delirium tremens, 322 cases and 30 deaths, and of chronic alcoholism 257 cases and 10 deaths, were reported. Of venereal cases, there were reported 4,426 of gonorrhœa, 845 of venereal sores, and 717 of constitutional syphilis—in all, 5,988 cases, of which 261 occurred in the garrison. There were 607 cases of scabies. The number of deaths in Copenhagen was 4,888, including 221 still-born. The number of births in the year was 8,267; and the deaths under one year 1,729, or 20.91 per cent. of the births. The average death-rate at the middle of the year (the population being calculated at 222,500) was 21.96 per 1,000: in 1877, it was 22.59.

SCOTLAND.

REGISTRAR-GENERAL'S RETURNS.

From the returns of the Registrar-General for the week ending October 9th, it appears that the death-rate in the eight principal towns during the week was 19.6 per 1,000 of estimated population. This rate is 2.3 above that for the corresponding week of last year, and 0.8 above that for the previous week of the present year. The lowest mortality was recorded in Leith — viz., 16.8 per 1,000; and the highest in Paisley—viz., 22.3 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.7 per 1,000, being 0.7 below that for last week. Scarlet fever continues prevalent in Edinburgh. Acute diseases of the chest caused 66 deaths, being 10 less than the number during the previous week. The mean temperature was 45.7°, being 9.2° under that of the week immediately preceding, and 3.7° under that of the corresponding week of last year.

DEATH OF A CHILD FROM HYDROPHOBIA.

Some three months ago, two children of a gentleman living at Bearsden, near Glasgow, were attacked by a dog that was evidently suffering from rabies. The eldest child was only slightly hurt, but the other, a boy of five years, had the calf of one of his legs severely torn. He was confined to bed for some weeks; but latterly the leg had healed so satisfactoriiy that he was permitted to go about, and appeared to be in good health. On Saturday, the 16th instant, however, the child was seized with illness, and rapidly became worse, the symptoms of hydrophobia showing themselves. Medical aid was of little avail, and the boy died on the evening of the following day in great agony. The dog which inflicted the wound was eventually destroyed in Glasgow, but not before it had bitten other children.

THE SEWAGE QUESTION IN GLASGOW.

The deputation appointed by the Glasgow Town Council to visit several English towns to inspect their systems of dealing with sewage, have just issued their report, which is one of considerable interest, and indicates that the Committee's work has been done in a very exhaustive manner. In addition to their English inquiries, they visited Holland, and inspected the working of Captain Liernur's pneumatic system at Amsterdam. The Committee have given a full account of the different methods of dealing with sewage as they came under their notice, but they have gone still further, and have ventured to indicate in a general way what their views are as to the best course of procedure to be adopted in reference to the disposal of the sewage in Glasgow. They recommend the system of purification by filtration; and their scheme for accomplishing this is to treat separately the sewage on the north and south sides of the river—that on the north to be taken to Dalmuir by a high-level and a low-level sewer; while that on the south, the whole of which will require to be pumped, is to be taken as far down the river as practicable. At these points, the sewage will be treated in suitable tanks, the solids precipitated, and the fluids purified into a state of innocuousness, and then discharged into the river. The Com-

mittee are decidedly favourable to the intermittent system of precipitation as distinguished from the constant flow process, but they leave the nature of the precipitant for future consideration, as the same construction of tanks and other apparatus is required for all the various systems. A valuable appendix to the report, by Dr. Wallace, deals with the question of the oxidising power of river water on purified sewage; and he hints at a newly invented process "for the extremely rapid oxidation of the effluent from precipitation by lime or alumina, by which it would be rendered entirely innocuous before being introduced into the river, and that at a trifling cost". The Committee, it is satisfactory to note, are unanimous as to the necessity of dealing with the present state of the Clyde; for they say that, "however it might be delayed, there could not be a doubt that, even apart from Governmental interference, the evil, at present sufficiently crying, would in time become unbearable—all passenger traffic would cease, and the river would be avoided like a pestilence".

IRELAND.

DR. JOHN ISLAND DONOVAN of Skibbereen has been appointed a Justice of the Peace for the county Cork.

ULSTER HOSPITAL FOR SICK CHILDREN.

THE annual meeting of the friends of this hospital was held last week in the Clarence Place Hall, Belfast, presided over by Sir Thomas Bateman. The chairman believed that the benefits and advantages to be derived from the institution would certainly be increased fourfold if some arrangement could be made to amalgamate with the kindred charity. An attempt was made to bring about this result; but, although it failed, he was of opinion that, if two or three representatives from the hospital were to meet an equal number belonging to the kindred association, some arrangement might yet be made by which, under one board of management, and under one system, and one organisation, the benefits of the two charities might be united in one centre. During the year ended August 1st last, there were 6,732 new cases admitted, and 5,609 old cases, or a total of 12,341 who received medical aid through the instrumentality of this charity. Drs. Esler and Whitla still continue as medical officers, but Dr. Workman has resigned, and the Committee recommend that Dr. Haslett should be appointed in his place. The Rev. Robert Workman moved that the thanks of the meeting be given to Drs. Esler and Whitla for their valuable services; and that the appointment of Dr. Haslett on the medical staff be confirmed, which was carried, and the proceedings shortly afterwards terminated.

CORK FEVER HOSPITAL.

A GENERAL meeting of the subscribers was held on the 15th instant at the Royal Cork Institution, to receive the report of the Committee on the management of the hospital. At the recent inquiry, four charges were made affecting Dr. Adderley, resident medical officer: two regarding the want of certain hospital requirements, the hospital stores being under his charge; and two regarding the neglect of the directions said to have been given for the treatment of a patient by one of the hospital physicians. The first charge—that there was no brandy in the hospital on a certain day in February last—the Committee regret to find was true, and that the hospital was without it for a considerable time; also that whiskey was substituted for brandy during this period, and that the medical staff was not made aware of the change, Dr. Adderley's action in the matter being due to motives of mistaken economy. Another charge was Dr. Adderley's neglect to carry out the directions of the physician as to packing, and shaving and blistering the head of the patient; and to this the report states that, as regards the former, the directions were not sufficiently definite, but that in regard to the latter they were, but were not attended to. The Committee, further, could not free Dr. Adderley from blame for giving claret after milk, instead of brandy as directed. As regards the general administration of the hospital, it was complained that patients were tied to their beds by nurses; but, on inquiry, it was shown that it was the practice to use a soft sheet mostly in delirious patients, and that as little restraint as possible was used on these occasions. It was also charged, that women dismissed for drunkenness were again employed in the hospital as nurses; this, the Committee acknowledged they were sometimes obliged to do, in consequence of the want of trained attendants. The Committee found that Dr. Macnaughton Jones's prescription-book was removed from the hospital, and the institution allowed to remain for some time without any permanent record of the prescriptions; and have directed that, in future, neither prescription-books nor any other permanent records of the hospital be removed therefrom, every facility, however, being permitted to the medical officers to take extracts, etc., consistently with this rule. The report suggests the order in which patients who are admitted shall be placed under the medical officers; who are expected to make their daily visits in the forenoon of each day, and who shall for the future hold consultations and summon formal consultations when necessary. The Committee, finally, have directed that no physician attached to the hospital shall prescribe or administer any medicine that is not named in the *Pharmacopœia*, approved of by the medical staff, and sanctioned by the Committee of the hospital. The report was adopted, but the recommendations relating to certain alterations of the by-laws must be ratified at a future general meeting of the subscribers.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE annual stated meeting of this College was held on Monday last (St. Luke's Day). It was expected that there would have been a contest for the Presidency of the College—Dr. George Johnston, ex-Master of the Rotunda Lying-in Hospital, and Dr. Hayden of the Mater Misericordiæ Hospital, having both been nominated for the office. The latter gentleman, however, at the request of several of the most influential Fellows, gracefully withdrew in favour of his senior in the College, Dr. Johnston, who was accordingly unanimously elected President. Drs. Walter Smith, Benson, Macan, and Harvey were elected Censors; and Dr. Walter Smith was also nominated by the President as Vice-President of the College. Dr. Duffey was elected an additional Examiner in Medicine; and the following Fellows were elected additional Examiners in the subjects of the first Professional Examination: Dr. W. G. Smith (in Anatomy), Dr. Duffey (in Chemistry), Dr. J. W. Moore (in Materia Medica), and Dr. Purser (in Physiology). The following members of the College, having been duly nominated, were elected to the Fellowship: Joseph Henry Hatchell, Resident Medical Superintendent Maryborough District Lunatic Asylum; and Charles Sibthorpe, surgeon, Madras Army. The other officers of the College, including the Professor of Medical Jurisprudence and the Representative on the General Medical Council, were re-elected.

PATHOLOGICAL SOCIETY OF DUBLIN.

A SPECIAL general meeting of this Society was held in the Anatomical Theatre of Trinity College, Dublin, on Saturday last, when the following recommendations of the Council were unanimously adopted. "1. The meetings of the Society shall commence on the first Saturday in November of each year, and shall close on the last Saturday in March of each year." "2. The hour of meeting shall be four o'clock in the afternoon." "3. The former system of admission of students by two tickets shall be reverted to, and the members of the Society shall have the privilege of giving an extra admission personally or by card for any meeting."

THE DUBLIN ORTHOPÆDIC HOSPITAL.

THE annual meeting of the friends of, and subscribers to, this institution was held last week—Mr. William Findlater, M.P., in the chair. The report stated that 60 cases had been under treatment in the hospital during the year, and that 5,091 cases were attended to at the dispensary. The statement of accounts showed that the income for the year ending September 31st, 1880, had been £1,041 0s. 8d.; and that there now remained a balance to the credit of the institution of £155 6s. 3d.

THE NURSING AT WESTMINSTER HOSPITAL.

A CORRESPONDENT writes: The question long at issue between the Managing Committee of the Westminster Hospital and the Training Institution which has for some time furnished the nursing staff, has at last been decided. The matter is of some interest in the light of the late *fracas* at Guy's, as illustrating the recent strange tendency to regard the nursing of hospital patients as a matter quite outside the jurisdiction of the medical officers, instead of looking at it, as common sense demands, as a most important and integral part of medical treatment.

For some years past, this hospital has been nursed by an institution which was specially under the patronage of the late Lady Augusta Stanley, and in which the Dean of Westminster, whose influence and support is most valuable to the hospital, is still much interested. Although the nursing of the hospital by this institution showed a great improvement on that of previous years, yet the independent powers possessed by the lady-superintendent gave rise to many serious difficulties in the matter of nursing; and the medical staff had constantly grave causes of complaint, owing to the frequent and total ignoring of their unanimously expressed wishes. No redress, however, could be obtained, as the terms of the contract placed most of the remonstrances of the staff legally out of court; and, though the House-Committee, on which the medical staff is largely represented, numbered many lay members who took the common sense view of the question, yet the influence of the powerful, though perhaps small, section of it which, led by the Dean of Westminster and Sir Rutherford Alcock, looked upon the interests of the Nursing Home as paramount, generally carried the day.

The contract between the Hospital and the Home has lately expired, and a series of debates have taken place at the Board with regard to a new constitution. A compromise had to be arrived at between the party (so strong in its pecuniary support and patronage of the hospital), which regarded the wards chiefly as a place for the evolutions of the nurses of the Home, and the rest of the Board—including, of course, the medical staff, who deemed the interests of the patients to be of primary importance.

Such a compromise has now been arrived at, whereby, though material successes have to be reported as gained by the medical interest, yet the fear of losing the patronage of the Dean of Westminster, a loss threatened from time to time when things seemed to be going against his desires on the committee, has placed the ultimate right of decision on any possible complaint brought by the medical officers against the nurses, in the hands of the governing body of the Nursing Home. It seems clear that the best interests of the hospital demand that its own governing body, with a fair, though it is to be regretted, not an *ex officio*, representation of the medical officers thereon, should be entitled to decide on all questions regarding the vital interests of the institution.

Furthermore, there is reason to complain that, in the recent election of a new lady superintendent of nursing, a great want of courtesy has been shown to the medical staff. In the new contract between the hospital and the home lately agreed to, it was provided that the superintendent of the home should be also the resident matron of the hospital; and that, though her nomination should rest with the committee of the Nursing home, a power of veto should be given to the hospital authorities. In this instance, the nomination was made generally according to the letter of the new law; without consultation with any of the medical staff, and, indeed, in total disregard of some expressed wishes on the subject; and the ratification thereof was carried at the hospital board by the same irresistible influence as succeeded before, the lady having been practically assured of her success before the governing body of the hospital had been conferred with.

The medical staff have no complaint whatever to make against Miss Pyne, the lady who has been elected, and who brings credentials of a very high order; and, of course, must submit to the inevitable force of the arrangement made (however it has been inspired), and hope for the best. Such submission is a logical sequence of taking unpaid appointments at a charitable institution. But the whole transaction, taken in conjunction with the Guy's dispute, shows how loudly the subject of hospital management calls for public notice. Any unprejudiced observer must admit that, in all matters of hospital working, not strictly financial or domestic, the authority of the medical staff should be established firmly enough to overcome all uninformed opposition, and to prevent the influence of personal sentiment or religious feeling on the part of any members of the managing board from being sufficiently powerful to set at nought all other considerations.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE first quarterly meeting for the session of the Council of the College was held on the afternoon of Thursday, October 21st.

The minutes of the last ordinary Council, held in August, were confirmed; and the signatures to the by-laws of members elected to the Fellowship were received. Reports were also received from the several annual committees. Two vacancies occurred in the Court of Examiners by the expiration last summer of the term of office of Messrs. Le Gros Clark and Savory, the former of whom did not seek re-election. At the last meeting, Mr. Savory, Professor Hutchinson, and Mr. Christopher Heath, were nominated for election; and at this meeting the election was made—Mr. Savory being elected to fill Mr. Le Gros Clark's seat, and Professor Hutchinson that vacated by Mr. Savory. Mr. Timothy Holmes was elected Examiner in Dental Surgery, in place of Mr. Le Gros Clark, resigned.

Copies of the amended recommendations of the General Medical Council on education and examination, and regulations regarding the registration of medical students, were received.

Mr. Arthur James Barker, Fellow of the Royal College of Surgeons of Ireland, of 87, Harley Street, London, was elected an *ad eundem* Fellow of this College.

Two notices of motion were given. One was by Sir James Paget: "That the Preliminary Examination in General Education, hitherto conducted by the College, be discontinued, and the examination handed over to the universities and general educational bodies, in accordance with the recommendation of the General Medical Council to that effect." The second notice of motion was by Mr. Luther Holden: "That the annual report of the president of the College be discontinued."

GUY'S HOSPITAL.

THE following is a copy of the resolution passed at a general court of the governors of Guy's Hospital, held on October 14th. "Resolved, that Dr. Habershon and Mr. Cooper Forster having withdrawn the letter of August 13th, signed by them on behalf of the medical staff, the governors do not think it necessary to insist on their resignation. The governors, however, must at the same time record their resolution to maintain in its integrity the power to govern the hospital entrusted to them by law, and this resolution must be accepted by the medical staff". In the excessive and unjustifiable ungraciousness of the wording of the latter part of this resolution there is an unpleasant surprise, and it indicates little perception on the part of those who framed it of the rules of courtesy and common sense, which must temper the use of powers "entrusted by law". In constituting this body entirely of laymen the governors have certainly broken the law in spirit, and have failed to carry out the intentions of their founder, and the manner in which this resolution is expressed calls loudly for a modification of the law which they have abused.

ENTRIES AT THE METROPOLITAN MEDICAL SCHOOLS.

THE following are the numbers of entries for the present session at the Metropolitan Medical Schools.

	For Entire Curriculum.	No. Partial Courses of Lectures or Practice.
St. Bartholomew's	150 (1st)	20 (1st)*
Charing Cross	45 (1st), 66 (2nd, 3rd, and 4th)	1 (1st)†
Guy's	90 (1st)	11 (1st)
St. George's	44 (1st), 52 (2nd), 80 (3rd and 4th)	5 (1st)
King's College	80 (1st)	10 (1st)‡
London Hospital	84 (1st), 63 (2nd), 46 (3rd) 45 (4th)	53 (1st)
St. Thomas's	55 (1st), and 36 other new entries	—
University College	151 (1st)	55 (§
Westminster	21 (1st), 1 (2nd), 2 (3rd and 4th)	3 (§

* Gentlemen attending the Matriculation and Preliminary Scientific Classes are not included in the list of students.

† Total number of students of all years in attendance, 112.

‡ Total number of students of all years in attendance, more than 100.

§ Preparing for the Preliminary Scientific Examination of the University of London.

LOCAL LEGISLATION AS TO INFECTIOUS DISEASES.

FIVE of the six sanitary authorities who introduced local Bills into Parliament this session, providing for the compulsory notification of cases of infectious disease, and making other alterations in the general public health law, have been clothed by the legislature with the powers for which they asked. The five Acts, as they received the Royal assent, contain substantially the same provisions as those detailed in the report presented by Mr. Ernest Hart to the Parliamentary Bills Committee

of the Association on the 9th of February last (see vol. i, 1880, p. 259). The one Bill which was not proceeded with was that promoted by the corporation of Birkenhead; the others (Huddersfield, Lancaster, Oldham, Preston, Stafford) were all passed.

Taking the Acts in their order, Huddersfield takes what are now known as the "Jarrow" powers with regard to infection; but from the list of places which may be closed by the sanitary authority, "surgeries and offices of public vaccinators, or other places of public resort", have been struck out. The clause, however, prohibiting any person dwelling in an infected house from following his occupation, "except with the written permission of the medical officer of health, and after disinfection of the person and clothing", and that prohibiting nurses attending an infectious case from nursing any other person except on the same conditions, are retained in the Bill, though their workability seems very questionable. The method by which the existence of infectious disease is to be made known to the authority has been altered for the worse in the Act. In the Bill, the plan which has received the sanction and approval of this Association was followed, by making the occupier primarily responsible for the notice to the sanitary authority; the medical attendant being under an obligation to give a certificate to the occupier only. By the Act as passed, the medical attendant is required to give notice to the sanitary authority direct of all cases of infectious disease in his practice. It is unnecessary to point out afresh the objections to this method of procedure; and it is to be regretted that so retrograde a step should have been taken, especially in view of the fact that the other and better practice has already been in force in the town for four years. The penalties on persons riding in hackney carriages, etc., after exposure to infection, and the power of recovery from masters of the expenses of their domestic servants whilst in hospital, have been struck out of the Bill; but the prohibition of the carrying in public conveyances of corpses of persons dying from infectious disease, has been retained. In other respects, the Act has not been materially altered in its passage through the Houses, though numerous small changes have been made in it.

The Lancaster Bill has not been altered, except that the clause prohibiting the entrance into an infected house of any person not authorised by the corporation, has been expunged; and the occupier has in any case (and not, as before, only when a medical attendant was not called in) to give notice to the authority of the existence of infectious disease in his house. A new clause has been added, enabling the authority to order any other infectious disease than those mentioned in the Act to be compulsorily reported, subject to the sanction of the Local Government Board. At Oldham, the proposed power of closing "other places of public resort" besides schools has been cut out, together with the cumulative penalty of forty shillings per day for not reporting infectious cases. No alterations of any moment have been made in the Preston or Stafford Bills; and to them, therefore, the description given by Mr. Ernest Hart in his report as the Chairman of the Parliamentary Bills Committee of the British Medical Association still applies.

It does not seem necessary at this juncture to add anything to that report as to the expediency of allowing such very extensive local deviations from the general statute law to be made without due inquiry as to their necessity, and as to the general sanitary administration of the towns that seek to make them. It may suffice for the moment to point out that nineteen authorities in the kingdom now have power to compel each case of infectious disease in their districts to be reported to them. In six more towns, the authority is empowered to provide temporary shelter for families in which infectious disease has appeared; to provide nurses; to close schools, shops, dairies, or other similar places; to declare houses in which infectious disease has appeared to be "infected places", and to enforce certain stringent regulations with regard to such places. In two instances, the procedure of the authority with regard to the disinfection of private premises is altered. Four authorities have attempted to make clearer the somewhat ambiguous phraseology of the 124th section of the Public Health Act with regard to the compulsory removal of persons "without proper lodging or accommodation"—this having been held in some quarters to be accommodation proper for the patient himself, and not for those surrounding him. Four authorities have more or less amplified Section 131 of the Public Health Act with reference to the provision of hospitals for infectious disease; and individual authorities have altered other sections in the general law in fashions too numerous to recapitulate here. It must be obvious, even to the superficial observer, that any considerable increase of legislation of this sort must needs impair very importantly the unity of the working of the Public Health Act throughout the country. It would seem by far the wiser and better plan for the Local Government Board to face the question at once, and to set to work on an amended and amplified public health code which shall have general application, rather than to allow these local patchings of an imperfect law to be multiplied indefinitely.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of the above District will be held at the Kent County Ophthalmic Hospital, Maidstone, on Tuesday, October 26th, at 3 o'clock P.M.; J. MEREDITH, M.D., in the Chair.

Dinner will take place at the Mitre Hotel, at 6 P.M.; charge 5s., exclusive of wine. A. HALLOWES, *Honorary Secretary.*

11, King Street, Maidstone, October 5th, 1880.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this District will take place at the Kent and Canterbury Hospital, on Thursday, November 18th.

Members intending to read papers are requested to give immediate notice. T. WHITEHEAD REID, M.R.C.P., *Hon. Sec.*

34, St. George's Place, Canterbury, October 20th, 1880.

YORKSHIRE BRANCH.

THE autumnal meeting of the Yorkshire Branch will be held at the Grand Hotel, Scarborough, on Wednesday, October 27th, at 3.15 P.M. Subject for discussion: "Paracentesis in Pleurisy". Members wishing to read communications on the subject are requested to communicate at once with ARTHUR JACKSON, *Hon. Sec.*

STAFFORDSHIRE BRANCH.

THE seventh annual meeting of this Branch will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, October 28th, at 4 P.M.

An address will be delivered by the President, Mr. W. H. FOLKER.

Dinner at half-past five. Tickets (without wine), 7s. 6d. each.

VINCENT JACKSON, Wolverhampton
J. G. U. WEST, Stoke-upon-Trent } *Honorary Secretaries.*

Wolverhampton, October 1st, 1880.

BORDER COUNTIES BRANCH.

THE autumnal meeting of this Branch will be held at the Infirmary, Dumfries, on Friday, October 29th, at 1 P.M.

Dinner will be provided at the King's Arms Hotel, at 4 P.M.; charge, six shillings (exclusive of wine).

Gentlemen who intend to read papers are requested to communicate with one of the Honorary Secretaries.

J. SMITH, M.D., Dumfries,
J. K. BURT, M.B., Kendal, } *Hon. Secs.*

LANCASHIRE AND CHESHIRE BRANCH.

A MEETING of this Branch will be held at St. Helens, on Thursday, October 28th, at 2.30 P.M.

The following communications will be read:

1. Dr. T. L. Brunton:
2. Dr. Lloyd Roberts: Extra-uterine Pregnancy.
3. Mr. E. A. Browne: A Modified Ear-Inflator.
4. Mr. F. T. Paul: Congenital Tumour of Jaw.
5. Mr. W. M. Banks: Ventral Hernia.
6. Dr. Cullingworth: On Diaphragmatic Pleurisy.

The dinner will be held at the Fleece Hotel, at 5.30 P.M. Tickets, 7s. 6d. (excluding wine). A. DAVIDSON, M.D., *Hon. Sec.*

2, Gambier Terrace, Liverpool, October 19th, 1880.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE first meeting of the present session will be held at St. Thomas's Hospital (Westminster Bridge entrance), on Wednesday, Nov. 10th, at 8 P.M., Dr. HABERSHON, President of the Branch, in the chair, when a discussion on the Treatment of Enteric Fever will be opened by Dr. Bristowe. The chief points for discussion will be (1) Food, (2) Alcohol, (3) Drugs, and (4) Baths; and, as it is desired to elicit the opinions both of consultants and of general practitioners on this important subject, it is hoped that all members of the District who do not intend to take part in the discussion will communicate their views on the above points to the Honorary Secretary a few days previous to the day named. The discussion will be open to all members of the Metropolitan Counties Branch and their friends.

H. NELSON HARDY, *Hon. Sec.*

The Grove, Dulwich, October 12th, 1880.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE first meeting of the session will be held at the house of Dr. Henty, 308, Camden Road, at 8.30 P.M., on Thursday, October 28th, when the following papers will be read:

1. Dr. Habershon: On the Use of Ice applied externally in some Cases of Intestinal Obstruction.
2. Dr. Potter: The General Practitioners of the Future.
3. Dr. Wiltshire: On the Treatment of Pruritus Vulvæ.

THOMAS STRETCH DOWSE, *Hon. Sec.*

14, Welbeck Street, October 18th, 1880.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the Bristol Museum and Library, on Thursday evening, October 28th, at half-past seven o'clock; ALEX. WAUGH, Esq., President.

The following communications are expected:

1. On the Treatment of Lacerations of the Cervix Uteri, by J. G. Swayne, M.D.
2. Exhibition of a New Form of Freezing Microtome, by R. Roxburgh, M.D.
3. Notes on Inversion of the Uterus after Delivery, with a recent Specimen, by E. Crossman, Esq.
4. On the Prevention of *Post Partum* Hæmorrhage, by A. E. Aust Lawrence, M.D.

E. MARKHAM SKERRITT, R. S. FOWLER, *Hon. Secs.*

Clifton, October 1880.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held at the Office of the Association, on Wednesday, October 13th, 1880: Present, Dr. ALFRED CARPENTER, President of the Council, in the Chair, Professor Humphry, President, Mr. B. Barrow, President-elect, Mr. W. D. Husband, Treasurer, Dr. T. C. Allbutt, Dr. T. W. Barron, Dr. M. M. De Bartolomé, Dr. L. Borchardt, Dr. C. Chadwick, Dr. J. W. Cousins, Dr. A. Davidson, Dr. G. F. Duffey, Dr. R. W. Falconer, Dr. E. L. Fenn, Dr. B. Foster, Dr. E. L. Fox, Dr. J. H. Gibson, Dr. W. C. Grigg, Dr. C. Holman, Mr. J. R. Humphreys, Dr. D. J. Leech, Mr. C. Macnamara, Mr. F. E. Manby, Mr. F. Mason, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. G. H. Philipson, Mr. Henry Power, Dr. R. C. Shettle, Dr. E. H. Sieveking, Mr. H. Stear, Dr. A. P. Stewart, Dr. W. Strange, Dr. W. F. Wade, Dr. A. T. H. Waters, Dr. E. Waters, and Mr. C. G. Wheelhouse.

The minutes of the last meetings of August 12th and 13th were read and found correct.

Resolved: That a Subcommittee be appointed to consider the resolutions received from the Metropolitan Counties and other Branches of the British Medical Association, regarding Medical Education, the Subcommittee also to report to this Committee.

Resolved: That the gentlemen who names are as follows be a Subcommittee to carry out the foregoing resolution, viz.: Dr. Clifford Allbutt, F.R.S., Dr. Alfred Carpenter, Dr. Holman, Dr. B. Foster, Dr. Grigg, Professor Humphry, F.R.S., Mr. Arthur Jackson, Dr. D. J. Leech, Dr. C. Parsons, Dr. A. P. Stewart, Dr. Edward Waters, Mr. Macnamara, and Dr. Duffey.

Resolved: That the Treasurer be empowered to pay a sum of not exceeding £20 on account of the expenses of the Subcommittee on Medical Education.

Read communication from the Worcester and Hereford Branch, respecting the disposal of the Hastings Memorial Fund.

Resolved: That the resolution of the Worcester and Hereford Branch be referred to the Trust Funds Subcommittee.

Resolved: That the minutes of the Journal and Finance Committee, together with the minutes of the Printing and Office Subcommittee, both of this day's date, be received and approved, and the recommendations carried into effect.

The minutes contain the report of the examination of the quarterly accounts, amounting to £3,179 13s. 11d., and empowering the Treasurer to pay that part of this sum remaining still due—viz., £[illegible].

Resolved: That, in accordance with By-law 33, Messrs. Price, Waterhouse, and Co. be appointed auditors for the ensuing twelve months.

Read minutes of Subcommittee appointed to consider the place of Annual Meeting for 1881.

The minutes of the Subcommittee contain the following resolution:

That, while fully appreciating the readiness and kindness which has dictated the invitation from Blackpool, your Subcommittee are of opinion that as the Isle of Wight is more accessible to the distinguished foreigners who may attend the International Congress in London in 1881, the invitation to Ryde be accepted and that Mr. Barrow of Ryde be appointed President-elect.

Resolved: That the minutes of the Subcommittee be received and approved, and the invitation to the Isle of Wight be accepted, and Benjamin Barrow, Esq., be appointed President-Elect.

Resolved: That the Annual Meeting be held on the 9th, 10th, 11th, and 12th days of August next.

Resolved: That there be three Addresses at the Annual Meeting, viz., Medicine, Surgery, and Obstetric Medicine.

Resolved: That Dr. Bristowe be requested to give the Address in Medicine.

Resolved: That Mr. Husband be requested to give the Address in Surgery.

Resolved: That Dr. Sinclair Coghill be requested to give the Address in Obstetric Medicine.

Resolved: That the gentlemen whose names are as follows be the Arrangement Committee for the Annual Meeting of 1881: The President, the President-elect, the President of the Council, the Treasurer, Dr. Chadwick, Dr. Falconer, Dr. Wade, Dr. Sinclair Coghill, Dr. Ward Cousins, Dr. Holman, Dr. Neal, and Dr. J. M. Pletts.

Read Resolution passed at the Annual General Meeting of Members held at Cambridge, of which the following is a copy:

That, in the opinion of this meeting, the price of the dinner-ticket should not include the charge for wine; and the Committee of Council are requested to provide for this in future.

Resolved: That the resolution be referred to the Arrangement Subcommittee.

Resolved: That it be an instruction to the Arrangement Committee to limit the Addresses of Presidents of Sections to twenty minutes.

Read resolution passed at the Annual General Meeting of Members, of which the following is a copy:

That the thanks of this meeting are due to the President for his valuable suggestions respecting collective action in accumulating the data of medical knowledge, and that the Committee of Council be requested to consider how such suggestions can be best carried out to a practical result.

Resolved: That a Subcommittee be appointed to consider in what manner the object of the resolution may be best carried out, and to report to this Committee. The Subcommittee to consist of the gentlemen whose names are as follows: Dr. Carpenter, Mr. Husband, Dr. Sieveking, Dr. Allbutt, Dr. B. Foster, Professor Humphry, Dr. Ransome, and Dr. Mahomed.

Read resolution passed at the Annual General Meeting of Members held at Cambridge, of which the following is a copy:

That the support of the Association be requested, with the view of obtaining from the legislature some provision whereby habitual drunkards who become chargeable to the rates should be placed under such restraint as may lead to their being reclaimed.

Resolved: That the foregoing resolution be referred to the Committee for Legislative Restriction for Habitual Drunkards.

Read resolution passed at a Meeting of Members attending the Public Health Section at the Annual Meeting held at Cambridge, of which the following is a copy:

That, in the opinion of this Section, the subject of the Communicability of Disease to Man by Animals used by him as Food, urgently demands careful inquiry, both in regard to the actual state of our knowledge thereon, and to the legislation which is desirable in connection therewith; and that the Committee of Council of this Association be invited to appoint a Committee for the purpose of reporting on this matter.

Resolved: That the consideration of the resolution passed in the Public Health Section at Cambridge be postponed till the next meeting of the Committee of Council.

Resolved: That the seal of the Association be affixed to the transfer of £1000 London and North-Western Railway Four per cent. Debenture Stock, purchased in accordance with Minute 539 of July 7th last.

The seal was then affixed to the transfer and re-locked in the presence of the Committee of Council, and the keys returned to the holders, the President of the Council, the Treasurer, and the General Secretary.

HENDON.—This rapidly growing suburb of London had only had a separate sanitary existence for six months at the end of 1879. During that period, 162 births and 70 deaths were registered in the district, equal to annual rates of 34.9 and 16.6 per 1,000 of the estimated population. Thirty-three of the deaths were of children under five years of age, of which 16 were under one year. From zymotic diseases 10 deaths occurred, 2 resulting from scarlatina, 1 from typhoid fever, and 7 from diarrhœa—the latter all in children under the age of five years. The drainage of the district is evidently in a very unsatisfactory condition; and there is, besides, much work before the local board in the repression of manifold nuisances at individual houses.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE BOMBAY HOSPITALS.

THE report of Surgeon-General Beatty, for the year 1879, on the Civil Hospitals and Dispensaries under the Government of Bombay, has been published. The number of hospitals now in existence is 42, and of dispensaries 140. In these institutions, a total of 1,195,077 patients (1,154,890 out-door and 40,187 in-door) were treated during the year, against 1,109,698 in 1878. Of the total in-door patients, 31,194 were discharged cured, 838 were relieved, 2,571 were otherwise discharged, and 3,986 died. The percentage of deaths to total treated was 9.9, against 11.5 in the previous year. The number of beds available during the year was 2,896, against 2,872 in 1878; and the daily average under treatment was 2,052 against 1,944. As in previous years, the disease for which most patients applied for treatment was malarious fever, 26.9 per cent. of the admissions being from this disease. There was a comparative immunity from cholera; a total of 2,118 cases being treated, against 7,510 in 1878. Small-pox is not a disease for which the natives usually seek hospital aid, and it is only in the city of Bombay that small-pox patients are really brought to hospital, as may be deduced from the fact that 173 out of the 265 admissions were returned from institutions in the city. The total number of admissions from syphilis was very large, and, taken together with gonorrhœa, constituted a percentage of 3.1 of the total number of cases treated. The cases of rheumatic affections amounted to the same percentage, and diseases of the respiratory organs constituted 5.1 per cent. of the total number. There was a marked diminution in the number of cases of diarrhœa and dysentery. Affections of the skin gave 133,769 cases for treatment, being 11.2 per cent. of the total. Diseases of this kind are very prevalent in the country, and they are, generally speaking, of a parasitic nature. Diseases of the eye and ear gave 95,539 cases, or a percentage of 7.9 on the total. The number of major surgical operations performed was 3,502, or 785 more than in 1878. Of these, 848 were ophthalmic operations, 292 were dislocations (274 cured), and 276 were amputations (18 per cent. of forearm, 31 per cent. of thigh, 35 of knee-joint, and 21 per cent. of leg amputations fatal). Lithotomy was performed on 424 occasions with a mortality of about 6 per cent., and lithotrity on 12 without any fatal result. Cæsarean section was performed on four occasions, one only proving successful; and ovariotomy on two, one proving successful.

CORK DISTRICT LUNATIC ASYLUM.

THE thirtieth annual report of the medical superintendent of this asylum is a very satisfactory one; and the appended reports of the Inspectors of Lunacy show that the institution is well and carefully looked after. The number of patients in the asylum on the 1st of January, 1879, was 777. During the year, there were 272 admissions, and 107 discharges, besides one escape. The number of patients under treatment at the end of the year was thus 865. The percentage of recoveries on the total number under treatment was 5.5; on the admissions, 21.3. This small percentage is attributed in a great measure to overcrowding both of the house and airing-yards, defects which have been partly, and, it is to be hoped, will soon be wholly, removed. Another cause is the disproportionate number of the staff of attendants. The death-rate was 7.2 per cent. on the total number in the asylum. The new buildings are now nearly complete, and will prove of much value in assisting in the cure of the patients of the institution. The expenditure per head was as nearly as possible £20, about half of which was defrayed by the Treasury by grant and other receipts.

WEST CHESHIRE PROVIDENT DISPENSARY.

THE first annual meeting of this dispensary, which has its headquarters at 11, Borough Road, Birkenhead, was held on October 2nd, at Queen's Hall, in that borough; Mr. Vacher, the President, in the chair. In opening the proceedings, the Chairman dwelt briefly upon the advantages of the system of medical attendance upon which provident dispensaries were conducted, and went on to say that, although the success of the West Cheshire Dispensary had not yet been so great as was anticipated, he regarded the results already achieved by their young institution as satisfactory and encouraging. In conclusion, Mr. Vacher read a letter of apology for non-attendance from Mr. S. Stitt, who expressed his approval of provident dispensaries. In presenting their first annual report, which was read by the honorary secretary (Mr. Alfred Judd), the committee congratulated the members on the success of the dispensary. The total number of cards issued during the year was 468, representing 1,027 members; of these 175 cards, representing 229 members, had been withdrawn on account of removal from the district, death, and other causes, leaving on the books at present 798 members. The committee began the year with a debt of nearly £90, but they have been able to reduce that, so that their present liabilities do not exceed £70, while they have a dispensary well stocked with drugs, and comfortably furnished offices. The committee hope to be able to extend the operations of the dispensary by opening branches in different parts of the borough, and in the adjoining districts. The report and statement of accounts having been passed, a committee and officers were appointed for the ensuing year, Mr. Vacher being re-elected President.

THE TEYPUR LUNATIC ASYLUM, ASSAM.

DEPUTY SURGEON-GENERAL DE RENZY, in reporting on the state of the Teypur Lunatic Asylum, says that its management during 1879 reflects much credit on Surgeon Warburton, its present medical superintendent. The buildings in which the lunatics are housed are of the flimsiest and least costly description; they are, indeed, mere bamboo sheds. The fact that the lunatics inhabiting these sheds have been maintained in excellent health, appears to convey a lesson which might be applied with advantage to the housing of lunatics and convicts in many parts of India. The lesson is that, in a climate like that of India, huts of a very simple and inexpensive construction are all that is necessary for the healthy housing of these classes of the population. This lesson has not been lost sight of in providing new gaols in the province of Assam. Dr. Warburton has found that opium- and ganga-eaters do not suffer in health in any way from being suddenly deprived of these drugs. All the lunatics in the Teypur Asylum are weighed carefully once a month. If we mistake not, this admirable system, which often gives timely warning of failures in health that might otherwise be overlooked, is not yet adopted in all British asylums. The Commissioners in Lunacy would do well to exert their influence to secure its general adoption.

OUR CONFESSIONAL.

MAGNO INGENIO, MULTAQUE NIHILOMINUS HABITURO, CONVENIT ETIAM SIMPLEX VERI ERRORIS CONFESSIO; PRÆCIPUÈQUE IN EO MINISTERIO, QUOD UTILITATIS CAUSA POSTERIS TRADITUR; NE QUI DECIPIANTUR EADEM RATIONE, QUA QUIS ANTE DECEPTUS EST.—(Celsus *De Medicina*, Liber viii, cap. 4.)

USE OF THE LARYNGOSCOPE.

A SHORT while ago, a gentleman, aged 30, came to consult me on account of a hoarseness which had troubled him for some months. After examining the throat, and finding nothing wrong there, I proceeded to use the laryngoscope. As the day was bright and clear, I put him to sit with his back to the window, and my reflector threw a good light into the mouth. I grasped his tongue; but, the moment he felt the mirror touch his soft palate, he leaned back violently, tilting his chair, and putting his head (a bald one) right out through a pane of glass; he pulled it in again, however, without a scratch on it.

In self-defence, let me state that I have, in the same position, examined many dozen patients—men, women, and children—laryngoscopically, without any approach to such an accident, and, as a general rule, manage to get a good view of the larynx at the first sitting; even in this case, I saw the cords, etc., very nicely a few minutes later. I may also add that, in the *kliniks* of Stoerk and Schrötter in Vienna, I attained much dexterity in the manipulations necessary both for the purpose of diagnosis and for applying medicaments, which latter I used, for some months, to have the privilege of doing to, perhaps, several patients daily. This case, however, has taught me to put my patients to sit a little further away from the window, even at the expense of a little light. J. P.

BIRMINGHAM. During the first two quarters of the present year, the births at Birmingham numbered 3,964 and 4,104 respectively, equal to rates of 40.17 and 41.6 per 1,000. The deaths during the same period numbered 2,207 and 1,892, or 22.36 and 19.17 per 1,000. The diminished death-rate in the second quarter was partly due to the smaller fatality of zymotic diseases, though it is chiefly to be ascribed to a lower mortality from local and developmental diseases generally, more particularly from heart-disease and old age. There has lately been a great diminution in the mortality from zymotic diseases—the deaths numbering 219 and 178, against 331 and 265 in corresponding periods of 1879. Whooping-cough was credited with the largest number of deaths in each quarter, and diarrhœa and scarlet fever followed next in order of fatality. During the half-year, 72 cases of scarlatina and 5 of small-pox were admitted to the borough hospital; and 1,093 articles were disinfected.

CORRESPONDENCE.

PROFESSOR RUTHERFORD ON MEDICAL REFORM.

SIR,—I did not expect you, and those who share your opinions, to agree with the ideas expressed in my Address on "Medical Education and Reform"; but I had a right to expect that, if you criticised them, you would at least give your readers a just, and not a one-sided, indication of what I really said. In your article of the 9th instant, you contrive to make it appear that the main object of my address was to show the "paramount importance of the Scotch universities",—reasons for their being allowed to "examine their own pupils", and to "confer on them the exceptional rights and privileges of registered practitioners";—and you further contrive to make me figure as a mere obstructionist, by asking: "Does Professor Rutherford believe that Parliament will remain inactive when made acquainted with the true relation of this subject?" Perhaps you will allow me to give your readers a brief *résumé* of what I said, which shall, at all events, not mislead them. In the address referred to, I traced the development of medical science and of medical education; I showed that the present state of medical education in this country is due much more to the influence of universities than of corporations, and to the Scottish more than to the English universities. I expressly stated that my object was "not to glorify Scottish universities, but to show that they had fairly earned the right to oppose, as they recently did, the schemes of London reformers, when these are likely to lessen the influence of universities in medical affairs". I showed that, owing to the growth of universities as centres of medical education and graduation, medical candidates have naturally divided themselves into two classes: "one desirous of university education and degrees; the other contented with the licence of a corporation, and with an education less expensive and elaborate than that required for university degrees". With reference to the departments of medical science in which every candidate ought to pass an examination, I said: "It cannot be denied that reform is needed; the giving of single qualifications as licences to practise, whether by corporations or by universities, ought to be entirely abandoned; and no one ought to be admitted to the *Register*, unless he has obtained, after due examination, a licence to practise medicine and surgery, including midwifery." In considering the authorities who ought to grant the licences to practise, I alluded to the not unfrequently mooted one-portal idea, which more than one eminent person (doubtless known to you) regard as the only satisfactory scheme of medical reform, and as that to which any triportal scheme can only be a stepping-stone. From your present standpoint, you advocate a triportal scheme, knowing well that, if that cannot be carried, a one-portal scheme is out of the question. But if the triportal scheme were carried, and if it were still found that a large number of young Englishmen continued to cross the border to attend Scottish schools and pass the Scottish Board, I have little doubt that you, or those around you, would raise another agitation—probably founded on the "want of uniformity", for which a one-portal scheme would be flaunted as the only cure. But, perhaps, you will regard this as "too ridiculous for serious criticism" and as evidence that I "do not understand the question which I have proposed to discuss". I am sorry that my humorous banter about a "mountain" and a "curious little mouse" should have troubled you so much. As I stated, the metaphor applied to the Medical Reform Bill of the late Government. The "busybodies" referred to the zealous wire-pullers, who dexterously managed to make that Bill as soft as clay when it had to take an impression favourable to English interests, but hard as steel when Scottish interests *only* had to be considered. In my address, I correctly detailed what that Bill proposed as regards the robbing of universities of their powers to give licences to practise, and the relegation of their medical degrees into the category of expensive ornaments. I said that, what some London reformers wanted was, "that every student should first pass a lower level examination of a conjoint board; pay a sum of money; become a legally qualified practitioner of medicine, surgery, and midwifery; and, if he cared for an ornament, he might pass the higher level examinations of an university, and pay for its degrees." "Graduation at English universities would not have suffered to a great extent, for already the graduates are so few in number; but graduation in the universities of Scotland and Ireland must have suffered seriously." (I have been assured by a friend in London that this effect was fully anticipated by some London authorities, and regarded by them as one of the most desirable results of the Bill.) "Had all the practitioners of Scotland been compelled to become legally qualified practitioners by passing on a lower level an examination than that of the universities, can any one be so foolish as to suppose that seventy per cent. of them would have paid for the degrees of universities, if these had been robbed of their powers as licenses to practise? It is to be feared that, had such a scheme been in operation, the standard of examination in our universities could not have risen to what it now is; for, with the degrees robbed of their qualifying power for practice, and reduced to expensive ornaments, it would have been difficult to resist the tendency to let them be more easily obtained than they now can be."

It is true that the London scheme has become remarkably plastic. Your article of June 19th only shows that you are prepared to abandon two-thirds of the substance of a triportal scheme, if only the remaining third can be retained as a sort of skeleton, capable of being clothed in the garments of the complete entity, and named accordingly. What sort of triportal scheme is it, on which you and others now say to universities: You may hold your own examinations in anatomy, physiology, chemistry, pathology, materia medica, and medical jurisprudence, for the conjoint board will accept them; but, to save the appearance of our maintaining our triportal principle, you must submit your graduates for examination in surgery, medicine, and midwivery, to the conjoint board? Having compromised the principle, and conceded so much, the next step ought not to be difficult—viz., to abandon the scheme altogether. This fusion of universities with corporations in the manner proposed is a complete mistake, and the sooner the idea is abandoned the better. In my address, I advocated that there should be two sets of portals into our profession.

"1. A set of university portals. Let each university be a separate portal, having for its examining board its professors, with an equal number of non-professorial examiners approved by the Medical Council, if it can be shown that our university courts have not faithfully discharged their duty in making the appointments. 2. A set of corporation portals, consisting of the conjoined corporations of London, those of Dublin, and those of Edinburgh and Glasgow. Let one-half of the examiners be nominated by the corporations, and the other half be subject to the approval of the Medical Council.

"Let the subjects of examination at the corporation boards continue to be, as now, subject to the approval of the Medical Council, as those of the Scottish universities are both to the Medical and Privy Councils. Let the examinations and results be, in the future, as in the past, open to the inspection of the Medical Council; and if the delegates of the Council believe any examination to be faulty, let them say so. Hitherto, they have scarcely ever had any fault to find.

"If these simple reforms were carried out, it could not fail to follow that, while the universities, which have done so much for medical education, would not suffer, neither ought the corporations of necessity to suffer by the appointment of extra examiners, and by double qualifications being rendered compulsory. Their efficiency would be increased, and they would not fail to retain the confidence of the profession and of the public.

"It would probably not be difficult to carry these simple but important reforms, and it would be well to set aside the agitation for changes of a more radical character until these have received a fair trial."

From your remarks, one would suppose that, in the Scottish universities, the teachers are the sole examiners of their own pupils, although my address stated—what, indeed, you must previously have known—that the examining body is "a conjoint board of professors, and an equal number of non-professorial examiners, selected from various schools in England and Scotland, and appointed by the university courts." I, for one, have no objection to have them appointed by the Medical Council, provided the same be carried out in the teaching universities of England and Ireland. Nor should I, personally, have any objection to see a conjoint board of all the universities in each division of the kingdom, but I fear that it would only render the work of examination more cumbersome; and surely, with a professorial and a non-professorial examiner conducting the examination of every student, the "public" are sufficiently protected. I am aware that complete *uniformity* of university tests, even in one division of the kingdom, could not be secured by this, or indeed by any practicable scheme; but *efficiency* ought to be secured by it, and that is, I think, much more to the purpose.

You say, that while I object to graduates of the University of Edinburgh submitting to any other examination prior to their being placed on the *Register*, I do not object to their passing a test examination for the army and navy. And then you magniloquently ask, "Are the public not as deserving of protection as the army and navy?" The feebleness of the argument shows the poverty of your cause. I object to our graduates submitting to the examination of a conjoint board prior to registration, because it would inevitably be a lower level examination; and to compel the graduate to pass such an examination, and to pay for it, would be, I think, a vexatious waste of the time of examiners and of the money of candidates. But with regard to the army and navy, of course the most eligible candidates are desired to fill the vacancies, and the

only way in which the most eligible can be discovered is by an entrance examination. I suppose I am right in believing that not only are the candidates thus selected, but that their future careers are affected by the order in which they are placed by the marks obtained at that competitive examination. I fail to see any argument for your triportal conjoint boards based upon the action of the Army and Navy Medical Department. Do you suppose that they would cease that action if three conjoint boards were set up in the Kingdom? I take it for granted they would do nothing of the sort.—I am, etc.

WM. RUTHERFORD.

Edinburgh, 13th October.

THE CORK FEVER HOSPITAL INQUIRY.

SIR,—Now that the expression of professional opinion has been fully given as to my action in the case which led to the Cork inquiry, it behoves me to say a few words in dismissing the subject from your columns. And first, let me tender my grateful thanks to all those friends and many comparative strangers who, both during the investigation and subsequently, wrote voluntarily, giving useful testimony as to the value of pilocarpin as a diaphoretic, and also expressing sympathy with me under the circumstances of the trying ordeal through which I was compelled to pass. More especially am I indebted to Dr. Duffey of Dublin, who at once offered to come to Cork (at great inconvenience), and give evidence as to his personal experience, which was considerable, of the hypodermic injection, the employment of which caused me all the inconvenience of this public trial.

It might have been thought by some that I should not have, in the first instance, submitted to the adjudication on the question by a scientifically incompetent tribunal; that I should not have entered the lists with a wily solicitor, to defend myself in an open court, to which the public of every degree were admitted, from strictly technical and professional charges, when ignorance, prejudice, and misinterpretation might excite or sway an audience; in short, as a leading Dublin daily journal expressed it, to submit to become the victim of "a public scandal", and of a prosecution which, in every sense, was "unfair and unconstitutional". The reason is a simple one.

At the Cork corporation, without any notice to me of specific charges—when, in consequence of the long time which had elapsed (seven months after the occurrence), added to the fact that the committee had already heard all that had to be said on the subject, I thought the thing was ended—these charges were made, which involved not alone my individual professional conduct and character, but also matters of the gravest import to the profession generally: such as submitting to the dictation of friends of patients, calling in outsiders in consultation, the loyalty and good faith of an hospital staff to each other and to the hospital they serve. Virtually, also, the charge was made that, in the light of an experiment, I had injected into the veins of a child a poisonous substance "never heard of in this country or in the United Kingdom before, an importation from America"; that, in consequence of this experiment, the death of the child was accelerated, if not caused. The only notice given me of these charges was an intimation received by the treasurer of the hospital, that the father of the child would oppose the usual grant, an intimation given to me about thirty-six hours previous to the meeting of the corporate body. I had not heard of the case for six months previously. I had no idea that a solicitor would be present. I did not believe that the corporation would permit such a discussion in public, the more especially as I knew that members of the committee would be present to explain the fact of the previous investigation. Once made, it was clear that I should meet these statements. And I considered that, taking every view of the case, it was better for myself and all concerned that I should accept the task of defending myself in public, as imposed on me, than that I should shrink, or appear to shrink, from any inquiry into my action. Events have, I think, proved that I was right. I now have little to regret. Certainly, it was hard to think that this public vivisection of a man's conduct for five days should have been performed on one who had done something for his native city, both in the way of the scientific advancement of his profession in it, and also in the material benefit of its poorer population.

In 1868, I established the Ophthalmic and Aural Hospital in Cork; since then, about twenty thousand poor patients have been there treated. I have mainly for years worked the Cork Maternity, and was the principal mover in its foundation. About three thousand women have been, through its instrumentality, attended in labour at their own homes. I, with a few lady workers, started the scheme for the organisation of the County and City of Cork Hospital for Women and Children. It has far outgrown its original design; and, up to the present time, I, with my other colleagues, conscientiously worked it. I have been for nearly ten years connected with the Fever Hospital, and have passed through epidemics of small-pox, fever, and scarlatina there; I have for some years been attached to the County General Hospital; I was for six years physician to the Cork City Dispensary, and received a special vote of thanks from the committee on my resignation of that office in 1872. One would hardly think that a man who had done this practical service without a single complaint having been at any time made against him, should lightly, or on the ignorant assertions of patients' friends, be made the victim of so manifestly unjust an ordeal as that through which I have passed. Yet so it has been. So far as the medical history of Cork is concerned, it is the first fact of the kind connected with that history of which I am aware. I regret to think that, in a future historical retrospect, the fact of a persecution founded on ignorance, sustained by prejudice, and completed under a sense of universal condemnation, should be connected with my name. However, I have the satisfaction of knowing that, only twelve months before, the most creditable fact connected with the scientific history of Cork for many years—the visit of the British Medical Association—had its origin in, and, I think, in some small measure owed its success to, the exertions of the same "experimentalist" and "enthusiast", whose crime it was that he for the first time used pilocarpin subcutaneously, and who did not consider that a drug in common use over the civilised globe was either novel or dangerous, and who failed to see in the hypodermic syringe a formidable instrument, and in the insertion of a needle a serious "operation". A medical witness came voluntarily forward, who thought the symptoms of scarlatina manifested themselves at least three or four days before the eruption appeared; and, under no circumstances, would this physician use extreme remedies. I envy the sphere of his practice, no matter how deeply I may feel for his innocence of the prodomal periods of the exanthems. My resident thought that a pack meant a "rolling in blankets". My nurse saw no use in torturing by the application of a small blister; and thus the case of malignant scarlatina, pronounced of a fatal nature by me early in the day, the third of the family who succumbed to the disease, having died, as I expected he would, was, through the visits of sympathy and condolence on the part of my resident to the father's house, and the reluctant shrugs of others' shoulders, magnified and distorted into one of pilocarpin poisoning. When, however, it was shown that there was nothing (outside of Cork) new, dangerous, or startling in the drug, and that the scientific accuracy of its application could not be disputed, then came a dissolving view—the "elixir of life" was not administered in time; and the walls of Cork were placarded with this latter announcement. First, the reluctant medical witness is produced to prove the medicine was used too soon. Now the poisonous drug (which could only be obtained of a given strength at the Ophthalmic Hospital) was administered too late. All the other charges broke down. And so ended this unique trial.

May it be hoped, for the credit of Cork, that many years will elapse, if ever again such a scene shall be enacted as that which disgraced the theatre of the Royal Cork Institution, from the 10th to the 16th of September 1880.—Yours faithfully, H. MACNAUGHTON JONES.

St. Patrick's Place, Cork, October 12th, 1880.

WOOLSORTERS' DISEASE.

SIR,—With reference to the letter of Dr. Tibbits in your last issue on this subject, the information on which the statements to which he objects were based was obtained from the minutes of the Bradford Commission who are now investigating the subject. The four cases referred to are detailed in those minutes, and it seems fair to assume that cases described in their minutes *came under the observation of the Commission*. If all the members, or a majority of them, did not see the cases, that appears to be a matter to be dealt with by the Commission, and no other responsibility is engaged.

The *distinctness* of the cases was assumed also from their being entered in the minutes of the Commission, none of whose members appear to have objected to their insertion. The information which Dr. Tibbits furnishes about the existence of bacilli in the blood of a patient who died of heart-disease is extremely interesting; and no doubt he has stated the facts to his colleagues on the Commission, from whom in due time a report on the whole subject will no doubt be issued. I do not see how the remarks in the JOURNAL can have "a tendency to choke or frustrate what might otherwise become a very valuable inquiry". It seems to me that the intention was the very reverse of this; namely, to bring the information that could be collected on the subject up to the date of the publication of the article in the JOURNAL, and so to keep alive public interest in it, avoiding any attempt to prejudge the question by a "premature" discussion.—I am, etc.,

AUCTOR.

SIR,—In your issue of October 16th I observe a communication from my friend Dr. Tibbits, where he is good enough to credit me with more microscopic experience than I am fairly entitled to receive. He has kindly afforded me many opportunities for the examination of the blood of patients in the Fever Hospital and General Infirmary. From these observations, I have ventured to conclude that microphytes are seldom found in normal or diseased blood under examination during life or shortly after death. I believe that specific changes in the fluids of the body must take place before these organisms can be detected. I have seldom failed, after the lapse of several hours, to find striking examples of the fission fungoids (Schizomycetes) in one or more of their various forms.

With regard to the bacillus anthracis and its relation to the so-called "woolsorters' disease", wherein is it morphologically distinct from other known species of its genus? What are its specific characters? It has been stated that the only difference which distinguishes this species is that it is non-motile, while the others are motile baccilli. Working microscopists know that this distinction is misleading. I believe that the bacilli found in other fluids and conditions are identical in form and size with those found in woolsorters' disease, and that the various stages of their development correspond. Before the doctrine that bacillus anthracis is the cause of disease can be accepted, it must be shown that these organisms, as usually met with, are injurious, or in what manner they differ from those known to be innocuous. It is stated that all the species of the fission group can be introduced into the system with impunity. Other authorities differ, and assert that there is a distinct septinous group; that remains to be proved. It is also stated that it is possible for anthracoid and similar diseases to arise without the presence of these bacilli; and also possible to communicate these diseases with blood not containing them, showing that bacilli are not the conveyors of the virus.

In conclusion, permit me to refer (at the risk, I am afraid, of giving offence to one or two personal friends) to the difficulty experienced by local observers who are desirous of having opportunities afforded them for examining cases of woolsorters' disease. Perhaps the omission arises from oversight; if so, I must apologise for alluding to the matter here. —I am, sir, yours obediently, W. G. TACEY, L.R.C.P., etc.

Bradford, October 16th, 1880.

HOSPITAL BOARDS.

SIR,—Thirty years ago, a Medical Board was constituted at our Lying-in Hospital. The consulting surgeon being president, the office of vice-president was held by rotation for a period of three months, during which time it was his duty to attend the meetings of the General Committee, to represent the Board on all matters of medical import. Now, if you would lend your valuable aid to secure the adoption of this or some similar plan at all hospitals, you would save us a world of trouble.—I am, sir, yours respectfully, BENJAMIN BLOWER.

Liverpool, October 16th, 1880.

THE FINANCIAL RESULTS OF THE PROVIDENT DISPENSARY SYSTEM.

SIR,—Dr. Fairlie Clarke is so well known in the profession as an earnest and able advocate of the provident system, that, if I had not been already aware that the new metropolitan association, though taking the name of provident, has little in common with the system which has hitherto been known under that name, I should have felt surprised at the way in which his most important query has been treated by two members of the council of that association in your columns. I cannot agree with either of your correspondents that the statistics asked for cannot be had, and would be worthless if they could be had; nor do I believe with Dr. Clarke that the statistics for which he asks would favour his argument for provident dispensaries if they were obtained; and this, I suspect, is the reason why Messrs. Bunn and Radley attempt to divert attention to other aspects of the question. There ought, however, to be no great difficulty in obtaining a sufficiently accurate estimate of the payments of five hundred non-members at even the lowest rates of payment, and this is all that is required; for so far back as January 1874 it was shown in an article in the BRITISH MEDICAL JOURNAL that the total sums received from members in the most successful provident dispensaries in town and country did not exceed 2s. 7d. or 2s. 8d. per member *per annum*, including midwifery fees (the basis of this calculation being the receipts from over 85,000 members in the metropolis and elsewhere); and the figures there given have never, I believe, been disputed. Perhaps I may also remind Dr. Clarke that, at the discussion which took place in the Metropolitan Counties Branch in February 1878, I compared the receipts from provident dispensaries with those from Poor-law appointments and clubs, greatly to the disadvantage of the former; and though I then gave a friendly challenge to one of the leading advocates of provident dispensaries, who was present, to dispute my calculations if he could, at the adjourned meeting, it was not even attempted. Unless, therefore, some one is able to answer Dr. Clarke's very pertinent question in a manner very different from what I believe it can be answered, I shall continue to believe that the adverse criticisms on the new provident association (and the system generally) contained in the papers contributed to the annual meeting of our Association were fully justified.—Faithfully yours,

H. NELSON HARDY.

SIR,—Mr. W. G. Bunn expresses surprise that I should have raised a question respecting the financial results of the provident system, because my article on The Limits of Unpaid Service "contains the only answer that can at present be given, in the absence of the statistics required". "Precise information", he adds, "is unobtainable, partly because the provident dispensary system is not sufficiently developed, but still more because there will always be great difficulty in ascertaining the amount paid in medical fees by any given number of persons".

But I must be allowed to differ from Mr. Bunn. I cannot flatter myself that my article furnishes the only answer that can be given. On the contrary, I believe that the required statistics might, with a little trouble, be obtained, and then a more precise answer would be forthcoming. Indeed, I have hopes that by-and-by I may be able to supply it myself. No doubt, as I said before, the investigation is a difficult one, but it does not appear to me to be at all impossible.

As regards Mr. Radley's further objection, I would say that, if the statistics were once obtained, it would be easy to make a deduction for the cost of drugs and dispensing, so that they might fairly be compared with the statistics of the provident system.

With the greater part of what is said by both your correspondents I entirely concur, and it is gratifying to observe that two such representative members of the Council of the Metropolitan Provident Dispensary Association take so wise and comprehensive a view of the whole subject.—I am, yours faithfully, W. FAIRLIE CLARKE.

Southborough, Tunbridge Wells, October 4th, 1880.

THE RESPONSIBILITY OF SELECTING A DANGEROUS ANÆSTHETIC.

SIR,—Scarcely a week passes without the record of a death during the administration of chloroform; and the account is always the same: a small amount used; a fairly healthy patient; the utmost care. Nor do I doubt it.

How long is this to continue? Surely the time has come for the profession to insist on the use of some other and safer anæsthetic. Why not ether? It is more disagreeable to the patient, I allow; but it is, in ordinary hands, incomparably safer—severe bronchitis, phthisis, and extreme abdominal distension perhaps excepted.

Is it due to that strange feature of our character, the spirit of toleration, which enables us to put up with things, in spite of certain twinges of conscience, until a climax is reached; and afterwards to wonder how we could have endured so long? Surely a sufficient climax has been reached here. Our Transatlantic cousins must laugh at us, if their wonder is not too great.—Yours truly, F.R.C.S.

STIMULANTS FOR PAUPERS.

SIR,—Your note of the week in the JOURNAL of October 9th, on the discrepancy in the amount expended on stimulants in different unions, will doubtless attract the attention of medical officers of workhouses to the subject.

From the figures given, it seems evident that the Sunderland Union, which expended only 2½d. per head during the year, must be conducted on almost teetotal principles; and that other unions, expending from 1s. 1d. to 2s. 7½d., give stimulants only in cases of sickness; whilst the West Derby Union, whose expenditure for stimulants is said to amount to 21s. 6d. per head, probably allows beer to most of the aged and infirm.

I think it will be interesting to many workhouse medical officers if further information on the subject can be given in the JOURNAL, and if gentlemen who have carried out these different plans of treating the poor in workhouses will give the benefit of their experience as to the result, as regards the health and wellbeing of the paupers, where alcoholic drink is generally allowed, or, on the other hand, where it is given only in cases of extreme illness. For, if it be proved that the old and infirm are benefited, and their strength better maintained, by the pint or half-pint of porter, on which they themselves undoubtedly set

great value, the medical officer will feel that he has good ground for ordering them this allowance; whilst, on the other hand, if it can be demonstrated that they can be maintained in as good a state of health without any stimulants at all, a very great saving to the ratepayers of many unions throughout the country could be effected.—I am, sir, yours faithfully, EDWIN FENN, M.R.C.S.

Dover, October 13th, 1880.

DAVOS PLATZ.

SIR,—In your impression of October 2nd, Mr. Goodchild partially quotes a sentence of my letter in the JOURNAL of September 18th. As this may be apt to convey an erroneous notion of the method of warming houses, etc., at Davos, I would point out that it is neither necessary nor desirable that the whole number of porcelain stoves in the hotels should be alight at the same time. By having a large and well-distributed supply of warming arrangements, external air may be allowed to enter a building more freely than with a limited number of hot stoves; and the pernicious condition of "confinement in a stove-heated compartment" is changed into a comfortably warmed and fresh atmosphere.

The extreme stuffiness and discomfort experienced in some continental hotels during the winter must not be attributed to the serviceable warming qualities of the German porcelain stove, but rather to improper management and defective ventilation. These stoves should never be allowed to become too hot for the hand to be placed on them; and, being of a massive size, and presenting such a large surface for the gentle radiation of heat, the air is warmed to a moderate temperature, without being uncomfortably hot; unless doors, windows, and other apertures are kept closed, when (as with any plan of heating) confinement in an apartment, with or without stoves, is injurious both in health and in disease.

The advantage which open fireplaces have over stoves, especially those of iron, is that less attention is necessary to the ventilation of a room; but for cold climates open grates are almost useless. With fair intelligence, any attendant can regulate the ventilation and temperature of an apartment warmed by the apparatus I mention. The liability of air becoming too dry and irritating to the air-passages is easily obviated by having a vessel containing water on or near the stove.

As the other part of Mr. Goodchild's letter enters on the subject of Davos Platz as a health-resort, I must defer any statements on the whole of the question for a future occasion. My last letter principally dealt with the mistaken notion that the low temperatures of certain cold climates always carry with them feelings of cold in proportion to the range of the thermometer. This is not so. The effects of all temperatures on the subjective sensations cannot be estimated or measured by the thermometer. It is quite possible to feel cold and be shivering at a temperature of 50° Fahr.; whilst, in a different locality, with the thermometer at 20°, quite opposite sensations may be experienced; although, with such low temperatures as the latter, it is, of course, necessary to warm the interior of buildings, which in no way interferes with health, if properly conducted, and due regard is paid to the admission of fresh air and the escape of foul.—I am, sir, your obedient servant, ALFRED WISE, M.D.,

Visiting Physician to the Infirmary for Consumption, Margaret Street, Cavendish Square.

Davos Platz, October 13th, 1880.

SOUTH SHIELDS.—Mr. Spear's final report on this district chronicles a death-rate which he may fairly regard as satisfactory testimony of his labours as medical officer of health. The rate was 19.6 per 1,000, the lowest for South Shields on record. During the year, there were 2,217 births and 1,214 deaths within the borough, the excess of births over deaths thus being 1,003. The deaths included 293 of infants under one year of age, or 23.3 per cent. of the total number of deaths; 587, or 48 per cent., of children below the age of five years; 437, or 36 per cent., of children and adults from five to sixty; and 190, or 16 per cent., of elderly people, aged sixty and upwards. The infant mortality, measured by the proportion of deaths under one year to births registered, was equal to 132 per 1,000, against an average of 160 for the last five years. Zymotic diseases caused in all 247 deaths, scarlatina alone accounting for 50 per cent. of these. The death-rate from the continued fevers shows a steady and continuous decline. In 1878, the rate was the lowest on record; and last year the decline was still more marked. Diarrhœa caused only 33 deaths, 17 being in the summer quarter. From tubercular diseases 175 deaths were registered, phthisis being responsible for nearly half that number. Inflammatory diseases of the lungs accounted for 249 deaths, and heart-disease for 59 more. In view of the large mortality from scarlet fever, it is to be regretted that the Town Council should still be undecided as to the utility of building a fever-hospital.

MILITARY AND NAVAL MEDICAL SERVICES.

STAFF-SURGEON HENRY HADLOW (1868) has been promoted to the rank of Fleet-Surgeon in Her Majesty's Navy with seniority of September 20th. Mr Hadlow served as Assistant-Surgeon of the *Conqueror* at the attack on the batteries in the Straits of Simono-Seki from September 5th to 8th, 1864. He entered the Service as Surgeon July 22nd, 1859, and was promoted Staff-Surgeon December 8th, 1868.

THE INDIAN MEDICAL SERVICE.

THE executive committee of the Indian Medical Service Defence Fund have just issued their report. They state that about 33 per cent. of the members of the service have joined the fund, which originated in the action of a few individuals who found themselves aggrieved by "the destructive order of January 2nd". So little is known of this organisation, that we may be pardoned for reprinting the following statement by the committee of the grievances under which Indian medical officers labour. "From the day he lands in India, the British Army surgeon never, under any circumstances, draws less than the full-pay of his rank. But, in the Indian Service, there is a system of what is called 'unemployed pay', which, besides making an invidious distinction, is most unfair to the Indian surgeon. By this system, the full-pay is given only to those who are permanently appointed to definite charges, and the unemployed pay to those who are waiting for vacancies to occur. But there is no limit to the time they may be so kept waiting; and if, in the meantime, one so waiting is appointed to 'officiate' for another in a permanent appointment, but going on furlough, the substitute, although he has the whole of the duties and responsibilities of the permanent appointment, is allowed only half the difference between the full-pay and the unemployed pay of that appointment." From this, says the *Broad Arrow*, it would seem that the grievance rests on a comparison of the position of the Indian medical officers with those of the British Service. Their position as to "unemployed pay" seems to be equivalent to that of British naval officers on "half-pay". The committee admit that an inquiry into the matter is being carried out in India, but say they have no confidence in the manner in which it is being conducted.

THE NAVAL MEDICAL SERVICE.

SIR,—The *Newcastle* has been paid off, and her captain rewarded with another appointment. The medical officers whom he compelled to obey a degrading order are on half pay. "Cabins *versus* Water-closets" is under consideration in a flagship fitting out. Rumour has it that the captain of the *Eclipse* has given the staff-surgeon of that ship the authority of a Deputy Inspector-General, to enable him to worry the staff-surgeon of the *Dryad*.

Truly these are anything but pleasant subjects for the consideration of young candidates, and the latter shows what they may expect from "rising" executives.—I remain, etc., X.

EXCHANGES BETWEEN ARMY MEDICAL OFFICERS.

SIR,—A clause in the Royal Warrant of the 27th November, 1879, states that: "Exchanges between officers of the Army Medical Department shall be granted under such conditions as from time to time shall be approved of by us". Preventing medical officers from exchanging had long been complained of as a grievance; and when this warrant was published, it was felt that a piece of injustice to medical officers had been removed, which they alone of all army officers laboured under. I wish now to ask whether the clause I have referred to is intended to be a dead letter or not. I can vouch for the facts of the following case.

Early in April last, two medical officers, serving in different presidencies in India, sent in applications through their departmental seniors to be permitted to exchange their tours of foreign service, one of these gentlemen being desirous of going home instead of the other, who was willing to remain longer in India, but whose tour of foreign service had nearly expired. Both applications were sent back to them to be supported by a "health certificate"; meaning a certificate furnished by a medical officer to the effect that "the health of the officer who applied to exchange was good enough to enable him to serve in the station where he applied to be sent to". (One might assume, if an officer's health were good enough to serve in India it was surely good enough for home service.) The certificates were furnished as directed, and with them the applications were sent in again to the Surgeon-General's office at Simla, and from there were sent to Whitehall Yard for the sanction of the Director-General. The Director-General, however, appears not to have thought fit to adjudicate in the matter, for he sent both applications back to India, saying the applications should have been made to the Commander-in-Chief in India. Hoping at last they were in the right track, the officers concerned made application to the Commander-in-Chief in India in the way they were directed to do, but up to the present date, two months have elapsed without any answer being vouchsafed, and altogether five months since the applications were originally made.

Is this encouraging, or is it not? When for mutual convenience officers wish to exchange, their private arrangements on the subject being satisfactory to one another, and the State being put to no expense by it, why should it still be denied to medical officers only, in spite of the late Warrant, which, if acted up to, is generally admitted to be satisfactory? Do the authorities want our letters to imagine exchanges are allowed in the Medical Department, while, by putting difficulties in the way, they are practically forbidden? I am, sir, yours, etc.,

WORRIED AND WEARIED.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH AND DISEASE IN ST. GILES'S DISTRICT.

THE Board of Works for the St. Giles's District, which includes the parishes of St. George, Bloomsbury, and St. Giles-in-the-Fields, has just issued its annual report, which gives interesting information on the sanitary work of the year in these important parts of London, the report of the medical officer of health, and other interesting details. The district board elects a member to the Metropolitan Board of Works, and passes, without comment, the fact that the annual payment for main-drainage, and for the share in the other business carried out by the vestry-elected board, amounts now to £8,870; but condemns very strongly, as "extravagant expenditure", the rate of the London School Board, which has assessed the district at the sum of £7,644, for the purpose of education. The St. Giles's District Board demurred to the principle of the amending Act of last session to the Artisans' and Labourers' Dwellings Act, 1868, in throwing upon the local authorities the cost of rebuilding on sites cleared under the Act; and urged that the cost should be borne by the whole metropolitan area. Under the Act of 1875, the wretched habitations formerly standing between Great Wild Street and Drury Lane had been cleared, and improvements were going on in regard to Little Coram Street, Russell Square, and other parts of the district. The board complained of the "burdensome rates" imposed by the water-companies, and looked forward to the action of Parliament in the ensuing session for a remedy. Under the Sale of Food and Drugs Act, 1875, Professor Redwood had analysed 272 articles, and proceedings were taken in thirty-two cases, with the result of the peccant tradesmen being fined and mulcted in costs. Under the Sanitary Acts, owners had had to be summoned before the magistrates, and in some cases the board's officers had had to force an entrance into unsanitary premises, to cause necessary work to be done, the costs being recovered from the owners. The medical officer of health, Mr. Lovett, states that the population of the district is 53,429, or a density of 219 to an acre. There had been a very low marriage-rate during the year, and the birth-rate was 27.9 per 1,000, as against an average, during the preceding ten years, of 29.3 in the district, and as against 33.5 of the United Kingdom. The death-rate of the district (deducting the deaths of non-parishioners, and adding the deaths of parishioners who died out of the parish) was 22.5 per 1,000 inhabitants. In the St. George's part of the district, the death-rate was 17.9 per 1,000 of population; in St. Giles's South (the district of courts and alleys), 27.3; and in St. Giles's North (the more open part), 22.1; figures which show the tax the poor have to pay in health and life for dwelling under unsanitary conditions. Of the deaths, 246 were of children under one year, and 428 of the 1,207 deaths were to children under five. The death-rate of St. Giles's district from zymotic (fermenting and preventable diseases), was below the average for the district, being 2.4 per 1,000 of the population; this without any deaths from small-pox. Measles caused 18 deaths; scarlet fever, 38; diphtheria, 4; whooping-cough, 34; and typhoid, 8. Typhus raged in the low parts of the parish, and many cases were said to have been "imported" by the poor people on their return from hop-picking in Kent. A particular form of enthetic disease caused 13 deaths; 10 to children under one year, and two others were under five years. Mr. Lovett also shows that a considerable improvement in the health of the district has arisen from the carrying out of sanitary measures.

THE TENURE OF OFFICE IN THE SANITARY MEDICAL SERVICE.

ANOTHER very striking and distressing example of the uncertainty of the tenure of office in the sanitary medical service is afforded by the case of Mr. Herbert Page, the health-officer for the Redditch Urban District. Mr. Page, who was appointed in 1874, has for the last six years discharged his difficult duties with zeal and fearlessness. He has taken pains to acquaint himself thoroughly with the wants of his district, and has studiously endeavoured to keep himself *au courant* in sanitary science—showing, by taking up the Cambridge diploma, and in other ways, his anxiety to perfect himself in the knowledge requisite for his position. But, in the honest discharge of his duties, he has had to comment severely on the maladministration and neglect of his board, and has thereby incurred the hostility of the small property-owners sitting on it. The result has been that, when submitting himself for re-election recently, Mr. Page has been calmly passed over in favour of another candidate with absolutely no claim to the appointment at all. It is to be regretted that any practitioner at Redditch should have been found willing to assist the local authority in wreaking what is perfectly well understood to be their spite against Mr. Page for his honesty. Had other candidates abstained from presenting themselves, the local board might have been ashamed of their petty meanness; but, under the feeble and transparent pretext of the "desirability of a change", Mr. Page was ousted in favour of a quite untried candidate. The new officer will have no easy task before him, if he desire to do his duty. He must feel that he is appointed to make things as pleasant as possible, and to keep silence about the neglect and misdoings of the local board. Yet in face of him are Mr. Page's reports, which cannot be gainsaid, and which, being in the hands of the Local Government Board, who know Redditch of old, are likely to be used against the local board with damaging effect. One of the worst features of the case is, that the local authority do not propose to ask for the repayment of half the salary of their new officer from the Local Government Board. Thus all control over the appointment is lost to the central authority, together with all future information about the sanitary state of the place, unless some local resident is bold enough and persistent enough to move the Local Government Board to energetic action under Section 299 of the Public Health Act.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

LOUTH RURAL DISTRICT.—Notwithstanding the adverse influences of agricultural depression and the severe weather, the death-rate for this district last year was only 15.2 per 1,000. Scarlatina, which was the only zymotic disease prevailing, with the exception of whooping-cough, was not marked by much fatality. Whooping-cough, on the other hand, was very prevalent, and caused many deaths among children; the fatality being due, in a large proportion of cases, to imprudent exposure to the cold, with consequent serious complications of the lungs. The mortality from pulmonary diseases was, as was to be expected, very high, the deaths numbering no less than 109 out of a total of 377. Phthisis still maintains its high fatality in the district; the deaths numbering 35, against 29, 33, and 28 in the preceding three years. A comparison of the wold and marsh villages in this respect is an useful feature in the report. Improvement of an unambitious character seems to be taking place in several departments of sanitary work. The water-supply, the drainage, and the cottage accommodation are all improving, though no sanitary works, with the exception of the drainage of Mablethorpe, have been carried out. It is noteworthy, as showing the haphazard way in which the remuneration of officers of health is settled, that, for the supervision of this district of 24,750 persons, Dr. Domenichetti receives a salary of £375 *per annum*.

ST. FAITH'S RURAL DISTRICT.—During 1879, there were 341 births and 187 deaths, equal to rates of 31.2 and 17 per 1,000 respectively. It is unsatisfactory to find that nearly 9 per cent. of the deaths were registered without medical certificate, and that in five instances the cause of death was declared to be unknown. Most of these uncertified deaths were those of young children of the working classes. The average duration of life was about thirty-eight years. A labourer died in August at the age of 97, and two others had exceeded their ninetieth year at death. The mortality was highest in the month of April, and lowest in August. Neither the autumnal season nor the severe cold of November and December materially affected the death-rate. The infantile mortality was, for a rural district, very high (155 per 1,000 births registered). The disease which proves most fatal to young children in the district is marasmus, which Dr. Shephard Taylor regards as brought about in many instances by improper feeding. Of zymotic diseases, scarlatina was the most fatal, and was epidemic in one village during a part of the year. It is encouraging to find that some at least of the landowners of the district seem to be waking up to their responsibilities for the sanitary improvement of their cottage property.

PRESTON.—The death-rate for the borough, though an improvement on that for 1878, is still much too high (27.34 per 1,000). The deaths from all causes numbered 2,395, of which 283 were from zymotic diseases, and 667 (or 27.84 per cent. of the total number) in children under one year of age. Convulsions, premature birth, and the wasting diseases of infancy occasioned 525 deaths, of which 411 were of infants under the age of twelve months. Of this latter number, 104 died within a few hours or days of their birth. Although many of these infants were prematurely born, or of such feeble vitality as only to live for a very few hours or days, Mr. Pilkington says there can be little doubt that many others would have been still living, had greater care been bestowed on their nursing, greater judgment exercised as to their food, and more care given to personal cleanliness. The working of

mothers in factories, and the consequent tending of children by unfit and ignorant persons, the feeding of infants with indigestible substances, and the use of sleeping stuffs and so-called "soothing syrups", undoubtedly account in a large degree for the high infantile mortality of the town. Of the zymotic diseases, scarlatina was the most fatal, causing in all 137 deaths. With the exception of eight, who had exceeded the age of ten years, all the victims from scarlatina were infants or young children. The period between two and five years was that in which the greatest fatality was observed, 65 deaths being recorded between these ages. From fevers only 13 deaths occurred—a gratifying diminution from the 48 and 45 deaths of the two previous years. The deaths from the other zymotic diseases do not call for any special remark. The mortality from consumption was rather below the average; but that from bronchitis was very large, no fewer than 365 persons succumbing to the disease.

THE SANITARY MEDICAL SERVICE.

SIR,—Complaints are frequently being made in your columns of the reduction of the salaries attached to public appointments held by medical men; but it is not often that you have to report a case in which the salary of a medical officer of health is reduced at the instance of a medical member of an urban sanitary authority.

Seven or eight years ago, the Bilston Sanitary Authority, by order of the Local Government Board, advertised for a medical officer of health at a salary of £60 *per annum*. The successful candidate, Mr. W. M. Hancox, was opposed on that occasion by a gentleman who got only one vote. Immediately after the appointment was thus filled, the defeated candidate, who was a member of the board, moved that the salary of the medical officer be reduced to £50, and succeeded in getting his motion carried. Ever since, he has openly endeavoured to cast ridicule upon the medical officer; and in his capacity of chairman of the sanitary committee, has repeatedly characterised the officer's monthly reports as being unsatisfactory. Three years ago, the same gentleman unsuccessfully attempted to grasp the appointment from Mr. Hancox. This year, he, unfortunately for the sanitary interests of the town, got installed in the chair of the Bilston Town Commissioners, who constitute our local sanitary authority, and just before the usual period for reappointment of the medical officer, took advantage of his position as chairman to get a resolution passed that a medical officer of health should be advertised for at £20 *per annum*. Mr. Hancox, as well as other competent local practitioners being thus practically precluded from applying, the appointment fell into the hands of a gentleman of the advanced age of seventy years, who holds a parish appointment in a neighbouring union, and who, on this occasion, was the only candidate. It is proper to add, that the district under the Bilston Urban Sanitary Authority has a population of 25,000, and an acreage of 1,730.

I do not feel it incumbent upon me to offer any criticism upon the part that Mr. Hancox's opponent has acted in this affair; but as it has given rise to a considerable amount of comment in medical circles, as well as among the general public, it would be satisfactory to all if he were afforded an opportunity, of which it is hoped he will take advantage, of explaining away his connection with an act, the just and adequate reasons for which do not appear on the surface.—Yours truly,

FLOREAT ÆS MEDICA.

*** On the facts as stated, there can be but one opinion as to the conduct of the medical man who has thus taken upon himself to secure the reduction of the already too small salary attached to the office of medical officer of health for Bilston to the paltry sum of £20 a year. For the sanitary supervision of 25,000 people housed under such circumstances as the inhabitants of the Black Country are known to be housed, the initial salary of £60 was ludicrously inadequate; and the appointment at the present remuneration—leaving out of consideration altogether the advanced age of the holder of the office—is nothing but a mockery of the Public Health Act.

SIR,—As you state in your leading article of September 18th, "it is desirable that the health officer should be a man free from the cares of practice, and whose pecuniary interests are not perpetually at war with the discharge of his duties". It is also desirable that those with whom the appointment rests should have some guarantee that candidates have made sanitary science a special study. To effect this, certificates are now granted by the universities and licensing bodies, but there is no doubt that the demand for them is limited by the meagre salaries now paid to health officers debarred from practice. Could not this be remedied, in some instances, by appointing such men coroners for their district? The combination would give us a coroner who, by his medical training, was peculiarly fitted for his work, and a medical officer of health who could fearlessly discharge his duties. Hoping some correspondent may take up the subject, I am, yours, etc., M.B.

SIR,—I beg to tender you my thanks for the advice given to me in the JOURNAL (in June) relative to my appointment as medical officer of health. As you advised, I appealed to the Local Government Board, and they at once declared the whole proceeding illegal, and ordered a new election to take place. This was carried out on August 31st, at a large and influential meeting of the board, and I was reinstated in office amid many expressions of regret that a few members should have acted as they did. Faithfully yours, W. INGRAM KEIR.

Linden House, Melksham, September 16th, 1880.

POOR-LAW MEDICAL APPOINTMENTS.

ERSON, William Robert, M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator for the Lindley-cum-Quarenby District of the Huddersfield Union, *vice* F. C. Ellerton, L.R.C.P.Ed., resigned.

[illegible] W. Ingram, L.R.C.P.Ed., appointed Medical Officer of Health to the Melksham Rural Sanitary Authority.

MUIR, James, jun., L.R.C.P.E., appointed Medical Officer and Public Vaccinator for [illegible] District of the Penrith Union, *vice* W. R. Jones, M.R.C.S.Eng.

YOUNG, Alexander G., M.B., appointed Medical Officer, Public Vaccinator, etc., for the Moss-side Dispensary District of the Newry Union, at £[illegible] per annum, and £[illegible] per annum as Medical Officer of Health, and Medical Attendant to the Fever Hospital and Workhouse at Newry. Late House Surgeon, Thomas Street L.&Q.C.P. Dublin.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

EXAMINATIONS for the degree of Bachelor of Medicine, both first and second, will be holden in the present Michaelmas Term, beginning on Monday, November 29th. An examination also for the certificate in State Medicine and Public Health will take place in the third week of December. Notice will be hereafter given of the days and hours for each examination. Candidates are to send their names to the Regius Professor of Medicine, Medical Department, Museum, on or before November 15th. Students are reminded that, after the present year, the examinations aforesaid will be holden only in the Trinity Term.

UNIVERSITY OF CAMBRIDGE.

EXAMINERS.—The following have been appointed Examiners: First M.B. Examination: Dr. Anningson, Caius; Professor Dewar.—Second M.B. Examination: Dr. Watney, St. John's; C. Creighton, King's.—Third M.B. Examination: Dr. Reginald Thompson, Trinity; Dr. Galabin, Trinity.—Medical and Surgical Degrees: Mr. Luther Holden, F.R.C.S.; Mr. Thomas Bryant, F.R.C.S.—Dr. Cheadle, of Gonville and Caius College, has been appointed Assessor to the Regius Professor of Physic.

UNIVERSITY OF ABERDEEN.

ELECTION OF ASSESSOR.—At a meeting held on Tuesday in the Temple—Professor Hunter in the chair—the following resolutions were unanimously approved:—Moved by David Ferrier, M.A., M.D., F.R.S., Professor of Forensic Medicine, King's College; and seconded by the Rev. Peter Forsyth, M.A.: "That, in order to adapt the curriculum of Arts to the wants of the different professions, room should be found for such subjects as Chemistry, Botany, Modern Languages, History (ancient and modern), Political Economy, and a more extended course of English Composition and Literature; and, as it is impossible to enlarge the curriculum, candidates for degrees in Arts should be allowed to select some of the above-mentioned subjects in lieu of Higher Mathematics, Greek, or other existing compulsory subjects." Moved by Stephen Mackenzie, M.D., F.R.C.P.; and seconded by the Rev. John Gibb: "That, as Dr. Bain accepts the principle of options for the degrees in Arts, this meeting strongly urges the members of the Council to vote for Dr. Bain as Assessor." On the motion of J. Mitchell Bruce, M.A., M.D., F.R.C.P., Assistant-Physician to Charing Cross Hospital, a vote of thanks was accorded to Professor Hunter for presiding.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—On October 14th, a *conversazione* was held at the North-Eastern Hospital for Children, Hackney Road, and more than two hundred guests assembled at the invitation of the president, committee, and medical staff of the institution. The hospital, which was founded thirteen years ago, is placed in one of the poorest and most densely populated districts of the metropolis, precautions being taken that none but fit subjects for treatment shall be admitted to the benefits of the charity. The originator of the institution is stated to have been a lady, a member of the Society of Friends, who took a single room in the district as a dispensary. Subsequently, two houses were secured; and, in June last, new wards were formally opened by Her Royal Highness the Duchess of Connaught, and permission was given to name one the "Connaught Ward". The number of beds in the extended hospital is sixty; and, in the Convalescent Home at Croydon, eight beds are provided. Since the opening, 146,000 patients have been relieved, and the average number of outpatients weekly is nearly 1,000. The new wards display the most recent improvements for securing comfort, cleanliness, and ventilation. Communication by telephone is provided all over the building; and there is a complete isolation ward, which is connected only by telephone with the rest of the building. There has been a most ingenious adaptation of the great flat roof, which has been securely railed in, and turned to the purpose of a playground, whence the little sufferers may obtain occasional glimpses of the outlying country. The cost of the construction of the new wards and offices, together with that of the freehold, is about £21,000; and one result of opening these wards is, that there is an expenditure in excess of income estimated at £700 a-year. There is a debt remaining on the building of about £600, and the expenditure for the past three years has been £400 in excess of income. New subscriptions are, therefore, much needed.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—As the result of the last quarterly examination for the Licence of the College, the undernamed gentlemen, having passed the required examinations and taken the declaration, were admitted Licentiates of the College on August 5th.

John Leslie Barrington, Joseph Boyd, Luke Brady, James Stewart Brooke, Humphrey John Bromfield, Augustus James Arthur Brown, Walter John Clarke, James Nagle Cleary, Robert Cochrane, Abraham Lyndes Connellan, Edmund Corcoran, Thomas Corcoran, John George Cronyn, Edmund Francis Flynn, Charles Herbert Ford, William Fottrell, Thomas Mark Gallagher, Fitzgerald Isdell, James Alfred Johnston, Thomas Samuel Lacey, Francis Joseph Lambkin, John Lilly Lane, Peter Edmund Lemas, William Cuthbert Lucas, Samuel Foster Lougheed, John Low, James Patrick Mackin, Patrick Andrew M'Dermott, John Barry Moylan, George Cathcart Moutray, Richard Francis O'Brien, John O'Halloran, William Watson Pike, Patrick Henry Rochford, John Goodwin Shea, William Patrick Stanners, Thomas Stanton, James Steel Swain, Samuel Malcolm Thompson, William John Trotter, and Henry Lloyd Whitestone.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences of this College, held on Monday, Tuesday, Wednesday, and Thursday, October 4th, 5th, 6th, and 7th, the following candidates were successful.

For the Licence to practice Medicine.

George Henry Butler, Kilburn, London; John Edward James Deane, Dublin; Harry Chalmers Hudson, Dublin; John Hugh Jones, Dublin; Francis Joseph Lambkin, Dublin; John Murphy, Dublin; Edward Connell Adair Ramsay, Fleetwood, Lancashire; Henry George Sworn, London.

For the Licence to practice Midwifery.

Harry Chalmers Hudson, John Hugh Jones, John Murphy, Henry George Sworn.

At the usual Quarterly First Professional Examination, held on Monday, Tuesday, and Wednesday, October 4th, 5th, and 6th, the successful candidates were the following.

Elizabeth Lougheed, London; Katherine Mitchell, London; Julia Caroline Mitchell-Swaagman, London.

The following licentiates, having complied with the by-laws relating to membership, have been duly admitted Members of the College.

John King Forrest, 1859, Dublin; George William Hatchell, 1860, Dublin; Daniel Paterson Barry, 1871, Surgeon-Major A.M.D.; Alexander Richard Joyce, 1871, Surgeon R.N., Plymouth; George Kell, 1871, Surgeon R.N., China; Francis M. Harricks, 1871, Corowa, New South Wales; Henry Anthony Wills Richardson, 1873, Surgeon R.N.; Peter O'Reilly, 1876, Carrigallen; Eliza Louisa Walker Dunbar, 1877, Bristol; Francis Patrick Staples, 1880, Surgeon Major A.M.D.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 14th, 1880.

Cutfield, Arthur, Burnt Ash Lane, Lee.
Graham, Robert, 56, Upper Kennington Lane.
Sisley, Richard, 1, Park Row, Albert Gate, S.W.
Steer, William, Courtenay Terrace, Salcombe.
Williams, Augustus Frederick, Ravensthorpe, Northamptonshire.

The following gentleman also on the same day passed his Primary Professional Examination.

Goddard, Walter Horace, St. Mary's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

BOLTON UNION—Medical Officer to the Sharples District.

*BRADFORD FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION—Assistant Medical Officer and Dispenser. Salary, £120 per annum. Applications, with testimonials, on or before November 4th.

BRIGHTON AND HOVE LYING-IN INSTITUTION—Honorary Surgeon. Applications, with testimonials, on or before November 5th.

*CHARING CROSS HOSPITAL—Assistant-Physician—Applications, with testimonials, on or before October 30th.

*CHARING CROSS HOSPITAL—Assistant-Surgeon. Applications, with testimonials, on or before October 30th.

CHEPSTOW UNION—Medical Officer to the Sydney District.

COLCHESTER UNION—Medical Officer to the Third District.

*CORK FEVER HOSPITAL—Resident Medical Officer and Apothecary. Salary, £100 per annum, and £30 per annum to keep accounts of institution, with apartments, fire, and light. Election on 4th proximo.

*DENTAL HOSPITAL OF LONDON—Assistant Dental Surgeon. Applications on or before November 1st.

ELLESMERE UNION—Medical Officer to the Hordley and Dudleston District.

*GREAT NORTHERN HOSPITAL—Physician for Out-Patients. Applications, with testimonials, on or before October 30th.

*HULL GENERAL INFIRMARY—Assistant House Surgeon. Salary, £50 per annum. Applications not later than November 8th.

KIDDERMINSTER UNION—Medical Officer to the Lower Milton District.

LINCOLN ODD FELLOWS' MEDICAL INSTITUTION—Assistant or Second Medical Officer. Salary, £100 per annum. Applications, with testimonials, to the Secretary, on or before November 2nd.

RATHANGAN DISPENSARY—Medical Officer. Salary, £120 per annum, with £25 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 25th inst.

*ROYAL FREE HOSPITAL—Assistant Physician. Applications, with testimonials, to the Secretary on or before October 27th.

*ROYAL SOUTH HANTS INFIRMARY, Southampton.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, with testimonials, on or before October 23rd.

*ST. THOMAS'S HOSPITAL—Resident Medical Officer. Applications, with testimonials, on or before October 29th.

*ST. MARYLEBONE PARISH—Medical Officer of Health and Public Analyst. Salary, £400 per annum. Applications, with testimonials, on or before October 28th.

*ST. GEORGE'S HOSPITAL—Assistant Lecturer on Midwifery. Applications, with testimonials, on or before October 30th.

ST. PANCRAS PARISH—Medical Officer to the Leavesden Woodside Schools.

SHIPTON-ON-STOUR UNION—Medical Officer to the Halford District.

*THE FRIENDS' RETREAT, York—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications, with testimonials, before October 30th.

THETFORD UNION—Medical Officer to the Sapiston District.

THINGOE UNION—Medical Officer to the First District.

TICEHURST UNION—Medical Officer to the Wadhurst District. Salary, £70 per annum, with extras. Applications on or before November 3rd.

*TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, etc. Applications not later than November 1st.

*VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea.—Honorary Assistant Physician. Applications on or before November 1st.

WEST BROMWICH UNION—Medical Officer to the North-West Oldbury District. Salary, £65 per annum. Applications on or before October 25th.

*WESTMINSTER GENERAL DISPENSARY—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, gas, and attendance. Applications, with testimonials, on or before October 23rd.

WHITECHAPEL UNION—Assistant Medical Officer to the Infirmary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

JAKINS, Percy S., M.R.C.S., appointed Clinical Assistant to the Western Ophthalmic Hospital, *vice* G. Gwynne Bird, resigned.

LE CROMIER, H., M.R.C.S.Eng., appointed Honorary Physician to the Dreadnought Seamen's Hospital, Greenwich, *vice* C. C. Claremont, jun., M.R.C.S., whose appointment has expired.

ROLSTON, John R., M.R.C.S.E., appointed Honorary Surgeon to the Seamen's Hospital, Greenwich, *vice* Richard Steele, L.R.C.P.Ed., whose appointment expired on September 30th.

ROWLANDS, H. P., M.R.C.P.Lond., appointed House-Surgeon to the Weston-super-Mare Hospital and Dispensary, *vice* Donald A. Fraser, M.R.C.S., resigned.

SHARMAN, P. E., appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, *vice* F. P. Wightwick, resigned.

WHITE, W. Hale, M.B.Lond., appointed Resident Medical Officer to the Evelina Hospital for Sick Children.

WHITE, Sinclair, appointed Demonstrator of Anatomy and Physiology to the Sheffield School of Medicine, *vice* A. H. Cooke.

*WILSON, John S., L.R.C.P.Ed., appointed Medical Officer to St. Ann's Dispensary, St. Ann's Road, Stamford Hill.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

GILL.—On the 15th inst., at Bootham, York, the wife of H. Clifford Gill, M.R.C.S.E., Medical Superintendent of the York Lunatic Hospital, of a son.

HUME.—On the 8th inst., at 57, Westgate Road, Newcastle-on-Tyne, the wife of G. H. Hume, M.D., of a son.

MARRIAGE.

FRASER—TRENCHARD.—On the 14th of October, at St. Augustine's Church, Honor Oak, by the Rev. Dr. Morgan, Donald Alexander Fraser, M.R.C.S., L.S.A., eldest son of P. Gordon Fraser, Esq., late Colonial Treasurer and Member of the Executive and Legislative Council of Tasmania, to Elizabeth, eldest daughter of E. P. Trenchard, Esq., of Woodville, Honor Oak.

PRESENTATION.—The friends and patients of Dr. Hooker of Hadlow lately presented him with a handsome clock, massive gold chain, and a purse containing £75, on the occasion of his leaving the neighbourhood.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The Open Entrance Scholarship in Natural Science of £100 has been awarded to Mr. Robert Lawson, and that of £60 to Mr. H. H. Lankester.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Mr. Arthur Sheild has obtained both the William Brown Exhibitions of £100 *per annum*, tenable for two years, and £40 *per annum*, tenable for three years; and Mr. Bradshaw and Mr. Taylor have obtained the Brackenbury prizes in medicine and surgery, value about £30 each.

THE Wakefield guardians have increased the salary of Mr. Benjamin Kemp, M.R.C.S.Eng., as medical officer for the Horbury district, from £16 to £25 per annum.

UNIVERSITY OF DURHAM.—At the First Examination for the Degree of Bachelor in Medicine, which terminated on October 8th, the following candidates satisfied the Examiners: Thomas George Ainsley, M.R.C.S.; David Henry Barley; Herbert Alfred Clowes, M.R.C.S.; Anthony Dodd; A. W. Woodman Dowding, L.R.C.P., M.R.C.S.; Frederick William Allen East; Frederick Eastes; Henry Marshall Fenwick; William Henry Kempster; Walter Edgar Rudd. Seven candidates failed to satisfy the Examiners, and were referred to their studies for six months; and one candidate withdrew.

KING'S COLLEGE.—Mr. John Power W. Gray and Mr. Thomas Arthur Collinson have been each awarded a Warneford Scholarship of the value of £75; and Mr. Charles Robert Hodges one of £50. Mr. Ernest Paul Alphonse Mariette has obtained a Sambrooke Exhibition of the value of £60, for proficiency in general literature and science; and Mr. Albert Carless a Clothworkers' Exhibition in Science of the value of £50.

DURING the thirteen weeks which ended on 2nd instant, the death-rate in the metropolis averaged 21.3 per 1,000, against 19.3, 22.1, and 18.4 in the corresponding periods of 1877, 1878, and 1879.

HOMŒOPATHIC SPRINGS FOR FEVER AND AGUE.—In Westphalia there is a spring which, after flowing for twenty-four hours, entirely ceases for six, then returns with a very loud noise, and in a stream large enough to turn three mills. The well at Torbay ebbs and flows sixteen times in an hour. The Giggleswick well, in Yorkshire, rises and falls every ten minutes. St. Anthony's well, near Edinburgh, has a similar regular intermittent movement. In Savoy there is a spring which is very uncertain and irregular in its rises and falls; this water has been suggested for the irregular chills of pyæmia, while sea-water, which rises and falls regularly with tides, is said by Dr. Max Greubler to rival natrum muriaticum in the cure of intermittent fever. He also hints that the other waters may be tried in obstinate cases of fever and ague. The waters from the intermittent geyser springs in Iceland have not yet been suggested by Dr. Greubler for the worst cases, but he points, with pride and pleasure, to the numerous cases of malarial disease which have been cured at the springs, called the *Puits de Vaisse* at Vichy, which have a perfectly regular and curious *intermittent* action, preceded by a subterranean noise, followed by a violent eruption of mud, water, and gas, strongly impregnated with the hydrosulphuric odour, which occurs at intervals more or less regular, six or eight times every twenty-four hours. Dr. Greubler prides himself very much upon a homœopathic inspiration which led him to give these water, especially in cases attended with flatulence and more or less violent explosions of gas and scybala. In some cases he was obliged to use what he calls the ascending rectal douche, or injections of the water, which is highly impregnated with gas. Thus all the indications were fulfilled—the water, gas, and fæces were forced first to ascend, and then to descend; and were finally expelled from the patient's body, to his great relief and comfort.—*New York Medical Record.*

PUBLIC HEALTH.—During last week, being the forty-first week of this year, 5,955 births and 3,629 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living. The annual death-rate was 27 in Edinburgh, 21 in Glasgow, and 33 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bristol, 15; Wolverhampton, 19; Sheffield, 19; Manchester, 20; London, 20; Birmingham, 20; Norwich, 21; Newcastle-upon-Tyne, 21; Nottingham, 22; Leeds, 22; Plymouth, 22; Bradford, 23; Brighton, 24; Liverpool, 25; Portsmouth, 25; Sunderland, 25; Oldham, 27; Hull, 29; Leicester, 30; and the highest rate was 34 in Salford. The annual death-rate from the seven principal zymotic diseases averaged 3.9 per 1,000 in the twenty towns, and ranged from 1.7 and 2.8 in Newcastle-upon-Tyne and Plymouth, to 7.6 and 8.7 in Sunderland and Salford. Scarlet fever showed the largest proportional fatality in Sunderland, Salford, Oldham, and Liverpool; and measles in Leicester. The death-rate from enteric fever was highest in Liverpool and Bradford. The fatality of diarrhœa showed a further general decline, but was equal to an annual death-rate of 3.3 in Leeds and 4.1 in Wolverhampton. Small-pox caused six more deaths in London, but not one in any of the nineteen large provincial towns. In London, 1,405 deaths were registered, which were 19 below the average, and gave an annual death-rate of 20.0. The 1,406 deaths included 6 from small-pox, 20 from measles, 70 from scarlet fever, 8 from diphtheria, 17 from whooping-cough, 27 from different forms of fever, and 66 from diarrhœa—being altogether 214 zymotic deaths, which were 28 below the average, and were equal to an annual rate of 3.0 per 1,000. The deaths referred to diseases of the respiratory organs, which had increased from 124 to 266 in the five preceding weeks, further rose to 273 last week, and exceeded the corrected weekly average by 31; 164 were attributed to bronchitis, and 68 to pneumonia. The death of a child, aged six years, in the London Hospital on the 8th instant, was referred to hydrophobia from the bite of a dog. An inmate of the Shoreditch Infirmary, whose age was stated to be one hundred years, died on the 8th instant, from senile decay. Different forms of violence caused 43 deaths; 37 were the result of negligence or accident, including 17 from fractures and contusions, 3 from burns and scalds, 2 from drowning, and 7 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 48.0°, and 3.6° below the average. The general direction of the wind was north-easterly, and the horizontal movement of the air averaged 9.3 miles per hour, which was 1.1 below the average. Rain fell on three days of the week, to the aggregate amount of 1.30 inches. The duration of registered bright sunshine in the week was equal to 14 per cent. of its possible duration. No ozone was recorded during the week, except on Sunday, when the amount was but small.

MIDDLESEX AND HERTFORDSHIRE.—The district ably served by Dr. C. E. Saunders suffered further dismemberment during 1879—two large and populous parishes having been formed into local government districts, and not having joined the combination. It is time to protest against such action as this. If a combination has any *raison d'être* at all, it ought to be sustained against disintegration of this sort. Nothing in sanitary combinations is more striking than the extremely slender tie that binds the authorities together. As a rule, it is little better than a rope of sand. In Dr. Saunders's case, it has proved to be somewhat more stable; but the Local Government Board ought not to allow the principle of the combination to be sacrificed by allowing new local boards to spoil its unity in appointing separate officers of health. Amongst the population of 97,606 persons under his care, Dr. Saunders reports that there were last year 1,593 deaths, giving a death-rate of 16.3 per 1,000 living. The proportionate number of deaths under one year of age decreased to 20.3 per cent. of the total deaths, and 11.1 per cent. of the total births. Diseases of the respiratory organs stand, as usual, first as regards fatality in the list of deaths, though the actual number is not stated. None of the diseases of the zymotic class seem to have been epidemic during the year; but outbreaks of diphtheria at Friern Barnet, of measles at Croxley, and of scarlet fever at Bushey and Harrow, are reported. The great want of the district generally seems to be a better and purer supply of water. Efforts are being made in some places to remedy this defect, but in others affairs are at a standstill. The dairies of the district evidently want much more efficient regulation than they now obtain from the county justices. No further provision has been made for the isolation of cases of infectious diseases, though numerous cases reported by Dr. Saunders point to the necessity of such provision. The absence of any tabular statements for the district as a whole, is an omission that it would be well to rectify in future reports.

MERTHYR TYDFIL.—Mr. Dyke has, happily, a comparatively uneventful state of affairs to report for this district. There were registered in it last year 1,600 births and 1,036 deaths, equal to rates of 31.7 and 20.5 per 1,000 respectively. The deaths of 221 children under one year of age were recorded, the proportion to the total deaths being 21.5, and to the total births 13.8 per cent. The average age at death was nearly 32 years, against a mean for the previous thirteen years of 30 years. There was an almost complete immunity from any widespread diffusion of infectious disease. Measles, scarlet fever, and diphtheria each caused one death, and 13 were due to whooping-cough. The deaths from enteric fever were 20 in number—the disease, in every instance, being associated with an imperfect drain-pipe, or gully-trap, or closet-syphon, or a foul and filthy cesspit. As soon as the outbreak of disease was heard of, these unsanitary conditions were remedied; but, as to the systematic removal of such defects before they become associated with disease, it would be desirable to have further information. The number of fatal cases of enteric fever, though still large, compares very favourably with the numbers for former years. Scrofulous maladies were less fatal than in 1878, though the number of deaths (160, or one-sixth of the total) is still much too high. Diseases of the lungs caused 223 deaths, and violent deaths numbered 35. An useful feature in the report is a section on the industries of the district, stating the amount of coal raised, the wages of colliers, the output of iron and steel, the price of flour, and the amount of pauperism.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. William Adams, "Cases of Paralysis, with Contraction of one Leg, following Pelvic Abscess in Women, and of both Legs, following excessive Loss of Blood after Miscarriage".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Henry Morris, "On a Case of Aneurism of the External Carotid, in which, after failure of the Ligature of the Common Carotid, the Old Operation was successful"; Mr. Savory, "On a Case of Abscess in the Neck, which in its course destroyed a large portion of the Carotid Artery, Jugular Vein, and Pneumogastric Nerve".

THURSDAY.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Consideration of Laws and Election of New Members. Mr. Hutchinson, "Case of Intra-ocular Hæmorrhage"; Dr. Hughlings Jackson, "The Eye-Symptoms in Locomotor Ataxy"; Mr. Higgens, "Hyposcleral Cyclotomy". Living Specimens (at 8 o'clock): Dr. Gowers, "Optic Neuritis in Intracranial Disease" (two cases); Mr. Nettleship, "Double Iritis, with a Growth on one Iris"; Mr. J. E. Adams, "Peculiar Opacities in the Vitreous Body after Injury".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE NEWCASTLE THROAT AND EAR HOSPITAL.

SIR,—In reference to a letter in your correspondence of October 16th, and signed "R. Torrance", I am sorry to be compelled to characterise that production as a misstatement of the fact so far as regards the working of this hospital. I append statements to that effect from the secretary and treasurer, the Rev. Joseph Slack; from the assistant-surgeon; and from the dispenser. The hospital is recognised as one of the charities of the town, and has a properly constituted committee, and receives aid from our Hospital Sunday Fund; daily we attend patients sent by other practitioners, which is an additional mark, I presume, of the confidence placed in us.—I am, yours, etc., RICHARD ELLIS, F.R.C.S.Edin., etc., Senior Surgeon.

SIR,—In addition to what has already been stated by Dr. Ellis concerning the Newcastle-on-Tyne Throat and Ear Hospital, I may say that, for almost eight months, I have acted as Assistant Surgeon to the same institution. During that time, I can most confidently affirm that no irregularities have taken place in the working of the hospital, which is generally recognised as a distinctly charitable institution.—I am, etc., SAMUEL MACAULAY, L.R.C.P.(Ed.), etc., Assistant-Surgeon.

SIR,—In reference to a letter in your issue of the 16th instant, signed "R. Torrance" I may say that the said R. Torrance was co-secretary with myself until December 4th, 1879. On that day he resigned; and since then I have been sole secretary; and since April 1st, 1880, have acted as treasurer also. Since December last, all the accounts have passed through my hands, and I can truthfully assert that this hospital is not "a private provident dispensary", as is most erroneously asserted by the said R. Torrance, for the only paid persons connected with it are the dispenser and the matron. I can confidently assert, from a thorough knowledge of its working in every part, that it is doing an immense amount of good as a public institution, and has been recognised as such by those who have the division of the stream created by those who support the public institutions of the town.—I am, etc.,
JOSEPH SLACK, Curate of St. James's, Newcastle-on-Tyne, Honorary Secretary and Treasurer to the Newcastle Throat and Ear Hospital.

SIR,—I act as dispenser to the Newcastle Throat and Ear Hospital, and as such keep an accurate account of all prescriptions written by the surgeons. During the last six months, I have given medicine five hundred times to free patients.—I am, etc.,
J. T. ROBINSON.

MR. SLACK.—Mr. Torrance announced the fact last week. The MSS. from which his paper was printed have been for some months in our possession.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.

SIR,—In your issue of the 16th instant, in answer to T. S. Sutton, it is stated that the tariff of the Manchester Medico-Ethical Association may be had by writing to the Secretary, Dr. Haddon. Permit us to state that the tariff can only be had from Cornish Brothers, Booksellers, Manchester and Birmingham; and that the secretaries of the Association are the undersigned, and not Dr. Haddon.—We are, sir, yours truly,
A. WAUGH, M.D. } *Secretaries.*
27, King Street, October 18th, 1880. JOHN BROADBENT. }

MIDWIFERY ENGAGEMENTS.

SIR,—Whatever may become of the unhappy fee which threatens to ruin the friendship which seems hitherto to have existed between your correspondents "L." and "G.", I sincerely hope they will not in the end allow it to cause a rupture in their intimate relations. Such friendships are far too uncommon among us. From past personal experience, as well as from observation, I am quite sure that, if neighbouring medical men asked each other to dinner or supper once a week or once a fortnight, no jealousy would exist between them. All difficulties relating to patients and fees would be arranged as if by magic. For, after all, to take a common cause of heartburning, when A.'s patient chooses B. to attend him, it is not B.'s fault, but the patient's. But A.'s human nature includes B. in the feeling of resentment (if any) thus caused, unless he knows B. intimately, when (I speak from experience) no such feeling is raised with respect to him. Do not let this idea be scouted as chimerical. I know two villages with two practitioners in each; in both cases, the rivals are fast friends, and laugh over their troubles and their patients' (and their own) whims, and advise each other about their difficult cases, while they smoke the veritable "pipe of peace". In a town with which I am well acquainted, six medical men, all living in the same district, met once a fortnight at the home of one of them, taken in rotation, discussed a subject, or one or more bad cases brought forward by any of them, and afterwards had a substantial supper, and then a pipe, and, it may be, a drop of grog. The only break which ever occurred in the harmony of this arrangement was caused by the death of some of the members; while living, not one single difficulty ever arose. They had very few "rules"—perhaps the chief of them being one forbidding the introduction of sparkling wines at their suppers, at which generally only one lady besides the hostess was present. It is scarcely possible to imagine anything better for the patients and for the doctor than such an *entente cordiale*. If anyone doubts this as to himself, let him cultivate the acquaintance of his next neighbour during the next six months. As to the effect upon his patients, I will only say that I can well imagine that "when doctors quarrel, the devil laughs".—I am, sir, your obedient servant, C.

SURGEON-MAJOR RINGER.—We are obliged to make it a rule not to insert charitable appeals having no reference to the medical profession.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN SEPTEMBER 1880.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health. (The results are stated in grains per imperial gallon of 70,000 grains.)

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.	Hardness. (Clark's Scale.)	
			As Nitrates,&c.		Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	19.33	0.056	0.126	0.000	14.8	3.0
West Middlesex .	19.02	0.041	0.123	0.000	14.8	3.8
Southwark and Vauxhall	19.63	0.113	0.125	0.000	14.5	2.8
Chelsea..... .	19.91	0.442	0.125	0.000	15.0	3.8
Lambeth	19.80	0.046	0.125	0.000	15.0	2.8
Other Companies.						
Kent	30.50	0.000	0.437	0.000	21.2	5.1
New River	20.72	0.056	0.135	0.000	15.4	3.0
East London	18.82	0.023	0.104	0.000	15.0	3.0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc, is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, Southwark and Vauxhall.

THE DEGREE OF M.D.(ST. ANDREW'S).

SIR,—If your correspondent "F.R.C.S." contemplates presenting himself for examination for the degree of M.D. of the University of St. Andrew's, he should (1) send, without delay, to the Dean of the Medical Faculty the necessary testimonials, certificate of birth, and preliminary fee of ten guineas. Under the most favourable circumstances, he will have to wait not less than two, probably three or four, years before he is summoned for examination, as the lists are always very full. 2. Any of the text-books will suffice for his purpose. I may mention those I used myself—viz., Tanner's *Medicine*, Erichsen's *Surgery*, Playfair's *Midwifery*, Garrod's and Ringer's *Materia Medica and Therapeutics*, and Green's *Pathology*. 3. If "F.R.C.S." has the necessary time at his disposal, and is willing to work steadily, he can dispense with the aid of a medical tutor. Cramming he will find useless, and a waste of time; a good all round and practical knowledge of his profession will be required from him. The following additional items of information may, perhaps, be useful to him. He should be well up in skin-diseases, and pay special attention to diseases of the heart and nervous system, and be conversant with the newest ideas on the pathology of these subjects. A good knowledge of general pathology will also be required. He should brush up his anatomy, so far as to renew his acquaintance with the position and relations of the principal arteries, the anatomy of the joints, and regional anatomy. His knowledge of microscopic anatomy will be tested at the close of the *vivâ voce* examination, on the second day; and various pathological specimens, as well as the newest inventions in surgical instruments, will be placed before him, which he will be called upon to recognise and describe. If within easy distance of a medical school, he will do well to take a short course of microscopic and pathological anatomy, and familiarise himself with the contents of a good museum. If I can give "F.R.C.S." any further information, I shall be glad to do so.—I am, sir, yours very obediently,

JOHN BRIDE, M.D.(St. Andrew's).

Wilmslow, Cheshire, October 1880.

THE UNIVERSITY OF LONDON AND MEDICAL DEGREES.

SIR,—The remark quoted in a recent number—namely, that "the University of London has hitherto had a smaller influence than was anticipated in elevating the medical profession of England" can scarcely fail to receive the assent of all who read it. Indeed, from the sparing way in which it grants its degrees, it cannot be said to fulfil the purposes of a great national university. The inefficiency, neglect, and apathy, shown by the English universities in this matter strikes visitors to this country with astonishment. They allow a large proportion of their students to go from among them (including many of their best men), allured by the offers of the universities of the generous north; and these, returning armed with degrees obtained after examinations of no greater difficulty, endeavour to soar above those of their brethren who, with less wisdom and forethought, have studied and qualified at home.

Let the University of London but grant its degrees after examinations of no greater difficulty than the average good student can pass with four years' diligent study (let its examinations for honours remain as they are at present), and the change would be hailed with satisfaction by numbers of the men who now, coming from England and different parts of the world, are overcrowding the lecture-rooms of the Scotch universities and who could then avail themselves to the fullest of the unequalled advantages which the London hospitals offer for study; while the roll of [illegible] the London University would be augmented by names many of whom would assuredly confer fresh lustre upon it; whilst, on the other hand, it would [illegible] of the position which it has already attained. I remain, sir, yours [illegible],

VERITAS.

THE USE OF SPIDERS IN THE TREATMENT OF AGUE.

SIR,—At page [illegible] of a work on *British Spiders*, by E. T. Staveley, he quotes Sir D[illegible] Wilson as an authority on the use of the web of the spider as a medicine in the treatment of ague, particularly alluding to some prisoners of war in the Isle [illegible] confined in the black spider's web, he also says that the doctor men[illegible] by smothering spiders bruised and wrapped up in raisins. [illegible] Lancet, I am unable to refer. May I ask, seriously if these [illegible] I have, having plenty of the said spider and its web, I [illegible] to supply any of my professional brethren who may wish to test their [illegible].

IGNORAMUS.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

VACCINATION OF ECZEMATOUS CHILDREN.

SIR,—When, in my letter of July 26th, I mentioned that I had found vaccination an excellent remedy for eczema in unvaccinated children, I had no idea that anyone else had tried it; and I was amused, on looking through the JOURNAL after my holidays, to find the idea treated with something like contempt on August 21st; then doubted, September 4th; and, lastly, that it was "nothing new", September 25th. It was evidently something new to someone on August 21st and September 4th. The following is the history of my four cases.

CASE I.—Ten years ago, I attended a child for eczema capitis for a long time without benefit, when the father received the usual notice of vaccination, and spoke to me about it, when we determined to vaccinate the child, the father accepting the responsibility. The effect was simply wonderful; in about ten days, the eruption began to decline; and, in six weeks, the child was quite well, and remained so.

CASE II.—Three years since, having attended a similar obstinate case for some time without benefit, I mentioned Case I to the parents, and asked permission to vaccinate their child, which was granted. I stopped all medicine for three weeks, then vaccinated it, and paid a weekly visit to watch the result, which was the same as Case I. In five weeks, the child was quite well, and has now a fine head of hair. The parents were so pleased that they gave me permission to mention the case to anyone, or to send anyone to them who wished to know more about it.

CASE III was the first child of its parents, and its grandmother was greatly distressed about this "nasty skin-disease". I sent her to the parents of Case II; and, a few days afterwards she called, asking me to vaccinate the child, which I did, with the same result.

CASE IV is almost identical, the difference being that it was the first child by a second wife (the children by the first wife being healthy), and was consequently causing "family jars"; its left cheek was also more irritable during the first week, but an aperient powder was all the medicine I gave.—I am, sir, your obedient servant,

D. M. WILLIAMS, L.K.Q.C.P.I., M.R.C.S.Lond.

63, Shaw Street, Liverpool, October 10th, 1880.

RESUSCITATION OF THE NEW-BORN.

SIR,—The report of Dr. Robert Battey's case at the American Medical Association can suggest, I am sure, no new method of treatment to British practitioners. I have been blessed about as many times as I have been cursed, for spending from one to two hours on my knees in front of a fire, with the only available means for inflating an apparently still-born child—viz., a towel or pocket-handkerchief over the mouth, with compression of the nostrils with the thumb and finger, and as much pressure over the trachea as I thought would prevent the air which I blew from my mouth from entering into the stomach through the œsophagus. With all these precautions, I found that the air, after being used for so long a time, would enter the intestines, and even pass out at the anus, as well as inflating the lungs, and producing the desired effect. Still, it was very interesting to watch, first of all, a return of the heart's action; this becoming very rapid, then one inspiration occurring, and, after a few minutes, another; the action gradually increasing until the normal rate was arrived at, the cyanosis beginning to disappear after the first inspiration.

I am aware that there are numerous kinds of tubes used for this purpose, but very unlikely to be at hand when required; and I am sure a pocket-handkerchief and due pressure placed on the trachea will answer the purpose equally well, and be always available.

I will not trouble your readers with the probable evils resulting from such a procedure, such as emphysema, etc.; but I have the record of nearly all the cases in which I have adopted this treatment, and am anxiously watching and making inquiries for any symptoms which may occur in after-life; which, if I should become aware of them, I shall be glad to make known.—Yours, etc.,

Beaufort, Breconshire, October 11th, 1880. J. PARETTE, F.R.C.P., &c.

INFLUENCE OF EXCISION OF THE UVULA ON THE VOICE.

SIR,—When I was, in 1838, at the then medical school of Nice, a singer at the theatre of that town was operated on for enlarged tonsils. From being a very good tenor, he became a very bad baritone. As an amateur singer of many years' standing, and member of one of our largest choral societies, I have had many opportunities of observing how small a cause will interfere with the vocal organ. I think that cutting the uvula would not much interfere with a bass voice; but I fear that in a tenor it would do so in the production of the "voce di testa"—Anglice, "head voice". Most tenors (I may say all trained in the Italian school) break off at the so-called "Ponticello" (D or E), from the chest to head voice; and I believe that the velum palatinum and uvula are main factors in producing the change. If your correspondent would write to Mr. J. Wedley, Secretary to the Albert Hall Choral Society, he might derive some information from him on the subject.—Yours truly,

124, Fulham Road, S.W. V. POULAIN, M.D.

ARE SUICIDES LUNATICS?

SIR,—*Apropos* of the heading prefixed to this letter, as well as, more particularly, of your remark that "many persons well qualified to form an opinion.... are of opinion that, among English people, suicide is, in the large proportion of cases, if not in the majority of cases, by such people, allowable to say that a paper of mine, which advocated precisely similar view, appeared under the signature "A" "All Suicides Insane" in the *Medical Record* for November 1st, 1879. In this essay—which runs to fourteen closely printed columns, and which contains numerous illustrative examples—I have, I think, succeeded in showing that many, if not, indeed, a majority, of those who [illegible] though, it may be, abnormally depressed or excited—at the time of shuffling off their coil; and no one can dispassionately read the story of Grecian fortitude or Roman despair without, as I believe, coming to an identical conclusion. Suicide [illegible] legal position in China and Japan; and our Government never ventured to stamp out the "Samurai" and "Sutteeism" of Hindostan on this ground or from this standpoint. Yet were these practices suicidal all the same.

As to your quasi-endorsement, in a previous number, of the fanciful "chill" theory of malaria, as that was at one time set forth by Surgeon-Major Oldham of the Bengal Army, I may add that I have, I think, disposed of that in a paper on Peshawur Fever, that appeared in one of the last numbers of the old Indian *Annals of Medical Science*. Further corroboration in point, were any such needed, might be found any day in the blanched faces and big spleens of the men of these brigade depôts, who have lately returned from service on the Peshawur frontier or in the interior of Afghanistan. Your obedient servant,

Warrington, October 12th, 1880. WM. CURRAN, Surgeon-Major A.M.D

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

NITRO-GLYCERINE FOR SEA-SICKNESS

SIR,—An invitation from a friend to join him for a little yachting expedition has given me an opportunity of trying nitro-glycerine for preventing and relieving the horrors of sea-sickness. Our course was down the Thames, in and out of Ramsgate, and as far south as Dover, in a small cutter of twelve tons. Returning from Dover early in the morning of the Monday, August 30th, with a north-east breeze, wind against tide, in the Downs we had a good deal of swell for our little craft, and she dipped her bows frequently. We had not reached the South Foreland before I began to feel a certain amount of squeamishness and nausea. Dreading the retching on an empty stomach (we had hoped to breakfast on the way or after our arrival at Ramsgate), I munched up a nitro-glycerine tablet, containing 1-100th of a grain. In a few minutes, I felt the fulness and throbbing in the head which even this dose will cause; the nausea and tendency to sickness quickly subsided; there only remained a qualmish feeling at the pit of the stomach, which did not entirely disappear until we reached Ramsgate Harbour, and had breakfast. My friend, who had noticed my condition, had his two boys on board, aged seven and eight respectively. The elder was sick early in the voyage, and both felt ill. He gave them each one-third of a tablet, which had the desired effect; they soon recovered their usual spirits, and were able to enjoy their breakfast on board at our destination. Next morning (Tuesday) we breakfasted before starting. The sea was calmer as we left Ramsgate; but as we rounded the North Foreland, there was a considerable swell on, about equal to the day before. The two boys and myself repeated our doses of nitro-glycerine earlier on this occasion, as we could see what was coming; we thus warded off any traces of nausea even. We lay off Whitstable that night. Next morning (Wednesday), we got up as far as Southend, and anchored near the jetty. To-day (Thursday) my friend's wife and her sister joined us for a sail up the river and back with the tide. Both are bad sailors, and soon felt nauseated. They tried a little spirit and water, and afterwards I gave each half a nitro-glycerine tablet. On one the effect of this dose was quite marked. Her sister, although much slighter and more delicate, did not observe its physiological action, but both soon obtained relief, which they attributed to the nitro-glycerine. They were then able to enjoy some shrimps and bread and butter; eating, one of them informed me, being a feat she had never been able to perform on shipboard before. My friend's wife felt a little nausea this afternoon when we came ashore; but this was no doubt due to the overpowering heat. I had left my nitro-glycerine on board, or I might have repeated the dose; but the attack soon passed off. I think, for short journeys, an attack of sea-sickness may, in most cases, be entirely avoided by taking a dose of nitro-glycerine on going on board—1-100th of a grain for robust and strong adults, 1-300th to 1-200th of a grain for children or delicate persons; but further trials are requisite, like this of a LANDLUBBER.

Yacht off Southend, October 2nd, 1880.

SIR,—In the observations of Dr. Glynn Whittle on the above subject, one great error seems to me to have been committed, viz., as to the pathological cause of this affection. In section 3, the following explanation is given of the phenomena of vomiting: "Pathologically, the turbulent action of the sea interrupts the normal slow and circular motion, substituting for it a rapid jumbling up and down of the contents of the stomach". In addition to the two objections to this theory, which Dr. Whittle candidly mentions, there are other reasons which seem to dispose of it entirely. If vomiting and nausea were caused by the "rapid jumbling up and down of the contents of the stomach", how frequent would be this *contretemps* in cabs, railway trains, and especially in omnibuses travelling over roughly paved roads; but we know that cases of nausea more often occur in gently oscillating carriages than in these more jumbling vehicles.

In the second place, the surface of any fluid contents of the stomach being small, greater agitation would occur in a small vehicle than in a large ship (which would be steady comparatively to a cab or to a small boat), and yet more people become sick in the latter. On the other hand, it is generally well known also, that the "pitching" causes more sickness than the "rolling" motion; although the former is the slower movement, and much less likely to shake up the contents of the stomach than "rolling". Again, it is difficult to comprehend how people could be relieved by the recumbent posture, or continue sick after having got rid of the contents of the stomach if, as according to No. 4 theory, "the contents of the stomach thus become neither more nor less than a foreign body, whose presence readily accounts for all the distressing symptoms that usher in an attack of sea-sickness". The viscus in question is generally so much abused, that I may say it puts up with almost anything in the shape of a "foreign body"—fruit-stones, coins, pocket knives, etc.; and yet these substances rarely, if ever, cause actual vomiting. And further, why should the sickness sometimes continue after landing? Those that so suffer invariably carry the motion of the ship with them in imagination, although they themselves may be motionless. I am of strong opinion that we must be guided to the true pathological cause of this malady from the effects on the cerebrum of the peculiar drowsy, uncertain, and deceiving motion of the pitching and rolling vessel, and not refer it to any mechanical motion imparted directly to the contents of the stomach, nor to the diaphragm.—I am, etc., ALFRED WISE, M.D., late Royal Navy.

SIR,—There has been a good deal of discussion in the JOURNAL lately regarding the treatment of sea-sickness. I am a very bad sailor, and am unpleasantly familiar with the horrors of the *mal-de-mer*. I have tried many remedies. I have, through want of caution, taken as much as 120 grains of chloral-hydrate in three hours, without any alleviation of the symptoms; on the contrary, I believe my sufferings were increased. After successive trials of various remedies, I must give my testimony in favour of the bromide of potassium. A drachm dose of this drug, taken just before starting, spared me the pangs of sea-sickness in crossing from Rotterdam to Hull, when nearly all the other passengers were ill, the weather being very rough. The same journey in moderate weather had seen me prostrate, notwithstanding the free use of vaunted specifics. The next best remedy to the "beloved bromide", is merely to keep the eyes shut and maintain the recumbent posture.—I am, etc., R. BRUCE LOW, M.D.Edin.

SIR,—Having read with much interest, in your last issue, an article on Sea-sickness by Dr. Whittle, in which he expresses a theory as to the causation of that malady, it occurs to me that, in framing such theory, Dr. Whittle has left out an important factor and lost sight of some powerful objections to its validity. The factor to which I allude is the central nervous system in its relation to the digestive function. The chief objections are briefly as follow. Firstly, were the purely mechanical theory advocated by Dr. Whittle correct, it would be right to assume that an empty stomach would be an unfailing preventive of sea-sickness; this, we know, is not the case. Secondly, were the mechanical disturbance of digestion the only agent in the production of the malady, should we not expect the symptoms to subside after the rejection of the offending meal? and would it alone account for the usually severe, and occasionally protracted, character of sea-sickness? Again, it does not seem feasible to me that the mere interference with the movements of the contents of the stomach should give rise to the intense nausea and nervous prostration characteristic of the *mal-de-mer*.

Bearing these considerations in mind, should we not relegate Dr. Whittle's theory to a secondary place, and assume, as the main factor in the disease, the disturbing effect of the ship's motion upon the central nervous system in general, and the vomiting centre of the medulla oblongata in particular? This effect has, I think, an analogue in the nausea, sometimes vomiting, which some persons experience in railway travelling, and which is presumably due to the disturbing influence on the sensorium of a rapid succession of objects in landscapes; this, in its turn, resembling the giddiness experienced by others when gazing at a rapidly moving object.

To the question, Why should the stomach be so profoundly affected if the disease be of central origin? I would reply by another—Why should vomiting be so pregnant a symptom of cerebral lesions, pathological and traumatic?

Dr. Whittle's statement: "The natural power possessed by the muscular elements of the coats of the stomach for accommodating their action to the motion of the sea varies considerably in different individuals", would appear to attribute to muscular tissue a power of automatism not usually, I think, conceded to "contractile protoplasm"; and I respectfully suggest that the power of adaptation would be more correctly attributed to the cerebrum.

I offer these suggestions with all due deference to one who has probably had much experience in the treatment of sea-sickness, remarking, *en passant*, that "the recumbent posture and smart purgation" are useful in many cerebral diseases. Apologising for so far encroaching on your space, my excuse being the interesting nature of the subject, I am, sir, yours truly,

JAMES T RTON, M.R.C.S., L.S.A.

1, Park Road, New Cross, S.E., September 26th, 1880.

RECIPROCITY OF PRACTICE.

SIR,—For many past years. Dr. E. Waters and others have maintained with considerable confidence that "reciprocity of practice" was established by the Medical Act of 1858. The subjoined correspondence, it is to be hoped, will, when concluded, help to determine that question.—I am, sir, your obedient servant,

R. H. S. CARPENTER, Hon. Sec.

Medical Alliance Association, 130, Stockwell Road, S.W., Sept. 18th, 1880.

"Medical Alliance Association, 130, Stockwell Road, Sept. 11th, 1880.

"My dear Sir,—As the President of the General Medical Council, will you have the goodness to tell me whether "reciprocity of practice" has been lawfully established by the Medical Act of 1858?—I am, faithfully yours, R. H. S. CARPENTER, Hon. Sec.—The President of the General Medical Council."

"Leipzig, September 16th, 1880.

"Dear Sir,—Your letter of the 11th has been forwarded to me here. The question which you put, "Whether reciprocity of practice has been lawfully established by the Medical Act of 1858?" does not convey to me with sufficient fulness the meaning which you assign to the words. In any case, a legal question should be referred to a legal authority. I have no authority to interpret the Act in the name of the Council without their instruction.—I am, dear sir, faithfully yours, H. ACLAND.—R. H. S. Carpenter, Esq."

"Medical Alliance Association, 130, Stockwell Road, Sept. 18th, 1880.

"My dear Sir,—I am sorry that my question was not put to you in such a way as to enable you to comprehend it clearly. What I intended asking you is this: Before the year 1858 it was known to be illegal for persons holding only Scotch medical qualifications to practise medicine or surgery in England or Ireland; it was known to be illegal for persons holding only English medical qualifications to practise medicine or surgery in Scotland or Ireland; and it was known to be illegal for persons holding only Irish medical qualifications to practise medicine or surgery in England or Scotland; and I intended to ask you, Whether this law has been altered by the Medical Act of 1858? whether, by that Act, the Scotch medical corporations have acquired the power of granting diplomas giving their holders a right to practise either medicine or surgery in England or Ireland? whether that Act has given the English medical corporations the power of granting diplomas conferring a right upon their holders to practise medicine or surgery in Scotland or Ireland? whether that Act has given the Irish medical corporations a power to grant diplomas giving their holders a right to practise medicine or surgery in England or Scotland? The conferring of these new powers would be the establishing of what is known in the profession by the term of "reciprocity of practice"; and I am asking you very kindly to tell me whether such "reciprocity of practice" has been established by the Act of 1858.—I am, dear sir, faithfully yours, R. H. S. CARPENTER, Hon. Sec.—H. W. Acland, Esq., M.D."

"Gottenburgh, Sweden, September 26th, 1880.

"My dear Sir,—I do not observe, in your letter of the 18th just received, that you raise any question which is in the jurisdiction of the Medical Council; but ask only for a legal opinion as to the interpretation of the Medical Act. It is not in my personal province to decide on points which are held by you to be doubtful; and I think this is a case in which you should obtain a legal opinion direct through a lawyer should you so see fit.—I am, my dear sir, faithfully yours, H. W. ACLAND.—R. H. S. Carpenter, Esq."

"Medical Alliance Association, 130, Stockwell Road, October 2nd, 1880.

"My dear Sir,—Under the impression that registration gave a right to practise in any part of Her Majesty's dominions, the members of the profession have paid to the Council, of which you are the president, upwards of £130,000. I must, therefore, urge that the question I have raised is eminently within the jurisdiction of your Council, and that, if they are unable to answer it, it is their bounden duty to themselves and to the profession to submit it, without delay, to their legal advisers, so as to enable them to do so. I have approached you with no hostile feeling towards your Council, but merely for the purpose of simplifying our attempts at future medical legislation by having it established as a fact, whether the profession have or have not acquired fresh privileges of practice by registering themselves under the Medical Act of 1858; or, in other words, whether "reciprocity of practice" was or was not established by that Act.—I am, dear sir, faithfully yours, R. H. S. CARPENTER, Hon. Sec.—H. W. Acland, Esq., M.D., President of the General Medical Council."

"Edinburgh, October 9th, 1880.

"My dear Sir,—In answer to your further communication, I may say that, should any doubt arise on a legal point concerning the Act in question within the Council, the Council will take the steps which the circumstances require. I may, however, in conclusion, refer you, as you seem to have overlooked it, to Clause XXXV

of the Act.—I am, dear sir, faithfully yours, H. W. ACLAND.—R. H. S. Carpenter, Esq.

"Medical Alliance Association, 130, Stockwell Road, October 11th, 1880.

"My dear Sir,—The clause you refer me to says that "every person registered under this (the medical) Act *shall be entitled*, according to his qualification or qualifications, to practise as a physician or surgeon or medicine and surgery, as the case may be, in any part of Her Majesty's dominions, and to demand and recover in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the costs of any medicines or other medical or surgical appliances rendered or supplied by him to his patients", etc. Now, I wish to ask you, on my own behalf, if this clause means what it says, whether, having registered my Hall qualification, I have, by so doing, acquired a legal right to practise medicine in either Scotland or Ireland? The clause you name states that I can practise "according to my qualification"; and that qualification states upon the face of it that I am entitled to practise medicine in England or Wales, but it says nothing about Scotland or Ireland; and the Apothecaries' Act of 1815, under which it was granted, does not pretend to give a right to practise elsewhere than in England and Wales. Since the Medical Act was passed in 1858, has there been a single legal decision or ruling that would tend to support, even indirectly, the impression so prevalent in the profession, that "reciprocity" was established by that Act? If so, I should feel greatly indebted to you by your pointing it out to me. But, on the contrary, have there not been both legal decisions and legal rulings which have shown, to the cost and mortification of the plaintiffs in the cases I am alluding to, that "reciprocity" was not established by the said Act? Twenty years since I sent to the Medical Council a fee of £5 for the registration of my Hall licence. I sent it under the impression that registration would give me a legal right to practise medicine where I pleased "in Her Majesty's dominions"; and as you are the President of that Council—I say it with all due respect for every member of your Council—who received that fee, I think you are in honour and justice bound to give me clear and definite answers to the questions I have put to you, and to do your best to show that "reciprocity of practice" is not, what I now allege it to be, a monstrous sham which, for more than twenty years, has been practised upon the profession by the Medical Act of 1858.—I am, dear sir, faithfully yours, R. H. S. CARPENTER, Hon. Sec.—H. W. Acland, Esq., M.D., President of the General Medical Council."

It may be held as a general rule that, prior to the Act of 1858, a degree or diploma obtained in one country did not give the holder a legal position to practise out of that country. The words of the Act which we have italicised in Mr. Carpenter's letter give a legal qualification to every registered person to practise in any part of her Majesty's dominions without reference to other places at which his qualification has been obtained. The *Register* is the proof of qualification.—ED. BRITISH MEDICAL JOURNAL.]

SURGEON.—1880. 1. By the editors of the respective papers. 2. By the Council of the New Sydenham Society.

PHLEBOTOMY IN ACUTE DISEASES.

SIR,—I was very pleased to find in the BRITISH MEDICAL JOURNAL of Sept. 25th a letter from Dr. Greenhow, of Newton Hall, near Leeds, on the letting in inflammatory diseases. I perfectly agree with him in his remarks; and, as a practitioner of long standing, I feel the profession will have to go back to phlebotomy in all acute diseases. I have seen great benefit, almost immediate in some cases, from bleeding in pleurisy, pneumonia, and acute rheumatism at the commencement of the attack. I remember that, forty-eight years ago, whilst an apprentice at Royston, I had to bleed persons belonging to a certain brewery, "at their own request", without any injury to them. This practice, of course, I would not recommend.

I would here state I have deeply repented not bleeding of late years in acute diseases at the first; and I believe that, if I had done so, I should have been more successful in my practice; and am certain in my own mind, if the younger members of the profession were to adopt this principle, we should not hear of so many persons having pleuritic adhesions and heart-disease after acute rheumatism.

At the late meeting of the Association at Cambridge I had an opportunity of seeing many old friends, some who have retired from practice, who quite agreed with me on this subject. Since then, I met a celebrated professor of Cambridge in consultation, who was of the same opinion.—I am, etc., R. S. [illegible].

Wimbledon, St. Ives, Huntingdonshire, October 16th, 1880.

BINOCULAR STETHOSCOPES.

SIR,—In reply to "Thylacine", I strongly recommend him to obtain a stethoscope of the kind I am using. It consists of a metal chest-piece of the size of a watch, and, attached to it, two caoutchouc tubes, ending in ear-pieces. The chest-piece is held in position by two fingers, and the ends of the tubes are inserted into the ears. I bought mine at Wood's, King Street, Manchester. It is much less costly than the ordinary double stethoscope, and carries quite easily in any pocket. The only objection to it is that the ear-pieces often slip out of the ear.—Yours, etc.,

Heath Chapel, Stockport, October 11th, 1880. F. W. JORDAN.

HOW TO OVERCOME THE OBJECTIONABLE ODOUR OF COD-LIVER OIL.—The odour of cod-liver oil is, of late years, generally considered "disagreeable". This term is more particularly applied to the smell which has been used as a remedy in general debility, and especially in the form of emulsion, has fallen upon it to no doubt owing to a sort of intermediate action of odour between the oil and the remedy. The whole of the term "disagreeable" is inhaled in moderation, and as long as it is kept under the influence of the warmth of the body. Of course, the use of the oil in its various kinds of emulsion has become so well known that it is of considerable importance to be able to neutralise this disagreeable property without interfering with the curative action. Several methods have been proposed, the best of which, according to the *Medical Press & Circular*, are the following:—1. Taking, mixed with pickles, in small quantities, immediately after meals. (Dr. J. R. Gowan, *Lancet*, 1853, p. 54.) Although this probably depends upon a chemical change, the pickles are evidently only a mechanical adjunct. 2. Oil of peppermint has been recommended by Dr. Vaughan, to be added to the mixture of oil and syrup in the proportion of one drop to the ounce. (*Lancet*, 1853, p. 54.) Lavender water and oil of cinnamon were recommended by Keyworth (*Lancet*, 1858, p. 54), and oil of peppermint by Dr. Lindemann. (*Lancet*, 1858, p. 54.) Other formulæ are the following:—Dissolve the yolk of an egg in a little water, add a few drops of oil of lemon, and then gradually the oil, stirring well. 4. Oil of sweet almonds, a teaspoonful to each ounce of oil, is recommended by Dr. Martineau. 5. Essential oil of almonds, in small quantities, by Dr. Constantine Paul. One or other of the last two methods is probably to be preferred.

TREATMENT OF PRURITUS SCROTI.

SIR,—In reply to "M.R.C.S.", I would recommend a trial of cod-liver oil as a local application in pruritus scroti. My father at one time suffered much from pruritus ani, and found almost immediate relief from its use.—Yours truly,

M.E.C.N.T.A.

MR. W. J. M. READY (Newport, Monmouthshire) writes that, for two cases of pruritus scroti, he used the following remedies. The part was first washed with carbolic soap and warm water; then dried with a soft towel; and sulphurous acid was freely applied two or three times a day. He also gave, in increasing doses, liquor arsenicalis, with bicarbonate of potash in infusion of gentian. Both cases quite recovered in about twenty days.

A LARGE FAMILY PARTY.

THE *Journal de Neufchâtel* is responsible for the following statement. There live, it appears, at Saint Leger aux Bois, in Neufchâtel, Monsieur Dumont, aged 86, and his wife, aged 84. This venerable couple were married in 1817, and had seven children, six boys and a girl, who were all married. They, in their turn, enriched the State with thirty-one children, of whom two sons and a daughter are also married, and have contributed fourteen children to this flourishing family. It follows that M. and Mme. Dumont, if they chose to assemble all their children, grandchildren, and great-grandchildren, might have a family dinner-party consisting, with the host and hostess, of seventy-four persons.

SIR,—Having a friend who has a great admiration of Malthus and his writings, and being totally unable to convince him of his mistake, I should be much obliged if your correspondent Mr. Atkinson would kindly inform me where I can obtain the work he alludes to in the JOURNAL of the 7th; what its cost, and whether it is a large work; my leisure time being limited.—I am, etc., D. A. H.

Wickham Market, Suffolk.

EPSOM COLLEGE.

SIR,—Can you or any of your readers inform me why there are so many boys running away from Epsom College. No less than six last week I am told. Surely some cogent reason can be given for the wholesale exodus, and it cannot entirely be the fault of one side. There is a screw loose somewhere. I enclose my card, and remain yours truly, A LIFE GOVERNOR.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir James Paget, London; Mr. W. H. Pollard, Ramsgate; Mr. J. Geddes, London; Dr. Thin, London; A Member; F.; Dr. Malins, Birmingham; Dr. Graham Browne, Edinburgh; Ignorant; Dr. P. Cross, London; A Graduate; Dr. Alfred Wise, Davos Platz; Dr. H. W. Jeffries, London; Mr. W. Fletcher, Warrington; Dr. C. Holman, Reigate; Mr. John Parks, Bury; Mr. Sampson Gamgee, Birmingham; Dr. Rabagliati, Bradford; Our Paris Correspondent; Dr. A. Brown, London; Dr. J. B. King, Brighton; Mr. J. Murray, Inverness; Mr. Shirley Murphy, London; Dr. F. H. Spencer, Bath; Dr. W. C. Wicks, Newcastle-on-Tyne; Dr. James Adams, Ashburton; Dr. Gillespie, London; Dr. J. Henry, Rochdale; Dr. R. Hilliard, London; Dr. Partridge, Stroud; Mr. Geo. Eastes, London; Mr. H. C. Gill, York; Mr. P. D. Hopgood, Stow-on-the-Wold; Mr. C. Ashenden, Hastings; Mr. C. J. Devis, Hereford; Mr. H. Culleford Hopkins, Bath; Mr. J. Carnity, London; Dr. G. Buchanan, Glasgow; Mr. W. G. Tarrey, Bradford; Dr. J. C. McVail, Kilmarnock; M.D.; Our Dublin Correspondent; Dr. Luke Armstrong, Newcastle-on-Tyne; Mr. Samuel Macaulay, Newcastle-on-Tyne; Dr. T. Gelston Atkins, Cork; Our Glasgow Correspondent; Mr. J. S. Knott, London; M.B.Cantab; Dr. A. B. Brabazon, Bath; Justitia; Dr. Henry Barnes, Carlisle; Dr. Brailey, London; Our Edinburgh Correspondent; Dr. T. S. Dowse, London; Mr. Arthur Kempe, Exeter; Mr. Robert Bentley, London; Dr. Stephen Mackenzie, London; Mr. John Wilson, London; Mr. A. F. McGill, Leeds; M.B.M.A.; Mr. A. O'Brien James, Epsom; Mr. W. F. Pinn, Gateshead; Mr. T. Charles White, London; Mr. E. Russell, London; Mr. James Startin, London; Dr. C. E. Grabsett, Manchester; Dr. Dunker, London; etc.

BOOKS, ETC., RECEIVED.

San Remo and the Western Riviera. By A. H. Hassall, M.D. London: Longmans, Green and Co. 1880.

A Practical Treatise on Tumours of the Mammary Gland. By S. W. Gross, M.D. London: H. K. Lewis. 1880.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Washington. 1880.

Consumption in its Curable Stages. By William Cayley, M.D., F.R.C.P. London: J. and A. Churchill. 1880.

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REPORT

ON CERTAIN CASES OF FUNCTIONAL ISCHÆMIA OF THE BRAIN.*

By BENJAMIN BALL, M.D.,
Professor of Mental and Cerebral Pathology in the Faculty of Medicine of Paris.

THE existence of cerebral disorders, apparently unconnected with any organic lesion of the brain, has, we believe, been fully acknowledged by all neurologists, and more especially by those whose province it is to investigate the diseases of the mind. But, while the fact is universally recognised, its causes lie deeply hidden from our sight; and, beyond the pale of visible and tangible changes of structure, there exist a vast number of morbid processes, which, however different in their mode of action, coincide in the same point: the suppression of part or the whole of the central nerve-functions.

Cerebral fatigue, exhaustion of the brain, loss of nerve-power, are among the causes to which physicians are mostly in the habit of appealing when called upon to explain the sudden failure of nervous and mental activity. Dr. Radcliffe, for instance, states that, in his opinion, all the symptoms of hæmorrhage or softening of the brain may result from mere cerebral exhaustion.

Anæmia, understood in the sense of impoverishment of the blood, and ischæmia, produced by an atheromatous or otherwise diseased condition of the brain-vessels, have long been recognised as legitimate causes of cerebral deficiency. But my present object is to call attention to a series of facts, in which clear, distinct, and definite perturbations of nervous activity have arisen in consequence of what I consider as simple spasmodic ischæmia—contraction of the vessels supplying certain provinces of the encephalon, without structural change, either in the vessels themselves, or in those parts of the brain the functions of which were momentarily suspended.

I will now proceed at once to relate the facts.

CASE I.—C. J. D., aged 26, is a fine, strong, healthy young man of moderate size, but considerable muscular strength. He is by profession a lace-maker; his habits are sober, his conduct regular, his salary adequate to his wants. He has been four years married, and has one child.

On May 12th, 1879, he had a most violent quarrel with his stepmother, and went into a towering passion. On reaching his own home, pale with emotion, and still trembling with anger, he attempted to give his wife an account of what had occurred, and found, to his great terror and astonishment, that he was both deaf and dumb; he could neither speak, nor hear what was said. It occurred at once to him that he had better send for a doctor; and, not being able to express himself in words, he wrote down, without the slightest difficulty or hesitation, the name and address of the medical man whose attendance he desired. There was evidently, therefore, no aphasia in the case; he was able to think and write, but could not speak.

A dose of sulphate of soda was prescribed, and at 4 P.M. on Tuesday the power of speech was suddenly restored. He still remained, however, totally deaf, and had lost all tactile sensibility on the left side.

On May 16th, he entered my ward at the Laennec Hospital. The symptoms were as follows. Over the entire surface of the left side of the body, tactile sensibility was completely abolished. The prick of a pin was not felt, and did not fetch blood. The contact of various objects was not perceived, and the impression of cold and heat was not felt. These symptoms also existed upon the left side of the internal cavities of the body; the left nostril being quite insensible, while the slightest tickling on the opposite side brought on a fit of sneezing. The left side of the tongue and of the inner surface of the mouth were also deprived of sensibility. The normal conditions were retained on the right side, and, as frequently occurs in similar cases, a mathematical line divided the zone of sensibility from the region of anæsthesia. Smell and taste were also completely abolished on the left side only. The power of sight, although not entirely suppressed, was considerably weaker on the left side than on the right.

A singular exception to the rule, by which all anæsthetic symptoms occupied the left side of the body, was exhibited in the intense deafness which prevailed on both sides. All the ordinary methods of testing the auditory perceptions gave a negative result; and, although the patient's quickness of intelligence often enabled him to catch what was said from the play of the features and the motion of the lips, still it was in general necessary to communicate with him in writing. There existed a very slight degree of facial hemiplegia, and the tongue was somewhat deviated to the left. Speech was hesitating and indistinct, and the act of swallowing (especially solid food) was accompanied by pain, and often followed by vomiting. The left arm was evidently weaker, and felt heavier than the right one. Lastly, a singular symptom, which I am unable to explain, and which lasted during the entire duration of the disease, deserves to be noticed. When the patient put out his tongue, both eyes converged and the pupils contracted. (These phenomena totally disappeared after the patient's recovery, although he still retained a slight congenital squint.)

It seems unnecessary to mention the various modes of treatment adopted which successively failed, including metallotherapy. No important change had taken place in his condition when, on May 27th, as he was anxious to leave the hospital and resume his work, galvanism was applied, in the form of a weak descending current upon the back part of the left forearm, during a quarter of an hour. Before the application, it was again ascertained that, by pricking the part with a pin, no blood was drawn and no sensation of pain or contact excited. After the application, a slight degree of sensibility was found to exist in the parts which had just been galvanised.

The operation was repeated the three following days; and, on the fourth, about a quarter of an hour after the withdrawal of the electrodes, the patient heard a loud crack in the right ear, as if something had burst in his head, and immediately recovered the power of hearing. At the same moment, the hemianæsthesia suddenly disappeared, and he found himself restored to his former condition. A fifth application of galvanism took place the next morning; but, all the functions of the nervous system being perfectly restored, it became impossible to retain the patient any longer, through his anxiety to return to his work. He was, therefore, discharged on June 2nd, 1879, and has not since been heard of.

To resume, in as few words as possible, the facts of the foregoing case. A young man, twenty-six years of age, married, of good character and sober habits, gives way to a most violent fit of anger, and is suddenly struck deaf and dumb, with hemianæsthesia, and a slight motor paralysis on the left side. Speech is restored in the space of eighteen hours; the other symptoms persist during twenty-two days, and suddenly disappear after a few galvanic applications, limited to the posterior part of the left forearm. The patient's health was previously good; but the year before, in the month of May, he had been suddenly struck blind on the left side, and only recovered his visual powers after the lapse of a month.

That violent emotion can produce sudden paralysis is a well-known fact, but the *modus operandi* of a moral shock is still a subject of controversy. Attention has been drawn to paraplegia, caused by fright, in various essays, among which I would chiefly refer to those of Kohts (*Berliner Klin. Wochenschrift*, 1873, No. 24, *et seq.*) and Brieger, who in a paper on "Schrecklähmung" or Fright-paralysis, reports the case of a female, who died of acute myelitis in consequence of a severe fright. Attributing to vaso-motor ischæmia the symptoms observed, Brieger remarks that long-standing contraction of the capillary vessels may produce degeneration of the corresponding parts, while a transient state of ischæmia will only give rise to transient phenomena. Be this as it may, in our case the sudden disappearance of the paralytic symptoms will scarcely bear any other interpretation, and might perhaps be compared to that singular eclipse of visual power, which French oculists have called "scotome scintillant", and which has been elaborately described by Dr. Dianoux. In these cases, there occurs a sudden and complete blindness, which, after a few hours' rest, vanishes as unexpectedly as it came. Having experienced myself an accident of this nature, I can vouch for the perfect accuracy of the description.

As to the loud noise perceived by the patient, it arose probably from contraction of the muscles which act upon the minute bones of the auditory apparatus, and which, suddenly aroused from a protracted sleep, created a subjective perception of sound by restoring the proper position of the parts upon which their action is exerted.

But, while numerous perversions of the sensory and motor functions were observed in our patient, the intellectual faculties remained firm and unshaken. Such was not the case with the second patient, whose history I will now briefly proceed to relate.

CASE II.—Alphonse Coullant, aged 33, a cabdriver, is, like the subject of the preceding narrative, a middle-sized, but strong and healthy young man. He is married, leads a sober life, and is of an easy cheerful disposition. His general health had always been excellent, and up to the present attack he had never been seriously ill.

* Read in the Section of Psychology at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

The winter of 1879-80 was the most severe on record at Paris since the use of the thermometer was introduced. During the extreme cold of the month of December, Coullant had an attack of acute articular rheumatism, and was placed under proper treatment at St. Louis. Immediately after his recovery, he resumed his work as usual, and suffered again from the intense cold. On the 24th of February he had a severe attack of vertigo. The next day, however, he still went out with his cab, but was brought home in the evening in a peculiar state of mental obstruction, which still persisted at the moment of his admittance into our wards on March 1st, 1880.

The patient's appearance expressed a sort of vacant, stupid astonishment; the eyes were wide open, but not a muscle quivered in his face. He often put his hand to the right side of his forehead, as if in pain, but said nothing. He was absolutely unable, without assistance, to eat, to drink, or to attend to the calls of nature. His wife led him about, and took care of him, as of a small child. He followed her, clung to her, and was evidently distressed when she left the room, but could not call her back; in fact, he had lost the power of speech; and, as his wife said, "he had no conversation". In this respect, his mental condition was singular indeed. He could not utter spontaneously a single word; but, when he was asked a question, after a pause, he repeated the very words in which that question was made. Example: "What is your name?" After a moment's reflection, he repeated, in a lower tone, "What is your name?"—"Where is your pain?" After a few seconds, he repeated, "Where is your pain?" He evidently did not understand the words, but uttered them automatically, and without the exercise of his jugdment. This constant habit of repeating all that was said to him led us to give him the nickname of "*l'Homme Miroir*", the "Mirror-man", by which he was familiarly known in the wards. But another, and a most important symptom, was now ascertained, namely, hemiplegia on the right side. The sense of touch appeared to be completely suppressed; the patient's attention being engaged for a moment, a pin could be driven through the fleshy part of his arm without drawing blood, and without eliciting the slightest expression of pain. There also existed a marked diminution of muscular force. The dynamometer gave 15 *kilogrammes* on the right side, and 50 *kilogrammes* on the left. The lower limbs exhibited the same contrast, the left leg being visibly stronger than the right. Notwithstanding this, he walked pretty straight, and did not appear lame. As a last experiment, the patient was offered a glass of wine, which he drank with evident satisfaction, saying spontaneously, "That's good".

On March 12th, an attempt was made to introduce specific treatment, under the form of iodide of potassium (thirty grains), and mercurial pills. The unpleasant effects of iodine were soon, however, carried to such a pitch, that the treatment had to be suppressed.

On the following days, the patient's mental condition rapidly improved. He began to answer questions in the following manner. The words used were, as before, repeated in a low voice, then the answer came, slowly, after a pause. Example: *Question*. "What is your name?" *Answer*. "What is your name?"—a pause—"Alphonse"—a pause—"Coullant." He was, however, able only to answer extremely simple inquiries. When a more difficult question was put, he repeated the words, scratched his head, looked stupid, and was silent. Notwithstanding this, he proved his intelligence and good-nature by attending to the wants of other patients, and frequently rose from his bed at night to assist them.

On April 1st, the patient had made considerable progress; he was able to speak in broken sentences, and could give some account of his former intellectual condition. His motive for repeating words addressed to him was, that they rang in his head, producing an echo, to use his own expression, and thus spontaneously found their way to his lips. He still had great difficulty in connecting his ideas; he was obliged to think for a moment before he was able to give his name, address, and occupation. He could not read a printed paper, nor write his name. His memory was chiefly impaired; all vestige of what occurred during the first weeks of his illness had totally disappeared from his mind, and, although he knew he was in our wards, he could not tell how he came there; nor was this amnesia confined to distant events. On being given directions to do anything in particular, he almost immediately forgot what he had been told, and the same orders had to be repeated over and over again. The frontal headache still persisted, but now extended to both sides. Tactile sensibility was partially restored on the right side, and his muscular force had increased.

From the 1st to the 30th of April, the patient exerted himself, with praiseworthy activity, in regaining lost ground, and learning, for the second time, the arts of reading, writing, and arithmetic. He was discharged on May 30th, in a satisfactory condition. His mental faculties had nearly recovered their former level; he was able to speak and write correctly, but his memory still remained imperfect, and he could not succeed in doing a sum, because, on reaching the end of a column of figures, he could never remember what he had to carry over. In spite of these deficiencies, his conversation was easy, and his judgment appeared to be sound. The headache had almost entirely disappeared. The muscular force was perfectly restored, the dynamometer marking 68 *kilogrammes* on the right, and 58 *kilogrammes* on the left side. Tactile sensibility still remained obtuse on the right side.

On May 10th, the patient called again. His mental and physical condition remained apparently unchanged, but he complained of a feeling of uneasiness, recurring daily between four and five o'clock, and disappearing in the course of the evening. While under this influence, he still laboured under a certain difficulty of speech, not being able to find words to express himself.

A small dose of quinine (ten grains daily) was prescribed. Since that time, the patient, having left Paris, has not been heard of.

The facts in this remarkable case point to localised ischæmia, arising from prolonged exposure to extreme cold. The progress of the case, and the patient's spontaneous recovery, would clearly not bear out the hypothesis of organic injury to the brain. The intermittent symptoms observed at the close of the disease would seem to prove that the disturbance, once produced in the cerebral circulation, had a tendency to recur for short periods, under the influence of very slight and almost invisible causes; a state of things which evidently precludes all possibility of material disorganisation. The disturbance, besides, was distinctly a local one, and occupied some portion of the left hemisphere; we may, therefore, be justified in calling the case one of aphasia, but aphasia of a very peculiar and unusual character.

I would more especially draw attention to two points; firstly, the restoration of motor power, preceding that of tactile sensibility; and, secondly, the almost total abolition of memory, as contrasted with the perfect soundness of judgment. It must, however, be allowed, that the patient, at the time of his entering our ward, was reduced to absolute imbecility, and that his intellectual functions were in a state of complete stagnation.

It need hardly be said, that in neither of these two young men did any signs of heart-disease exist; that, far from being in any degree anæmic, both offered the physical characteristics of vigorous health; and that neither of them exhibited the slightest indication of a nervous temperament.

CASE III.—The third case is, in some respects, a repetition of the first.

On April 1st, 1877, I was consulted at the hospital to which I was then physician (St. Antoine), by N. L., a tall, spare, pale man, aged 45, by profession a shoemaker. He came accompanied by his wife, who gave the following account. Eight days before, being in apparently good health, he quarrelled violently with one of his apprentices, turned the man out of doors, and was suddenly struck dumb. No other morbid symptoms appeared. The heart and other viscera were perfectly sound, and the patient had never been ill before. His habits were sober, and his temper usually cheerful. He experienced no difficulty in expressing his thoughts in writing; his style was clear and correct, though sometimes his spelling was bad; but this slight deficiency was clearly the result of an imperfect education, and had no connection with the ictus which had quite recently taken place. There was no paralysis of motion or of sensibility. The tongue was easily protruded, and moved without difficulty from one side to the other. But, when the patient attempted to speak (which he did quite unwillingly, and only under compulsion), a very different scene occurred. The middle part of the tongue was lifted up in the form of a convex dome, and struck the roof of the palate, thus obstructing the passage of sounds; the patient uttered with great difficulty something between a grunt and a growl; from the extreme roughness of the sound, I should feel inclined to suppose that the pharyngeal muscles also contracted violently during the man's fruitless efforts. There was, however, no difficulty in swallowing, and all the trouble seemed exclusively to exist in connection with the articulation of vocal sounds. When he thus attempted to speak, the tongue grew hard, rigid, and stiff; but, when at rest, it was as soft and flexible as in the normal state.

The obstacle, therefore, distinctly arose from spasmodic and convulsive contraction of certain muscles of the tongue; the motions of that organ were not paralysed, and the corresponding functions of the brain were sound, the patient being well able to express himself in writing; in short, it was a case of mutism, not of aphasia nor of glossoplegia.

The tongue being slightly furred, and other symptoms of gastric disorder being evident, an emetic was prescribed, and the patient was told to come again. The man never returned, but I learnt from his wife that, without taking the medicine, his powers of speech were restored as suddenly as they were suppressed.

The only hypothesis which, in my opinion, will explain the facts of this case, is that of spasmodic ischæmia affecting those regions of the nerve-centres which lie in immediate connection with the roots of the hypoglossal nerves. The sudden appearance and sudden disappearance of the spasmodic conditions of the tongue will not, I believe, justify any other conclusion. Anæmia is universally recognised as one of the most prominent causes of convulsions; and the present case, limited in its symptoms to a mere impediment of speech, would seem to show that functional ischæmia, which ought apparently to occupy a wider field, can occasionally be confined to as restricted an area as some of the more minute organic alterations of the brain.

Although the preceding cases are not exclusively connected with mental disorders, they bear distinctly, in my opinion, upon certain points of morbid psychology.

The experiments of Nothnägel and others have clearly proved the possibility of spasmodic contraction of the cerebral capillaries. Nay, more; the extreme activity and fulness of the intracranial circulation shows that similar accidents must not only be of frequent occurrence, but also of momentous importance.

That disorders of the cerebral circulation, viewed apart from structural changes, exert an almost unbounded influence on chronic diseases of the mind, is universally allowed, but upon systematic grounds. To administer positive proof of the fact is, in chronic cases, next to impossible. In making *post mortem* examinations of patients affected with chronic hyperæmia, for instance, certain parts of the brain are often found anæmic, without thrombosis or atheromatous degeneration of the capillaries, as if spasmodic contraction had taken place. I have often met with similar appearances; and one of the most celebrated cases on record is that of the well-known "dormeur de Bicêtre", the man who lay for several months as in a trance, and died at last of pneumonia. This patient, under the influence of religious terror, requested the chaplain of Bicêtre to administer to him the sacrament of extreme unction; and, after receiving it, folded his arms, closed his eyes, and assumed the attitude of a dead body, which he maintained for several months together, until his life was cut short by intercurrent disease. The necropsy, performed by my excellent friend Dr. Luys, showed anæmia, and as it were spasmodic contraction of the capillaries of the surface-layers of the brain; while, in the deeper regions, the vessels were gorged with blood, as if contraction had taken place in one part, and distension of the vessels in another.

But, in chronic cases, it is extremely difficult to separate cause from effect; and it might be urged that permanent oppression of the intellectual faculties might easily produce an unequal distribution of the blood-supply, and that the *post mortem* appearances were merely the consequences of prolonged inertia of the brain.

To these and similar objections, the cases above reported will, perhaps, furnish a satisfactory reply. It is to the living, not to the dead subject, that we must look for illustrations of functional disorders, which, as they form a part of life itself, can hardly be expected after death to appear in the fulness of their energy. When physical deficiencies, such as loss of sensation, spasmodic contraction of muscles, or motor paralysis, under the influence of definite causes, suddenly make their appearance, and suddenly disappear, the inference seems evident; and the most superficial observer will be struck by the analogy between similar phenomena and that spasmodic contraction of vessels which Dr. Maurice Raynaud has described under the name of local asphyxia, and which not unfrequently terminates in mortification of the part affected.

My friend Dr. Krishaber has pointed out the possibility of permanent contraction of the brain-vessels in cases of what he calls the cerebro-cardiac neurosis. The facts we have just reported seem to give these hypothetical views the corroboration of clinical observation.

It has already been stated that all our patients were free from disease of the heart or arterial vessels; but it would have been easy to multiply the number of facts, had it not been considered indispensable to avoid the slightest suspicion of hysteria. For these reasons, our choice of cases has been strictly limited to male subjects—to men in sound cerebral health, of regular habits, and earning their daily bread by hard manual labour. Under such circumstances, the charge of hysteria cannot evidently be raised against them.

From the preceding facts, I hold myself entitled to draw the following conclusions.

1. Spasmodic contraction of the brain-vessels may be produced by moral impressions—fear, anger, or grief; and also by the prolonged action of severe cold.

2. All the symptoms of organic injury of the brain may be created by functional ischæmia.

3. Mental disturbance of a peculiar kind, and especially lowering of intellectual power, as apart from positive insanity, may be the result of this process.

4. Spasmodic contraction of the brain-vessels, when once induced, may persist for a considerable length of time without producing structural changes in the nervous centres.

5. This morbid condition may, in certain cases, suddenly disappear; while it is not unreasonable to suppose that the converse may be equally true, and that the symptoms may culminate in rapid or even sudden death.

ON THE RELATIVE MERITS OF DIFFERENT METHODS OF WOUND-TREATMENT.*

By SAMPSON GAMGEE, F.R.S.Ed.,

Surgeon to the Queen's Hospital, Birmingham; late President of the Midland Medical Society; late Surgeon to the Birmingham and Midland Counties Branch of the British Medical Association.

To surgeons scarcely past middle age, it is a subject of astonishment that a department of our art, which was supposed to have been thoroughly surveyed and understood in their student days, should of recent years have fallen into almost inextricable confusion. The dictum *simplex sigillum veri* seems to have lost its charm, if not its truth; and the old dresser, who once fondly believed he could tend a wound to healing with dry lint or simple cerate, red wash, or a pledget of cotton-wool, has been bidden to learn many novelties in a hurry; with what result time will prove. Many of the innovations are already in process of being unlearned at leisure; but, so much more attractive is partisan advocacy than judicial impartiality, that the contest still rages, and the question awaits solution, What are the relative merits of the different methods of wound-treatment?

At the onset, and throughout the discussion, one fundamental truth must be held steadily in view: the majority of wounds have an almost irresistible natural tendency to heal. Amongst the glorious results achieved by cotemporary surgeons, we have none to surpass, very few to equal, the success of Alanson of Liverpool,† with thirty-five amputations and no death; of Martineau of Norwich,‡ eighty-four lithotomies, with only two deaths; and last, but greatest, Syme of Edinburgh,§ with only one fatal result in thirty-five ligatures of the femoral artery for popliteal aneurism.

If a comparison be instituted between the statistical results of surgical practice under the lamented Callender and Mr. Lister; in the Edinburgh Infirmary under Spence; at Glasgow under Cameron and M'Ewen; and at Kilmarnock under Borland and M'Vail, the very small difference in the percentage of deaths is a prominent and incontrovertible fact. As those all but uniform results have been attained under very various methods of wound-treatment, the thought suggests itself, that local appliances have less influence on the process of wound-healing, than has the manner in which they are employed, the judgment of the surgeon, or his manipulative dexterity and precision.

Another proposition of which it is essential to have a clear conception is, that means apparently widely different exercise similar physiological influences, and, in the same manner and proportion, affect surgical results; to wit, cold water irrigation, and dry pressure. Let us assume two compound fractures, resembling each other in situation and extent of violence, reduced and put at rest. Over the one trickles a constant stream of cold water, while the surface of the other is covered with elastic pads, and uniformly compressed. Cold and pressure alike favour capillary contraction, retard the circulation, lull nervous susceptibility and muscular action, and, *pro tanto*, are opposed to congestion and inflammation, and favourable to healthy nutrition and reparative consolidation. Not only are cold and pressure not antagonistic, but complementary, as long since pointed out by Thomas Baynton, in the classical pamphlet‖ which I hold in my hand. To him, as you all know, we are indebted for the introduction of pressure in the treatment of ulcers of the leg; but it may be questioned if many are equally acquainted with the lucidity and fertility of demonstration with which the old Bristol Surgeon inculcated his teaching. He was no mere local dresser, but thoroughly understood the importance of attention to constitutional causes. He valued pressure as it deserves; but that did not prevent him from understanding and utilising other agencies, and especially that combination of resources which is eminently conducive to therapeutic success. In cases of exceptional severity, he advocated

* Read before the Birmingham and Midland Counties Branch.

† *Practical Observations on Amputation and its After-Treatment*, by Edward Alanson, surgeon to the Liverpool Infirmary. Second edition. London: 1779. p. 15.

‡ *Medico-Surgical Transactions*, published by the Medical Society of London, vol. xi. p. 208. 1820.

§ Mr. Syme's autograph letter, published in the *Treatment of Wounds*, by Sampson Gamgee. London: Churchill, 1871, p. 27.

‖ *Observations relative to a New Method of Treating Old Ulcers of the Legs*, by Thomas Baynton, surgeon, of Bristol. Second edition. London: 1779.

a combination which will be found applicable to, and a source of great good in, a variety of surgical conditions—pressure and frequent applications of cold water.

Reverting to the all but uniform statistical results, already quoted, of successful wound-treatment under a variety of methods, one thing is quite clear. The atmosphere, with its pervading particles, was practically the same in all; but it had little influence, if we are to judge from the result. Spray or no spray, the wounds healed. If you go back to 1867, when Professor Lister followed, though unconsciously, Déclat* and Lemaire in the treatment of wounds by carbolic acid, for the destruction of Pasteur's germs, you cannot fail to be impressed with the heroic boldness of the practice, and its alleged beneficial results. In compound fractures, nothing would do but rubbing strong carbolic acid into their inmost recesses. A little more than a century ago, Wilmer taught that "to dress the wound of compound fractures, whether it be small or large, no application seems in general so proper as dry lint."† Generations of surgeons have endorsed the dictum, but none the less the carbolic cauterisation found many imitators. Nature was happily equal to saving many limbs in spite of them; and gradually it has come to be understood that carbolic acid is a very powerful irritant, and that its safe use in wound-treatment is only compatible with very large dilution. The exigencies of the germ-theory were at first held to necessitate the use of the concentrated acid; but, while the ratio of successes has grown with its dilution, something else has grown—awe of traumatism and unrest; reverence for cleanliness, gentleness, and absolute repose. None the less the out-and-out germ-theorists laud the health-giving power of their favourite germicides.

With the most sincere deference, I cannot but think that the intrusion of the germ-theory into this discussion has been a very unfortunate one. From a strictly scientific point of view I cannot but regard the expression "antiseptic surgery", professedly based on the germ-theory, as scarcely more defensible than "homœopathic medicine", which claims the doctrine of similars for its foundation. Assuming the truth of the former and the utter falsity of the latter, the terms remain objectionable. Surgery and medicine are sciences of observation in which pathological states should be noted, their causes enquired into, and their remedies experimentally tested by a strictly inductive process. If the practice be once recognised of prefixing to them designations, according to *à priori* theoretical generalisations, which extended experience may prove to be fallacious, the nomenclature of the sciences will vary with succeeding ages and opposing schools.

In questioning the wisdom of pretending to base a new system of surgery on the germ-theory, let it not be supposed that I confound with it the value of antiseptics, which the omnipresent germs are said to require for their extermination. The error, as I have said from the first, and as those who differed from me seem to be gradually becoming aware has been twofold: first, to raise accessories to the position of essentials; secondly, to predicate from experiments on dead matter the behaviour of living tissues. Life and putrefaction are not correlative, but antagonistic; and in proportion as the surgeon utilises and economises the attributes of life, he will find himself independent of those changes which are inherent to decaying organic matter, whether it be in bagging wounds or boggy lands.

As detergents of foul wounds, and stimulants to the healing action of weak ones, antiseptics are admittedly of great value. Lesne tells us, in his posthumous edition of the works of Jean Louis Petit,‡ that the great surgeon knew that tepid water and poultices were of no use in arresting sloughing and caries; against them he employed the most powerful antiseptics. Belloste, in his *Chirurgien d'Hôpital*,§ one of the brightest gems of our seventeenth century literature, employed antiseptics largely. He had also a clear appreciation of the value of immobility, and of dry and infrequent dressing, on which Magati of Bologna had written so learnedly a century before,‖ and which, later on, Pibrac¶ and Louis** chose as the themes of classical disquisitions in the French Academy of Surgery.

It would be tedious to quote instances of the old standing and wide repute in which turpentine and resinous gums, alcohol, bark, and acids have been held as aids to wound-treatment, for their antiputrescent properties. In appropriate conditions, their value is indisputable—always remembering that no local treatment can dispense with attention to constitutional states.

To quote from John Scott,* another of the past masters of surgery, equally distinguished as a philosophic writer and a sound practitioner: "The influence of disorders of the health and the digestive organs in keeping up local diseases has of late years been fully explained; but little notice has been taken of the reverse truth—the influence of local disease in keeping up disorder of the constitution and the digestive organs; yet the latter is as true and important as the former."

The statement is almost a truism; but I make no apology for quoting it. There is some reason to apprehend that the great attention lately paid to topical appliances has been at the expense of adequate consideration for constitutional states; and that those who have made of the subject of wound-treatment a matter of mere dressing, have lost sight of some of the higher functions of surgery, in its scientific bearings and aspirations. Far from me to attempt to disparage the indirect advantages which have resulted from the discussion of the germ-theory and the advocacy of antiseptics, exaggerated and exclusive though they have often been. I well remember the day when one of the most kindly natured men I have ever known, and probably one of the most brilliant operators who ever took a knife in hand, performed one after the other such operations as a lithotomy, a ligature of the femoral, an excision of the lower jaw, and an amputation of the thigh. Well can I see him dipping his knife into the fat of the ischio-rectal fossa, with as much freedom and as little concern as a butter-taster would dive into a tub of Dutch butter. The forceps followed into the large opening, and brought out a stone as easily as a boy takes a marble out of his pocket. Some rather free bleeding was little heeded; and the patient was carried to bed, to make way for a young woman whose jaw was to be excised. To save time, she was already under chloroform when brought into the theatre; and it was a matter of very few minutes to turn up the cheek and divide the symphysis, lever out the condyloid process, and send the patient back to bed with a fold of wet lint in the vast wound and the blandly expressed assurance that the oozing of blood would soon cease. Such surgery, brilliant and nearly as fatal as the charge of Balaklava, might be magnificent as a feat of physical dexterity; but withal it was not surgery. Less blood would have been spilt, more lives saved, by a far less dexterous and showy operator, who had thought a little more of the evils of traumatism, and of the advantages of careful dressing based on sound physiological principles. To amputate a fleshy thigh, ligature two or three vessels, flood the flaps with iced water, and send the patient to bed with a fold of wet lint in the wound, to dress it after a few hours, when glazed,—is a proceeding which once was called scientific, but which I shall abstain from characterising as it deserves, through respect and sympathy for the mistaken men who practised it—myself, five-and-twenty years ago, amongst the number.

In heading the practical protest against such a state of things, and in exemplifying, by the most magnificent patience, the value of attention to details, which had come to be treated almost habitually with neglect, Professor Lister established claims to admiration and gratitude, which will survive long after the eccentricities of the germ-theory shall have been forgotten.

It is to the lightness and precision of all manipulations, to perfect rest and drainage, equable pressure and unfrequent dressing, with antiseptics as valuable accessories in due form and proportion to suit particular cases, that the operator must trust for his results. The less he delegates to others the better: every detail is of the highest import; the mental repose, no less than the physical rest of body and limb of his patient, must be studied; and he will have the satisfaction of finding that all-round major surgery—including lithotomy and amputations, compound fractures and [illegible] can be practised with a mortality of one and a half per cent. Rest, to be really effective, must be merely a negation of motion, but a state of absolute repose. Joints above and below the seat of injury must be [illegible] the very imperfectly attainable [illegible] most perfectly expressed by the use of materials which accurately model themselves to the inequalities of the body, and retain stability. On the whole, I find it troublesome so easy of preparation, [illegible] comfortable, and so effective, nothing quite with them to [illegible] and gutta-percha. Of [illegible] thicknesses can be used, according to the strength required, with interposing layers of [illegible] splints can be constructed. Sand bag pillows and suspension apparatus are invaluable aids in carrying [illegible] principles into practice, and, also, is undergarment [illegible]. Many wounds will do [illegible], however frequently they are dressed; but, as a general proposition, the less

* [illegible] *Diseases of the Joints*, by John Scott. London; 1828, p. 7.

frequently wound-dressings are displaced the better. To change the dressings after an amputation at the hip-joint, because some bloody serum has permeated them, and may become the channel of germ-infection, is, I submit, with the most kindly candour, to sacrifice the chances of a life to a theory.

It was, if I mistake not, Mr. Erichsen who said, at the late Cambridge meeting, that drainage was the most important and valuable innovation in wound-treatment. I quite agree with my old master, the distinguished President of the Royal College of Surgeons. But it is not only to drainage-tubes that you must trust for carrying out the principle.

These pads of absorbent gauze and cotton, which Messrs. Southall Brothers and Barclay prepare, act admirably in taking up discharges and keeping parts clean and sweet. They are proportionately antiputrescent; and, as they are treated with carbolic, benzoic, and tannic acid, according to requirement, they act as agreeable deodorisers. All in all, they are the most perfect and comfortable surgical dressings I have ever manipulated. Their absorbent power is so great, and they dry the neighbourhood so rapidly and effectually, that some softening application may sometimes be necessary. I find nothing better than a little glycerine sprinkled on the under surface of the pad, or applied on a piece of lint. The affinity of glycerine for water and other liquids is so great, that it favours endosmose, and really increases the absorbent power of the pad, while averting the inconvenience of its sticking. Those of you who are acquainted with the writings of the versatile Demarquay,* need not be told how he extolled glycerine for its antiputrescent and mildly stimulating powers. The more I have used it the more I have been pleased with it, though it has not altogether displaced in my practice, according to the requirements of particular cases, such applications as styptic colloid and tincture of benzoin, the terebinthinates, and solutions of iron, zinc, and copper.

A few words for position and pressure, to which, with rest, you must trust for the regulation of the dynamics of the circulation. I have said so often that rest, position, and pressure are the trinity of the healing surgical graces, that I am almost tired of repeating it. But some truths are so essential and obvious, that iteration is indispensable to secure their constant presence to the mind as leading dogmas of a working faith. The value of position is pretty generally understood; but if I were asked what therapeutic agency is inadequately appreciated by the majority of surgeons, many of them the most enlightened, I should say *pressure*.†

The brevity of these observations must not be taken as a measure of the estimation in which I hold the subject matter of this very imperfect address. None is more worthy of the zealous attention of the student and the deep thought of the practitioner.

It has been less my aim to instruct the youngest of my hearers than to elicit, in debate, the experience of the oldest and the wisest. I felt that this could better be done by sketchy treatment and salient contrast, than by methodical arrangement and exhaustive prolixity. I am free to confess that I have had another inducement to conciseness; for by it I have hoped to obtain admission for the observations which I have ventured to submit to you in the crowded pages of our widely circulated and very ably conducted JOURNAL. Its columns have teemed for some years past with communications on wound-treatment—many of them sparkling with originality, all of deep interest; yet not a few, I say it with the most respectful consideration for their authors, erring by their exclusiveness, and by their want of comprehensive grasp of a subject, which is essentially broad and many-sided.

It is in this, as in many other departments of knowledge, abstract and applied. The very concentration, which is of the essence of success to complete mastery of principles and detail, is apt to beget narrowness and prejudice. Enquirers, with steady gaze on the objects immediately before and around them, are very liable to mistake for the horizon the boundary lines of their restricted vision, and to be attracted into newly discovered by-ways, as if they could dispense with the old highway of truth to which they are but auxiliary.

All that is needed to dispel the illusion and sober the judgment is wide observation of nature from an independent standpoint, and a patient study of the masters of our science and art, irrespective of age and country. Such a study will minimise obstacles to reconciliation of differences, which are often more apparent than real. It will strengthen a reasonable faith in the powers of living nature, which will be found all sufficient to promote the healing of wounds in the hands of surgeons who, guided by the demonstrable truths of experimental physiology and pathology, combine unprejudiced, clear, and painstaking observation with light-handed, clean, and painless manipulation.

* *De la Glycérine: de ses Applications* [illegible] Par E. Demarquay. Troisième Edition. Paris [illegible]

† *Clinical Lectures on Diseases of Women*. By Sampson Gamgee. London: Churchill. Page 14.

ON THE ALBUMINURIA OF PREGNANCY AND ITS RELATION TO PUERPERAL ECLAMPSIA.*

By A. L. GALABIN, M.D., F.R.C.P.

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THE occurrence of albuminuria in pregnancy and at the time of labour has attracted especial attention, from the fear which the discovery of its existence always excites, that the formidable complication of puerperal eclampsia may follow. But the causation of eclampsia forms but a small portion of the whole subject. The tendency of pregnancy to favour the onset of chronic Bright's disease, which remains as a permanent lesion, is also an important part of it. Moreover, the proportion of women in whom albuminuria exists at some time or other of pregnancy has been estimated as high as 20 per cent.; so that, if this be correct, the number of those who suffer from convulsions is only a minute fraction of the total number who have albuminuria: the ratio of cases of eclampsia in about 23,000 deliveries in the Guy's Hospital Lying-in Charity having been only 0.12 per cent.

Of the actual proportion of cases in which albuminuria does occur there are very few English statistics available. It is obvious that, for the observation to be of any value, the urine must be withdrawn by catheter. Such observations are made with difficulty in any extern charity, and the lying-in hospitals do not seem to have afforded as much assistance as might have been expected. M. Blot, in 205 observations made during actual labour, found 41 cases of albuminuria or 20 per cent. M. Petit, in 88 observations made during labour, found 18 cases of albuminuria, or about 20 per cent. Just after labour, there were 4 cases of albuminuria in 17. In 22 observations made during the ninth month, before the onset of labour, he found 3 cases of albuminuria, or 13.6 per cent. Again, M. Hypolitte, in 72 observations made during labour, found 17 cases of albuminuria or 23.3 per cent.; and in 73 observations in the ninth month, before the onset of labour, he found 10 cases of albuminuria, or 13.7 per cent.; in 20 observations after labour, he found 5 cases of albuminuria or 25 per cent.

It will be noticed that the ratios given by these observers agree very closely together—about 1 in 7 before labour, 1 in 4½ in labour, and 1 in 4 shortly after labour; that the frequency of albuminuria would seem to be very much greater than it has generally been suspected to be in this country; and that this frequency is very much greater at the actual time of, or shortly after, labour, than it is before its onset. M. Petit gives also statistics which show that, in the cases observed by him, albuminuria was more frequent in primiparæ than in multiparæ, in the proportion of about 5 to 4; and that both in primiparæ and in multiparæ, the greater the age, the less is the liability to albuminuria. The same relations are well known to hold, in a much greater degree, with regard to the frequency of eclampsia.

The very few statistics which are available in this country are singularly in contrast to those which I have quoted. Dr. Lever, in the well known paper in which his discovery of the connection of puerperal convulsions with albuminuria was made known, and which was published in the *Guy's Hospital Reports*, 1843, records observations made in 50 cases during labour, and says, somewhat vaguely it is true, that in none of them was albumen discovered, excepting in those in which either convulsions had occurred, or those symptoms had presented themselves which are readily recognised as the precursors of puerperal fits. Dr. Hicks, in a paper on the connection of eclampsia with albuminuria (*Obstetrical Transactions*, vol. viii), records 50 cases in the Guy's Hospital Lying-in Charity presumably also observed during labour, and says that in only one was albumen discovered, and that was a case in which there was an unmistakable history of old kidney-disease.† I have unfortunately but very little evidence myself to bring forward on the subject, but I have examined the urine of a certain number of women who came to the out-patient room of Guy's Hospital in the ninth month of pregnancy, a large proportion of them being unmarried primiparæ. Out of 26 primiparæ, I found albumen in one case, but only in small quantity; out of 17 multiparæ, I found albumen in no instance.

I am unable to account for this discrepancy, and further observations in England are very desirable, to determine whether national peculiarities make any difference. One or two points, however, may be noted which may possibly be of some significance. First, a small or moderate proportion of albumen in the urine may signify not any kidney-affection but cystitis, and cystitis is not uncommon in pregnant women, from extension of gonorrhœal inflammation or other causes. This is especially likely to be the case in hospital patients, and may, perhaps, be

* Read at a meeting of the East Surrey District of the South-Eastern Branch.

† Since the above was written, Dr. Hicks has mentioned another series of fifty cases observed in the Guy's Hospital Lying-in Charity, in which also only one case of albuminuria was found.

more common in France than in England. Secondly, the French observers do not give any information as to the relative proportion of albumen, nor as to the presence of casts in the urine. But from the fact that they are not content with the ordinary tests of heat and nitric acid, but think it necessary to use more delicate tests, such as picric acid, it would seem probable that, in many cases recorded, only a minute trace of albumen may have been present. Now it is well known that in cases of eclampsia the proportion of albumen is generally very considerable, forming from one-sixth to one-half of the whole, or even more, after settling in the test-tube; and casts are usually abundant. The same is true of most of those cases in which general oedema appears during pregnancy, or in which those other symptoms which are regarded as premonitory of eclampsia occur in conjunction with albuminuria. It appears probable, therefore, that a considerable proportion of the cases included by the French writers can hardly be classed with these, or considered as of grave import.

One very important point may be regarded as established, namely, that pregnancy leads not merely to a temporary functional or mechanical albuminuria, but, in some cases at any rate, to a nephritis or true Bright's disease, from which a permanent lesion of the kidney is apt to remain, although more frequently the nephritis rapidly disappears after delivery. Of this, the following case of a patient who was under my care may serve as an illustration.

A. C., aged 36, was pregnant for the sixth time. In her first delivery, at full term, she had puerperal convulsions with albuminuria, and the child was still-born. The albuminuria disappeared between the pregnancies, but always recurred when she became pregnant again, although precautions were taken by the use of a milk-diet. Each succeeding child died *in utero*, and was expelled prematurely, while no evidence of any cause for this, except the kidney-affection, could be discovered. With each pregnancy the sight became increasingly impaired, and did not recover in the intervals. By the ophthalmoscope, the hæmorrhagic spots characteristic of chronic Bright's disease were seen. I afterwards learnt that the sixth pregnancy had terminated prematurely like the others, and that the patient had subsequently died from some thoracic inflammation, probably connected with the Bright's disease.

Several theories have been propounded with regard to the causation of albuminuria in pregnancy, and it may probably be said of each that it is erroneous if taken by itself. It is a truer view to consider that there are several factors, each tending to favour the production of albuminuria, and that, in any individual case, two or more of these, in varying proportions, may have contributed to the result. Those which appear to be true causes may here be enumerated.

1. Increased venous tension in the kidneys may result from the pressure upon the renal veins of the pregnant uterus, when this has passed beyond a certain size. This will favour the mechanical transudation of albumen; and, moreover, an organ suffering from venous congestion is more liable to become inflamed from slight causes of irritation, and recovers less easily than when the circulation is normal. The fact, however, that tumours of a similar size do not so readily produce albuminuria, and that albuminuria is apt to occur in the earlier months of pregnancy, shows this cause to be insufficient by itself.

2. Arterial tension throughout the body is increased during pregnancy, and the heart becomes hypertrophied. This also would tend towards [illegible] to actual effusions in the kidney, constituting interstitial nephritis.

3. The renal circulation is subject to great temporary changes, owing to the rhythmical contractions of the uterus, which occur at intervals throughout pregnancy, and are intensified in labour. During a contraction of the uterus, the flow of blood through it is greatly limited; and the tension in the renal arteries, which arise from the aorta not far from the [illegible] rapidly raised. At the same time, [illegible] the arterial and the venous tension in the vessels of the kidney are at the same moment elevated. This effect will be greatly enhanced during the powerful contractions of labour; and it is by this circumstance that we must chiefly explain the very large increase of the proportion of cases of albuminuria during labour over that in the ninth month of pregnancy. In some cases of this kind, the albuminuria has been found to be present only in the first urine drawn by catheter after delivery, and not again to recur.

4. The kidneys, [illegible] with the genital [illegible] in development, is so also in its nervous relations. Thus, tumours connected with the kidney have sometimes been observed to swell during menstrual periods. The same fact is illustrated by the rapid [illegible] women. Hence it is probable that the development of the uterus in [illegible] in a perfectly healthy organ, is apt to pass into or to promote inflammation, when any morbid condition or source of irritation is present, as is well illustrated by the physiological active fluxion of menstruation or of sexual emotion in the case of the uterus. It is conceivable, even, that morbid conditions of the pregnant uterus may lead to reflex irritation or congestion of the kidneys.

5. Although the mechanical effect of pressure cannot be regarded as sufficient to account altogether for the albuminuria of pregnancy, yet that it is a very important element in the case is proved by the markedly greater frequency of albuminuria in primiparæ than in multiparæ, and also in the younger than in the older, both amongst primiparæ and multiparæ. This can only be explained as due to the greater rigidity of the abdominal walls in primiparæ, and in younger women, and consequently greater pressure upon the viscera. But pressure upon the renal veins is not the only thing to be considered. There is another mode in which pressure comes into play, which has been scarcely included among the theories of the causation of albuminuria which are enumerated by authors. I refer to pressure upon the ureters, which is exercised by the pregnant uterus even in the earlier months of pregnancy. It is known to pathologists that, in the case of fibroid tumours of the uterus, even when of no great size, some dilatation of the pelves of the kidneys, and flattening of the apices of the pyramids, may be found. The more temporary enlargement of the uterus in pregnancy is not likely to leave such a manifest anatomical change. But the secreting cells of the kidney must necessarily do their work against a greater pressure, and therefore with more difficulty; and so be more liable to functional disturbance or irritation.

6. Probably the most important factor of all in causation is the increased amount of work thrown upon the kidneys during pregnancy. They have to excrete the waste products not only of the mother, but of the fœtus, in which tissue-changes are far more active than in adult structures. It is not alone the urea and uric acid which have to be considered, but other excrementitious materials, whose chemical nature is not precisely known, and which may have a more irritating effect, even in minute quantities. It may reasonably be expected that, while healthy organs will do this increased work without suffering, yet kidneys which are congenitally a weak point in the constitution, or have undergone any degeneration, especially when they are at the same time subjected to the disturbances in their vascular supply and in other respects which have been enumerated, are liable to give way under even a slight additional strain, and become inflamed. Hence the especial importance of this element in causation, because it leads not merely to functional or mechanical transudation of albumen, but to actual nephritis, and even to the chronic form of Bright's disease. We may compare this effect with the causation of the ordinary granular kidney. It may be regarded as proved, that a granular kidney may be, and probably in most cases is, produced by the prolonged presence in excess in the blood of uric acid or other irritating material, the result of chronic indigestion or of other causes. In accordance with this analogy, we find that, in the albuminuria of pregnancy, while, in the recent form, such as that which often leads to a fatal result through the medium of eclampsia, the changes in the kidney are slight, and often hardly discoverable, yet, when the albuminuria recurs in repeated pregnancies, as in the case related in this paper, the changes in the eye and the vascular conditions peculiar to chronic Bright's disease are often found; and a granular contracted kidney is then discovered after death. This sequence of events would seem an argument in favour of the view, that the changes leading to the granular kidney in some cases have their commencement in the epithelial or tubular form of nephritis.

7. A final theory of the causation of albuminuria in pregnancy I will mention only to reject, since it has hardly found any acceptance in this country. It was brought forward by M. Gubler, and has been called the theory of superalbuminosis. M. Gubler supposes that a certain amount of albuminous material exists in the blood for the nutrition of the fœtus; and that, if this be in excess, or if the assimilation of the fœtus be deficient, then the excess of albumen appears in the urine. It is sufficient to say that, if this were true, then the death of the fœtus, or its atrophy, would inevitably lead to albuminuria; and this is certainly not shown by experience to be the case.

We may say, then, that albuminuria, arising in pregnancy or during labour, may signify any one of an extensive gradation of conditions. First, and more especially in the case of the albuminuria limited to the active stage of labour itself, it may mean simply extreme vascular disturbance, and mechanical transudation of albumen. Secondly, it may [illegible] to vascular changes, such a disturbance of function in the kidney-cells, that their secreting power is interfered with. So far as it is the power of secreting water which is affected, this will tend to [illegible] be correct. So far as the capacity for excreting solid waste products is diminished, it will tend to produce either convulsions, or those symptoms in the nervous system which are known to be premonitory of

convulsions, or other of the recognised sequelæ of uræmia. Thirdly, it may mean actual nephritis of the epithelial or so-called tubal variety, and recognisable on post mortem examination. Fourthly, a granular kidney may be the eventual result, especially if the exciting cause recur in successive pregnancies.

I shall not attempt to enter fully upon the wide question of puerperal convulsions, but only to remark upon a few points connected with their causation. There has been rather a tendency amongst authors in this country of late not to accept the uræmic theory as one applicable to the great majority of cases, but rather to hold that the uræmic variety is only one amongst a number of forms of puerperal convulsions, or even to contend that the albuminuria is not necessarily an evidence of nephritis, or that it may be the effect, and not the cause, of the convulsions. I see with pleasure, however, that, in the recent excellent work on obstetrics of Dr. Spiegelberg, it is laid down as an undoubted fact, that uræmia is an essential factor in the enormous majority of cases. My own experience agrees entirely with this, so far at least as regards the frequency of albuminuria in cases of convulsions; and the records of the Guy's Hospital Lying-in Charity show the same thing. In thirty-six cases which have occurred within the last seventeen years, the state of the urine has been recorded in twenty-two. In one only of these twenty-two did the urine remain free from albumen throughout. In this instance, that of an unmarried primipara, aged 14, the patient had been seduced by her cousin, and appeared to feel her position acutely. She was delivered of a fine living female child, after a labour of more than forty-eight hours' duration. Seven hours after delivery, she had a violent epileptiform convulsion, followed by deep comatose sleep. Her appearance was anæmic, but it was found that an attempt to examine the uterus produced a fresh convulsion. Chloroform was administered, and the uterus was found to be relaxed, and distended with clots. These were emptied out, and the uterus syringed with a solution of perchloride of iron. Within the next eight hours, she had five more fits, which were cut short by chloroform, after which she recovered. The urine never contained any albumen. The child died in two days, having had convulsions continually since birth. This, then, would seem to be one of the rare cases of eclampsia without any uræmic element.

A second case was that of a confirmed epileptic, aged 40, pregnant for the twelfth time. She had been subject to epilepsy since the age of seventeen, and fits had recurred at intervals varying from three to seven months. After her second confinement, she had convulsions for five or six days. For some years, her intellect had been gradually becoming impaired. Convulsions commenced at about the eighth month of pregnancy. No assistance was sent for until they had continued for four days, and the patient had been quite unconscious for three days. The fits were then recurring every eight or ten minutes. The os was found to be dilated. The membranes were at once ruptured, and a living male child was expelled in a few minutes. The convulsions still continued after delivery, were only temporarily checked by the use of chloroform, protracted for many hours, and death occurred nineteen hours after delivery. The urine contained only a trace of albumen, and no casts. At the necropsy, the kidneys were found to be hard and deeply congested, but were not examined microscopically. This would seem to be a case in which the trace of albumen may probably have been secondary to the convulsions, combined with the vascular effects of pregnancy and labour, without any actual nephritis. It would then be an instance in which the other causes of eclampsia, without the uræmic factor, were sufficient to produce very severe eclampsia of the ordinary form in a person having the epileptic tendency. The recurrence of the eclampsia in two pregnancies tends to confirm this view.

A third case was that of a primipara, aged 21, who had also been subject to epileptic fits since she was fifteen years old, but had had none since her marriage, nine months before. Eclampsia commenced soon after the commencement of labour-pains, and was treated by the administration of chloroform. The urine was tested when the fits were most severe, and found to be free from albumen. Next day, a little albumen was found, and it increased for some days, and continued present while the patient remained under observation, about two weeks.

A fourth case was that of a primipara, aged 19, who had eclampsia, not very severe, four days after delivery. A sample of urine before the convulsions was free from albumen. That drawn off after the convulsions contained albumen; proportion, one-eighth after settling. Previously to delivery, it had been noticed that the patient's face, as well as her feet, was œdematous. A year before, she had had an epileptiform fit after the attempt at the extraction of a tooth.

In the remaining eighteen cases, the urine contained a considerable quantity of albumen; and, in most of them, casts were also numerous.

Of thirteen cases, seen by me in private practice, in which the state of the urine was noted, it contained a considerable quantity of albumen in all except one; and, in that instance, the slightest possible trace was discoverable. This case, however, differed from the ordinary form of eclampsia. Labour had been protracted on account of hydrocephalus in the fœtus; and it was afterwards found that the patient had hemiplegia of the left side, which gradually disappeared in the course of several weeks. Here there was probably some hæmorrhage or other gross lesion in the brain.

Two of the above cases involve the question first raised by Dr. Braxton Hicks, in a paper brought before the Obstetrical Society in 1867, and which has not since, so far as I know, advanced any nearer towards solution. He there recorded four cases, in which the urine, before the fits or just after the first fit, was free from albumen, but afterwards became albuminous. Dr. Hicks suggests that the nearly simultaneous appearance of the albuminuria and convulsions may be explained in one of three ways:

1. That the convulsions are the cause of the nephritis:

2. That the convulsions and the nephritis are produced by the same cause, *e.g.*, some detrimental ingredient circulating in the blood:

3. That the highly congested state of the venous system, induced by the spasm of the glottis in eclampsia, is able to produce the kidney complication.

There is another possible explanation, however, of these instances; namely, that, in the earliest stage of commencing nephritis, or of congestion of the kidney with functional disturbance of the secreting cells, its power of excreting solids is diminished, and that the albuminuria, not necessarily the first symptom of kidney-disease, does not appear till a somewhat later stage. One of the factors of the eclampsia, just as in the ordinary form in which it is preceded by albuminuria, might then be the presence of excrementitious material retained in the blood. As an analogy for this, we may recall the fact that, in chronic degeneration of the kidney, the appearance of albumen may be preceded for some time by the passing of copious urine of low specific gravity, and containing a small proportion of urea, and by some of the constitutional conditions which are recognised as belonging to chronic Bright's disease. If this supposition be correct, it may readily be understood that the convulsions themselves would increase the circulatory embarrassment of the kidney, and tend to promote the nephritis. In accordance with this view would be the circumstance that, in one of the cases narrated above, the albuminuria increased and persisted for a fortnight after the eclampsia; that, in a second, there was general œdema, without albuminuria, preceding the convulsions, and indicating, as I believe, a defective power of excreting water; and that, in one of Dr. Hicks's cases, there were well marked signs of actual nephritis subsequent to the convulsions.

A theory has been propounded, which aims at including in one cases of convulsion arising from nephritis with those occurring without it. It was suggested by Traube for the convulsions of ordinary uræmia, and has been adapted by Rosenstein to the case of puerperal eclampsia. It has been more or less completely accepted by some high authorities, as Playfair and Schroeder. I generally find, as an examiner, that students profess themselves unable clearly to understand it, and I confess that I am myself in much the same condition. The theory is, that there is excessive arterial pressure, combined with watery blood; that this produces transudation from the vessels, and thence œdema of the brain, by which the vessels are in their turn compressed, being enclosed within the skull, and so anæmia of the brain is produced and consequent convulsions.

Now, excess of intravascular over extravascular pressure would certainly lead to excess of transudation; but this would only go on until the balance were restored, and could not lead to actual anæmia by compression of the vessels, by which would be implied the very reverse—namely, an excess of extravascular over intravascular pressure. The effect would stop as soon as the due relation between extravascular and intravascular pressure had been reached. Again, watery blood would certainly tend to increase transudation, and I believe that this is the cause of general dropsy. But we do not find in Bright's disease that the tendency to convulsions is in proportion to the degree of general dropsy, a circumstance which is of itself sufficient to condemn the Traube-Rosenstein theory, since the same causes should tend to produce œdema elsewhere, as well as in the brain.

An objection to the uræmic theory of eclampsia, regarded as in itself the sole and sufficient explanation, is, that we have in some way to explain the circumstance that puerperal convulsions differ from other forms of uræmic convulsions in that they are generally the sign, not of advanced kidney disease, but of a very early stage, so early that it cannot always be demonstrated by any anatomical stage; that the element of convulsions preponderates over that of coma; that the convulsions come on intensely and in rapid succession; and that, in accordance with this, the temperature, instead of being depressed, as in ordinary

uræmia, is elevated—in fatal cases, sometimes to a very high point, such as 109 or 110° Fahr.

It would seem that, as in the case of the albuminuria of pregnancy, no one theory is sufficient entirely by itself, but that in every instance there are several factors of causation, present in different proportions. Of great importance is the increased irritability of the nerve-centres, which occurs physiologically, in order to fit them for carrying on the reflex mechanism of labour. Thus, in the pregnant woman, a poison in the blood more readily excites a convulsion, just as, in a child, a convulsion is apt to occur at the outset of a zymotic disease; and the same thing applies to any reflex irritation. When the Bright's disease is chronic, a certain tolerance is acquired, as in the later stage of the zymotic disease, and eclampsia is then not so likely to occur. Secondly, there is the effect of reflex irritation. The importance of this is shown by the large proportion of cases of eclampsia which commence during actual labour, and by the fact that the convulsions are often synchronous with labour-pains, and may be excited by digital examinations. Thirdly, in the great majority of cases, there is the presence of a poison in the blood, probably secondary, in the main, to the impairment of kidney-function usually resulting from a very early stage of nephritis. The existence of such a poison seems to be proved by the frequent death of the fœtus about the time of the convulsions, even if delivery do not take place till some time afterwards. The vascular disturbance would hardly be sufficient by itself to account for this, while the fœtus is still protected from pressure by the liquor amnii; and, moreover, the same thing is apt to occur in cases of albuminuria, even without an convulsions, as in that recorded at the commencement of the present paper.

CHLORATE OF POTASH IN THE HÆMORRHAGIC DIATHESIS.

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THE therapeutic value of chlorate of potash is, to a certain extent, recognised by the profession. This medicine has not, however, in my mind received the attention to which it is properly entitled. Its sphere of usefulness has a much wider range than has been accorded to it, for there is not, in the catalogue of the *Pharmacopœia*, according to my experience, a single remedy so many-sided, whether given alone or in combination, as this crystalline body, the product of the laboratory.

At its introduction, this salt was principally recommended as an antidote to scurvy. It is now prescribed for throat-affections, for scarlatina, for low fevers, for blood-poisoning, etc. I am convinced, however, that it will yet be recognised as a most potent agent in the treatment and cure of all maladies dependent on suboxidation, on defective nutrition, secretion, excretion, aëration, and molecular metamorphoses. Nor need it be considered strange that important results should follow its administration, when we remember that the elements of which it is mainly composed, viz., oxygen and potassium, are indispensable to the genesis of healthy arterial blood, and to the recuperation of its nutritive powers, when, after making the circuit of the system, it returns to the heart as venous blood, of darkened colour, and impaired coagulability.

By the agency of the first-named, chiefly through the organs of respiration, the blood is chemically changed, and its vitality renewed by the metamorphosis of the corpuscles. Oxygen is, as we all know, required for other important purposes; notably, for the conversion of the phosphorus and sulphur which are found in the protein compounds, into phosphoric and sulphuric acids, and their subsequent combination with bases; the other elementary substance, potassium, also operates in the circulation as an oxidising agent; for, according to Bence Jones, "alkalies furnish, out and in the body, the most marked evidence of assisting in oxidising actions". This alkali, too, appears to subserve another important purpose, as, according to Franz Simon, "the basic salts of potash and soda in the blood serve for the purpose of combining with the lactic, fatty, uric, and probably carbonic acids that are continually [illegible] during metamorphosis". (Dr. Franz Simon's Diseases, vol. 1, page 152.)

The [illegible] of the potato, which contains an abundance of potash, combined with a vegetable acid, may fairly be attributed the rarity of scorbutus in modern times. To its absence as an article of food during periods of scarcity and famine, and the substitution of a [illegible], I have attributed many cases of purpura and scurvy which have come before me. The late Dr. Baly has stated that scurvy was most prevalent in prisons where no potatoes were used. Dr. Garrod, in 1849, demonstrated that scorbutic blood was deficient in potash; and, more recently, Dr. Dickinson, in the pages of the British Medical Journal, has attributed, with apparent probability, the [illegible] to a deficiency of potash in the white corpuscles. The importance of those elements, considered singly, will not be questioned; the consideration then arises, In what manner do those agents, combined as chlorate of potash, act upon the system? This can, in the present state of our knowledge, only be guessed at; but, judging from analogy, and from the results of observation, it may be surmised that, after the reception of a solution of the salt in the stomach, one portion, obeying the law that governs the action of the nitrate and iodide of potassium, is immediately carried out of the system by the kidneys, and may be detected unchanged in the urine. Another part, borrowing the language of Bence Jones, as applied to a soluble salt of iron, "diffuses into the liquor sanguinis, into every texture, into the blood-globules and white corpuscles, making a greater formation of hæmato-crystalline, and thereby promoting that combination with protagon, on which the formation of new blood-globules depends." And further: "By dialysis, all crystalloid medicines act as directly on the textures as on the blood; they act according to their chemical power when they enter the textures, and according to the chemical and physical properties of which the different textures are composed." The remainder is supposed to part with three equivalents of oxygen in the blood, leaving, as a residuum, chloride of potassium, which is found in the urine as well as in the blood, of which it is a normal constituent. The probability of the theory of direct absorption of these equivalents of oxygen is strengthened by observation, which shows that the constitutional changes induced by the persevering use of chlorate of potash are similar to those ascribed by Beddoes, Hill, Thornton, Birch, and other writers, to the direct inhalation of oxygen gas, viz., an improvement in colour, and increase of vital and nervous energy and physical power, and the more healthful performance of all the nutritive and secretory functions of animal life.

It is, however, with chlorate of potash as a hæmostatic remedy that we are at present concerned; and it shall be my endeavour to demonstrate that, in its intelligent use, will be found a definite remedy for a specific diathesis, thus fulfilling within its own limits the prediction of John Simon, "that the results of empirical and popular observation will be transcended and eclipsed by the positive results of rational pathology; that diseases will presently yield to philosophical investigation what they have refused to blundering quackery; and that, within the lifetime of many here, there will be a specific treatment of each diathesis, founded on an exact knowledge of the physiological laws of its manifestation." (*General Pathology*, p. 15.)

When we inquire what is the condition of the blood in the hæmorrhagic diathesis, we find that it coagulates with difficulty, that it has a soft clot, that it is not buffed, that it shows a diminished proportion of fibrine; and that, along with this depraved state of the blood, there is a corresponding abnormal delicacy of structure in the capillaries and minute vessels, which are easily torn, and are wanting in contractile power and tonicity.

In this condition, the slightest cut or scratch may lead to excessive hæmorrhage; a trifling contusion to extensive extravasation under the skin. For this dyscrasis, an antidote is needed that shall increase the fibrin of the blood, add to its plasticity, and chemico-vital constituents, and that shall also tend to restore the contractile power of the capillaries and smaller vessels. That chlorate of potash, whether alone, or in combination with a soluble salt of iron, is possessed of these properties, and has the power of controlling the various manifestations of the hæmorrhagic diathesis in the human system, an experience extending over more than twenty years has thoroughly convinced me. To detail at length the evidence upon which this conviction is founded, is forbidden by the space at my disposal. It shall be my duty, however, to report some examples of the salutary influence of this remedy in several of the most important lesions of this group; and my first illustration shall be drawn from a case of hæmorrhage from the bowels.

On December 18th, 1877, F. C., a constable, aged 27, of spare habit, residing at Boyne Bridge, Belfast, after returning at night from the music-hall, found his boots full of blood, the source of which he traced to the rectum; next day, he had medical advice, and remained under the care of several experienced practitioners in hospital till February 14th following, without receiving any benefit. He then sent for me. On examination, I could not discover any sign of fissure or hæmorrhoids, the blood seeming to flow from a congested state of the mucous membrane of the rectum. I prescribed rest, and a mixture composed of one ounce of chlorate of potash and twenty ounces of water; dose, one ounce three times daily. After the first day, he began to improve, and, on the third, every trace of the disease had disappeared. With the exception of a slight return after an interval of two years, he has been quite free ever since, one or two doses of the mixture having sufficed to relieve him. I have had occasion to see him officially very often since that time. He is now a strong, robust man, and he attributes the change in his constitution to the use of the mixture, which he persevered with for a time.

Hæmophilia: Epistaxis.—A. B., aged 18, tall, of florid complexion, engaged in a large concern near Belfast, established for the manufacture of the textile fabrics for which that town is remarkable, suffered so much from a continual dropping of blood from the nose, caused by dust from the flax, that he feared he should have to relinquish the business. His family history is remarkable, his father having been subject to many and severe attacks of epistaxis, sometimes persisting, in despite of treatment, for a month at a time. Another member of the family suffered in the same way after the extraction of a tooth; a wound on the skin, as by shaving, giving rise to most troublesome bleeding. Having been asked by a friend, in the end of 1874, to prescribe, *in absentiâ*, I ordered a mixture, which was forwarded to him, containing, as in the previous case, an ounce of the chlorate dissolved in twenty of water, but with the addition of one drachm of the tinctura ferri perchloridi; dose as above. A fortnight after, the young man called to thank me for his cure. Nearly five years have since elapsed without a relapse, save on one occasion, when, having lost a train, he ran a distance of two or three miles, when a slight bleeding occurred, which was stanched by his pocket-handkerchief.

Hæmaturia Renalis.—W. McN., aged 25, a saddler by trade, living at Albert Bridge Road, Belfast, of very delicate constitution and deformed spine, and subject to lumbar pains, consulted me in July 1863 for a very profuse discharge of bloody urine which had troubled him for many months, and for which he had been treated ineffectually by several medical men. The blood came in large quantities, mixed, but not suspended, in the urine, apparently from the kidney; the bladder was healthy and free from calculus, having been carefully sounded by my friend Dr. Murney. I tried for a time a number of styptics, etc., in vain; among the rest the tincture of iron; when, on recurring to my favourite remedy, and joining to the iron the chlorate of potash in the usual dose, immediate relief was the result. For a period of twelve years, the man was subject to periodical returns of the affection, perhaps twice in the year. His custom was to have the prescription renewed, generally without reference to me, and with the same happy result; he was thus enabled to continue at his trade, and to assist his friends, until the month of August 1875, when, having taken a long drive upon a rough road, the hæmorrhage recurred with great violence, and the attack terminated fatally in ten days. I had not the opportunity of *post mortem* examination.

Purpura Hæmorrhagica.—I was requested by some charitable ladies, in the summer of 1865, to visit a factory-worker named Hagan, who lived at 58, Mary Street, Falls Road. She had been confined to bed for thirteen weeks, and been carefully attended by the dispensary doctor of her own and the Shankhill districts. I found her much exhausted by a continuous drain of blood proceeding from the gums, nose, bowels, vagina, and bladder. She was profusely covered with purple maculæ on the chest, arms, legs, and abdomen. Her diet had consisted for months exclusively of bread and tea, alternated with rice, with little milk, potatoes being scarce and dear, and not having anyone to cook them. I advised a complete change of diet, and prescribed the usual mixture. When I called to see her at the expiry of a week, she opened the door herself, quite recovered, all bleeding having ceased ere the mixture was finished. As a later example, I may give the case of Sarah Flanagan, aged 12, an inmate of the St. Patrick Industrial School, Belfast, whom I visited on May 8th, 1878, suffering from bleeding from the nose and gums, her body being dotted freely with the characteristic purple spots. In her case, two drachms of the salt, with thirty minims of the tincture of iron, effected a cure, every trace of the disease having disappeared within a week. Her diet was of course looked after.

Menorrhagia.—Miss L., a school-teacher, aged 38, wan and feeble, very tall and delicate, consulted me for a discharge of blood, which had continued, with short intervals, after a menstrual period several months previous. She suffered from severe pain in the back, from palpitation, and the other constitutional symptoms consequent on a continuous drain. She had tried various remedies prescribed by other medical men without effect. I advised relaxation from her duties for a time, and the chlorate and iron mixture. I saw her some days afterwards; her colour began to improve, the discharge diminished, and finally disappeared. The mixture was renewed, and taken occasionally as a preventive.

Hæmorrhage from the Womb.—Mrs. McS., mother of five children, called my attention to a profuse discharge of blood, which had recurred a fortnight after her previous confinement. On examination with the speculum, I discovered an abrasion of the os, from which the blood flowed. She was treated topically by the application of strong perchloride of iron and by the internal use of the mixture. The case was rather tedious, but she always spoke of the sustaining power of the mixture, and the sinking feeling which occurred when the dose was intermitted. She recovered in about a fortnight.

Hæmatemesis: Hæmoptysis.—There yet remain two highly important lesions for consideration, in the treatment of which, when they can be traced to the hæmorrhagic diathesis, this remedy has invariably proved beneficial, especially as its administration need not contraindicate the use of more energetic hæmostatics, such as ergot of rye, ergotin given hypodermically or otherwise, ice, acetate of lead, tannic or gallic acid, etc., if given at sufficient intervals. In cases of hæmatemesis due to malignant disease of the stomach, liver, or spleen, and in those cases of hæmoptysis caused by hypertrophy of the right ventricle, in pulmonary apoplexy due to a peculiar condition of the parenchyma, or from hæmorrhage caused by the breaking down of a tubercular deposit, and the laceration of an artery passing through the deposit, it is not to be expected that a constitutional remedy should be solely depended on; but when a state of pulmonary plethora exists evidenced by an effusion of blood from the mucous membrane, in the absence of pulmonary disorganisation, and in those cases where a sudden cessation of an accustomed discharge, menstrual or otherwise, causes congestion of the mucous membrane of the stomach or of the bronchial tubes, and vicarious discharge from either, then the liberal administration of the chlorate of potash and iron will be found as salutary and satisfactory as in the other phases of the disease.

Having thus presented a few typical cases, behind which, had opportunity permitted, I might have marshalled a host of equally striking examples, I have but to remark that, while it is the duty and the instinct of the physician, after obtaining satisfactory results from any remedy, to seek for and to theorise upon the *modus operandi* of that remedy, it is wise, while he remains steadfast and immovable upon the basis of practical experience, to advance with diffidence and reserve the solution which to him appears satisfactory, but which others equally or better fitted to judge may not believe to have passed beyond the region of hypothesis, lest, in condemning the superstructure, the foundation itself may suffer in their estimation.

NOTE ON A CASE OF COMA, IN WHICH THE CAUSE WAS VERY OBSCURE.

By RICHARD H. QUILL, M.D.,
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DURING last February, while stationed at the Privar Kotal, Afghanistan, I was hurriedly called to see a prisoner, belonging to the 8th Regiment, who, having been sentenced to be flogged, was about to undergo that punishment fifteen minutes after the time when he was reported to me as being ill.

On arriving at the guard-room, I learned from the sergeant on duty there that the prisoner had suddenly and silently fallen off his seat in a state of insensibility while gaily conversing with the men guarding him, and without having previously complained to anyone of feeling unwell. On examination, I found the man almost completely insensible, he being roused only with great difficulty, and then merely muttering a few unintelligible words. The pupils were normal in appearance, surface of body cold, pulse and heart's action very weak, respiration quiet, and no particular smell from his breath. Having reported to the commanding officer the present unfitness of the prisoner to undergo his punishment, I had him conveyed without delay to the regimental hospital, which was close at hand. Within a few minutes after his arrival at the hospital, insensibility became complete; respiration was now somewhat stertorous; the pulse a mere thread; the heart's action heard with great difficulty; the pupils widely dilated and insensible to light, as were his eyeballs to the touch; the surface of the body was cold, and free from perspiration. Temperature in axilla, 98.6° F. A careful examination of his head discovered no injury there.

At this stage of the case, the treatment employed consisted in the application of sinapisms to the nape of the neck and the cardiac region, hot-water bottles to the legs and feet, and stimulating draughts and enemata.

About an hour after his admission, his pupils lost their dilated state, and became normal, but in every other respect his condition remained unchanged, with the exception of vomiting having twice followed the administration of a stimulating draught. Examination of the matters thrown up shed no light on the case.

About seven o'clock, a report reached me that the prisoner was supposed to have taken a large quantity of chlorodyne (in the hope of his thereby being better able to bear his punishment) shortly before I saw him. The truth of this report was strenuously denied by the sergeant and men who had charge of the prisoner; nevertheless, in the absence of any clue to the true history of the case, and looking to the man's alarming condition, I determined to treat him as suffering from narcotic

poisoning, and I had latterly had injected *per rectum* twelve ounces of a strong infusion of tea; this injection was repeated at 10 P.M., and again at 1 A.M. Very shortly after the last injection, improvement was noticed in the condition; and by 3 A.M. he was quite conscious.

On the following morning, the man was almost quite himself, and was discharged from hospital two days subsequently to undergo his deferred punishment, which, I may add, was borne unflinchingly.

Remarks.—I look upon the foregoing case as interesting, owing to the obscurity (to my mind) which surrounded the cause of the sudden and alarming attack of profound insensibility. One or more of the following exciting causes naturally presented themselves to my mind as being concerned in producing the observed symptoms, namely: *a*. Alcoholic poisoning; or *b*. Narcotic poisoning; or *c*. Apoplexy, due to cerebral hæmorrhage.

The first of these I excluded for the following reasons: 1. The suddenness of the attack, the man, previously to it, having been perfectly sober, as was vouched for by the sergeant and men on guard; and 2. There being no alcoholic odour from the breath, nor fall in the natural temperature of the body. The obvious difficulty of a person in close confinement being able to procure any liquor, also influenced me in excluding alcohol as being a possible cause for the attack.

Then, again, it seemed doubtful that the exciting cause was narcotic poisoning, owing to the absence of so marked a symptom in such cases as "contracted pupils", as well as the suddenness of the seizure, which of itself was a strong argument against the narcotic hypothesis.

Lastly, that the case was one of apoplexy due to cerebral hæmorrhage was by no means apparent, even at the moment of my first seeing it; and the subsequent history of the case completely negatived such a supposition.

Being thus so undecided as to the nature of the case I had to deal with, I willingly acted upon the suggestion that the man had taken a large quantity of chlorodyne, and accordingly used frequent enemata of a strong infusion of tea, that being a remedy in which I have great faith in narcotic poisoning. The difficulty of proving anything by a *post hoc* argument prevents my assuming that the man's recovery was due to the remedy employed, and, as a consequence, that the case was one of poisoning by chlorodyne or some other narcotic. I much prefer leaving the question an open one, in the hope that some of the numerous readers of the JOURNAL may discuss the case, which has been to me a most interesting one, owing to the obscurity which enveloped it.

It is proper to state that the prisoner, on his recovery, persistently denied having taken chlorodyne or alcohol in any form. During his imprisonment, his previous health had been excellent, and he was free from any organic disease.

DONCASTER COMBINATION.—The district served by Dr. H. Franklin Parsons, before his appointment as Medical Inspector of the Local Government Board, has now been enlarged by the addition to it of the Doncaster and Tadcaster Rural and the Tickhill Urban Districts. The combination now has as its officer of health Dr. Mitchell Wilson, who had created for himself a not inconsiderable reputation for sanitary work while health-officer at Rochdale. The time during which he had held his new office was too short, at the date of writing his annual reports, to enable him to say much about the year's sanitary history; but this defect will doubtless be remedied in the reports for 1880. The subject to which Dr. Wilson has hitherto turned his chief attention has been the water-supply of the district, in dealing with which he observes that "some definite and satisfactory improvement in the public health can be most effectually brought about". The next subject that needs consideration is evidently the excrement-disposal of the district, which, in some places, is very adversely reported on. The vital statistics of the district are not dealt with in the reports after a very regular fashion—tables being given for some districts and not for others. The absence, moreover, of tables giving the statistics of the entire district is an omission which should be rectified in future. The death-rates of the constituent districts of the combination varied considerably last year. The lowest was Selby Rural (17.6), and the highest Selby Urban (23.7 per 1,000). It is not stated whether any of the rates are improvements or otherwise on those for preceding years. Diseases of the respiratory organs were, as elsewhere, very fatal throughout the district. Scarlatina was unduly prevalent and fatal, especially in some parts of the Doncaster rural district, and at Goole and Selby. Typhoid fever also occurred in many places, the disease being mostly associated with bad water and foul privies. The infant mortality was tolerably low in some of the districts; but in the Goole rural district, and at Selby, it was very high. Judging from analogy, the district does not seem too large for a strenuous officer of health, such as Dr. Wilson has already proved himself to be.

SURGICAL MEMORANDA.

NOTE ON A CASE OF AMPUTATION OF THE ARM, WITH SCAPULA AND PART OF CLAVICLE.

IN the JOURNAL of October 16th, Mr. Lund relates a case in which he successfully amputated the arm, with the scapula and part of the clavicle. The operation cannot, I think, be as rare as he seems to think. I have performed it once myself, and have seen it performed four times: twice by Sir William Fergusson, in King's College Hospital, both for sarcoma of the scapula—one being successful, one fatal; twice by Mr. Wheelhouse and by Mr. Jessop, in the Leeds Infirmary, both in boys for accident, and both successful.

My own case occurred in May of this year. The patient was a woman, aged 58, who was under my care at the Leeds Dispensary. She was suffering much pain from a large rapidly growing tumour, attached to the lower part and axillary border of the left scapula. It could be felt over the dorsum of the bone below the spine, and also projecting into the axilla; the pulse could, however, be felt plainly at the wrist, being only slightly smaller than that of the opposite side. The patient was in a feeble condition. I determined to try to excise the scapula with the tumour attached, and, if this were not possible, to remove the arm. The operation was performed with antiseptic precautions. A T-incision was made over the scapula, the head of the T being along the base, the foot slightly below the spine; the posterior attachments of the bone were divided; the suprascapular and posterior scapular arteries being secured by clips. In dissecting around the anterior part of the tumour, the axillary artery was divided, whereupon I prolonged the incision on to the clavicle, divided that bone, and detached the arm. No vessels were ligatured till the operation was completed, yet the patient lost but a few ounces of blood. An examination of the tumour showed that amputation was the only possible operation, as the axillary artery was imbedded in the tumour for more than an inch of its course. Carbolic gauze was used as a dressing, and all possible precautions were taken to keep the wound aseptic.

The patient recovered well from the shock of the operation. Unfortunately, at the first dressing, it was seen that a portion of the skin was commencing to slough; and, perhaps more unfortunately still, that putrefactive changes were taking place in the discharges. The failure of our antiseptics was probably due to the fact that, at the time the axillary artery spurted, one of my assistants placed his uncarbolised finger on the vessel. The gangrene spread till a piece of skin, when about four inches square, was involved. The discharge became copious and very offensive, and, though the poor woman seemed to be going on fairly well for a few days, she ultimately sank, and died on the sixth day.

Though a case like the above, when taken alone, is of no great interest, yet it may be useful to some one who may hereafter wish to collect statistics on the subject.

A. F. MCGILL, F.R.C.S.,
Surgeon to the Leeds Public Dispensary.

CLINICAL MEMORANDA.

EPILEPSY.

MR. BRINDLEY JAMES'S case of epilepsy, published in the BRITISH MEDICAL JOURNAL for September 18th, leads me to bring before the notice of the profession one which has occurred in my own practice. My method of treatment was somewhat different, but there has been more time to judge of the success of the remedy, as three-and-a-half years have now elapsed since the last fit.

J. S. was brought to me one day, immediately after a violent fit, which had seized him while employed in a mantlet, marking for the practice of a volunteer corps. He was twenty-three years of age, temperate, and not addicted to any bad habits, and had suffered from epilepsy from childhood. It was rarely that a month passed away without his having at least one fit, and for the last two or three months they had been much more frequent. His expression was stupid, heavy, and markedly epileptic. He had been apprenticed to a carpenter, and had learned his trade, but failed to obtain regular employment owing to the fits.

I administered the same night thirty grains of bromide of potassium, and gave him a brisk aperient to be taken early in the morning. For a fortnight afterwards he took thirty grains of bromide three times a day, during which time he had no return of the symptoms. He then took, on his own responsibility, the same dose at bedtime about twice a week, and an occasional aperient, for another month. Since

that time, three years and a half ago, he has been perfectly well. He is now in regular work as a carpenter in a large town, is married, and has one child about a year old, which, I believe, is perfectly healthy. I may add that I have always seen benefit arise from the same method of treatment, viz., large and frequently repeated doses of bromide of potassium, and that without any untoward symptoms produced by the drug. In no case, however, I am bound to state, has the success been so great as in that of J. S.

J. ADAM WATSON, L.R.C.P.Ed., Chudleigh, Devon.

THERAPEUTIC MEMORANDA.

THE HYPOPHOSPHITE SALTS.

IN a paper, by Dr. Frederick Churchill (BRITISH MEDICAL JOURNAL, March 27th, 1880), on the use of the hypophosphites, I observe the following sentences: "There is no doubt that we have in these preparations all the therapeutic properties of phosphorus, without the dangers attending the administration of crude phosphorus;" and, "For the administration of phosphorus, there is not, I am certain, a more efficient or safer medium than the hypophosphites."

I do not wish to appear to undervalue the alkaline hypophosphites; and I will, therefore, say at once that I have used them extensively, and that I am convinced of their value in certain kinds of disease—for the most part in disorders of nutrition. This knowledge is, and for many years has been, familiar to several writers, as Dr. Churchill's own references show—references which are not complete, however, on this subject, since they do not include the name of Dr. Churchill of Paris. The manner in which the last named author has written may not be altogether agreeable, but I do not know that his matter is insignificant.

Having, then, used these preparations, and being acquainted with some of their properties; and having used free phosphorus—to substitute an exact chemical term for Dr. Churchill's adjective "crude"—and being acquainted with some of its properties; I do not hesitate to say that the opinions expressed in the quoted sentences can be entertained only by those who have never made comparative observation of the effects of free phosphorus and of the hypophosphites. Should the latter be substituted for the former, under the impression that their action is identical, disappointment will be experienced in the effects produced in many cases; but more especially in many cases of neuralgia, in cases of insomnia, the result of nervous exhaustion (in which it is desirable to avoid the use of narcotics if immediate relief can be procured by other kinds of medicine—as it may be procured by free phosphorus), and in all cases of imminent death under the typhoid condition.

I do not know why this difference of power should exist, since it seems most likely that the mode of action of the hypophosphites is such as Jardien has ascribed to zinc-phosphide—a compound, the action of which is almost the same as that of free phosphorus; by the evolution, that is to say, of phosphuretted hydrogen, from which, by decomposition within the circulation, free phosphorus is precipitated *(vide Free Phosphorus in Medicine)*. Nevertheless, presumption in favour of similarity of action need not be allowed to obscure the fact of difference of action.

As for the dangers attending the administration of free phosphorus, vaguely alluded to by Dr. Churchill, it can scarcely be necessary to repeat now that, when certain formulæ are employed, no dangers exist. Those formulæ have already been sufficiently described, both in this JOURNAL and elsewhere.

I desire to take this opportunity of saying, that, having tried the hypophosphite salts, I have now almost entirely relinquished them in favour of hypophosphorous acid. This acid, of which the dose is, I consider, one, two, or three drops for infants, five drops for adolescents, and ten drops for adults, given every four hours, I have by experience been brought to regard as a valuable means of treating all cases of disordered nutrition, whether the result of chronic or of acute febrile disease. It may be administered in a variety of combinations; and I have been led to prefer it to the alkaline salts because I have found its effects more promptly manifested, productive of more permanent results, and withal more generally useful. I regret that I am obliged to be content with making these assertions; observations which I was conducting, with a view to publication, having been unavoidably interrupted.

J. ASHBURTON THOMPSON, M.D.

Toowoomba, Queensland, June 21st, 1880.

THE Government of India has ruled that young medical officers on arriving in India are not to be posted to civil appointments; and further, that such officers are ineligible for civil employment until they have completed two years' military duty.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

EAST LONDON HOSPITAL FOR CHILDREN: OUT-PATIENT DEPARTMENT.

(Cases under the care of Dr. WARNER.)

INFANTILE PARALYSIS.

THIS is a condition frequently met with in childhood, and always of grave import. There appears, however, some reason to look upon the lesion, when it affects only the upper extremity, as likely to lead to a more favourable result than when the lower extremity is attacked. To illustrate this fact, eighteen cases have been analysed; the results are briefly indicated.

CASE I.—Male, aged ten months. Onset with illness and fever; general health good. Paralysis of right deltoid, seven weeks previous to observation; possibly slight weakness of right leg. Good recovery; almost complete restoration of powers of arm; could run well.

CASE II.—Male, aged seventeen months. Paralysis of left arm, humeral and deltoid muscles, two months previous to observation; onset with general poorliness. No reaction to faradisation; no improvement; much wasting of deltoid.

CASE III.—Male, aged three and a half years. Child debilitated and suffering from bronchitis; infantile paralysis of left leg of two years' standing.

CASE IV.—Male, aged two years. Infantile paralysis of ten months' standing; left leg withered; onset sudden.

CASE V.—Male, aged eighteen months. Loss of power in right deltoid; complete recovery.

CASE VI.—Male, aged three years. Right leg paralysed; attack four months previous to observation; was ill and vomited; paralysis very complete, but little reaction to faradisation.

CASE VII.—Female, aged one year. Right leg paralysed; no reflex action; atrophied.

CASE VIII.—Male, aged five years. Wasting of right leg of two and a half years' standing; a healthy and hearty child; scarcely any reaction to faradisation; doing badly two months after treatment.

CASE IX.—Male, aged two years. Paralysis of left arm five months previous to observation, with sudden onset; general health good; left leg also slightly paralysed. Complete recovery of arm; partial recovery of leg; but slight atrophy remained.

CASE X.—(London Hospital.) Male, aged seven years. A delicate child; complete paralysis of extensors of left arm; recovery complete.

CASE XI.—Male, aged two years. Left leg partially atrophied; cause, cold; reflex action lost; no improvement in a month.

CASE XII.—Male, aged three years. Paralysis of right deltoid; recovery complete.

CASE XIII.—Male, one year and eight months. Ill six days on admission; right arm and leg; deltoid paralysed; arm could be used; sudden onset; power recovered within a week.

CASE XIV.—Male, aged one year and six months. Ill five days before admission; commenced with some sort of attack and vomiting; right leg and thigh completely paralysed; no reflex action; right arm not affected; in-patient; recovered.

CASE XV.—Male, aged two years. Paralysed ten months; onset with illness; left leg withered four months.

CASE XVI.—Male, aged three years and a half. Right leg paralysed; patellar tendon reflex lost; general health good; onset at twelve months old; right lower extremity much atrophied; arms healthy.

CASE XVII.—Male, aged eleven months. The child was brought to the hospital feverish, ill, and vomiting. Next day, it was noted that the left arm was powerless; no other paralysis. The power soon began to return, first in the fingers and hand, and in a week the use of the hand was restored.

CASE XVIII.—Female, aged twelve months. Well grown and healthy; right arm perhaps thinner than the left; could move the hand and fingers, but could hardly move the shoulder or elbow; no coldness of the limb; the deltoid remained permanently paralysed.

Summarising these cases, we find that, in seven, the arm alone was paralysed; in nine, the leg alone was affected; while in two patients, the paralysis was hemiplegic. Of these two latter cases, one recovered completely, in both arm and leg; in the other, the leg remained somewhat atrophied, while the arm completely recovered. Of the seven

arm cases, five recovered, and two did badly; of the nine leg cases, eight did badly, while only one recovered.

ŒDEMA OF THE LEGS.

Cases of œdema of the legs in children, independent of diseases of the heart or kidneys, are not uncommonly met with. This sign is usually of grave import, occurring in cases of extreme prostration. When independent of any proof of obstruction to the circulation, and of albuminuria, it appears to be analogous to the œdema frequently seen in adults, in cases of anæmia. It is probably of particularly grave import when œdema appears also in the upper extremities.

The following cases are illustrations.

CASE I.—A wasted, ill-fed child, with loose, offensive motions, and sloughing of the cornea. Under treatment and better feeding, the diarrhœa stopped; and soon after this, dropsy appeared in both hands and feet: no cough.

CASE II.—Female, aged one year and nine months. She had always been an ailing child, and liable to attacks of diarrhœa. Four weeks before she came under observation, the feet began to swell, and when seen there was distinct pitting and much soft œdema. The bowels at this time were constipated. The bowels were opened more fully, and in five days the œdema had gone.

CASE III. *Œdema of one arm.*—Male, aged nineteen months. A very anæmic child, had suffered from diarrhœa a fortnight; never had been strong. One night the right hand was noticed as stiff, and when seen the next day it was distinctly swollen. No cause for the œdema could be discovered; there was none elsewhere. The urine was of specific gravity 1,005; no albumen. The œdema disappeared in eight days.

CASE IV.—Female, aged three years. Œdema of legs appeared the day before attendance at the hospital. Slight cough three weeks previously; no proof of lung-disease; no albuminuria; bowels regular; œdema cleared up after a fortnight.

CASE V.—Female, aged nine months; suckled only; a feeble child; bowels had lately been loose; no *bruit*. The legs had been œdematous about six weeks. The œdema disappeared in a week; eczema of the legs followed. A week later, the eczema disappeared; considerable soft œdema of the legs returned; no purging. A fortnight later the child died, the œdema having increased. No *post mortem* examination was obtained.

CASE VI.—Female, aged eight. Five days previously to observation the face was noted to be puffy; the legs œdematous; slight bronchitis; no cardiac *bruit*; not ill in herself; appetite good; no albuminuria; treated by iron; œdema disappeared in a week.

CASE VII.—Male, aged four. Œdema of legs fourteen days at time of observation; hands also slightly puffy, but no general anasarca; a few *râles* over lungs; heart normal; no albuminuria; bowels previously loose, now tending to constipation. A week after first observation, the œdema was less; and after three weeks' treatment, the œdema had gone. The legs were noted as very blue; this, however, lessened, and the general health improved under iron and tonics.

CASE VIII. Female, aged six and three-quarters. An anæmic child, weakly, and complaining of pains in the back; pupils dilated; thrill and *bruit* over jugular vein; lungs and heart presented no signs of disease; no albuminuria; pediculi in head; glands about the neck swollen. Under treatment by iron, the œdema disappeared in three weeks.

SMALL-HEADED CHILDREN.

In giving a diagnosis and prognosis in the case of infants, it is always well to consider whether the head presents any deviations from the normal. Infants are not uncommonly brought under medical examination because they appear to their friends too small in the head, and they dread that they should develop as idiots. Cases of so-called marasmus among infants are common enough; and in these, the size of the head and the increase of its growth are matters of great importance, as indicating the vitality of the child. Lastly, these cases of small-headed children are by no means necessarily of bad prognosis, if there be reason to think the brain is fairly developed, though small.

The following cases illustrate these points.

CASE I.—Female, aged three months. First seen November 5th, 1878. It was noticed that its head was small, its circumference being 15½ inches. It could not hold its head up, but it hung on one side. The anterior fontanelle was patent. On examination, there was no paralysis: it could move all its limbs; the special senses appeared competent; it could see and hear, and noticed things around. It was brought up by the breast only, and sucked well. There were no signs of organic disease. The mother continued to nurse the child, and no specific treatment was adopted. December 31st. It held the head up well. January 21st, 1879. The head measured in circumference 16 inches. February 11th. The circumference was 16¾ inches, thus having grown 1¼ inches in fourteen weeks.

CASE II.—A marasmic child, aged fifteen months, came under treatment November 6th, 1879, with impetigo, and the complaint that it did not walk. It was small and ill-nourished; bowels regular. There were no marked signs of rickets; not much sweating; the fontanelle was very patent and depressed. The limbs were small. The head measured in circumference 16¾ inches. The impetigo soon cleared up. In a month, the circumference of the head had increased to 17¼ inches; and, after three months' treatment, the head measured 17.25 inches.

CASE III.—A female, aged four months, came under treatment December 4th, 1879, as the subject of marasmus, and eczema of the nates. The voice was good. She was fed upon condensed milk and biscuits, which she frequently vomited. She was born at full time after an easy labour, and appeared healthy. The head was small, measuring 14.5 inches in circumference. The family appeared healthy, and there was no proof of syphilis. She was treated with milk and lime-water, with Millen's food; and, by February 14th, the head had increased in circumference to 15.5 inches.

CASE IV.—A male aged one month, was brought to the hospital on account of general weakness and frequent screaming. He was a small and weakly child. No signs of syphilis. The circumference of the head was 14¾ inches; the anterior fontanelle was patent. May 7th. The head measured 15¼ inches. July 22nd. The head measured 16 inches.

Probably infants with small heads, as well as idiots, more easily succumb to any illness.

CASE V.—A female infant, aged four months, was brought to hospital after having had five convulsions in as many weeks, with slight tendency to retraction of the head. The circumference of the head was 16 inches. The child emaciated, and died in fourteen days.

In any case of a small-headed child, before giving a favourable prognosis as to the growth and development of its head, it is of course necessary to be sure that we have not a small-headed idiot to deal with.

CASE VI.—Male, aged two years and a half; could not sit up. The left arm was rigid, but not wasted; it had been thus from birth. Of course, in such a case, the prognosis is bad. The circumference of the head was 17¼ inches.

GUY'S HOSPITAL.

TWO CASES OF BULLET-WOUND OF THE HEAD.

(Under the care of Mr. GOLDING-BIRD.)

CASE I (from the report of Mr. Luscombe, dresser to the case).—P. E., aged 24, a clerk, was brought into Guy's Hospital on August 14th, 1880, having been shortly before found by the police in his room in the following state. He was lying near the fireplace, some feet from the window; a double-barrelled pocket-pistol (carrying a thirty-grain conical bullet), with one barrel discharged, being near him. He was quite conscious, and bleeding from a wound in the head, which he said he had received from without while standing at the window.

At 3.30 P.M., he was admitted into Accident Ward, under the care of Mr. Golding-Bird. He was perfectly conscious and rational, but suffered most intense pain in the head, especially in the right temporal region, where was a small ragged wound an inch and a half above the zygoma, and just in front of the ear. Through this wound of the skin, a second could be seen in the temporal fascia. He also complained of much pain and tenderness on pressure over the left mastoid process, and in the muscles on the left side of the neck. Nearly every minute a paroxysm of more violent pain would come on; and the patient would shriek out, exclaiming often that it felt "like some one digging at his brain". The pulse was good and regular; there were no symptoms of compression; and there was no paralysis.

In the evening, he was seen by Mr. Golding-Bird. He was then very pale and excited, with rather contracted pupils, screaming frequently with paroxysms of pain, as before. There was still no sign of paralysis or nerve-lesion anywhere; but the pulse had become intermittent. A close examination of the wound showed it to be scorched at the edges and blackened; and the scalp-tissues were separated from the temporal fascia beneath for nearly an inch all round. Judging from the discoloration of the subcutaneous tissues, this separation was due to the gases of the explosion. In the temporal fascia was a small ragged hole, through which the temporal muscle bulged; a probe passed in struck something hard. There was no pain on pressure round the back of the head or neck, as from a bullet-track. Sight and hearing were perfect.

Chloroform being administered, Mr. Golding-Bird exposed the skull in the temporal region by a conical incision through the temporal muscle above the zygoma, and at once came upon the bullet, flattened

and firmly impacted in the skull at a spot corresponding to the wound in the soft parts, just below and behind the anterior inferior angle of the parietal bone. With some force it was extracted, and was then found to have penetrated the skull for about one-fourth of an inch, driving before it a disc of bone of the size of a threepenny-piece. The base of the bullet (originally conical) was that which had first been seen; the part projecting into the skull being the fore part of it, now nothing but a ragged lamina of lead, about one-fourth of an inch long, as stated above. By enlarging the wound in the skull with Hoffmann's forceps, the depressed bone was removed. The dura mater was bruised, but otherwise uninjured; but Mr. Golding-Bird, fearing fracture of the inner table to a greater degree, further enlarged the wound, and drew out two loose pieces of the inner table from under the round outer table; their triangular shape showed them to be portions resulting from an extensive star-fracture of the inner table. The wound in the scalp was now partially closed with sutures, after being syringed with carbolic lotion. The operation was not done under the spray. The only hæmorrhage of any moment was due to division and detachment of the temporal muscle.

August 15th. "The patient passed a quiet night, sleeping the greater part of the time. His temperature was normal." He still complained of pain in the head generally, and on the left side specially, as before the operation; but there were no more paroxysms of pain.

Nothing worthy of note occurred during convalescence, which was only interrupted by slight burrowing of pus around the wound, and by a great difficulty in taking food, from trismus, owing to the interference with the temporal muscle at the operation. This passed off in three weeks, and on October 19th he was discharged with only a superficial wound remaining.

The operation was undertaken in this case with a view to relieve brain-surface irritation, ascribed to fragments of bone (and especially of the inner table, regarding the bullet-wound in the light of a puncture of the skull), rather than to the presence of the bullet. The close quarters at which the bullet had been discharged, and the persistent pain about the left mastoid bone and left side of the neck, rendered it most probable that the bullet had traversed the cranial cavity; the absence of nerve-lesion in no way invalidating that view, as much experience with bullet-wounds has shown. The superficial presence of the bullet was, therefore, unexpected; not so the starring of the inner table; and probably the removal of the splintered inner table contributed as much to the relief of symptoms as did that of the bullet itself with its depressed disc of bone.

This case furnishes a strong argument for the exploration of all penetrating bullet-wounds of the skull, even when the projectile is known not to be in the wound. A modern conical bullet is to the two tables of the cranium what a blow from a pickaxe, or a kick from the corner of a horse's shoe becomes, when sharply delivered. The inner table is sure to suffer more than the outer; and, however insignificant the damage to the latter may be, the wound in the former is certain to produce angles of eversion like any other exit-wound, or, as in this case, large loose fragments; either condition being dangerous to the brain, and demanding the surgeon's interference. Cases in all respects comparable to this one occur, and recover, without removal of the bullet—for example, one lately published from the Royal Naval Hospital at Greenwich; yet it is questionable whether the greater risk of speculating upon nature's powers and the individual's capability of brain-accommodation should outweigh the minor one of operative measures for the removal of the bullet and broken bone.

Case II (from the report of Mr. Littlewood).—P. M., aged 21, was admitted into Cornelius Ward, Guy's Hospital, on October 15th, 1880, about 9 P.M. Shortly before, a friend, standing about ten feet from him, discharged, by accident, a small American waistcoat pocket-pistol, of five-sixteenths inch bore, and carrying a half-drachm bullet. The bullet struck the patient over the inner extremity of the left supra-orbital ridge, lacerating the soft parts, and laying bare the bone, over an area of the size of a sixpenny-piece. He was not stunned nor particularly incommoded, save by excessive swelling and ecchymosis of the left eyelids, which rapidly came on, completely blinding that eye. He was seen by his medical attendant, Dr. De Liefde Temple, who sent him to the hospital, conceiving that the projectile had most likely entered the frontal sinuses.

On admission—after walking a mile or more—he was examined by Mr. Golding-Bird under chloroform. The little finger inserted into the wound felt the bare bone, but no fracture; nor was any track for the bullet at first to be found. A crucial incision was then made, and a track found in the soft parts, beneath the supra-orbital ridge, and leading among the muscles above the left eyeball. A silver probe, after some little time, struck something hard, embedded in the neighbourhood of the superior rectus muscle: a cut was therefore made along the lower border of the eyebrow, and, on depressing the upper eyelid, the end of the bullet could be seen about an inch from the surface. It was easily extracted, and the wound closed with wire sutures. The operation was performed under the spray. The base of the bullet retained its shape, its fore-part being completely flattened; it was this fore-part that presented when it was found, the ball having turned upon its transverse axis after striking the bone.

The wound healed primarily without any untoward symptoms. The patient was discharged on October 24th.

Remarks.—This case illustrates the strength of the thickened protective ridges of bone found variously in the body. The supra-orbital ridge was here struck with sufficient force to completely flatten the bullet, yet escaped without being fractured. The bone must—fortunately for the patient—have been hit exactly at right angles to its curve, otherwise the bullet would have glided off in one direction or the other, instead of turning a complete somersault, and finally burying itself—though in the direction of its first flight—hind-side before. It was quite expected that the bullet lay in the frontal sinuses, that being most probable; yet the fact that the patient emitted no air through the wound on forced expiration, taken with the fact that the ecchymosis was confined to one eye, suggested an exploration of the orbital cavity as soon as it was found that the bone was unimpaired.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, October 26th, 1880.

John Eric Erichsen, F.R.C.S., F.R.S., President, in the Chair.

A CASE OF ANEURISM OF THE EXTERNAL CAROTID, IN WHICH, AFTER FAILURE OF THE LIGATURE OF THE COMMON CAROTID, THE OLD OPERATION WAS PERFORMED SUCCESSFULLY.

BY HENRY MORRIS, F.R.C.S.

Elizabeth P., aged 45, first came under Mr. Morris's care on May 20th, 1879, with an aneurism about the size of a walnut at the level of the hyoid bone, and just above the bifurcation of the right common carotid artery. It had been noticed eight months, and was growing. It was not the result of any injury. She complained bitterly of the pain it caused all over the right side of the head and neck, and of a distressing feeling of dryness about the throat and fauces. She could swallow nothing solid without great suffering; her voice was hoarse, and she spoke in rough whispering tones. Her sight and taste were unaffected. Digital and instrumental compression could not be borne. Diet and medicinal treatment were resorted to, but, her symptoms becoming rapidly worse, on July 16th, a catgut ligature was placed around the common carotid artery, on a level with the omohyoid muscle where it crosses the cervical sheath. Four hours and a half afterwards, faint pulsation returned in the aneurism, and continued more or less marked till August 12th; when the outline of the aneurism was quite lost, though some pulsation could still be felt along the line of the artery in the situation of, and for a little distance below, the seat of the aneurism. A sinus remained leading down to the point of the ligature, hard, and surmounted with exuberant granulations, from which blood occasionally was discharged. At the end of September, fresh swelling took place at the angle of the jaw; there was no pulsation in it, but, with this exception, all the old symptoms returned. On October 30th, there was evidence of suppuration; an incision was, therefore, made, and a small quantity of pus was evacuated from the surrounding tissues. Relief was again obtained, but only partially and temporarily. Though the sinus over the ligature now closed, a similar one, from which blood occasionally escaped in small quantity, remained in the centre of the late incision. At the end of November, pulsation again was felt; and the swelling, which had much subsided after the escape of the pus, again increased. In fact, the aneurism had now evidently ruptured, was inflamed and growing largely, and threatened to set up ulceration of the tense and distended skin. It was, therefore, treated in the following manner. The facial and superior thyroid arteries were first ligatured, and then the sac was laid open, and all clots turned out. It was now seen that all the bleeding was issuing from the distal end of the sac, and could be checked by passing a tenaculum underneath it and raising it. The incision was prolonged upwards sufficiently far to enable a silk ligature to be passed around the vessel beyond the sac; and, in doing so, a small artery (probably the occipital) and vein were cut, from which bleeding, easily controllable, occurred for the moment. It was specially noticed that no blood had been passing into the sac from the internal carotid, yet that no clot was prolonged into it from

the common carotid. The wound did well; the ligature separated on the seventh day: convalescence was retarded by an attack of quinsy, which, in the right tonsil, ran on to suppuration; but the patient had quite recovered by February 12th, 1880, and still remained well. Mr. Morris said that the return of the pulsation in the aneurism a few hours after the application of the ligature, the slow consolidation of the aneurism, the pulsation in the vessel on the proximal side of the sac, though not immediately above the ligature, the subsequent growth of the aneurism in spite of the complete obliteration of the common carotid, the violence of the hæmorrhage from the distal orifice of the sac at the time of the last operation, together with the absence of any bleeding from the internal carotid, proved how important a part the free anastomoses between the branches of the external carotids of the two sides of the neck, and between the branches of the external carotid and subclavian of the affected side, played in aneurism near the bifurcation of the common carotid. It was suggested, and well-known cases and dissections were quoted to support the suggestion, that, after the ligature of the common carotid, no blood usually continued to reach the lower end of the internal carotid in the neck; and that, therefore, the anastomosing circulation within the skull was not the cause of the return of pulsation in these aneurisms, and, therefore, not a cause of the failure of the ligature. The practical conclusion arrived at was that, if the Hunterian ligature were employed in these cases, it were best to supplement it by the simultaneous ligation of such branches of the external carotid as were easily accessible, viz., the temporal, facial, and superior thyroid.

Dr. HILTON FAGGE said that he had met with a case which seemed to confirm Mr. Morris's opinion. A man was admitted into Guy's Hospital with aneurism, and was also hemiplegic. The common carotid artery was tied, and the hemiplegia soon afterwards disappeared. He died some time afterwards; and Dr. Fagge found, on *post mortem* examination, an aneurism of the common carotid about as large as a pigeon's egg, and containing coagula; it pressed upwards on the internal carotid. There had been evidently interference with the flow of blood upwards to the brain; and, after the operation, the cerebral circulation had been restored by the collateral circulation through the external carotid.—Mr. HARRISON CRIPPS asked why, if the diagnosis, before operation, of aneurism in the external carotid artery were correct, the common carotid had been tied as low down as the omo-hyoid muscle. There was a great mortality after ligature of the common carotid, caused principally by the interference with the circulation in the brain. He thought that a ligature might have been applied to the external carotid, between the aneurism and the common carotid. If the internal carotid were patent in Mr. Morris's case, he did not see why blood did not flow down from it. Considering that there was a violent flow of blood from the distal end of the artery after opening the sac, he thought that the preliminary ligation of the collateral branches was useless. If the object were to cut off the supply of blood through the peripheral branches, he thought that it would be more effectual to tie the carotid of the other side.—Mr. HOLMES said that the case reminded him of one in St. George's Hospital, of ligature of the external iliac for supposed aneurism of the common femoral artery. The aneurism ran exactly the same course as in Mr. Morris's case; and it was so much like a malignant tumour, that the diagnosis was difficult. Local pressure was applied successfully; and the patient died some time afterwards of some other disease. The preparation, which was preserved in the museum of St. George's Hospital, showed the establishment of the collateral circulation. Local pressure would, of course, have been impossible in Mr. Morris's case. Mr. Cripps's question as to the situation of ligature was answered by the fact that the aneurism was close to the bifurcation of the artery. He agreed with Mr. Morris that additional security was gained by tying the main collateral arteries. The diagnosis between aneurism of the external and of the internal carotid arteries was difficult. The regurgitant circulation through the internal carotid was not always so powerful as some supposed.—Mr. CHRISTOPHER HEATH said that the suggestion of tying the peripheral branches was admirable, if it could be carried out; but, if only one branch were left, there might be a return current of blood. He thought that it was very difficult to tie all the branches of the external carotid artery. After ligature of the artery on the proximal side, galvanism or the injection of perchloride of iron into the sac might be tried, before the collateral circulation had been re-established. He did not see the use of tying the carotid on the other side.—Mr. HULKE believed that the injection of perchloride of iron was not safe, unless pressure [illegible] applied on both sides of the sac. He had some years ago made a number of experiments by injecting the perchloride into the veins of dogs, and had found that, if pressure were not applied, two drops caused death.—Mr. MORRIS said that, although it might not be possible to tie every branch of the external carotid, yet the diminution of the supply of blood by the ligation of some of them put the patient in a better position. With regard to the use of perchloride of iron, there was a coagulum in the sac in his case, but it was interfered with by the whirl of the returning blood; and the object was to prevent this interference. The recurrent pulsation soon after ligature could be explained by the flow of blood through the branches of the external carotid. Although the results of ligature of the external carotid artery were very favourable, it was impossible to perform that operation in his case.

ABSCESS IN THE NECK, WHICH IN ITS COURSE DESTROYED A LARGE PORTION OF THE CAROTID ARTERY, JUGULAR VEIN, AND PNEUMOGASTRIC NERVE.

BY WM. S. SAVORY, F.R.C.S., F.R.S.

In this paper, after a short account of two instances, in one of which the internal jugular vein, and in the other the femoral artery and vein, were laid open by an abscess, a case was related of a man who was brought to St. Bartholomew's Hospital in a state of extreme prostration, the result of hæmorrhage from a large orifice of an abscess at the left side of the neck, which had given way three days previously. He never fairly rallied, and died on the fourth day from his admission. On dissection, the cavity of a large abscess was exposed, in the upper and lower parts of which portions of the carotid artery, jugular vein, and pneumogastric nerve were found. But a considerable piece of each was wanting. The opposite ends of the divided artery were from one and a half to two inches apart; the distance between the ends of the vein was rather more than this; the ends of the nerve were from one to one and a half inches apart.

Dr. JOHN HARLEY said that some years ago he had excised an inch and a half of the pneumogastric nerve in a young dog, and no effect had followed.—Mr. MORRANT BAKER asked Mr. Savory for an explanation of the destruction of the vessels and nerve by abscess. He did not know that there was a similar case on record.—Mr. SAVORY could only suppose that the vessels and nerve had become degenerated and weak in consequence of being involved in the inflammatory process.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 19TH, 1880.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Dilatation of the Central Canal of the Spinal Cord.—Dr. NORMAN MOORE showed two specimens illustrating this condition. The first was taken from the body of a married woman, aged 22, who for two years had been gradually losing power in the left arm, and for six months in the right arm. There was partial anæsthesia of the left side of her neck and the left shoulder. Her voice was very hoarse, without apparent laryngeal disease. She died in an epileptiform convulsion. The ventricles of the brain were found to be greatly distended with clear fluid, and the central canal of the spinal cord was distended to the size of a man's little finger; the cord was otherwise healthy. It was curious how few nervous symptoms had arisen from so extensive a lesion. The second specimen was from a child, aged five months, admitted into the Metropolitan Free Hospital for slight opisthotonos. For three days before death there was considerable pyrexia; the ventricles of the brain were distended with pus, which extended downwards into the dilated central canal of the spinal cord. The lining membrane of the ventricles was deeply injected, and some lymph was deposited in the subarachnoid cavity near the medulla oblongata. Dr. Moore believed this case to be a later stage of the condition of meningitis in the neighbourhood of the medulla, described by Drs. Gee and Barlow, in which slight opisthotonos is almost the only symptom.—Dr. FREDERICK TAYLOR had seen several cases in which the spinal cord contained a cavity. In one of these, the cavity was distinct from the central canal of the cord; and in another, the cavity at one part appeared to result from dilatation of the central canal, and at others was separate from this canal. In all of the cases he had seen the symptoms were slight, and quite out of proportion to the extent of the lesion. The origin of these cavities had yet to be discovered.—Dr. EWART had seen a case in which the spinal cord contained a cavity four inches in length, and a quarter of an inch in diameter. There was in this case paraplegia of slow onset. He had seen a somewhat similar case in a child.

Calculi from the Urinary Passages.—Dr. MOORE showed this specimen for Mr. GODFRAY of Jersey. It had given rise to no symptoms, and its presence was not suspected during life.

Myeloid Tumour of the Head of the Tibia.—Mr. MCCARTHY showed this specimen from a woman aged 23, who came to the London Hospital complaining of pain in the right knee. At the front and inner side of the tibia was a swelling, painful, tender on pressure, and fluctuating. Shortly afterwards, pulsation appeared in the tumour. An exhausting syringe brought out blood and myeloid cells. He deter-

mined to amputate; and, while applying Esmarch's bandage, the tibia broke across near its head. The upper sixth of the tibia was found to be replaced by myeloid growth, which extended along the crucial ligaments to the femur. Although the wound remained perfectly aseptic, the temperature was still high, and there was a very profuse, thin, dark-coloured discharge. The patient died of exhaustion on the twelfth day after the operation. The tumour was found to have extended up the tendon of the quadriceps.—Mr. BUTLIN thought that the principal interest of the case was the extension of the disease to the femur along the crucial ligament. Only two or three instances of this were on record. He had seen one such case, where amputation had been performed, and the man was in perfect health four years and a half afterwards. This showed how much less malignant bony tumours of central origin are than subperiosteal tumours.

Fatty Tumours from unusual Situations.—Mr. SYDNEY JONES showed a fatty tumour removed from the right arytæno-epiglottidean fold of a man aged 40. In the tumour was a cyst lined with squamous epithelium. He showed also a fatty tumour which had grown in the median line of the scalp, in a child aged twenty months.—Mr. PARKER had seen a fatty tumour on the upper surface of the tongue. It was covered by a layer of squamous epithelium.—Mr. MORRANT BAKER had seen a child with a pendulous tumour attached to the soft palate by a broad pedicle. The tumour was fibro-cellular, and contained cartilage. He thought it was probably a remnant of fœtal life.—Mr. MAC CORMAC had removed a fatty tumour, weighing five ounces and a half, from the scalp. The tumour was composed of a sebaceous sac filled with fat and embedded in fat.

Acute Necrosis of the Tibia.—Mr. BAKER showed this specimen for Mr. GREGORY WHITE of Bournemouth. The patient, a healthy lad, had received a slight blow on the shin with a fir-cone. Five days afterwards, the leg was acutely painful, the skin over the tibia swollen, red, glazed, and very tender. A month later, the limb was amputated. The bone presented the typical characters of osteo-myelitis. It was difficult to explain the occurrence of such extensive mischief from so slight a cause.—Mr. GODLEE thought that, in these cases, the following points were in favour of a constitutional rather than a local cause for the inflammation: 1. That, in some instances, several bones were affected; 2. That the child frequently show signs of general illness before the onset of local symptoms.—The PRESIDENT agreed with Mr. Godlee, that multiple necrosis was not uncommon. He had recently seen a case in which both tibiæ and one humerus were thus affected. It generally occurred in healthy children who had had an injury, leading to necrosis of one bone, and subsequently to secondary affection of the others, the secondary affection being less severe than the primary. In these cases, there was scarcely any tendency to ordinary pyæmia, as shown by suppuration in organs or joints; nor was there, as a rule, severe fever threatening life. He had, however, seen one case in which pyæmia supervened. He thought it was not uncommon for bones to threaten suppuration, without its really happening.—Mr. HEATH thought that the occurrence of acute necrosis in scarlet and other fevers pointed to a probable constitutional origin. He thought the multiplicity of the bone-affection was due to pyæmia, but he had never seen abscess in the internal organs in such cases.—Mr. HOWSE thought the case should be termed one of osteitis rather than of acute necrosis.—Mr. BAKER, in reply, stated that he had seen two or three cases of the most acute septicæmia following acute necrosis, and leading to death within a very few days.

Osteitis of the Femur.—Mr. BAKER showed an example of this condition. The patient had been suffering for a long time from disease of the femur, and, after the limb was amputated at the hip-joint, the stump continued to bleed in an obstinate manner, the patient dying of exhaustion twelve hours after the operation. He had met with this difficulty in other cases of amputation where a patient had been exposed to chronic exhaustion; and he believed the blood became altered in these cases, so that it coagulated less readily. The bone presented a good example of the second stage of osteitis. The final stage of this condition was the production of ivory-like thickening of the bone. He thought that, in many of these cases, new bone was formed, both centrally and at the periphery of the bone, and that the original shaft was thus enclosed within new osseous tissue, which tended to deprive it of its proper nutrition. Hence he believed necrosis of the shaft would arise, and it was easy to see how difficult it would be in such a case to remove the dead bone.

Paralysis of Cranial Nerves in Congenital Syphilis.—Mr. NETTLESHIP exhibited a girl, aged 14, the subject of well-marked congenital syphilis, who had paralysis of the third and sixth nerves on the right side, and partial anæsthesia of the skin supplied by the first and second divisions of the fifth nerve on that side. The eye on the affected side was much less prominent than that on the sound side, possibly due to asymmetry of the bones on the two sides. The optic nerve could not be examined owing to corneal opacity, and the pupil was adherent from old iritis. There were no brain-symptoms.—The PRESIDENT remarked that it was a very unusual case. He had seen several cases somewhat resembling it, but in all of these there had been more or less symmetry.

Fracture of the Coracoid Process followed by Fibrous Repair.—Mr. SHATTOCK showed this specimen. The fracture was slightly oblique, being directed from before backwards, between the insertion of the pectoralis minor and the origins of the coraco-brachialis and inner head of the biceps. The detached fragment was united by a strap-like fibrous band, about one-third of an inch in length, and continuous with the adjacent part of the coraco-clavicular ligament, which had prevented any material displacement of the process. There was no injury to the shoulder-joint or of the clavicle.

Drawings. — The PRESIDENT exhibited the following series of drawings.

1. Multiple Cartilaginous Tumours of the Fingers. In all of these, it was the centre of the cancellous tissue that was affected.
2. Congenital Fibrous Tumour of the Toe in an Infant, involving the soft part, but adherent to the bone.
3. Congenital Tumour of the end of a Finger in an Infant.
4. Congenital Tumour of Cheek composed of fibrous tissue and cysts, and associated with nævus. A few months after birth, the tumour enlarged, and became hot; but, instead of becoming red, it had a bruised appearance.

The PRESIDENT also exhibited a fresh specimen of myeloid tumour of the femur.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 22ND, 1880.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

Cross-legged Progression (Scissor-legged Deformities) the Result of Double Hip-ankylosis.—Mr. CLEMENT LUCAS read this paper, the object of which was to direct attention to a peculiar and characteristic gait brought about by ankylosis of both hip-joints, and hitherto undescribed. Two patients were exhibited to illustrate the cross-legged mode of walking, one a boy, aged 10, and the other a man, aged 47. In each case, the disease had existed for some time in one hip-joint before the other had become affected. Gradually, as the patient walked with the aid of sticks or crutches, the limb last attacked was carried across the other, and, becoming ankylosed in this position, compelled the patient to walk permanently cross-legged. The legs placed in this position suggested, in their crossing, the appearance of a pair of scissors. The author left it open to discussion how this position was acquired, whether as the simple result of the adduction which was so common a sequence of hip-disease, or as the gradually developed, perhaps unconscious, action on the part of the patient to place his limbs in the position most favourable for progression. Mr. Lucas gave the following explanation as the most practicable. The patient, when commencing to walk on the convalescent limb, found that, by resting the other limb upon it, he could steady the inflamed hip, and prevent the movements which caused him pain. At the same time, by the oblique position, the limb was shortened, and rendered less liable to touch the ground. As recovery went on in the hip last attacked, the patient from time to time tested its condition by dropping the supported foot to the ground, and leaning a little weight upon it. Gradually, he took more and more weight from the crutches, still retaining the limb in the oblique position; and, finally, the second hip having become ankylosed, he was able to throw aside his crutches, and walk in the peculiar manner illustrated by these two patients. The author showed that, in ordinary walking, the forward movement took place entirely from the hip, the knee-movement being of service only to shorten the limb, and prevent the feet from touching the ground when in the act of being advanced. Hence, should both hips become fixed when the limbs were parallel, progression could only take place by twisting first one side of the body then the other to the front. The patient found out for himself that, by carrying one limb across the other, so as to render the knees oblique, the knee-movement could be made to take the place of hip-movement, and knee-walking was thus substituted for hip-walking. In both the patients exhibited, the right leg—that last attacked—was in advance of the other. The first patient, a boy, aged 10, began to suffer from disease of the left hip when four and a half years of age, and attended as an out-patient at the Evelina Hospital, under Mr. Lucas's care. Fifteen months later, after a fall, the right hip became diseased. He continued under Mr. Lucas's care till June 1877, when he was admitted into the hospital, under the care of Mr. Morrant Baker. After resting in the hospital three months, he was discharged, and again attended as an out-patient. For twelve months after his discharge, he

was kept lying during the greater part of the time; he was then allowed to walk with crutches, the left hip being, however, ankylosed. He was then sent into the country; and, on his return, it was found that he had learnt to walk with both legs, and that they were fixed in the scissor-like position. The second patient exhibited, Mr. Lucas saw walking in the street, and diagnosed his condition by the light of the other case. A man, aged 47, first began to suffer pain in the left hip in the year 1870. He was at that time employed as a coalheaver. He sought advice at St. Thomas's Hospital, and afterwards at St. Bartholomew's. Subsequently, he spent thirteen months in the Dalston nfirmary. After this, for a year, he tried to work a little, but remained lame. Since that time, he had gained his living by hawking trifles in the streets. In September 1879, be began to suffer pain in his right hip. Up to this time, it had been his custom to rest most of his weight on this limb, but the pain now caused him to stand chiefly on the left leg. In the course of the winter, he acquired the habit of crossing his legs, but at first was able to unlock them at will. Later, he used to unlock them at night-time, when he retired to sleep; but gradually this became more difficult, and they were now firmly fixed in the cross-legged position.—Mr. J. CROFT said that, among the cases of excision of the hip, he had had one which was double. This ended in recovery; but the mode of walking was different from that here presented, as the conditions were different. The patient walked with one knee in front of the other, and there was some lordosis. Much improvement was effected by cutting through the femur on one side, and breaking through the adhesions on the other. All cases of double hip-joint disease, however, did not end like these. In the child exhibited, there had probably been a double dislocation; and so likewise in the man. He thought the best plan of affording relief would be to cut through both femora below the great trochanter.—Mr. HOWARD MARSH said that such cases might and ought to be cured without displacement. The cause of the peculiar gait in the man was, that his limbs had been allowed to go wrong; and the tendency to displacement should have been obviated by splints and weights. The man did not walk in that peculiar fashion because he had had hip-disease, but on account of the position his limbs had been allowed to take. He would cut the femora. —Mr. LUCAS, in reply, said that the scissor-like position was assumed so that the knee-joint might be used after the manner of the hip-joint. In reply to Mr. Heath, he said he did not think there was dislocation in the man.

A Case of Intestinal Obstruction caused by a Hernia through the Mesentery of a Meckel's Diverticulum, which had retained its Attachment to the Umbilicus.—Dr. GREENHOW contributed this case. The patient was a boy, aged 7, who was seized with severe pain in the abdomen in the evening of May 31st, 1880. The pain was referred to the umbilicus, and was relieved by the sitting posture. He had occasionally suffered from attacks of pain previously, but the bowels had been opened freely the day before the fatal seizure. Examination of the belly yielding negative results, a poultice containing laudanum was applied, and small doses of opium were given by the mouth. Vomiting set in on June 2nd, and recurred with varying severity several times in the course of the illness. The urine was scanty, and of high specific gravity. Paroxysms of pain continued at intervals; and enemata administered daily brought away fæcal masses almost to the last. The pain was less on June 4th and 5th, but it recurred severely on the 6th, with increased distension of the belly, and the child rather rapidly sank on the evening of that day. The vomiting was rather fæcal. The treatment consisted in sedative applications, and the internal administration of opium and belladonna, as well as enemata. The *post mortem* examination by Dr. Coupland revealed commencing peritonitis; and about two feet of the lower part of the ileum were found depending in a collapsed condition on each side of a cord-like loop. This loop was formed in the mesentery of a well-developed diverticulum ilei, the upper end of which was attached to the umbilicus by an impervious cord half an inch long; the diverticulum itself being four inches in ength. The gut, when it passed through the loop, was constricted and pale, but a small projecting portion at the origin of the diverticulum was of a deep purple colour. Above the constriction, the bowel was distended with fluid fæces; beyond, it was empty. Dr. Greenhow remarked that he had been unable to find on record an exactly similar case to the above. When he first saw the case, he was led to exclude ntussusception and inflammation of the appendix cæci; nor did evidence of peritonitis supervene until the day before death. Complete obstruction did not take place until twenty-four hours before death; although the ileal evils might have been partially included in the loop or some time. The great relief obtained in the sitting posture was robably due to the fact that, in that position, the viscera were thrown orward towards the abdominal parietes. Abdominal section was enterained, but dismissed in the early days of the illness, and collapse supervened too rapidly upon the serious symptoms for operative interference. Even had this been attempted, it is likely that the diverticular attachment would alone have been recognised and divided; the existence of the loop not permitting recognition.

At the request of Dr. Greenhow, Dr. COUPLAND explained that the constricting cord, which passed from the upper part of the diverticulum to the true mesentery at the origin of the diverticulum, was formed, probably, by relics of the omphalo-mesenteric vessels, which had been torn away from their connections in the free border of triangular fold of serous membrane, forming the mesentery of the diverticulum.—Dr. SILVER asked the President if he could give the meeting any hint up to what time, supposing peritonitis was threatening or was actually present, abdominal section might be ventured on; and whether, supposing that peritonitis was actually present and the bowel greatly distended, very fine needles, similar to those used for the hypodermic syringe, might not be employed for the escape of gas.—The PRESIDENT said there could be no hard and fast line for operative interference, and that, in this case, there was no distension till close upon death.

Nephro-Lithotomy.—Mr. HENRY MORRIS read a paper on this subject, with notes of a case in which the operation was successful. By the term "nephro-lithotomy" was meant the removal through a lumbar incision of a renal calculus from a kidney in which the pelvis was not dilated, and which, but for the presence of the stone, was presumably healthy. It was to be distinguished from the numerous cases in which the kidney was cut for the evacuation of fluid accumulated within it, whether as the result of a renal calculus, of tuberculous disease, or some other cause, and to which, from very ancient times, the name "nephrotomy" had been applied; as well as from those cases, also numerous, in which a stone had been removed after it had been detected through a sinus in the loin. The opinion of writers upon the subject had been universally adverse to the attempt to remove a stone from the kidney, unless it could be reached through a distended pelvis—the chief reason urged being the danger of fatal hæmorrhage if the existing substance of the organ were cut or torn. The case described in the paper conclusively proved the feasibility of the operation; and, in answer to the question—Was nephro-lithotomy feasible, and, if feasible, was it safe? the author stated "that it was entirely due to his friend and colleague, Dr. Coupland, who advised the patient to undergo the operation, that an affirmative answer could now, for the first time in the history of surgery, be given with certainty to this question". The position of the question before this case occurred was reviewed; Marchetti's operation on the English Consul Hobson was referred to, and six cases in which the operation was planned, but in which it proved abortive, were mentioned. These six cases were considered encouraging, because all the patients recovered from the operation of exposing the kidney, and, curiously enough, obtained, at least for a time, relief from their symptoms. CASE. Maria M., aged 19, a servant-girl, of short stout stature, and with a remarkably rough scaly skin, had for eight years been subject at times to pain in her right side, accompanied occasionally with a feeling of sickness, and even actual vomiting. In September 1878, these symptoms became more pronounced; her urine became dark-coloured, and the pains so severe that she had to give up her situation and go under medical treatment. In April 1879, she was admitted, under Dr. Thompson, into the Middlesex Hospital, and, after treatment and rest, so far improved that she went again into service. A life of activity, however, brought back the old symptoms, and she was readmitted (this time under Dr. Greenhow) into the hospital. In less than a month she was again able to go out, but only to return a third time, with urine as dark as porter, and with the pains in the right loin and groin as severe as ever. When she was admitted, under Dr. Coupland, on December 29th, 1879, her urine was acid, and contained no other abnormal constituents than blood; there was some tenderness, but no swelling in the right loin. Again the urine cleared up, but the nephralgia was not relieved; consequently, on February 11th, chloroform was administered, and the right kidney exposed through an oblique lumbar incision. The right index-finger was then passed over the posterior surface of the kidney, and at once detected something faintly projecting over the renal substance near the hilus. The renal substance was incised at this spot with a probe-ended bistoury, and a mulberry calculus, of triangular shape, and weighing thirty-one grains, was extracted by means of a scooping movement of the finger-tip. There was no hæmorrhage at any stage of the operation. The upper end of the ureter was not dilated in the least, and, as the stone could not be felt there, it was consequently not interfered with. No attempt was made to examine the front surface of the kidney. The wound was brought together with three sutures, and a drainage-tube was introduced between two of them. The patient made a good recovery; urine ceased to flow through the wound on May 4th, and at the present time there was nothing whatever the matter with the patient, excepting that a sinus of one and three-

quarter inches still remained in the loin, and discharged about a drachm of pus daily. This case showed that a calculus could be extracted from an *undilated kidney* by surgical operation, without more risk than was amply warranted by the sufferings and general disability which the operation was designed to remove. But before the success of one case was allowed to influence treatment in others, four questions required consideration. 1. Could the diagnosis as to the disease, and the organ affected, be made with certainty? 2. What were the prospects of being able to complete the operation when a stone was found? 3. What were the dangers of the operation? 4. What was the best result which could be hoped for from the operation if successful? Mr. Morris, in answering each of these questions, gave arguments in favour of nephro-lithotomy; and finally expressed his agreement with Mr. Charles Bernard, the author of an account of Marchetti's operation, described in the *Philosophical Transactions* of 1696, that many of the writers upon the subject of wounds of the kidney "ought not to have so magisterially exploded the operation"; and hoped the operation would once again receive the consideration of the profession.—Mr. LUCAS said he had been looking for such a case, but had not found one. The experience gained, however, when the whole kidney was removed, was likewise available in such instances. Cutting down upon the kidney was, comparatively speaking, a trifling operation, though the risk of leaving a permanent sinus was considerable.—Mr. GOLDING-BIRD had operated on one case, but had failed to find a stone. The boy suffered from intense pain in the bladder and about the kidney. The organ was cut down upon, and nothing found, but the pain was relieved. The pain returned, and the bladder was opened, but nothing found. The end of the case was unfortunately unknown.—Mr. BARKER said that a case had been reported, where a cannula had been thrust down through a small opening and struck the stone; this cannula had been allowed to remain in, and the wound afterwards dilated by tents until a lithotrite could be introduced, and the stone crushed and removed. He had recently had a case where a large branched calculus filled the cavity of the kidney. He was able to remove a part, but not the whole. He then endeavoured to remove the whole kidney. The patient died of shock.—Mr. PRYANT said he would support Mr. Morris's view as to the operation in his case, though it was a dangerous one. Granting the presence of a stone, and a persistence of symptoms refusing all amelioration, the surgeon was justified in operating. Still, there were many cases where the stone would settle down in the kidney, and the patient survive many years, dying finally of something else. As regarded diagnosis, it was quite true that the stone might be struck by a needle thrust down upon it, but it was a question how far this plan should be tried. He suspected that the evil would exceed the good done.—Dr. GLOVER asked whether the rough appearance of the cuticle in Mr. Morris's case was due to the use of turpentine.—Mr. HEATH said that the conditions in Mr. Morris's case were unusually favourable, the stone being not too large for removal, and unbranched, though projecting. There would be no great danger in putting in needles.—Mr. MORRIS fully admitted that the case had been a most fortunate one. The conditions were most favourable; there was never a rise of temperature, and everything proceeded well from beginning to end.

SELECTIONS FROM JOURNALS.

PATHOLOGY.

MALFORMATION. — Dr. Pippingskiöld describes, in the *Finska Läkaresällsk. Handlingar*, Band 21 (*Nordiskt Medicin. Arkiv*, Band xii), a rare malformation which was sent to him by Dr. Hellström of Gamla Karleby. From the chest of a strong and fully developed infant, there proceeded two arms with hands and fingers, and, at some distance from them, with an intermediate rudimentary body, perfectly developed nates with corresponding lower limbs. These four duplicate extremities exhibited some movements during life, but more slowly than the proper limbs of the child. The child died at the end of fourteen days. The malformation was of the kind known as thoracopagus parasiticus acephalus.

DOUBLE CYSTIC KIDNEY WITH RENAL CALCULI.—Drs. L. A. Aman and Axel Key relate the following case (*Hygiea*, 1879; and *Nordiskt Medicin. Arkiv*, Band xii). The patient, a man aged 37, had first voided a renal calculus in 1871, and another in the autumn of 1872. Since that time his health had been good; but sometimes he had a feeling of weight in the loins and discharged a little gravel. On July 1st, 1879, he took cold, and soon noticed that the daily quantity of urine diminished until the 8th, when there was suppression. He was admitted on July 9th into the hospital at Linköping: his bladder was then empty. In the course of the next night, he voided about seven ounces of urine with his stools. He complained only of soreness in the region of the right kidney. The urine could not be examined until the 15th, when it was found to contain much albumen. On that day, symptoms of uræmia set in, and he died on the 16th. At the necropsy, the mucous membranes were found to be œdematous, and the brain hyperæmic. The kidneys were sent to Dr. Axel Key for examination. They were both greatly enlarged, the left, however, more than the right; and both presented almost complete cystic change. The renal parenchyma remaining in the interspaces between the cysts had a yellow grey turbid appearance. The pelvis of the right kidney was much dilated, and containe a large nodulated calculus, the lower part of which was rounded, and covered in the orifice of the ureter, which was dilated. The left ureter, at a distance of about two inches from the kidney, was completely blocked up by a calculus of moderate size; below this, the canal was completely strictured by indurated connective tissue, scarcely allowing the passage of a fine sound. Above the stone, the ureter was dilated, and the pelvis and calyces especially were greatly expanded. Dr. Key thinks it remarkable to find such extensive changes in the kidneys of a person who had enjoyed relatively good health up to a fortnight before his death. He regards the cystic change as having been principally congenital, and as having no connection with the formation of the renal calculi and the consequent obstruction to the flow of urine. The renal parenchyma which was found between the cysts had been sufficient for the function of the kidneys. When the renal concretions began to be formed, hydronephrosis was gradually developed, and in connection with it a chronic nephritis with interstitial and parenchymatous changes, which went on for a time without producing any marked disturbance, until at last an acute exacerbation set in and rapidly caused death.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

GRANULAR EFFERVESCING PREPARATIONS.

DR. HILLIARD reports to us that granular effervescing preparations of —A. Bromide of potassium; B. Bromide of potassium with iron; C. Bromide of potassium with iron and the alkaline hypophosphites; D. Effervescing alkaline hypophosphites; E. Effervescing alkaline hypophosphites with iron—have been made at his suggestion by Mr. J. H. Read, chemist, of Market Terrace, Upper Holloway Road. The drugs are in each case combined with the citro-tartrate of soda of the *British Pharmacopœia*, and the granules are very soluble, briskly effervesce, and are not unpalatable. The first three preparations contain ten grains of the bromide in each drachm or teaspoonful. B has, in the same quantity, two grains and a half of ammonio-citrate of iron, and C the ammonio-citrate of iron and alkaline hypophosphites in addition. D is a simple combination of the alkaline hypophosphites with sugar and the citro-tartrate of soda; and E is the same, with ammonio-citrate of iron added. A teaspoonful of the last-mentioned "granular effervescing alkaline hypophosphites with iron" in half-a-tumblerful of water produces a sparkling draught, almost identical in its composition with a popular and very much advertised beverage, which it is unnecessary here to further specify.

Dr. Hilliard thinks these new preparations will be found useful and very convenient. In epileptic cases, where it is necessary to continue the use of bromide of potassium for a long time, one or other of the above compounds will be found a very pleasant and ready way of administering the drug. In all cases where it is desirable to prescribe the alkaline hypophosphites, either in combination with iron or without, this effervescing form is likely to recommend itself to the profession.

STEARINE PAPERS.

MESSRS. MILLORD BROTHERS, Penn Street, New North Road, London, N., have forwarded to us a box of "stearine" or "wax" papers, which, by their damp-repelling powers, appear particularly well suited for wrapping instruments, preparations (anatomical or chemical), and drugs, etc., which it is desired to preserve free from hygroscopic influences. Generally, this paper appears to us to be a cheap, neat, and efficient substitute for tin-foil.

SCARLATINA, of a severe type, is reported to be very prevalen at Heywood, Lancashire.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 30TH, 1880.

THE ABERDEEN UNIVERSITY ASSESSORSHIP.

FOUR years ago, a Royal Commission was appointed to report on the form of government, the curricula for graduation, the teaching power, and the financial position of the Scotch universities. After two years, occupied in taking evidence and deliberating thereon, the Commission presented a report recommending sundry very sweeping changes in the constitution, and more especially in the curricula of these universities. To the changes in the constitution and in the curricula for medicine, law, and divinity, we shall not now refer. The changes proposed on the arts curriculum consist, fundamentally, in the introduction of the principle of option, and that in a degree as extreme as the previous absolute want of it. According to these changes, an arts student, after passing a first or matriculation examination in Latin, Greek, Mathematics, English, and Elementary Physical and Natural Science, could go forward for his degree of A.M. in any one of six lines: (1) the present curriculum unaltered; (2) Literature and Philology; (3) Philosophy; (4) Law and History; (5) Mathematical Science; and (6) Natural Science. This scheme, we believe, implies three things: first, that the secondary schools shall be far superior to what they now are; second, that the age of students shall, as a rule, be higher than at present; and, third, that the Scotch universities are to hold in the future a totally different position from that they have held in the past: becoming practically, like Oxford and Cambridge, large schools for specialists, not educational institutions in which a broad general education is given.

The above report came up at the meeting in April 1878 of the General Council of the University of Aberdeen, and a committee, with Dr. Bain as convener, was appointed to consider the bearing of the report on the Scotch universities. The finding of this committee is virtually summed up in the following resolutions, prepared by Professor Black (Latin), and carried by the committee, Mr. J. F. White alone opposing and dissenting: I. That the Council approve of options in the course for the degree in arts, provided the breadth and solidity of university education be maintained; II. That, in all cases, English, Latin, and Mathematics, shall be imperative, and these, as the leading subjects of school instruction, shall form the staple of any entrance examination; III. That the number of options proposed by the Commissioners is excessive, and their proposals are so vague as to need further elaboration; but the general principles upon which they proceed seem capable of being adapted to meet the wants of the Scottish universities. It is fair to state that Professor Geddes (Greek) had already indicated his belief that these resolutions, proposed by his colleague Professor Black, were *ultra vires* of the committee, which they probably were. The resolutions were left on the table for six months, and ultimately rejected by a large majority of the Council.

These facts must be known if we are to understand the present contest for the Assessorship in the University Court. Mr. J. F. White, an Aberdeen merchant, and a liberal supporter of art, but otherwise unknown to the academic world, has been proposed by the majority of the General Council, as it meets in Aberdeen, to oppose Dr. Bain. These majorities of ten or fifteen to one in the discussion of the "Greek question", as it is called, astonish an outsider till he learns that the Council meets on the same day as the Synods of the Established and Free Churches, and that, while the business of the Council is ordinarily conducted with an array of empty benches, the "Greek question" will bring together a body of clergymen sufficient effectually to vote down any attempt at innovation.

Should an Executive Commission be appointed to carry out the proposed changes of the curricula, the courts of the different universities will undoubtedly have large power; and hence, partly, the importance of the present election. The contest has been narrowed down to "Greek—optional or compulsory", owing to the temporary alliance of the rival churches to defeat what they believe, and probably with good cause, will diminish the number of students entering the divinity classes. With good cause, we say; for at present, many a Scotch student enters the Church simply because, on reaching the end of his four years' curriculum, he knows not what better to do with the Greek and Latin he has acquired. The question in the Commission, however, will be a much wider one—namely, what changes are requisite in the curriculum of arts in order that each student may acquire—and not only so, but may receive the seal that he has acquired—a broad and cultured education suited to the bent of his mind and his future profession? The present stereotyped arts curriculum of the Scotch universities is undoubtedly and avowedly better suited for the clerical than for any other profession. For the medical profession, it is utterly unsuited; and the consequence is that, much to their loss, comparatively few students of medicine have had an arts university training. They come up ignorant, frequently, of the commonest principles of logical reasoning and the most elementary facts of physical and mental science. The principle of option in the curriculum for the degree of Master of Arts, judiciously carried out so as to secure the breadth and solidity of university education, will, to a certain extent, provide a remedy for this state of matters; and, whether Dr. Bain is appointed Assessor for the General Council of the Aberdeen University or not, we beg most heartily to congratulate him on the work he has done, and yet purposes doing.

LUNATICS IN PRISONS.

AT an inquest held in August 1880, in Pentonville Convict Prison, on a suicide, who was shown in evidence to have been to all intents and purposes a raving lunatic, it was stated by the governor that there were fifty such prisoners, though not so violent, in the prison at that time. There were twenty cells, he said, under observation, sixteen with traps down, and watched; while twenty-two prisoners were, from prudential motives, deprived of their tin knives. Such a state of matters, revealed in the witness-box by a responsible official, calls, we think, for immediate strict and independent inquiry, and amply justifies the contention of the Howard Association that convict establishments and county and borough prisons should be inspected from time to time by unofficial persons. No time should be lost in ascertaining how it comes about that there is such a mass of mental unsoundness in Pentonville Prison, and such a widespread and acute disgust with life. This model institution is understood to be the portal of convict existence. As nine months of utero-gestation are the introduction to human life, so nine months of solitary confinement in Pentonville are the first stage of every term of penal servitude; and it is a curious coincidence that the time fixed upon, after much disastrous experiment, as the utmost duration of solitary imprisonment that can be endured without danger to reason, should coincide exactly with the period of uterine confinement in the human species. It would seem, however, that our experts in punishment and criminal reformation have been at fault; and that cellular seclusion, as now carried out, is playing havoc amongst the wretched beings who are subjected to it, and is depriving them of such shreds of reason as they possess, and driving them to mutiny against the order of nature and the tyranny of continued existence. For it is difficult to suppose that the discipline of the prison is not in some degree responsible for the prevalence of insanity and suicidal propensities amongst its inmates. If not, then we must conclude that our courts of justice are recklessly consigning to penal servitude those who are the victims

of a terrible disease, and who ought to receive kind care and treatment, instead of severe punishment. Cases which have come to light from time to time have indicated that sufficient pains are not always taken to ascertain the mental condition of prisoners who are placed on their trial; but we hesitate to believe that fifty convicts, now undergoing sentence in Pentonville, have been solemnly tried and condemned while in a state of lunacy. Such a wholesale miscarriage of justice would reflect the greatest discredit on our system of judicial procedure, and on the officers of our houses of detention. For it is clear that some one ought to be charged with the duty of determining the existence or absence in each case of a condition of mind which confers immunity from responsibility or punishment, but which is frequently of a nature to incapacitate the person principally interested from declaring it.

But whether the fifty insane convicts in Pentonville are of prison manufacture, or have found their way thither through judicial bungling, it is certain that their incarceration in such a place is highly improper. Why, it may be asked, have they not been removed to Woking or Broadmoor? Their presence in a prison must seriously embarrass the officers, and interfere with its regular administration; and the denial to them of medical treatment at the time when it might be of service in rescuing them from lifelong insanity, is a cruel wrong. Their position there, too, shut up in cells, and subjected to various deprivations, is a sad aggravation of their affliction; while the precautions taken for their personal safety are quite inadequate, as is evidenced by the suicide that has called forth these remarks.

A Departmental Committee, appointed to inquire into the provision made for criminal lunatics, is now sitting at the Home Office. It is to be regretted that that Committee includes only one medical man, a Scotch official; but several able members of Parliament are serving on it, Mr. Arthur Peel being its chairman, and it cannot be doubted that public benefit will result from its labours. We should recommend that Committee to extend its investigations to the strange prevalence of insanity and suicidal tendencies in Pentonville Prison.

BATTEY'S OPERATION OF SPAYING.

At the recent meeting of the American Gynæcological Society, held in Cincinnati on September 1st to 3rd inclusive, Dr. Robert Battey read a paper, entitled "What is the Proper Field for Battey's Operation?" which is analysed in the *Maryland Medical Journal*. As is well known to our readers, this operation was announced to the profession by Dr. Robert Battey, of Rome, Georgia, in 1872. The operation was received doubtingly; and, for several years, the field for its employment was greatly restricted. Within the past year or two, the operation has grown into great favour, and its practice is now by no means confined to a small class of cases. The growing popularity of this method of removing morbid manifestations in the female presents a problem very well worthy of careful consideration. No operation in the wide domain of surgery is so exposed to abuses or to injudicious practice as normal ovariotomy or spaying. In this country, the operation has advanced slowly, and thus far its employment is confined to a limited class of patients. In Germany, it has grown rapidly into favour; whilst in England it has been performed by Mr. Lawson Tait twenty-eight times in eleven months. The increasing popularity of the operation has called forth a warning paper from Dr. Battey. In this paper, the field for the application of this operation is pointed out by its author. The position is taken, that the operation should never be one of election; that it is applicable only to certain classes of cases: cases, in the first place, incurable by any other means; in the second place, cases menacing life; and, in the third place, cases from which we may reasonably expect to relieve the patients of the direful consequences of their disease by a change of life.

Dr. Battey remarks: "He must ask himself, If she had her change of life next week, would she probably get well? If she would, I propose to substitute for the natural change of life an artificial one, and secure the same result artificially that nature accomplishes in the change of life. It has been my habit in all my cases to ask myself three questions: Is it a mortal case? Is it incurable by other known resources of the art? Is it curable by a change of life? If all these questions be properly answered, then the operation is a proper one. I foresaw, at the outset, that the conditions which must necessarily call for this operation cover a large part of the whole field of gynæcological practice. They must be very variable under different circumstances."

The first class of cases in which the operation is advised is where there is an absence of the uterus, with more or less irregular ovulation, and a violent nervousness of the system. In these cases, remarks the author, "there is no means of supplying an uterus to give rise to the monthly supply of blood, and the only resource is to go to the other end of the case and extirpate the ovaries, which are simply surplusage in the system".

The second class of cases is where there is a complete occlusion of the whole utero-vaginal canal, attended with violent, nervous, or vascular perturbations.

A third class referred to consists of cases of menstrual mania, or ovarian mania, where reason becomes dethroned by reason of violent perturbations attendant upon this stoppage of the menstruation.

A fourth class of cases is where ovarian epilepsy is found. In another class, there is a pernicious amenorrhœa that is utterly destroying the life of the patient. Interstitial fibroid tumours, not amenable to any of the ordinary resources of art, afford another justification for operating in certain cases.

Dr. Battey closes by calling attention to a class of cases in which no one as yet has proposed this operation. In cases of contracted pelvis, where abdominal section is required, he thinks it rational and proper to ligate and remove the ovaries. This procedure secures the patient from the possibility of a future necessity for the same operation. Dr. Battey points out the abuses which are likely to result from the too frequent employment of this operation; and, by thus defining the classes of cases in which it is admissible, suggests a timely warning against a growing excess of zeal in its favour. Spaying is an operation attended, apparently, with comparatively slight risk to life. Its results offer great hope to a large number of women who suffer from ovarian disorders, attended with nervous manifestations of the most distressing character. Many a female would gladly accept a menopause thus induced, rather than forego the delay of a functional subsidence.

Unscrupulous men, however, it is pointed out, may find in this operation a lucrative field for practice. It is open to great abuse, and its application should be guarded with great prudence by the profession. Its abuse will certainly be looked upon with great disfavour by the profession in England.

Dr. Maclean having resigned his post at Luxor, Mr. J. H. Bartlett, L.R.C.P., M.R.C.S., will practise there this winter.

The nomination made by the Academy of Sciences at Berlin of M. J. B. Dumas, of the French Institute, as a foreign member of the Academy, has been sanctioned by the Emperor of Germany.

His Royal Highness the Duke of Connaught, on Saturday last, laid the foundation stone of the new North London Hospital for Consumption, at Mount Vernon, Hampstead.

At the recent annual meeting of the Medical Society of St. Petersburg, Professor Botkin was elected President, and Professor Slaviansky Vice-President, and Professor Chudnovski Secretary.

A new form of mental disease (pediculophobia, or fear of lice) is described in the *Maryland Medical Journal*. The writer, Dr. Morris, is constrained to believe that the ailment not unfrequently terminates in hopeless insanity.

Dr. S. Weir Mitchell, well-known as one of the ablest of American physicians, finds time to indulge in story writing in the midst of his busy life. J. B. Lippincott and Co., have just published three of his stories in one volume under the title of *Hephzibah Guinness*.

We publish several letters from correspondents, who are anxious to see steps taken to bring about some reform in the management of Guy's Hospital. It is plain that the staff are not, at the present moment, in the position which they ought to hold; and the management of the hospital is at present not such as to be satisfactory, either in principle or in practice. The suggestions of Mr. Holmes and Mr. Rendle both point to practical proceedings, of which we hope that more will be heard. The wording of the resolution of the governors, in which they ungraciously withdrew their demand for the resignation of Dr. Habershon and Mr. Cooper Forster, was as offensive as could well be devised; it was difficult to adopt a more defiant course than that which the governors adopted, and it remains to be seen whether events will justify their attitude.

An inquest held this week, on a case in which a nurse at Guy's received, dressed, and dismissed a patient applying with a scalp-wound, without the patient having been seen either by the dresser or the house-surgeon, having ended fatally, the injury being fracture of the skull, the strong expressions of indignation by the coroner and the jury have not led to any satisfactory conclusion. She never acknowledged that she was at fault. The matron did not appear in court to explain what were her instructions, and how far she was responsible for the course pursued by the nurse, who is under her orders. How does it happen that casualty patients are seen by nurses at Guy's Hospital? Where does a nurse get the idea that she is competent to diagnose an injury of the skull, or to decide how it is to be attended to? Is it not the duty of the matron—especially under the new system—to give her nurses such a sense of their duty of subordination, as to make such an assumption of quasi-medical knowledge impossible? Under the "old system", nurses were directly under the orders of the house-surgeon or medical staff, and did what they were told. But who is to tell them now, if the house-surgeon have no authority, and the nurse has no code of instructions?

In the *Annales de Dermatologie et de Syphiligraphie*, M. Vidal mentions that he has twice seen an eruption of urticaria, lasting nearly forty-eight hours, follow capillary puncture of hydatid cysts of the liver.

The New Jersey State Dental Society has decided that its members should refrain from the use of anæsthetics, whenever possible; and under no circumstances administer them before ascertaining positively that the patient is in good physical condition.

Dr. William A. Hammond, of New York, offers a prize of five thousand dollars for the best original essay on the "Functions of the Optic Thalamus in Man," to be given under the auspices of the American Neurological Association.

A complaint has been made, at the meeting of the Isle of Wight sanitary authorities, that the River Yar, from which several villages are supplied with water, was being polluted with sewage from farmyards and houses along its banks, and the authorities were asked to take steps to prevent a continuance of the nuisance.

Mr. George Turner, the energetic health-officer of Portsmouth, and well known for his painstaking efforts to throw light upon the mystery of summer infantile diarrhœa, has been elected Medical Officer of Health for the combined district in Hertfordshire, vacated by Dr. Ogle on his appointment as Superintendent of Statistics at the General Register Office.

The session of the Epidemiological Society of London will be opened on Wednesday evening, November 3rd, at 8 P.M., in the Council Room of University College, when the President (Sir Joseph Fayrer) will deliver an inaugural address; and Mr. Netten Radcliffe will read a paper "On certain appearances of Cholera, since 1873, in the countries lying between India and Europe".

It will have been seen from the Report of the Committee of Council, that it has been decided to hold the next annual meeting of the Association at Ryde, in the Isle of Wight, under the presidency of Mr. Barrow, to whose exertions it is mainly due that the invitation has been forwarded. Mr. Barrow holds a respected position in the profession, and has been several times mayor of Ryde. The subject has been laid before the Town Council at their last meeting, and there is every reason to believe that the local authorities will do their best to welcome the Association to this pleasant marine residence.

The sudden death of Dr. Louis Presse, from an attack of angina pectoris is announced. M. Presse was distinguished as a *littérateur* and a journalist: his articles published in the *Revue des deux Mondes* acquired a great reputation. He also wrote, in the *Gazette Médicale*, a series of *feuilletons*, which have been republished, in two volumes, under the title *Médecine et Médecins*. He was a member of the Paris Academy of Medicine.

QUEEN'S COLLEGE, BIRMINGHAM.

The report of the Council of the College for the past academical year, just issued, is very satisfactory. In the medical department, ninety-two students have attended the classes. The Queen's and Sydenham scholarships, founded last year, have proved useful in attracting to the College exceptionally good students, and in enabling the Council to offer to the orphan sons of medical practitioners unusual advantages in professional education. The University of Edinburgh has recognised the courses of lectures on anatomy and chemistry delivered in the College as qualifying for the degrees of the University. By this recognition, the College is placed in a much more favourable position than before; students can now spend in Birmingham two of the four years of study required for the Edinburgh degree. In view of recent legislation establishing the registration of dentists, steps have been taken for forming a complete dental school in connection with the College. Arrangements have been made between the College, the Clinical Board representing the General and Queen's Hospitals, and the Dental Hospital, for instituting the new courses of instruction required by the licensing bodies granting dental diplomas. The finances of the College are flourishing; the institution has paid its way during the year; and the surplus income has yielded a larger sum than ever before for division among the medical professors.

TREASURE-TROVE OF THE DISSECTING ROOM.

Professor Agnew reports that he saw, in the dissecting room of the Philadelphia School of Anatomy, a female subject, afterwards learned to have been insane, in whose intestinal canal was found three reels of cotton partially unwound; two roller bandages, one of them 2½ inches wide and one inch thick, the other was partially unrolled, one end being in the ileum, the other in the rectum; a number of skeins of thread, a quantity being packed tightly in the cæcum; and finally a pair of braces.

SMALL-POX IN LONDON.

The fatal cases of small-pox in London, which had been 2, 5, and 6 in the three preceding weeks, further rose to 7 last week. Five of the 7 had resided in East London; and it may be noted that 10 of the 25 deaths from small-pox registered in London, during the past five weeks, have been of Bethnal Green residents. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined from 116 to 85 in the four preceding weeks, further fell to 77 on Saturday last; 12 new cases of small-pox were admitted to these hospitals during the week, against 14 and 16 in the two previous weeks.

VACCINATION STATIONS.

The guardians of the East and West Flegg Incorporation seem to be particularly obtuse as to the advantages of vaccination stations, forgetting the much greater efficiency in the operation which is possible when the vaccinator is able to make a choice of lymph from a number of children assembled together, instead of having to vaccinate individual children haphazard, at no regular times, and with stored lymph. For

a number of years, the vaccination arrangements of this incorporation have been on a very unsatisfactory footing. The contracts of the public vaccinator have not been properly observed, and, as a consequence, the Government inspector reports that "great irregularity prevails; the vaccination is in great measure domiciliary; its quality is not good, and its quantity deficient". The guardians seem to think, however, that no improvements in the present system are possible, and have resolved to write to the Local Government Board that the inspector's remarks "are quite uncalled for, and that the vaccination is properly carried out". Perhaps, when the Government auditor surcharges some of the members for the payments they have sanctioned for vaccinations performed contrary to the laws and regulations, the guardians may think differently of the aspect of affairs.

GUY'S HOSPITAL.

THE course pursued by the Guy's Hospital nurse in dressing, on her own responsibility, the scalp-wound of a patient (who subsequently died from fracture of the skull, which she had not recognised), appears not to be, as might be supposed from the evidence at the inquest, an isolated example of forgetfulness of duty or omission of instructions. We have before us details of the case of a patient who applied lately at another metropolitan hospital with a scalp-wound over the vertex. The wound was "clean cut", and did not extend deep enough to expose the bone; it was about one inch long. The surrounding hair had been clipped off, apparently preparatory to the application of a surgical dressing. The statement of the man (who was sober) was to the effect that he had gone to Guy's and asked to see the house-surgeon or dresser; but, before this, the nurse had begun to cut the hair from around the wound. The nurse's reply was, "You can't see him"; upon which he left the hospital and came to St. Thomas's, where he was attended to. This incident suffices to show that the distressing scandal exposed at this inquest is a logical sequence of the system by which the nursing at Guy's has been made to supersede and override the responsibility of the medical staff, instead of being its docile and skilled instrument. The nurse in question is, we believe, one of the "Leicester nurses" introduced by the matron as being trained upon the system which she carried out at the hospital of that town prior to her appointment at Guy's Hospital. Nothing could more clearly justify the demand of the staff that the system should be abolished root and branch.

EMPLOYMENT OF DISCHARGED HOSPITAL PATIENTS.

THE Order of St. John of Jerusalem in England, in addition to their hospitaller work, but still as part of their sphere of operations, have determined upon making an attempt to carry out a scheme by which a certain class of deserving patients (a class, too, who must, without such assistance, necessarily become recipients of eleemosynary relief, and thus add to the burden borne by the community) shall, after their discharge from the hospitals, receive some practical aid to enable them to earn a respectable livelihood. The subject was recently brought under the notice of the order by one of its honorary associates, Dr. Sieveking, whose views are endorsed by a considerable number of the principal medical officers of the London hospitals; and as it appears probable that such a proposal would be universally countenanced by the medical profession, it is now thought to be desirable to bring the subject more prominently before the general public, and particularly to interest employers of labour in a scheme which, without their co-operation, cannot be brought to a satisfactory issue. To meet such a want as that indicated—one well known by the medical profession to be a real, and not a sentimental one—it has been suggested that there are doubtless many firms, companies, offices, etc, which would be both able and willing to assist in supplying a remedy, by employing such discharged patients, of established character, in various light capacities, as messengers, hall-porters, gate-keepers, or in charge of chambers and the like, for instance, for which their services would be especially available. It has been decided that the organisation of details shall be placed under the control of the Central Executive Committee of the St. John Ambulance Association, the best prospect of success being offered by the agency of its numerous centres and local committees. Many leading physicians and surgeons—especially those connected with the hospitals, whose assistance for the development of the plan is indispensable—have, as already stated, expressed a high opinion of the practical value of the suggestion; and it can only be hoped that this new branch of hospitaller work may meet with that support and encouragement, notably from employers, which will enable its benevolent promoters to confer on suffering humanity the benefit they have in view. As soon as sufficient means—which the numerous other calls upon the funds of the order prevent it, at present, from supplying—shall be forthcoming, it is intended to open a register for the enrolment of the names of those who may be willing to employ discharged hospital patients; and any communications from such firms or gentlemen will be gladly received by the Secretary of the Order of St. John, Sir Edmund Lechmere, Bart., M.P., at St. John's Gate, Clerkenwell, E.C.

THE CENSUS.

THE census of England will be taken by the Registrar-General (Sir Brydges P. Henniker), assisted by Dr. W. Ogle, Mr. W. Clode, and others. An office has been taken in Craig's Court, Whitehall, and the country will be mapped out into 35,000 districts. Instructions will be prepared for over 30,000 officials, and some million schedules issued. There is no doubt that the census will be taken efficiently; nevertheless, it would not be out of place to notice that it will be taken this time by two officers who have absolutely no previous statistical experience, and that they will have largely to depend upon the permanent staff. The one great objection to the appointment of Sir Brydges P. Henniker was that the census would, under his auspices, have to be taken without any efficient knowledge or experience to enable him, or his immediate subordinate (Dr. Ogle), to do more than rely upon the experience of others.

DRUNK OR DYING?

DR. HARDWICKE, coroner for Central Middlesex, held an inquest some days ago concerning the death of Caroline Hampson, aged 39. The deceased, who was described by her husband as a very abstemious woman, was arrested for drunkenness, and placed in a cell at the Stoke Newington Station. It was alleged, however, that the police had mistaken paralysis for intoxication, and had accelerated the death of the woman by allowing her to lie on the cold stone floor of the cell. The acting divisional surgeon certified that she was under the influence of drink; but Dr. Miller, who made the *post mortem* examination, stated that death was due to paralysis and rupture of a blood-vessel on the brain, which the divisional surgeon was of opinion happened after deceased was visited at the police-station. After some deliberation, the jury returned a verdict of "Death from natural causes", adding their opinion that there was no blame to be attached to the police, and that the deceased was an abstemious woman. The police-surgeon in this case appears to have made a rapid examination, and to have come to an erroneous conclusion. We have already many times pointed out the extreme difficulty of diagnosing certain cases of partial paralysis from cases of drunkenness; but, even with all possible care, it is certain that mistakes will sometimes be made. It is, however, clearly most desirable for police-surgeons to bear in mind the facility with which their judgment may be deceived, and in all cases to give the persons brought under their notice the benefit of the doubt.

A NEW DISPENSARY FOR SEAMEN.

A DISPENSARY for the relief of *bonâ fide* seamen only, who have served at sea within three months of the date of their application for relief, has been opened at Well Street, London Docks, adjacent to the Sailors' Home. This dispensary is under the management of the authorities of the Dreadnought Seamen's Hospital at Greenwich, and patients requiring hospital treatment will be sent thither from the dispensary in a special conveyance. The movement has received the warm support of the directors of the Sailors' Home, who have recognised the want of this dispensary for many years, because they hope it will remove the evil of

seamen resorting to quacks and unqualified practitioners, at the risk of health and a waste of money. The dispensary is entirely free to sailors of all nations, and is under the charge of Mr. G. H. Makins, of St. Thomas's Hospital, who has been elected dispensary surgeon.

THE VEGETARIAN SOCIETY.

THE Vegetarian Society held its annual meeting at Manchester on Saturday. A paper by Professor F. W. Newman was read, which contained a suggestion for the purchase of estates to be colonised by vegetarian teetotallers and non-smokers. At a soirée in the evening the chair was taken by Professor J. E. B. Mayor, Senior Fellow of St. John's College, Cambridge, who dwelt upon the advantages to be derived from the practice of vegetable diet, as shown conclusively by the health and vigour of some of their prominent members, in spite of the fatigues and anxieties of life. Mr. W. Hoyle, of Tottington, said that he had been for thirty-three years a vegetarian, and his conviction in favour of a vegetable in place of a mixed diet had been strengthened year by year.

PREVENTION OF FOG AND SMOKE.

THE subject of the prevention of fog and smoke is again seriously attracting public attention in the metropolis. We are threatened again this year with a visitation of thick fogs similar to those which caused so much distress and loss of life last year. At the close of last session, a committee of the National Health Society was formed, at the suggestion of Mr. Ernest Hart, chairman of the society, with the assistance of a society known as the Kyrle Society, which has somewhat similar objects in relation to health, together with objects of a more æsthetic character. The assistance was then sought of Dr. Siemens, Captain Galton, Dr. Frankland, Professor Chandler Roberts, F.R.S., and others, towards taking steps for obtaining a practical solution of the question. This year, Dr. Alfred Carpenter has, in some excellent letters to the *Times*, again called attention to the subject; and a committee of the National Health Society has held several meetings, at which important suggestions have been made by practical persons. A series of trials are being organised for the purpose of investigating the applicability of various kinds of anthracite smokeless coal for use in the open fires and furnaces in great cities. A number of inventions have been submitted, which have been referred to a committee of experts. Dr. Carpenter will also, in December next, deliver a lecture on the subject at the Society of Arts. It is hoped, in the course of the ensuing session, that steps will be taken towards bringing the matter, in a satisfactory and practical shape, before the attention of the Government.

IMPORTANT NOTICE AS TO REGISTRATION.

A CURIOUS but important notice on the subject of medical registration appears in our columns to-day from the Medical Council Office, calling upon every medical practitioner to send immediate notice of any change in his address *to the branch registrar by whom he was originally registered*, otherwise he loses all the benefits of registration before the law. Hitherto notice need only be sent to the chief registrar at the Council Office; but this is now changed, by direction of the lawyers, after much debate.

SCARLATINA AND AMERICAN HAMS.

WE have been favoured by Mr. J. Makinson Fox with the following particulars as to a number of cases of so-called "scarlatina" occurring in his district, in supposed relation with the eating of some American ham. Coming so soon after the occurrence at Welbeck, these cases raise the suspicion whether there may not be more connection between the eating of such imported hams and the occurrence of disease than is commonly supposed. Mr. Fox states that two adult parents and six children, of varying ages, were all attacked, within forty-eight hours one of another, with the symptoms of scarlet fever, preceded, however, by purging and general abdominal disturbance. The house in which these cases occurred being small, an adjoining house was taken. The cases were thus favourably placed as regards ventilation; and the services of two nurses from Chester were secured. Mr. Fox did not see the medical man in attendance; but the nurses said the throat and the skin in all the cases bore the appearance of genuine scarlet fever. None of the cases were fatal, all those ill having progressed favourably. The only person in the household unattacked was an infant of about eight months, who alone did not partake of the American ham. All ate of the ham, cooked in the ordinary way, the day before the first cases began. So sure were they that the ham was the cause of mischief, that what was left of the purchase was destroyed; and Mr. Fox tried in vain to procure some of it. It was stated to be American ham bought in the usual way, and no complaints were made by others who had purchased it. Scarlet fever was in the district, but not in the immediate neighbourhood, and no trace could be discovered of connection between the household attacked and any known cases of scarlet fever. It must be added that the sanitary arrangements of the house (such as water and the like) were bad.

THE GERMAN PHARMACOPŒIA.

IT is announced that the German Government has appointed a numerous commission, which has already commenced its sittings at Berlin, for the revision of the German Pharmacopœia. The commission consists of twenty-seven members, of whom sixteen are professors from various universities, five are apothecaries, and the remaining six are eminent practising physicians or surgeons. The Prussian War Office has deputed two military doctors, and a military apothecary to attend the sittings. Dr. Schmidt, professor of pharmacy at the University of Halle, is secretary to the commission, which is presided over by Privy Councillor Dr. Struck, director of the Imperial Sanitary Department.

NEW TEST FOR TRICHINÆ.

A HOLSTEIN peasant, uninstructed in microscopical research, and not possessing the requisite instruments of precision, has devised for himself a new test for the presence of trichinæ in pork. When he killed a pig, he was careful to send a portion of it—a ham or a sausage—to his pastor, and then waited the consequences for fourteen days. If his pastor remained healthy, then he felt perfectly easy in his mind, and well assured that his pig fulfilled the requisite conditions of soundness of food, and he proceeded to dispose of it accordingly in his own family. This ingenious method of research has not been considered satisfactory by the district physician.

A SINGULAR CONCATENATION OF MISFORTUNES.

THE death of a Dr. Desiré Voulet of Saillans is announced under the following circumstances. He was called in by a midwife to a woman in childbed; and, whilst assisting in the delivery, had an apoplectic fit. The midwife fainted, and the poor patient died of hæmorrhage from want of timely assistance. It may be noted that the unfortunate Dr. Voulet was eighty years of age!

ANGELS IN THE HOUSE.

IN the last fasciculus of the *Bulletins de la Société d'Anthropologie de Paris* (tome iii, fasc. 2), M. Bertillon gives the results of his comparative analyses of the statistical tables of suicides for France and Sweden. These results show singular accord between the two countries, and the author considers himself justified in maintaining that they establish the two following laws. 1. Widowers commit suicide more frequently than married men. 2. The existence and presence in the house of children diminishes the inclination to suicide both in men and in women.

POPULAR MEDICINE.

MR. STEWART, the Inspector of the Metropolitan District of Greenwich, in his report, gives the following answers given by the children in reply to some simple questions on domestic economy set to them. "Infections are brought on by bad smells such as small pox measels scarlet fever Glass pox SC they are brought on by bad drainerges suers, they must be well ventolated." "Infection disease are caught by touching such as charcoal chlorid of lime, &C." "Measles Feaver . . . . are

called disinfectionous because they are catching." "Fainted. If a person as fainted take her out in the open air lay her down with her head. And do the clothing round the neck and dashed cold water the face and hand and put smelling saults to her nose." The children in one school wrote answers as follows: "Degestion is paines in the head, paines in the stom-ach bad tempers." "From digestion comes consumption, information head ache neuralgia." It would certainly be desirable, if any real benefit is to accrue from this kind of teaching, that the questions should be clearly explained to the children, so that they may carry away some definite notion of the information it is desired to convey to them.

DEATH FROM CHLOROFORM.

AN inquest was held on Friday, October 8th, by Mr. Coroner Ball, on a girl aged 15, who was brought to the Cirencester Cottage Hospital for operation for strabismus. Mr. O. H. Fowler testified that he considered her in every respect a fit subject for chloroform. The following are the most important points given in the course of the evidence.

Mr. Fowler deposed: On Wednesday, I fixed the operation to take place, and Dr. Wilson kindly consented to assist me. There were present myself, Dr. Wilson, Miss Murray (the matron), and my assistant, Mr. Mart. Dr. Wilson undertook to administer the chloroform, and it was administered on lint in the ordinary way. When Dr. Wilson told me the patient was under the influence of chloroform, about five minutes after it had been administered, I operated on the left eye, the operation taking about two minutes. I then desired the patient to recover consciousness, in order to see if the other eye required to be operated on. While she was coming round, Dr. Wilson and I left the room for about eight minutes, leaving the patient under the charge of Miss Murray and Mr. Mart. On returning, I found the girl was breathing steadily; but I saw that, to make the operation successful, I must perform on the other eye. In this opinion, Dr. Wilson concurred. Dr. Wilson again administered the chloroform; and, when he pronounced her to be again under its influence, I proceeded to operate on the right eye. I had scarcely begun to do so, when I noticed that she was looking very pale, and Dr. Wilson said she did not breathe, or words to that effect. I, of course, immediately desisted, and aided Dr. Wilson in using every effort to save her life. We applied the usual remedies, and continued our efforts for half an hour. But it was hopeless, and she died from syncope of the heart.

Mr. Charles William Wilson deposed: I am a surgeon practising in Cirencester. I did not see the deceased before the day in question, when I was asked by Mr. Fowler to assist him in the operation by administering the chloroform. The first time I administered about four drachms, a very small quantity; and a considerably less quantity was administered the second time. She took it very quietly indeed, and there was no struggling at all. I carefully watched her pulse and her general appearance. After Mr. Fowler had commenced the second operation, I noticed that the breathing and the pulse were affected. The operation was suspended at once, and we both used our utmost endeavours to restore animation, continuing our efforts for half an hour or more. I have frequently administered chloroform. I did not at all regard the absence of struggling as a serious sign, as struggling is by no means the rule.

The jury expressed themselves satisfied with the evidence, and returned a verdict of "Death by misadventure".

The chloroform appears to have been administered with due skill and care, and the patient was a fit subject. Seeing, however, the lamentable frequence of fatalities following chloroform anæsthesia, and the generally admitted greater safety of ether, we think it right to call attention yet again to the advisability of preferring that which is held to be the less dangerous anæsthetic.

ATROPIA IN CHLOROFORM-ANÆSTHESIA.

IN reference to the communication on the above subject by Mr. E. A. Schäfer, a correspondent states that the subject has been for some years worked out by Professor T. R. Fraser of Edinburgh, who has shown atropia to be a cardiac stimulant, advisable when chloroform is to be given. It stimulates the heart, not only indirectly, by lowering the conductivity of the cardiac terminations of the vagi, and thus, of course, diminishing their inhibitory power, but also directly by stimulating the intramural motor ganglia of the heart; and possibly, also, by raising the excitability of the accelerator nerve to the heart from the cervical sympathetic ganglia; and perhaps it may even stimulate the cardio-motor centres in the medulla oblongata. Dr. Fraser considers it advisable to combine with the atropia a little morphia, say 1-120th to 1-60th of a grain of sulphate of atropia, *i.e.*, one to two minims of liquor atropiæ sulphatis (*B. P.*), and one-twelfth to one-eighth of a grain of acetate or hydrochlorate of morphia. These are injected about fifteen or twenty minutes before the administration of chloroform is begun; and by this means, (1) not only is the patient in a less nervous state when the inhalation is commenced, but (2) less chloroform is required, and, (3) moreover, a very objectionable evil is got rid of, or, at all events, ameliorated, viz., the emesis which is apt to occur with chloroform. In the cases in which our correspondent has seen this method followed, there has been no vomiting whatever, although in some the inhalation was considerably prolonged.

EXCISION OF THE CUBOID BONE.

THE excision of the cuboid bone in confirmed and inveterate club-foot, advocated by Mr. Davy in our columns, has been recently practised successfully by Poinset in a case which he related to the Society of Surgery on the 28th July. This was a case of left talipes varo-equinus in a young girl, on whom an operation was performed, at the age of eight months. The foot was placed in a suitable apparatus; this, however, having been broken some time afterwards, was not replaced, and the deformity was reproduced. Subsequently, at the age of twelve years, a subcutaneous section of the tendons, which kept the foot in its abnormal condition, was performed; but this operation not having succeeded in removing the deformity, M. Poinset decided on performing the extraction of the cuboid bone; the foot was then placed on a gutter. As the result of this operation, which was performed under antiseptic precautions, complete cure was obtained; some months later, walking was easy, and the foot in a good position.

CASES OF SUNSTROKE.

A BOMBAY paper says that the troops who went out in the *Euphrates*, and arrived at Kurrachee on the 4th of September, experienced extremely hot weather in the Red Sea, and, notwithstanding all precautions, had no fewer than seven cases of sunstroke, three among the sailors and four among the soldiers. It was fortunate that the supply of ice on board was ample, as one man entirely owed his recovery to the use of ice. Had the passage in the Red Sea lasted one day longer, many more cases would probably have occurred. Among medical comforts, ice-machines are now taking a prominent part, especially in the case where bodies of troops are despatched to hot climates. The subject is well worth the attention of the heads of our medical departments.

SCOTLAND.

DR. F. BUCHANAN WHITE of Perth has been appointed one of the examiners for graduation in medicine in connection with Aberdeen University.

EDINBURGH UNIVERSITY COURT.

THE Edinburgh University Court met on Monday, October 18th; Principal Sir Alexander Grant, Bart., occupied the chair; there were also present Lord Curriehill, Mr. Clark, Sir Robert Christison, Bart., and Professor Campbell Fraser. *Inter alia*, Mr. David Lister Shand, W. S. and Mr. John Small, M.A., were appointed assistant-registrars for the revisal, in December next, of the Register of the General Council for 1881. The appointment of the following class assistants by their respective professors were approved: Dr. D. J. Cunningham, Anatomy; and Dr. A. P. Aitken and Dr. R. M. Morrison, Chemistry. Mr. W. Dittmar, Ph.D., was reappointed Examiner in Chemistry for one year from the 12th instant. Dr. Byrom Bramwell was recognised as a lecturer on practice of physic in Edinburgh, whose lectures should qualify for graduation in medicine in the University, in terms of

Ordnance No. 8, section vi (4). It was ordered to be published that the additional examinership in pathology would fall vacant at the end of the current year. The class returns for 1879-80 were received from the Senatus, and remitted to a Committee.

INFECTIOUS DISEASES.

THE Aberdeen Town Council have adopted a clause for the new Municipal Bill they are preparing, ordaining that all medical practitioners shall give notice to the local authority of every case of the occurrence of infectious disease coming under their observation, a fee of two shillings and sixpence being paid for each case when the report shall be found correct, and the penalty of forty shillings being exigible for every case known to a doctor, but not reported.

THE HEALTH OF GLASGOW.

FROM the report just issued by the medical officer of health for the fortnight ending October 16th, it appears that the death-rate was 20 per 1,000 living. The mean temperature during the fortnight was 46.1° Fahr., with no rainfall. The number of deaths from pulmonary diseases was 132, in place of 100 during the previous fortnight, representing a death-rate of 5.8 per 1,000, and constituting 29 per cent. of the total deaths. The number of deaths from fever was 17, in place of 14 in the previous fortnight, 14 being from enteric fever, and 3 from typhus. The number of deaths from infectious diseases of children was 52, viz., 34 from scarlet fever, 12 from whooping-cough, and 6 from measles. The broad features of the fortnight's mortality are a decided increase of the fatality of diseases of the lungs, and a slight decrease in the fatality of scarlet fever, while the fevers are stationary. There has been a very marked decrease in the number of cases of enteric fever, but scarlet fever has become disseminated over most of the districts of the town, and is no longer confined to the eastern district. There are at present in the hospital, Belvidere, 253 cases of scarlet fever, 178 of enteric fever, 35 of typhus, and 20 of measles—in all 486, as compared with 459 a fortnight ago.

OPENING OF THE MEDICAL CLASSES IN GLASGOW.

AT the University, the winter session of the Faculties of Law and Medicine was opened on the 26th instant by an address from Professor Cleland, on "Evolution"; while, at Anderson's College, the opening address was given by Professor Dittmar, who took for his subject "Respiration".

CASE OF POISONING BY CARBOLIC ACID.

IN a recent number of the JOURNAL, a notice occurred of the death of a patient in the Greenock Infirmary from poisoning by carbolic acid, administered instead of black-draught. Now we have to report a similar unfortunate accident in the Glasgow Belvidere Hospital for fever. On the 20th inst., a woman, aged 40, was admitted to the hospital suffering from typhus fever, and was placed in a ward which was under the charge of a young nurse who had only joined the hospital in that capacity eight days previously. A day or two after the patient's admission, the medical officer in charge ordered her a dose of castor-oil, which the nurse proceeded soon afterwards to administer; but, unhappily and inadvertently, she took from the shelf a wrong bottle, and gave the patient a tablespoonful of carbolic acid instead of the medicine prescribed. Before anything effective could be done in the way of remedy, the unfortunate woman expired. Such cases as the above point to the necessity of using proper safety-bottles for poisonous substances, and not having them mixed indiscriminately with other medicines.

ABERDEEN ROYAL INFIRMARY.

PROFESSOR PIRRIE of Aberdeen has resigned his appointment as Senior Surgeon to the Aberdeen Royal Infirmary. At a special meeting of the managers held on Monday, the clerk read the letter intimating Dr. Pirrie's resignation, which was on the ground of insufficient time for the discharge of the duties of hospital duties. Various managers referred in eulogistic terms to the faithful services rendered by Dr. Pirrie to the Infirmary, and as a teacher. It was unanimously resolved that Dr. Pirrie be elected a consulting surgeon for life to the Infirmary. Dr. Pirrie's retirement has led to an upward movement among his younger colleagues, Dr. Alexander Ogston and Dr. Will being advanced to the positions of first and second senior surgeons respectively; while Dr. Garden, the junior surgeon, becomes the third senior surgeon. No appointment was made to the office of junior surgeon, the Committee of Management having been requested to report on the subject on December 6th.

THE REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending October 16th, it appears that the death-rate in the eight principal towns was 22.4 per 1000 of estimated population. This rate is 5.8 above that for the corresponding week of last year, and 2.8 above that for the previous week of the present year. The lowest mortality was recorded in Paisley—viz., 19.1 per 1000; and the highest in Edinburgh—viz., 27.4 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.4 per 1000, being 0.7 above the rate for last week. An increase occurred in the number of deaths from scarlatina in Edinburgh, and also of those from scarlatina and ordinary fever in Glasgow. The deaths from acute diseases of the chest were 98, being 32 more than in the previous week. The mean temperature was 46.5, being 0.8 above that of the preceding week, and 2.1 above that of the corresponding week of last year.

RECTORSHIP OF ST. ANDREW'S UNIVERSITY.

IT is said that Sir Theodore Martin is to be nominated for the Rectorship of this University, about to become vacant by the expiration of the term of office of Lord Selborne. Sir Theodore's nomination is based on literary grounds only, but a political character is more or less given to the election by the Liberal section of the university bringing forward Mr. E. A. Freeman, the historian, as a candidate. Both gentlemen have given their consent for nomination.

GLASGOW ROYAL INFIRMARY DORCAS SOCIETY.

DURING the past year, the Glasgow Royal Infirmary Dorcas Society has supplied 31 patients with artificial limbs, and 607 with clothing, while it has also provided flowers for the wards. The subscriptions amounted, during the year, to about £550, of which a balance still remains, after clearing all expenses. At the tenth annual meeting, held on Monday, the Lord Provost, Drs. Orr and Cameron, and other gentlemen, testified to the great usefulness of the Society in completing the benefits conferred by that Infirmary.

EDINBURGH SCHOOL OF MEDICINE.

THE winter session was opened on Monday by an address to the students, delivered by Dr. Francis W. Moinet, Lecturer on Materia Medica and Therapeutics in the School. The President of the Royal College of Surgeons occupied the chair. The lecturer directed attention to the responsibilities of the profession, to the necessity for a well balanced study of each division of medical knowledge, and to the important bearing the profession was assuming as to the prevention of disease, whether produced by defective sanitation, or indulgence in alcohol or narcotics. Dr. Moinet also referred to the respective antiquities and positions of the University of Edinburgh and of the extramural school. The lecture was well received, and the lecturer accorded a vote of thanks.

UNIVERSITY OF EDINBURGH.

THE winter session began on Tuesday, October 26th. The principal's opening address is now more honoured in the breach than in the observance; nor is this much of a loss to medical students, considering how small a portion of crumbs fell from the principal's oratorical table to their share. The class of pathology will, owing to the regretted illness of Professor Sanders, be conducted by Mr. D. J. Hamilton, M.B., etc., Pathologist to the Royal Infirmary, and Demonstrator of Practical Pathology in the University. Professor Sanders' share of the course of clinical medicine will be divided among his colleagues; the

opening lecture on clinical medicine being delivered by Professor Grainger Stewart, on Friday, in the clinical surgery class-room (the clinical medicine class having to meet there in consequence of the new class-room, now being built, not being ready yet). Professor Turner has managed to get his new lecture-room ready for occupation, and delivered there, on Wednesday, his opening lecture, the first within the walls of the new Edinburgh University Buildings.

SCARCITY OF WATER IN SCOTLAND.

So long has the dry weather continued in Scotland, that, in the Western Lowlands, some places are seriously threatened with a water famine, such as Paisley, Greenock, and Dumbarton; in the latter place, the supply is restricted to the hours from 7 A.M. till 1 P.M. The smaller seaside villages, such as Largs, are suffering severely, and fears are entertained lest the scarcity should lead to an increase of existing epidemic disorders.

COTTAGE HOMES FOR INFIRM CHILDREN.

AT the sixth annual meeting of the Association for Aiding Infirm Children, at East Park, Glasgow, held on Monday at the Homes, it was stated in the report that, at the beginning of the year, there were thirty-one children in the home; and that, since then, twenty-five have been admitted, eleven children have been dismissed greatly benefited, while four have died. Financially, the report is satisfactory also, the income having been £1,159, and the expenditure £1,030.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS FOR SEPTEMBER.

DURING the month of September, there were registered in the eight principal Scotch towns 2,010 deaths, which were very evenly divided as to sex, 1,003 being males, and 1,007 females. Allowing for increase of population, this is 248 under the average of the same month during the previous ten years. The relative mortalities were, per 1,000 of population: Dundee and Aberdeen, 16; Glasgow, 18; Edinburgh and Greenock, 20; Leith, 22; Paisley and Perth, 23. Of children under five years of age, 940 died, equal to 46.8 per cent. of the total mortality; the lowest percentage being in Perth, with 28; and the highest in Greenock, with 57. Zymotic diseases caused 540 deaths, or 26.9 per cent. of the entire mortality; but this rate was, owing to scarlet fever and diarrhœa, considerably exceeded in Glasgow, Edinburgh, and Leith. Diarrhœa caused 8.1 per cent. of all the deaths. In Edinburgh, 13.4 per cent. of the mortality was due to scarlet fever. Of 53 deaths from fevers, 4 were registered as typhus, 48 as enteric, and 1 as simple continued fever. Whooping-cough caused 59, diphtheria 35, croup 27, measles 26, cholera (?) 18, and dysentery 6 deaths. Apoplexy and paralysis caused 104 deaths, cardiac diseases 94, hydrocephalus 52, and premature birth debility 41. Phthisis pulmonalis contributed 10 per cent. of all the deaths; other inflammatory affections of the respiratory organs (not including whooping-cough and croup) caused 13.4 per cent. Three females were over ninety years of age. During the month, the births of 3,249 children were registered, of whom 1,662 were males, and 1,587 were females. The mean barometric pressure was greater by 0.070 inch, the mean temperature greater by 2.7°, the mean humidity greater by 1, the rain-depth less by 0.67 inch, and the wind-pressure less by 0.29 lb., than the average of the same month during the last twenty-three years. The highest mean temperature was recorded at Dundee, and the lowest at Greenock and Leith. The greatest rainfall was at Aberdeen, and the least at Edinburgh. The prevailing winds were west and south-west.

AN ENDEMIC ON THE CLYDE.

DR. FRANCIS HENDERSON of Helensburgh, in an elaborate article in the *Glasgow Medical Journal*, discusses an endemic prevalence of influenza in that district. His summary conclusions are these. For a number of years past, a form of illness has constantly prevailed, to a greater or less extent, in that locality, which falls within the usual definition of influenza; and, like epidemic influenza, it has exhibited various phases, according to the portion of the nervous system, or the part of the mucous membrane, upon which the effects of the specific virus chiefly fell. While the majority of the cases observed would rank as cases of ordinary influenza, a very large number have displayed certain peculiarities, viz., great protractedness, peculiar appearances on the surface of the mucous membrane, and peculiar nervous phenomena. These peculiarities were probably due to the same cause which has occasioned the prolonged prevalence of the complaint, viz., the constant presence of the specific poison in the air of the locality, in effective strength. Dr. Henderson contends that the extensive and prolonged prevalence, the highly developed symptoms, the protracted course, in short, the peculiarities of the complaint, are to be attributed to the peculiarities of the locality. There are two important facts. First, the air of the locality is, to a certain degree, contaminated by the emanations arising from the adjoining shores; and, second, for a series of years a form of illness, distinguished by certain peculiarities, has been constantly prevalent in the locality. The conclusion is, that these two facts stand in the relation of cause and effect. If this relationship be real, it follows that the cessation of the endemic complaint can only follow the removal of the cause. To further this end, it is certainly the duty of the local authorities concerned not to increase the evil by spreading their drainage upon the already polluted shores, although, in his opinion, this will not avail to lessen, far less to exterminate, this endemic disorder. To effect this, the purification of the Clyde will alone suffice. Meantime, it cannot be questioned that the desirability of this locality as a place of residence is affected by the prevalence of this form of illness. While compelled to make this statement, he adds that, in other respects, the general health is very good, and particularly, he feels warranted in saying, that children thrive well, and that the climate is certainly favourable for certain forms of bronchial and pulmonary weakness.

IRELAND.

MR. FRANCIS JOHN WEST, resident medical superintendent of Omagh District Lunatic Asylum, died on the 23rd instant, of bronchitis, aged 68.

A CASE of small-pox, which was developed on the passage from America to Cork, was landed at the latter port last Monday and transferred to the Cork Union Hospital.

LISTOWEL UNION.

THE Listowel guardians, at a meeting held last week, unanimously passed a resolution expressing their regret at the death of Dr. Kenny, medical officer of the workhouse, and tendering their sympathy with his bereaved family. The board shortly afterwards adjourned, out of respect to the memory of the deceased gentleman.

IRREGULARITIES IN A SMALL-POX HOSPITAL.

DR. MACCABE, the Inspector of the Local Government Board, has made his report on the sworn inquiry which he recently held upon the irregularities reported to have taken place in the South Dublin Union small-pox sheds. We have already referred to these gross abuses (JOURNAL, September 25th, 1880, page 522), and expressed the opinion they were mainly due to lack of supervision. The truth of all the charges, which were made by a former patient in the hospital, has been established. Articles of clothing belonging to small-pox patients under treatment were pawned by a pauper wardsman or assistant, aided by a boy inmate; and intoxicating drink and tobacco were purchased with the money thus obtained, and introduced into the sheds. A wardsman left the sheds by scaling the paling, and returned in a state of intoxication. Articles of food intended for patients were improperly passed out and disposed of, and this abuse amounted to a regular practice; and wardsmen or pauper attendants repeatedly broke out of hospital, sufficiently disguised in the clothing of patients to conceal the Union uniform from public observation. The charge, that stimulants ordered for a patient in purpuric small-pox had been improperly consumed by a pauper

assistant-nurse, was not supported by the evidence. The recommendations which the Local Government Board make on the report as to (1) the administration of stimulants, viz., that it should not be entrusted to unpaid and irresponsible pauper inmates; (2) as to the custody of patients' clothing; and (3) as to the prevention of improper exit by inmates of a small-pox hospital, are so simple and evident, that the necessity for giving them would seem to us the severest censure that could be inflicted on the management of such an institution.

THE CORK FEVER HOSPITAL INQUIRY.

At a meeting of the Council of the Royal College of Surgeons in Ireland held on the 7th inst., it was unanimously resolved;

"That on consideration of the published reports of an inquiry recently held in Cork, in reference to certain charges brought against Professor Jones, a Fellow of the Royal College of Surgeons in Ireland, this Council desires to express its opinion that the conduct of Professor Jones, as established by the investigation, was in strict accord with the accepted practice of medical science and with professional usage, and that it gave no just grounds for the accusations to which he has been subjected."

The following resolutions have been passed by the Council of the Irish Graduates' Association.

"The Council of the Irish Graduates' Association desire to convey to Professor Macnaughton Jones of Cork their sympathy with him under the trying circumstances in which he has been lately placed, and to express their opinion that he acted with the best of his judgment as a physician, and in accordance with the ordinary rules of professional propriety.

"The Council also consider that the thanks of the profession as a body are due to Professor Jones for the able manner in which he defended the action of a medical attendant responsible for the life of his patient, as no physician or surgeon should be held responsible for the result of treatment, if due skill and care have been devoted to the case entrusted to him. They clearly recognise the incompetency of any non-medical authority to pass judgment on a purely medical question.

"That a copy of these resolutions be forwarded to the editors of the principal medical journals."

BALLINASLOE DISTRICT LUNATIC ASYLUM.

A SPECIAL meeting of the governors of this asylum was held on the 25th instant, to determine the contract for the additions to the institution at an estimated cost of £10,000; when a tender at £9,960, being the lowest, was accepted. The alterations will take about two years to complete.

HEALTH OF CORK.

FOR the four weeks ending October 9th, the total number of registered deaths amounted to 151, of which number, 17 were due to infectious maladies; while 158 births took place. The annual death-rate per 1,000 inhabitants gave a total ratio of mortality of 24.96; from general diseases, 22.15; from infectious diseases, 2.81; an infant mortality of 1.98; and a birth-rate of 26.11 per 1,000 of the population.

QUEEN'S UNIVERSITY IN IRELAND.

A DEPUTATION has been appointed by the Belfast Graduates' Association, to co-operate with the Committee of Convocation and the London Association in representing to Mr. Gladstone the views of the graduates. The deputation will urge the repeal of that part of the late University Act referring to the Queen's University, and will consist of the following: T. K. Wheeler, M.D.; Hans McMordie, A.M.; Henry Whitaker, M.D.; Edward Gardner, LL.B.; Adam Duffin, LL.B.; John McKane, A.M.; Rev. Alexander Gray, LL.D.; Hugh Hyndman, LL.B.; Thomas Sinclair, A.M., J.P.; Rev. Charles Scott, A.M.; and W. A. McKeown, M.D.

TOPPEROGANE DISPENSARY DISTRICT.

AN election for a medical officer to this district took place on the 18th instant; and, as there was a regulation specified in the advertisement issued, to the effect that the medical gentleman selected should not hold any other appointment under the board of guardians, Dr. Stoney, medical officer of the workhouse, who was a candidate, was obliged to resign, in order to qualify himself for the appointment. There were five candidates, viz., Drs. Stoney, Nixon, Crampton, James Carroll Daly, and Sampson. It was proposed to adjourn the election until the feeling of the poor in reference to the candidates was obtained; but this absurd proposition was negatived, the election proceeded with, and, after a close contest, Dr. Daly was elected by one vote over Dr. Stoney. The medical officer has been appointed subject to an alteration in the district, which, however, will not come into force until March next, and which will give an additional population of about 500 persons to be under his care.

SUPERANNUATION OF DR. FAUSSETT.

WE recently referred to the retiring allowance of £50 *per annum* which had been granted to Dr. Faussett, late medical officer of Clontarf and Howth Dispensary District, after upwards of forty years' service in the union; and pointed out the hardship of the case, the sum to which he was justly entitled being £106. However, it is gratifying to learn that, pursuant to notice, a motion was brought forward by one of the guardians, to rescind the resolution arrived at the previous meeting, as it was thought that the board had acted without having weighed the matter sufficiently; and, after some discussion, it was carried. One of the guardians offered, as a compromise, an allowance of £70 *per annum*, and stated that, if it was not accepted, the party he represented would adhere to the original resolution; but this was declined, and two notices of motion were given: one, that the superannuation should be fixed at £80; and the other, that the full amount of £106 should be awarded.

THE ROYAL UNIVERSITY OF IRELAND.

MR. D. B. DUNNE, Professor of Logic in the Catholic University, has been appointed co-Secretary of the University with Dr. J. C. Meredith. The Committee of its members, appointed by the Senate at its first meeting, have held several meetings during the past week, to consider a scheme for the new University.

THE MEATH HOSPITAL.

MR. E. B. STANLEY, who has been the Secretary of this institution for thirty-five years, has sent in his resignation. The managing committee have granted him a retiring allowance, and, as some appreciation of his lengthened and valuable services, recommended that his name be proposed for election to the next vacancy on the committee. It is intended for the future, we understand, that the offices of Secretary and Resident Medical Officer shall be amalgamated. We doubt if this arrangement will prove an advisable one, either for the pecuniary interests or general efficiency of the hospital. The class of men who make the best resident medical officers are not, as a rule, possessed of the trained financial and administrative qualifications essential for a hospital secretary; and an able young medical officer—if worth anything as such—would hardly care to remain a number of years as a hybrid official in an institution where he must be somewhat in the unenviable position of a servant to two masters. We cannot think that the majority of the medical staff, if consulted, could be in favour of such an arrangement. The duties of resident medical officer would then most probably be irregularly and imperfectly performed, and the great advantages to be derived by a series of former pupils holding the office for a year or two, under the supervision of the medical staff, would be lost to the ambitious young surgeon and to the public. Instead, it is proposed to have a permanent, routine, dual official, whose retirement on pension, after thirty-five years' service, like his predecessor, it may be the duty of another generation to record.

A NEW SCAVENGING SCHEME FOR DUBLIN.

THE Corporation of Dublin have adopted a new scheme, which, if satisfactorily carried out, will be a step towards providing the city with an effective means of domestic and public scavenging. The leading features of the scheme, as explained, are as follow. It is proposed to have three stations on each side of the city, where wagons would be placed. The house-refuse would be drawn thither in carts, and at night the wagons would be drawn away over the tram

lines to two stations close to the canals. These stations would have to be bought by compulsory purchase, and Parliamentary powers would be required for the purpose. There should be a speedy manufacture of the manure when deposited, and it should be brought up in boats to the country to be disposed of. The whole system was to be under the control of a superintendent of scavenging, whose salary should be £400 a year.

THE UNIVERSITY OF DUBLIN.

NOTICE has been given that the Council of the University will nominate to the Regius Professorship of Physic, *vice* Dr. Hudson resigned, at its next meeting on November 9th. The Council have expressed their opinion that, in future, instruction in surgery should be given by a course of lectures on the theory of surgery in the winter session, and a systematic course of demonstration in operative surgery in the summer session.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

MR. SPENCER having resigned the office, an Assistant-Librarian will be elected on the 18th proximo, by the Council of the College, at a salary of £100 *per annum*. The gentleman elected will be required to devote his whole time to his office, and to perform such duties as the Council may require.

TRINITY COLLEGE AND OPHTHALMIC SURGERY.

THE request of a memorial from the majority of the general clinical hospitals in Dublin to the Board of Trinity College, deprecating a recent requirement of the Board relating to its recognition of certificates in ophthalmic surgery, has been refused. The Board in May last passed a resolution, which was published at the time in the BRITISH MEDICAL JOURNAL, that the course in ophthalmic surgery should consist of three months' clinical instruction, and a systematic course of lectures delivered twice a week. It was added, as a proviso, that there should not be fewer than ten full ophthalmic beds in use during the three months' course. Most of the Dublin hospitals forthwith made arrangements to meet this requirement, when, much to their astonishment, another resolution was promulgated last June, to the effect that certificates in ophthalmic surgery would not be accepted from any hospital which did not maintain permanently fourteen beds for ophthalmic cases only. This resolution, it is alleged, was very much to the interests of a particular special hospital, as the general hospitals would not give up so many beds permanently to ophthalmic cases. The memorial stated that the student might readily be afforded a suitable education in ophthalmic surgery in a hospital containing six beds permanently occupied by ophthalmic cases, and possessing an efficient out-patient department for diseases of the eye; and prayed that the resolution of the Board might be modified, so that a certificate from such a hospital might be accepted as qualification for the degrees of the University of Dublin. It is to be regretted that, by its refusal of the prayer of this memorial, the Board of Trinity College, which was the first licensing body to recognise the necessity of practical instruction in ophthalmic surgery, should lay itself open to the charge of giving a monopoly of its teaching to a single hospital.

THE CERTIFICATE SYSTEM IN DUBLIN.

WE are glad to notice that the Colleges of Physicians and of Surgeons in Ireland are beginning to set their faces against a system which is well known to be in existence in some places, of giving certificates for attendance at hospital and upon lectures simply as a receipt for fees paid, the actual attendance of the student being of secondary importance. If certificates be required, they should at least be *bonâ fide*. The College of Physicians has directed that the number of lectures actually attended by the holder of each certificate shall be marked upon its face; and the College of Surgeons, with a view of preventing the entry of a student for a course of lectures near its termination, or even after its conclusion, as has been done, directs that, in future, no certificate be accepted by the College unless it testifies to the fact that the student holding it has entered his name for the course of study to which it refers at a period not later than twenty-one days from the commencement of the course, and that the signature of the registrar of the school be required as to the date of entry of such student.

PREVENTION OF FOG AND SMOKE IN LONDON.

A MEETING of the Fog and Smoke Committee of the National Health and Kyrle Societies was held at 44, Berners Street, on Wednesday afternoon; Mr. Ernest Hart, the Chairman of the Council of the National Health Society, in the Chair. Professor Chandler Roberts, Mr. Edwin Chadwick, C.B., Mr. Coles, Mr. Saxon Snell, C.E., Mr. Foley of Rugeley, Mr. J. S. Whittle, Miss Octavia Hill, Miss Kate Potter, Miss Le Fevre, and others, were present. Letters were read from Sir Frederick Pollock, Mr. Macfarlane, M.P., Professor Huntington, and others, desiring to join the Committee. Detailed evidence was given by Mr. Coles on the subject of the use of smokeless coal, of which he has great experience. Mr. Coles stated that the fields from which this coal was obtained were eighty miles long by twenty broad, and several thousand feet in thickness; and that practically the supply was adequate for all the uses to which it was probable it would be put, even in this great metropolis. There could be no doubt that smoke from factories might be entirely eliminated from London, if the use of anthracite coal were generally introduced, and that this might be done without inconvenience and at little or no additional cost. If the smoke of factories were eliminated from the atmosphere, a great bulk of the evil complained of would be got rid of. Mr. Coles entered into ample details on this subject, and gave the names of the extensive coal-fields from which the sources of supply would be available. Smokeless coal would be supplied in almost any quantity in London at sixteen shillings per ton. There was an inexhaustible supply of anthracite coal in America, where it was universally used in houses, the result being that American cities were not plagued with smoke. It was desirable that some of the principal manufacturers and owners of factories should amicably discuss the matter with the committee, and he believed in this way very considerable results might be achieved in London, even before additional legislation was resorted to.

Mr. OWEN THOMAS, and Mr. FOLEY of Rugeley, representing large collieries, stated that the United Association of Proprietors of the Anthracite Collieries had instructed their Secretary to communicate with the Society, with the object of setting up in London, at various public stations, open grates, such as those which were used in houses, with the view of showing that smokeless coal can be burned, and give satisfactory fires in such grates, in place of the present bituminous coal. It was stated that, in order to obtain a rapidly burning fire, it was desirable that at first a small percentage of bituminous coal should be added to the anthracite, or, it was suggested, that coke mixed with the anthracite coal would answer the same purpose. It is, however, alleged that, properly used, a smokeless coal might be most extensively introduced into private houses for domestic purposes, as well as into factories. A series of communications relating to the colliery fields available for the purpose of supplying smokeless coal, and to the various inventions of Mr. Edwards, Mr. Chubb, and others, for the prevention of smoke in the use of bituminous coal in private houses, were referred to the committee of experts. Mr. Aitchison's name was added to that committee.

A report on the existing state of the legislation on the subject was presented by Mr. WHITTLE, from which it appeared that the Act specially applicable in London was the Smoke Nuisance Act of 1853. This Act, however, was at present worked very inadequately by the police, and contained clauses requiring permission from the Secretary of State, or Chief Commissioner of Police, before any steps could be taken for abating the nuisance arising from smoke; hence it was very irregularly and imperfectly worked. It was believed that the state of public opinion at the time the Act was passed was not sufficient to justify a more stringent legislation; but at present the simple course of procedure was by an indictment, or adoption of a system of inspection, such as that now recognised on small grounds in the Alkali Acts, and would find favour with the public and the legislature, and would have great effect in reducing the smoke nuisance.

Mr. EDWIN CHADWICK stated that the Society of Arts were willing to co-operate in this matter, and had already expressed their interest.

Mr. ERNEST HART suggested that a communication should be addressed to Sir E. Henderson on the subject of the present working of the Smoke Nuisance Act by the police; and the legal members of the Council undertook to make further investigation. A statement was made as to the French invention mentioned at the last meeting of the Committee, by Mr. Moberley, from which it appeared that it includes in effect the use of hard, stoney, but porous fire-lumps, pierced with holes, and impregnated with gaselin or petroleum-oil. This was referred to the committee of experts for further consideration. It was stated by Mr. Saxon Snell that the operation of the present law was practically confined to compel manufacturers to introduce certain appliances; but it had not extended to the adequate use of such appliances when introduced.

Miss OCTAVIA HILL stated that the great success which had attended operations for the suppression of the smoke nuisance at Nottingham was attributed, by the local authorities, to a clause which imposed penalties on the stokers who neglected duly to employ the appliances, or failed in their duty to prevent smoke from issuing from the furnaces which they stoked.

A full report of the proceedings, with copies of documents, will appear in the next number of the *Sanitary Record*.

The meeting was adjourned till Wednesday next, at 2.30 P.M, at 44, Berners Street.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this District will take place at the Kent and Canterbury Hospital, on Thursday, November 18th.

Members intending to read papers are requested to give immediate notice. T. WHITEHEAD REID, M.R.C.P., *Hon. Sec.*

34, St. George's Place, Canterbury, October 20th, 1880.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE first meeting of the present session will be held at St. Thomas's Hospital (Westminster Bridge entrance), on Wednesday, Nov. 10th, at 8 P.M., Dr. HABERSHON, President of the Branch, in the chair, when a discussion on the Treatment of Enteric Fever will be opened by Dr. Bristowe. The chief points for discussion will be (1) Food, (2) Alcohol, (3) Drugs, and (4) Baths; and, as it is desired to elicit the opinions both of consultants and of general practitioners on this important subject, it is hoped that all members of the District who do not intend to take part in the discussion will communicate their views on the above points to the Honorary Secretary a few days previous to the day named. The discussion will be open to all members of the Metropolitan Counties Branch and their friends.

H. NELSON HARDY, *Hon. Sec.*

The Grove, Dulwich, October 12th, 1880.

EAST ANGLIAN BRANCH: ANNUAL MEETING.

THE annual meeting was held at Lowestoft on Friday October 8th; the President, F. S. WORTHINGTON, Esq., in the Chair. The Council of the Branch were entertained at breakfast by the President.

President's Address.—At the first general meeting, at 12 P.M., the President delivered an address. A vote of thanks, proposed by Mr. KILNER and seconded by Mr. GORHAM, was carried by acclamation.

Future Meetings.—It was decided to hold the next annual meeting at Great Yarmouth; and that Charles Palmer, Esq., senior surgeon of the hospital, be requested to preside.

Secretaries.—Dr. Elliston was re-elected Honorary Secretary and representative in the Committee of Council. Dr. Beverley was elected Honorary Secretary for Norfolk.

Representatives of the Branch in the General Council.—The following were elected. T. E. Amyot, Esq.; F. Bateman, M.D.; B. Chevallier, M.D.; W. Cadge, Esq.; G. C. Edwards, Esq.; R. V. Gorham, Esq.; J. Kilner, Esq.; J. B. Pitt, M.D.; W. A. Ellistan, M.D., Honorary Secretary.

Council of the Branch.—The above gentlemen, with the addition of W. M. Crowfoot, M.D.; C. M. Durrant, M.D.; P. Eade, M.D.; J. S. Holden, M.D.; J. Lowe, M.D.; H. Robinson, Esq.; F. L. Worthington, Esq., were elected the Council of the Branch.

New Members.—The following new members were elected: W. Groome, M.B.; W. Lock, M.D.; J. Percival Smith, Esq.; F. H. Vertue, Esq.; E. Crickmay, Esq. (unattached member).

Report of Council.—The following report was read.

The Council congratulate the Branch upon the increase of the members of the Branch from 137 to 146. They regret the resignation of Dr. Pitt, who has so long and so efficiently fulfilled the duties of Honorary Secretary for Norfolk. They will tend to Dr. Pitt your [illegible] for his valued services. The Council have pleasure in stating that Dr. Beverley (Norwich) has kindly consented to take office in the vacancy occasioned by Dr. Pitt's retirement.

Since our last annual meeting, several members have died. In Dr. Copeman, an ex-President of the Association, we have lost a valued and active member of our Body; and, in Mr. Edward Burman Adams, we have lost a member whose genial wit and humour will be much missed at our meetings.

The Council feel that the warmest thanks of the Branch are due to our ex-President, Mr. John Kilner, for his most hospitable reception at Bury St. Edmunds, which was certainly one of the most successful, as it was one of the largest, gatherings of our Branch.

The Council would suggest to the Branch that their thanks are due to the medical staff of Guy's Hospital for their unanimous, firm, and dignified determination to resist interference with the treatment of the sick, by the attempt of the governors of that institution to thrust upon them a system of nursing of which they did not approve. The question at issue affects the management of all hospitals; and, in the opinion of the Council, a reform in the constitution of the governing bodies of hospitals is much needed, particularly that every physician and surgeon should be *ex officio* a member of the Board of Management.

Upon the motion of Mr. KILNER, seconded by Mr. GORHAM, the report was received and adopted.

Papers.—An elegant luncheon was provided at the Royal Hotel at 2 P.M.; and, at 3.30, the members again met, when the following papers were read and discussed.

1. Mr. T. E. AMYOT: Extensive Lumbo-thoracic Abscess in a Child: with Necropsy.

2. Dr. W. M. CROWFOOT: Notes on Three Cases of Operation for Ovarian Disease.

3. Dr. W. A. ELLISTON: A Case of Vesico-vaginal Fistula, with Laceration of Os and Cervix Uteri.

4. The PRESIDENT: On Perforation of the Vermiform Appendix.

The "British Medical Journal" and Chloroform.—Dr. BENHAM (Ipswich) said he wished to call the attention of the Branch to the manner in which the editor was writing down chloroform in the JOURNAL. By his comments on the cases of death during its administration, he was trying to lead the public to think that it was incomparably more dangerous than ether; the natural result of which would be that, should any of the members be unfortunate enough to meet with a mishap, the coroner's jury might very likely bring in a verdict of manslaughter against them for using so dangerous an agent. What he (Dr. Benham) wished to ascertain was, whether the opinion of the profession coincided with that of the editor. He thought not; and considered the superior safety of ether "not proven". There had been deaths during the administration of ether; and he believed that no anæsthetic yet discovered was perfectly free from danger. There was a certain definite risk of death in travelling by an express train, and so there was in inhaling chloroform; it should never be given without a great sense of responsibility; and all care and attention should be paid during its administration; but—given that care and attention—he was not yet convinced that it was his duty to forego the convenience of chloroform, and uniformly give ether instead. He thought that, at this time, an expression of opinion would be very valuable to those in general practice; for, if the views expressed in the JOURNAL were those of the profession at large, all ought to throw away their chloroform-bottles, and only give ether or nitrous oxide.

The members were subsequently most hospitably entertained by the President and Mrs. Worthington at at "an home"; and those remaining the night at Lowestoft, including Professor Humphry, F.R.S., the President of the Association, were entertained at dinner by Mr. James Worthington.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

THE first meeting of the present session was held on October 14th; R. PROSSER, Esq., President, in the Chair.

New Member.—Dr. T. W. Smith (Leamington) was elected a member of the Branch.

Communications.—The following communications were made.

Mr. HUGH THOMAS showed a specimen of Diseased Kidney taken from a child nine months old, which had symptoms of narcotic poisoning before death.

Mr. LAWSON TAIT showed some Instruments of Parkonic or Celluloid, made by Otto and Co. of New York, including a morphia-syringe, female catheters, syringes, etc.

Mr. TAIT also showed two Ovarian Tumours, one of which was removed from a child on account of intestinal obstruction; and the other an instance of the rare form of tumour described by Rokitansky. The cysts were thin-walled, and were all pediculated on a common stalk, like a bunch of grapes.

Mr. TAIT also showed preparations from three cases of Cystic Dilatation of the Fallopian Tubes removed successfully by Abdominal Section; also some Hydatids of the Liver, which he had successfully removed by Abdominal Section.

Dr. MALINS showed a Myo-fibromatous Tumour, taken from the

abdominal wall of a patient aged 36, which had in several respects simulated an ovarian growth.

Mr. J. S. GAMGEE read a paper on the Relative Merits of Different Methods of Treatment of Wounds (the paper is published at page 695).

Dr. SAWYER read a paper entitled Therapeutic Notes. Discussions followed, in which several members took part.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Medical School.—Opening of Mason's College.—Resignation of Mr. Goodall. The Professorship of Anatomy at the Queen's College. The Queen's Hospital Casualty Surgeon.—The Children's Hospital.—The Medical Institute.—The Orthopædic Hospital.

THE medical school of Queen's College opened for the winter session on the 4th instant, with an address from Mr. T. H. Bartleet. The entry of students is not so large as last year, but that was perhaps an exceptional year. The prospects of medical education in this town are much improved by the opening of Sir Josiah Mason's College, as that institution possesses facilities for teaching science which are not surpassed by any college in the kingdom; while the school here, like most medical schools in the metropolis and the provinces, has been hitherto very deficient in that respect.

Professor Huxley's address on Scientific Culture is probably already well known to your readers. I do not think we are quite such Philistines as to join with Mr. Huxley in congratulating ourselves that "mere literary instruction"—if by that is meant instruction in Greek and Latin—is prohibited from even forming part of the college curriculum. Whatever we may think as to the relative importance of science and literature, few, I hope, desire to see one or the other excluded. There are some who believe that a fair share of the great increase of national wealth during the last century has not yet been devoted to the cause of higher education, and who look forward to seeing universities on the Scottish pattern established in all the great centres of population, industry, and wealth. Manchester may claim to have succeeded in doing so. Liverpool is making a splendid effort to keep up with her; and Birmingham will certainly not be behindhand in the race. Our School Board, and the governors of the wealthy corporation of King Edward's School, are providing admirable primary and secondary instruction. Mason's College already affords ample opportunities for instruction in mathematics, physics, chemistry, and biology; and before another decade is passed, we hope to see this list of chairs considerably increased.

I regret to say that Mr. W. P. Goodall, who has been for some years surgeon to the General Hospital, is about to leave the town on account of ill-health. His departure is the occasion of profound regret to his colleagues, and to a large circle of friends and patients who know his worth. A testimonial fund is being raised to afford a means of giving him a substantial expression of these feelings; and he will carry with him our best wishes for his speedy restoration to health in some more genial climate. This resignation will not create a vacancy on the staff, as, by the alteration made in the laws of the hospital three years ago, the number of surgeons was reduced for the future to four instead of five. Mr. Goodall was one of the first surgeons in Birmingham who recognised the importance of the antiseptic system, which he carried out with the energy and thoroughness that characterised all he did.

Mr. Jolly has resigned the Professorship of Anatomy in the Queen's College, which he has filled with much satisfaction to the students for some years. His loss will be felt, but we are glad to know that the reason for this step is to be found in the increasing demands made upon his time by private practice. His successor will probably be Mr. Bennett May, casualty surgeon to the Queen's Hospital, and senior demonstrator of anatomy in the College. The appointment of casualty surgeon at the Queen's Hospital is quite new, and Mr. May is to be congratulated on his appointment.

The Election Committee of the Children's Hospital has recently appointed Mr. Joseph Hunt to the surgeoncy vacant through the resignation of Mr. G. H. Evans, which, we regret to say, was owing to ill-health. Miss Alice Kerr, M.D. Paris, has been recently appointed junior house-surgeon to the same institution, Miss Clark being the senior house-surgeon, so that Birmingham now boasts no fewer than three qualified medical ladies.

The Medical Institute will be formally opened about the middle of November, though it is not yet certain what form the opening will take. It is expected that an effort will be made to effect a pleasant professional *réunion* on the occasion, which should be subject for general congratulation; and those who have successfully carried out the work of establishing the institute trust that the hearty appreciation of the profession will secure for them their cordial co-operation and support.

The annual meeting of the subscribers to the Orthopædic Hospital took place on the 12th instant; the Earl of Dartmouth in the Chair. The report mentioned that Mr. E. L. Freer had been appointed honorary assistant-surgeon, and that Dr. Heslop had consented to accept the position of consulting physician.

PARIS.

Infectious Diseases and Bad Smells.—Personalities in the Academy of Medicine.—Necropsy of Menesclou.—Are Suicides Lunatics?—Charge of Abortion against a Medical Practitioner.

FOR the last two months, the public press has been occupied with the bad smells of Paris; and to these have been attributed the unusual prevalence of such maladies as small-pox, typhoid fever, measles, diphtheria, infantile diarrhœa. It so happens, that these maladies had been raging, more or less, long before the smells were noticed; and it is in the very quarters that are comparatively free from smell where the diseases are most prevalent. The causes must, therefore, be sought elsewhere. The quarters just referred to are situated in the east, the most populous, and consequently the poorest, parts of the city; and the smells complained of are noticeable in the central parts, where the earth is being turned up for the establishment of an increased number of sewers. But the emanations thus produced, far from being injurious, are considered more salutary than otherwise, owing to the composition of the subsoil from which they proceed. The soil was analysed, and found to contain large proportions of sulphur, coal-tar, and oxidised iron—all three substances largely used as therapeutic agents. The obnoxious odours were then traced to the "dépotoirs", or repositories for filth; and to the manufactories of ammonia, phosphatic salt, and aniline, situated just outside and around Paris; but even these would not sufficiently explain the prevalence of the maladies in question. Attention was then directed to the cesspools, and to other receptacles for filth, which, coupled with the defective system of drainage, are, to my mind, the real sources of danger; and it is to remedy these defects that steps are being taken for the abolition of cesspools, and for the introduction of an improved system of sewerage.

The equanimity of the Academy of Medicine was lately disturbed by a rather warm discussion that took place between M. Pasteur and M. Jules Guérin, *à propos* of M. Pasteur's discovery of being able to attenuate, or modify by the inoculation of a special virus, the malady called the cholera of fowls. The process is kept a secret by the learned biologist; but M. Jules Guérin questioned the propriety of such a procedure, and condemned it as being contrary to academical usages. The discussion, from being warm, became violent; and ultimately degenerated into personalities, which nearly ended in a duel. This circumstance caused some hilarity among the members, owing to the would-be combatants being nearly *hors de combat*, as one is almost an octogenarian, and the other hemiplegic. Fortunately, the duel has been averted by an apologetic letter from M. Pasteur, which was read at the last meeting of the Academy, amidst the applause and congratulations of the members.

The JOURNAL for October 16th contains a short description by you of the necropsy of Ménesclou, who was executed last month for the most atrocious murder of a little girl whom he had previously violated. To your annotation, allow me to add the following particulars. About five hours after decapitation, the body was removed to the School of Medicine for examination. The head was severed from the body by a clean cut, the knife having passed through the neck just below the vocal cords. The face was calm, and presented nothing particular. M. Dassy, preparator of anatomy, injected into the carotid artery some blood taken from a live dog. The face of the deceased became immediately flushed, and the lips reddened; and it was expected that some emotional movements of the muscles of the face would taken place; but, owing to some misunderstanding, the body had not been given up till five hours after death, which, of course, interfered considerably with the experiments, and rendered the results incomplete. However, through the temporary apparent restoration of excitability in the decapitated head by the injection of warm and vivifying blood, M. Sappey, the professor of anatomy, was enabled to perform certain interesting experiments on the different muscles of the face by means of electric currents produced by Bunsen's battery, the results of which will soon be published. The muscular system in general was well developed. The bones of the skull were very thick; and the brain, as stated in your annotation, weighed 1,382 *grammes*. The deceased criminal was the

subject of phthisis in the second stage, as shown by tubercles found in his lungs; but this is supposed to have been brought on by incarceration, as he had not presented any signs of the malady while yet alive.

Your annotation entitled "Are Suicides Lunatics?" which was published in the JOURNAL of the 9th instant, reminds me of a case that was lately brought before the Civil Court of the Seine, in which judgment had to be given as to the validity or otherwise of the life-insurance policy of an individual who committed suicide under the influence of insanity. The policies of the French insurance societies stipulate that the policy is annulled if the insured came by his death by committing suicide. The question raised was, Is this clause applicable when the insured who committed suicide was a lunatic? French jurisprudence has always decided in the negative; but an insurance company interested in the matter, not being satisfied with the traditional decision of the court, submitted a case with which it was connected for further consideration. The individual insured committed suicide by throwing himself out of a window; and the company contended that the individual, at the time of his death, was neither interdicted nor insane. The tribunal condemned the company to pay the amount stipulated for, unless it could be conclusively proved that the suicide was voluntary; that is, whether the defunct voluntarily attempted his life. Several witnesses produced evidence to the contrary; and they made a statement to the effect that the individual in question was, on the day he committed suicide, under the influence of some mental disturbance which did not allow him the free exercise of his will.

A very serious charge has been brought against a French medical practitioner of some standing for criminal abortion. The subject was a young girl aged 18. Peritoneal symptoms having set in soon after the operation, she was taken to the Maison Dubois, where she died. Suspicions having been aroused as to the nature of the malady even before the death of the patient, application was made by the judicial authorities for information on the case; but the physician of the hospital, acting on the article of the Penal Code which forbids the divulgence of professional secrets, declined to give any. The body of the unfortunate victim was then removed to the Morgue, where it was submitted to examination. This was performed by M. Brouardel, Professor of Medical Jurisprudence, who found that, besides the presence in the genital organs of lesions or signs indicative of criminal manœuvres, there existed a cyst in the liver, which, according to the professor, was of itself sufficient to cause death. The doctor, with his accomplice, the paramour of the girl, have been arrested and sent to the Mazas Prison, where they are to await their trial for murder, manslaughter not being recognised by the French laws.

CHOROIDITIS AS A SEQUEL OF RELAPSING FEVER.—In the *Monatsblätter für Augenheilk.* (Jan. 1880) Dr. Julius Trompetter reports that, in three hundred and twenty-five cases of relapsing fever in Breslau, twenty-one cases of choroiditis were observed; they were mostly of the acute form. On admission to hospital, the patients mostly presented the characters of well-marked choroiditis in the form of cyclitis. Very frequently hypopyon appeared, in the absence of inflammatory phenomena on the part of the iris. Turbidity of the vitreous humour was ascertained in all the cases; and the visual acuity was always considerably impaired at the commencement of the illness. The field of vision showed a limitation of the periphery in all directions. The course of the choroiditis was in general favourable; its average duration was from a month to six weeks. In two cases, both eyes were affected. Dr. Trompetter believes that the affections of the eye in relapsing fever are due to embolism arising from partial necrosis and abscess of the spleen.

[illegible] was suddenly attacked, while the subject of headache, with convergent strabismus, especially of the right eye. At the same time, a high degree of amblyopia set in, along with concentric narrowing of the field [illegible] revealed nothing beyond a doubtful anomaly of formation, probably due to nerve-fibres with a double contour. The patient had almost completely recovered from the condition above described at the end of eight weeks; while it lasted, clonic convulsions occurred several times. A short time after the patient had been dismissed, a relapse occurred, in which, in addition to the previous symptoms, there was transient anæsthesia of the first and second divisions of the fifth nerve. The [illegible] acuity with asthenopic troubles.

CORRESPONDENCE.

COMMISSION OF INQUIRY INTO OUR HOSPITAL SYSTEM.

SIR,—I do not understand why there should be the delay which you seem to recommend in pressing for the reforms necessary in our hospital system, or rather in asking for the inquiry which must precede such reforms. Neither of the parties to the present dispute at Guy's can object to such an inquiry; for the medical men know that they can only obtain relief from their present position by a change in the constitution of their hospital involving parliamentary action; and, as you say, the treasurer, Mr. Lushington, has already formed a member of a deputation to petition for such an inquiry. Of that deputation, I, together with yourself, was a member; and the events which have passed since we waited on Mr. Cross have confirmed me in my opinion that effectual reforms can only be introduced in the manner which we then suggested. I would, therefore, propose that the same gentlemen should again meet together, and should invite the aid of others for the same purpose. As an influential member of the present Cabinet acted as our chairman then, we may hope now to address the Government with more success than before; and thus we may look forward with some hope to the termination of a state of things which is far worse than a disgrace to the medical profession, since it is a grievous injustice to the patients of these great hospitals. If, on the other hand, we delay our action till the present scandal is forgotten, all public interest in the question will have subsided, and the matter will probably be shelved again, while Ministers and Parliaments are busy about more pressing questions.

If my former colleagues in the deputation in question agree with me as to the expediency of present action, I shall probably have occasion to address you again.—Yours, etc., T. HOLMES.

18, Great Cumberland Place, Hyde Park, W., October 18th, 1880.

THE CRISIS AT GUY'S HOSPITAL.

SIR,—I would suggest that the Councils of the Branches of the Association should, as soon as practicable, take up the subject of Guy's Hospital, with a view to petitioning Parliament—when it meets—for the repeal of the Act under which Guy's Hospital is governed; and asking that a Bill be introduced, as speedily as possible, to ensure a proper form of representation, both lay and medical, on the Court of Governors.

At the same time, members of the profession should everywhere use what influence they may possess to induce the local Members to push such measure forward. The time has now come for very decided action on the part of the profession at large in this matter.—I am, sir, etc.,

A MEMBER OF THE ASSOCIATION.

SIR,—Friends whom I have consulted agree with me that a petition from the profession to Parliament for a reform in the management of Guy's Hospital, and, as a result of that, of other hospitals, would just now be very opportune. Irrespectively of the mismanagement of the affair, the public have rights; and the public mind is now aroused, and sees the great need of better management. Outside the profession, it is already resolved to memorialise the House.

I [illegible] a form of petition for your consideration, approval, and publication. If you approve, would it accord with your convenience to receive the names of those agreeing with the form; so that the names might, upon the writer's authority, be appended to the petition? or, should this work be done by others? I am personally willing to take any trouble in the matter, or to stand aside.—Your obedient servant,

[illegible]

Southwark, and fifty years since Student at Guy's.

Treverbyn, Forest Hill, October 23rd.

[illegible]

"To the Honourable the Commons of the United Kingdom of Great Britain and Ireland, sheweth—

[illegible] Southwark, called Guy's Hospital [illegible] poor people. That the revenues of the hospital and school amount to [illegible] people are relieved there annually.

"That the first committee of management, named in the Act of Parliament under which Guy's Hospital became a corporation, included four physicians, one of them the celebrated Dr. Richard Mead, himself greatly instrumental in founding the charity.

"That the hospital is at present governed by a close self-elected body, knowing nothing of disease or medical science.

"That no member of the medical profession is on the committee of management of the hospital, although the staff is numerous, and consists of physicians and surgeons of high repute—nor does the committee contain the name of any one representing the public interests.

"That, in the opinion of your petitioners, it is essential to the efficient and intelligent conduct of the affairs of the hospital that the professional staff should hold an important and independent position on the committee of management.

"That a large school of medical teaching has grown up at Guy's Hospital, at which from three to four hundred young men are being always taught the sound practice of their profession. That this school, sending forth well-instructed medical practitioners all over the world, is of scarcely less importance than the hospital itself.

"That the existence of such a school, ensuring as it does high-class teachers, who are, at the same time, among the first men in the treatment of disease and injury, is of the highest benefit to the hospital.

"That, in the opinion of your petitioners, the government of the hospital is, and has been for some time past, quite unequal to the duties of the hospital and school.

"Your petitioners, therefore, humbly pray your Honourable House that the Act of Incorporation of Guy's Hospital, passed in the ninth year of the reign of King George the First, may, if it seem good, be amended in the spirit of this petition.

"And your petitioners," etc.

SIR,—In common with most of my acquaintances, professional and otherwise, I am extremely grieved to find that the medical staff of Guy's Hospital have deemed it necessary to rescind the letter they wrote to the governors of the hospital, dated 13th August last, in which they expressed their disapproval of the system of nursing, and other innovations, introduced by the treasurer and the governing board. Surely, it was a temperate and just letter; and, why on earth need the physicians and surgeons have sought permission to be allowed to withdraw such a communication? This untoward transaction has placed the staff in an extremely humiliating position in the eyes of their professional brethren, and in a ridiculous one in the eyes of the public. After such an episode in matters medical, one may cease to wonder at the poor junior, and in some cases senior, general practitioners, who tamely submit through necessity to all the indignities heaped upon them by "Bumble", in the shape of parochial boards and the stewards of sick clubs, when we find the Guy's staff truckling (it is a nasty word to use) to the governing body of that institution in a matter which concerns their own dignity, and, I may add, the honour of their profession. We all know that in every institution there must be rules and regulations; and every one connected with it must conform to them, or discipline would soon be at an end. Nevertheless, in all things strictly medical or surgical, the respective staffs should have entire control, as they alone are capable of judging for the best in such matters.

I think any one, who will give the affair a moment's thought, cannot but come to the conclusion that, generally speaking, the lay governors of our London hospitals and other similar institutions, though often men of wealth, and perhaps also of high social position, and though well selected as men of the world and experience to direct the *business* of the place, are, at the same time, in many cases, about as well fitted to judge concerning the treatment of patients in the hospital wards as the pig—the animal said to be quite insusceptible to the influence of music—would be to decide on the merits of the performance of an oratorio.

It is, I believe, a general opinion (and it seems to me a right one) that the most dignified proceeding would have been for the whole staff to have resigned, there and then; and, perhaps, when the authorities discovered that none could be found who would fill the vacant posts, they might have been made to feel regret at having treated shabbily, if I may use the term, the body of scientific and honourable men who have done so much to maintain the ancient fame of Guy's Hospital.

A leader in the *Pictorial World*, of the 16th instant, hits the right nail on the head, when it says: "A hospital is strictly a medical institution for the cure of the sick, and, if the doctor is not paramount, the question naturally arises, Who is? In a private house, if the nurse does not do as the doctor directs, the question is very soon brought to an issue. If success is to attend the efforts of the medical man, it must be that the nurse understands the treatment which the doctor is pursuing, and carries out his instructions faithfully. What the public have to concern themselves about is, that a noble institution is being injured; and the public have a right to step in and say, this shall not be. The governors and treasurer are but the trustees of monies left for a public purpose, and, if they fail in their stewardship, they will be arraigned at the bar of public opinion."

As I am writing this, it is a great matter for satisfaction and rejoicing to read that Dr. Habershon has resigned; thank Providence for small mercies, and that one man can be found with sufficient *esprit de corps* to stand up for the honour of his profession.

All I can say is, that, if the gentlemen who have treated the staff of Guy's with such discourtesy, were to serve their domestic servants after the same fashion, they would soon find themselves in the predicament of having to perform those duties they had been in the habit of *paying* others to do for them.—Yours truly,

HENRY W. WILLIAMS, M.D.

168, Fulham Road, S.W., October 23rd, 1880.

PROFESSOR MACNAUGHTON JONES.

SIR,—Permit me to suggest that the profession should convey to Dr. Jones some tangible mark of its approval and sympathy. As one who has been intimately connected with Dr. Jones as a student under his instruction in Cork, and since then has had many opportunities of knowing what he has done to advance the best interests of the profession, I beg to propose that an address and testimonial be presented to Dr. Jones by the medical profession, and all those interested in the advancement of medical science. Should this suggestion meet with approval, I shall be pleased by your putting my name down for £1 1s.—I am, yours faithfully, WILLIAM DONOVAN.

Whitwick, October 28th, 1880.

PRACTICAL ANATOMY.

SIR,—I read with great pleasure the article on Practical Anatomy in the JOURNAL for October 9th, and I trust that it will be productive of good results, if only by leading to a general expression of opinion on a question which appears to be rapidly and unpleasantly forcing itself to the front. Everywhere one hears the same story—of prejudice or obstinacy on the part of parish guardians or their agents; of difficulty and perplexity in the case of the teachers at our colleges; of dissatisfaction, waste of time, and, I fear, frequently of consequent failure on the part of students.

The obtaining of a sufficient supply is obviously of far greater importance than the reduction of expense. To speak of the latter first, the charges can be frequently brought down by proper management to a sum reckoned by shillings rather than pounds. For example, few of the bodies which are obtained for the school with which I am connected cost more, when all expenses are covered, than 30s. Our coffins (which are well made) cost 6s., cartage generally 4s., and burial, £1. To bring about such a reduction we leave as little as possible to undertakers, by getting in a dozen or more coffins at a time, and by employing under contract a man to bring in and to take out.

The real difficulty at present is with the supply. In our own case, it has from various causes become so insufficient that we have been obliged to apply to other towns for assistance. Everywhere we have met with refusal, and though we have sent to some places at great distance have had no better success. As a rule the majority of the guardians were willing to assist us, but invariably a few offered strenuous opposition to our proposal. Consequently, rather than divide the board on a matter which was to them of small importance the majority yielded and acquiesced in the rejection of our request. Masters of workhouses and relieving officers were, of course, unwilling to act on their own responsibility and risk censure, and hence would do nothiug. The inspector of anatomy can give no help, nor can other schools, for we find that all those within reach of us are in the same predicament. There remains then nothing to be done but to ventilate the matter, and to endeavour, by united and general action, to bring about either some amendment in the law, or some mutual co-operation, by which the evil may be met or got rid of. I will not venture at this time to offer any suggestions as to what should be done, but will conclude by saying once more that I trust your article will draw general attention to a crying need.—I enclose my card, and am, sir, yours faithfully,

October 11th, 1880. LECTURER ON ANATOMY.

WE understand that the Minister of Public Instruction in France has conferred the decoration of "Officier de l'Académie de France" upon Mrs. Bovell-Sturge, M.D. This decoration is one given to reward scientific, literary, or artistic merit. It has been rarely conferred upon women, and Mrs. Bovell-Sturge is, we believe, the first Englishwoman who has received the honour.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENTERIC FEVER.

THE subjoined notes of outbreaks of enteric fever are interesting, especially in their bearing on the dissemination of disease by polluted water and milk.

ENTERIC FEVER AT MILLBROOK.

A SERIOUS epidemic of typhoid fever at Millbrook, in the St. Germans (Cornwall) rural sanitary district, which seems to have been wreaking itself upon the inhabitants of that place for the last four months, without the smallest effort being made to check its spread, has been the subject of a very severe rebuke to the local sanitary authority by Dr. Ballard of the Local Government Board. Dr. Ballard, it appears, was sent down from Whitehall, in consequence of a report from the local health-officer that typhoid fever had been for some time prevailing at Millbrook. He found that, whilst about forty-seven households had been invaded, and over ninety persons had been attacked by the disease, out of a population of fifteen hundred persons, the sanitary authority had, all the while, been in complete ignorance of what had been going on. Dr. Ballard, in pointing out to the authority the consequences of this neglect, and in giving them a series of recommendations for their guidance in dealing with the epidemic, explained his views as to the manner in which the disease had been spread. It appears that Millbrook has recently been sewered, but that the sewers have been most inefficiently and inadequately ventilated. Moreover, as they discharge into a tidal stream, the air in them is pushed back when the tide rises, and escapes at all weak and defective places. Early in the year, the air in the sewers became infected with the contagium of enteric fever, and undoubtedly spread the disease to certain other places, especially to one particular well, the overflow of which communicated with the sewer into which the infected discharges passed. The sewers have no adequate means of flushing, only one flushing-tank having been provided; and are doubtless, therefore, sewers of deposit. Again, but one of the wells in Millbrook was found to be safe for drinking purposes. All are sunk in fissured rocks in the immediate neighbourhood of the houses; the water is, therefore, subject to pollution by soakage from the surface, from privies, leaky drains, and the like. Dr. Ballard had no doubt that the fever had been spread through the medium of these well-waters. Another source of danger was the milk-supply. There was a dairy adjoining a slaughter-house, into which entered, from a stinking untrapped gully communicating with the sewer first infected, sewer-air, which had no doubt been absorbed by the milk. Of the eight regular customers of the milk-seller, six families had been attacked with fever. One family was away at the time, and only one escaped. Persons who were occasionally supplied had also had fever; and of ten or twelve people who took the fever, there were only two that escaped. The sanitary authority appeared much impressed at learning the consequences of the neglect of the outbreak on its first appearance, and gave the local sanitary committee instructions to carry out Dr. Ballard's recommendations. Seeing, however, that they themselves, and not the local committee, are responsible in the eye of the law for the condition of the place, it is to be hoped that the sanitary authority will see that these recommendations are faithfully carried out, and without any more delay.

ENTERIC FEVER AND POLLUTED WATER.

AT the last meeting of the Forden Rural Sanitary Authority, Dr. Thursfield reported an outbreak of enteric fever at a place called Mule Brook Dingle. The dimensions of the outbreak are not stated, but it does not appear to have yet subsided; and Dr. Thursfield promises a further report on the subject. It seems that the primary cases occurred in four different houses, and that the first case in each house happened at such a date as would agree with the conclusion that they were all referable to one common source. These houses are all detached, and some distance from one another along the course of the Mule Brook. They have in common one condition, and one only, viz., that they use, as Dr. Thursfield ascertained by personal inquiry in each case, the brook water, either for drinking or culinary purposes, although they all have good potable water within a reasonable distance if they chose to fetch it. This evidence pointed to the brook water as the source of infection, strange as this appears in the case of a mountain-stream flowing through so thinly populated a district. But Dr. Thursfield found, at a house about four miles higher up the course of the brook, a patient convalescent from typhoid fever. The case had preceded the outbreak lower down the brook by a period which would accord with the usual period of the incubation of the disease; and for about ten days in the commencement of the attack, before its nature was fully recognised, the excreta had been allowed to flow direct to the brook. In such circumstances, it is certainly no unjustifiable deduction to infer that the cases which subsequently occurred in the Dingle resulted from this case at the head of the brook, and presumably through the medium of the water.—Dr. Thursfield has also recently reported several outbreaks of typhoid at Whitchurch (Salop), the majority being apparently in association with conditions of bad water-supply.

ENTERIC FEVER AT YSTALYFERA.

A VERY striking example of the dangers to which rural communities are exposed through the sending home by employers of servants or assistants to their homes in the country as soon as they fall ill with infectious disease, is disclosed in a report presented by Dr. Franklin Parsons to the Local Government Board, on an unusual development of enteric fever in the Pontardawe (Glamorganshire) rural sanitary district. Our readers will remember the serious epidemic of that disease which occurred at Swansea last year, and which was traced by Mr. Ebenezer Davies to the probable contamination of the principal water-reservoir of the borough with the excreta of a patient ill of fever in a neighbouring farmhouse (see JOURNAL, vol. ii, 1879, p. 1046). Amongst the earliest of the cases in this epidemic, were several young persons whose friends resided in the Pontardawe district, and who, when they were taken ill, went home to be nursed, and became the starting-points for almost as many outbreaks. The disease was thus introduced into several villages, so that, by the end of last year, nineteen deaths had been registered from enteric fever in the rural district. The infection seems to have been mainly spread by the soaking into the water-sources of sewage from the privies into which the excreta were cast. The most typical case of this kind occurred at Ystalyfera, a place which, in the beginning of August 1879, had been for some months free from enteric fever. In the second week of that month, four young women employed in shops at Swansea were brought to their respective homes in Ystalyfera, all suffering from enteric fever, with copious diarrhœa. From these cases, the fever spread through the village, until, by the end of December, upwards of one hundred cases had been reported. One group of cases especially was traced to the use of water from a cistern which had apparently become infected by percolation from a cesspit, into which the excreta of a patient brought from Swansea had been thrown. The suspected cistern was closed on September 26th; and, after October 10th, the outbreak ceased, so far as regards its especial incidence upon the houses supplied with water from this source.

TYPHOID FEVER AT NEWLYN EAST.

WE are glad to be able to state that the publicity given to the sad state of affairs at Newlyn East has caused charitable assistance, both in money and kind, to flow in to such an extent, that the immediate needs of the villagers in the matter of medical attendance, nursing, food, bedding, and clothing, have been fully met. It still remains, however, for the local sanitary authority to take such steps as will prevent a similar calamity from occurring in future; and it is satisfactory to find that, with a view of stimulating them to this duty, the Local Government Board have dispatched Dr. Ballard, one of their most experienced inspectors, to make a searching inquiry into the causes of the recent epidemic.

AT Somerton, in the Langport sanitary district (Somersetshire), a serious outbreak of typhoid fever is reported, some of the cases being stated to be of a very malignant character. The present outbreak unfortunately occurs at a time when there is no medical officer of health for the district, the late officer having resigned, and no one having been appointed to succeed him; but it is locally believed that the wells from which the water-supply of the village is derived are at the bottom of the mischief.

TYPHOID fever has for some time been prevailing at Totnes, about thirty cases having occurred there since August last.

POOR-LAW MEDICAL APPOINTMENTS.

HANCOCK, [illegible] M.R.C.S., L.R.C.P., appointed Medical Officer to the Hollymoor Dispensary District of the Bromsgrove Union, vice E. S. Hancock, L.R.C.P.I., resigned.

HEAN, M. [illegible] L.R.C.P.I., appointed Medical Officer to the Monasterboice Dispensary District of the Drogheda Union, vice C. Segrave, L.R.C.P.I., resigned.

HUTCHEON, [illegible] A., M.R.C.S.E., appointed Medical Officer to the Felton District of the Alnwick Union.

KEMP, George F., L.R.C.P., appointed Medical Officer to the Seventh District of the Wood Bridge Union, vice Robert Hughes, F.R.C.S.Eng., deceased.

MACDOWELL, Francis Victor, L.R.C.S.I., appointed Medical Officer to the Fever Hospital of the Bromsgrove Union, vice W. Fredk. Seymour, L.R.C.P.I., L.R.C.P.I., deceased.

TURNER, James E., L.R.C.P.Ed., appointed Medical Officer to the Fever Hospital and Workhouse, and Consulting Surgeon of the Truro Union, *vice* Thomas Blake Turner, L.K.Q.C.P.I., deceased.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

PEARCE, Arthur, M.R.C.S.Eng., appointed Medical Officer of Health for the Salcombe Urban Sanitary District, Devonshire, at £4 4s. per annum for five years.

POGSON, William, F.R.C.S.Ed., reappointed Medical Officer of Health for the Leeds Rural Sanitary District.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Dental Surgery, at a meeting of the Board of Examiners on the 27th instant.

Messrs. George D. Curnock, Cable Street, E., Cornelius Robbins, Epsom, Thomas W. C. Wonfor, London Street, W., and Henry N. Hindley, Alfred Place, W., students of the Middlesex Hospital; and Thomas I. B. Palmer, Peterborough, of Guy's Hospital.

One candidate failed to acquit himself to the satisfaction of the Board of Examiners.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 21st, 1880.

Day, Donald Douglas, Blackheath, S.E.
Garrard, Charles Rowland Ordish, Tickenhall, Derby.
Price, William, Wrexham, Denbighshire.
Whittingham, Charles Henry, New Zealand.

The following gentlemen also on the same day passed thier Primary Professional Examination.

Donald, James, Charing Cross Hospital.
Piesse, Charles Henry, King's College Hospital.

QUEEN'S UNIVERSITY IN IRELAND.—At the Annual Meeting of the University, held in St. Patrick's Hall, Dublin Castle, on Wednesday, October 13th, 1880, the following Degrees in Medicine and Surgery, and Diplomas in Midwifery were conferred by His Grace the Duke of Leinster, Chancellor of the University.

Doctor in Medicine, October, 1880.—First Honour Class: Jeremiah Cotter, Cork; David M'Keown, B.A., Belfast. Second Honour Class; John C. Bodkin, Belfast; Hugh Brosnan, Cork; R. J. Dalbey Hackett, B.A., Galway; Robert Thomas M'Geagh, Belfast; Robert Shore, M.A., Galway; George Jas. Haslam, Galway. Upper Pass Division: Joseph Anderson, Belfast; John Shiel Collins, Belfast; John A. Cunningham, Belfast; Robert J. Hamill, B.A., Belfast; James Paul M'Geagh, Belfast; Matthew M'Vickar, Belfast; Adam A. C. Mathers, Belfast; William Roulston, Belfast; Albert M'Carthy Scully, Cork; High Thomas Shaw, Belfast; Samuel Hamilton Shaw, Belfast; John Wallace Watson, Belfast. Lower Pass Division: Robert Alexander, Belfast; Wm. Hamilton Caldwell, Belfast; Richard Campbell, Belfast; Henry Castles, Belfast; William R. Cole, Cork; Wm. Naunton Davies, Belfast; David Simpson Dunn, B.A., Belfast: Samuel Eakin, Belfast; Wm. Gordon Hanna, Belfast; Robert Lynn Heard, Belfast; William Kelly, B.A., Galway; Thomas M'Elroy, Belfast; John M'Laughlin, Galway; Samson Matthews, Belfast; Lowry D. Morell, Belfast; William David Moore, Belfast; Patrick Joseph Nealon, Cork; Thomas Nunan, Cork; James A. Oakshot, Cork; Samuel Jas. Parkhill, Belfast; Thomas Pritchard, Galway; Robert Roid Rentoul, Galway; James John Riordan, B.A., Cork; Robert John Roulston, Galway; Simson Stuart, Galway; Edmond Wall, Cork; Charles Wells, Galway; Charles Wenyon, Galway; James Blair White, Belfast; James T. Wilson, Galway; James Wrixton, Cork. *June* 1880.—John Howard Battye, Belfast; George J. Coates, Cork; John J. Dennis, Cork; Arthur Hickman, Galway; Edward Horan, Cork; Daniel Lehane, Cork; William J. Matthews, Belfast; William T. Mullally, Galway; Patrick Mullane, Cork; James Mullin, Galway; John F. L. Mullin, Galway; Menus W. O'Keeffe, Cork; Samuel Townsend, Cork.

Master in Surgery, October, 1880.—Myles H. Atkinson, M.D., Galway; Jas. Davison, M.D., Belfast; William T. Mullally, M.D., Galway; Myles Wm. O'Reilly, M.D., Galway; T. Kennedy Wheeler, M.D., Belfast; John C. Bodkin, Belfast; Hugh Brosnan, Cork; Wm. Hamilton Caldwell, Belfast; William R. Cole, Cork; J. T. Collier, M.D., Belfast; Jeremiah Cotter, Cork; John A. Cunningham, Belfast; Samuel Eakin, Belfast; R. J. Dalbey Hackett, B.A., Galway; James Paul M'Geagh, Belfast; Robert Thomas M'Geagh, Belfast; David M'Keown, B.A., Belfast; Matthew M'Vickar, Belfast; Adam A. C. Mathers, Belfast; William David Moore, Belfast; Patrick Joseph Nealon, Cork; Thomas Nunan, Cork; Samuel J. Parkhill, Belfast; James John Riordan, B.A., Cork; Robert John Roulston, Galway; William Roulston, Belfast; Albert M'Carthy Scully, Cork: Hugh Thomas Shaw, Belfast; Samuel Hamilton Shaw, Belfast; Edmond Wall, Cork; Charles Wenyon, Galway. *June* 1880.—George J. Coates, Cork; John J. Dinnis, Cork; Chas. Hall, M.D., Belfast; John Hosford, M.D., Cork; Charles Frederick Knight, M.D., Cork; John Martin, M.D., Galway: P. Mullane, Cork; Menus W. O'Keefe, Cork; Wm. Smyth, M.D., Belfast; William Stokes, M.D., Galway; Samuel Townsend, Cork; John Wilson, M.D., Belfast and Cork; Ralph Worrall, M.D., Belfast.

Diploma in Midwifery, October, 1880.—Robert Alexander, Belfast; Joseph Anderson, Belfast; John C. Bodkin, Belfast; Hugh Brosnan, Cork; William Hamilton Caldwell, Belfast; John Shiel Collins, Belfast; Jeremiah Cotter, Cork; Jas. Davison, M.D., Belfast; David Simpson Dunn, Belfast; Samuel Eakin, Belfast; James Paul M'Geagh, Belfast: Robert Thomas M'Geagh, Belfast; Matthew M'Vickar, Belfast; Adam A. C. Mathers, Belfast: Robert John Roulston, Galway; William Roulston, Belfast; Albert M'C. Scully, Cork; Hugh Thomas Shaw, Belfast; Samuel Hamilton Shaw, Belfast; Jas. Whitton, Cork. *June* 1880.—George J. Coates, Cork; Patrick Mullane, Cork; Menus W. O'Keefe, Cork; William Stokes, M.D., Galway.

The following Prizes, founded by public subscription, and won by medical students, were presented by His Excellency Earl Cowper, K.G., Lord Lieutenant of Ireland. Peel Prize for English composition, open to the competition of undergraduates in Medicine—Subject: "Sensation". The prize has been awarded for the essay signed "Sub Rosa". Peel Exhibition awarded at the First University Examination in Medicine—James Meek of Queen's College, Belfast, first; £20 a year for two years.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ASHTON-UNDER-LYNE INFIRMARY—Consulting Surgeon.

*BRADFORD FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION Assistant Medical Officer and Dispenser. Salary, £120 per annum. Applications, with testimonials, on or before November 4th.

BRIGHTON AND HOVE LYING-IN INSTITUTION—Honorary Surgeon. Applications, with testimonials, on or before November 5th.

CENTRAL LONDON SICK ASYLUM DISTRICT—Assistant Medical Officer and Dispenser. Salary, £100 per annum, with board and residence.

CHARING CROSS HOSPITAL—Assistant-Physician—Applications, with testimonials, on or before October 30th.

CHARING CROSS HOSPITAL—Assistant-Surgeon. Applications, with testimonials, on or before October 30th.

*CORK NORTH INFIRMARY—House-Surgeon and Apothecary. Salary, £105 per annum, with apartments, etc.

CORK FEVER HOSPITAL—Resident Medical Officer and Apothecary. Salary, £100 per annum, and £20 per annum to keep accounts of institution, with apartments, fire, and light. Election on 4th proximo.

DENTAL HOSPITAL OF LONDON—Assistant Dental Surgeon. Applications on or before November 1st.

FULHAM UNION—Medical Officer to the Third District. Salary, £60 per annum. Applications, with testimonials, on or before November 10th.

GREAT NORTHERN HOSPITAL—Physician for Out-Patients. Applications, with testimonials, on or before October 30th.

*HULL GENERAL INFIRMARY—Assistant House-Surgeon. Salary, £50 per annum. Applications not later than November 8th.

KILLARNEY UNION—Medical Officer for Coom and Glenflesk Dispensary District. Salary, £120 per annum, exclusive of sanitary, registration, and vaccination fees. Election on the 4th November.

LINCOLN ODD FELLOWS' MEDICAL INSTITUTION—Assistant or Second Medical Officer. Salary, £100 per annum. Applications, with testimonials, to the Secretary, on or before November 2nd.

*LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY—Resident Medical Officer. Salary to commence at £175 per annum, with house, etc. Applications, with testimonials, to the Secretary on or before November 12th.

LISTOWEL UNION—Medical Officer for Workhouse, at a salary of £75 per annum. Election on the 4th November.

NORFOLK AND NORWICH HOSPITAL House Surgeon. Salary, £100 per annum, with board, lodging, washing, coals, gas, etc. Applications, with testimonials, on or before November 19th.

OMAGH DISTRICT LUNATIC ASYLUM—Resident Superintendent.

ST. ANDREW'S PAROCHIAL AUTHORITIES—Medical Officer.

*SUNDERLAND PROVIDENT DISPENSARY—Secretary and Dispenser. Salary, £120 per annum. Applications, with testimonials, on or before November 4th.

TICEHURST UNION—Medical Officer to the Wadhurst District. Salary, £70 per annum, with extras. Applications on or before November 3rd.

TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, etc. Applications not later than November 1st.

*VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea.—Honorary Assistant Physician. Applications on or before November 1st.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BISS, Cecil Y., M.B., appointed Honorary Physician to the Western General Dispensary, *vice* A. T. T. Wise, M.D., resigned.—(In the JOURNAL of October 16th, Dr. Biss's appointment was by error described as that of "house-physician".)

EWBANK, F., M.R.C.S., L.R.C.P., appointed Resident Surgeon to the Cheltenham General Hospital and Dispensary, *vice* George Taylor, M.B., resigned.

JESSOP, Walter H. H., M.R.C.S.Eng., appointed House-Physician to the Royal Hospital for Diseases of the Chest, *vice* F. M. Pope, M.R.C.S.Eng., resigned.

LOUGH, John J., M.B., appointed Medical Officer to the N. Postal District (Islington Division), *vice* A. D. Harston, F.R.C.S.E., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

HITCHCOCK.—October 20th, at Market Lavington, the wife of C. K. Hitchcock, M.A., M.D. Cantab., Medical Superintendent of Kingsdown House Asylum, Box, Wilts, of a son.

MARRIAGES.

LOWNDES—LEWIS.—On October 26th, at St. Nicholas Parish Church, Liverpool, by the Rev. A. Stewart, M.A., Rector, Frederick Walter Lowndes, M.R.C.S.Eng., of Liverpool, to Elizabeth Ellen, youngest daughter of the late John Lewis, of Helsby, Cheshire.

WARDLE—HUTCHINSON.—At St. Andrew's, Auckland, on the 21st instant, by the Rev. Canon Long, M.A., Vicar, Mark A. Wardle, L.R.C.P. and S.Ed., to Jane E.M., third daughter of V. Hutchinson, M.D., The Elms, Bishop Auckland.

WHITE—JENNINGS.—On the 21st instant, at the Abbey, Malmesbury, by the Rev. G. W. Tucker, M.A., the Vicar, assisted by the Rev. C. D. Forbes, B.A., Edward Arthur White, M.D., of Malmesbury, third son of Richard White, of Heathfield House, Norwich, to Anne Maude, only daughter of Joseph C. S. Jennings, F.R.C.S., of the Abbey House, Malmesbury, Wilts.—No cards.

DEATHS.

HORNSBY.—On the 21st instant, at High Street, Bromsgrove, Worcestershire, George Harcourt Hornsby, M.R.C.S.Eng., in the twenty-eighth year of his age. Friends kindly accept this intimation.

INGHAM.—On the 24th instant, at Ash Mount, Haworth, Yorkshire, Mary, the beloved wife of Amos Ingham, M.D., aged fifty-two years.

DURING the past three weeks of the current quarter, the metropolitan death-rate has averaged 20.5 per 1,000, against 20.2 and 20.1 in the corresponding weeks of 1878 and 1879.

THE veteran surgeon Pirogoff, of St. Petersburg, completed the twenty-fifth year of his emeritus professorship on the 20th of September of this year.

DEPRESSION OF THE SKULL OF INFANTS.—Dr. Liddell quotes from Dr. Paul F. Eve's *Remarkable Cases in Surgery*: "I have heard of no less than three cases of depressed skulls in young children relieved by exhausting the air from a cupping glass, placed over the portion of the cranium driven below the surrounding level. One instance occurred in Europe, the second is recorded by Dr. Moultrie, of St. John's, and the third was mentioned to me by my colleague, Dr. Briggs."—*American Journal of Medical Science.*

PUBLIC HEALTH.—During last week, being the forty-second week of the year, 5,537 births and 3,748 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 23 deaths annually in every 1,000 persons living. The annual death-rate was 16 in Edinburgh, 20 in Glasgow, and 33 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Birmingham, 17; Portsmouth, 17; Bristol, 19; Oldham, 19; Leeds, 20; Sheffield, 20; Brighton, 20; London, 22; Sunderland, 22; Nottingham, 22; Wolverhampton, 23; Newcastle-upon-Tyne, 23; Manchester, 25; Norwich, 25; Salford, 26; Plymouth, 26; Bradford, 28; Liverpool, 30; Hull, 32; and the highest rate, 33, in Leicester. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 2.1 in Birmingham, Leeds, and Plymouth, to 6.7 and 7.6 in Salford and Leicester. Scarlet fever showed the largest proportional fatality in Sunderland, Liverpool, and Leicester; and measles in Leicester. The highest death-rate from fever (principally enteric) occurred in Portsmouth, Brighton, and Salford. The annual death-rate from diarrhœa did not exceed 0.8 per 1,000 in London, but averaged 1.4 per 1,000 in the nineteen large provincial towns. Diphtheria caused 11 deaths in London, and 2 in Bradford. Seven more fatal cases of small-pox occurred in London, but not one in any of the nineteen other towns. In London, 1,518 deaths were registered, which exceeded the average by 59, and gave an annual death-rate of 21.6. The 1,518 deaths included 7 from small-pox, 22 from measles, 58 from scarlet fever, 11 from diphtheria, 11 from whooping-cough, 24 from different forms of fever, and 59 from diarrhœa—being altogether 192 zymotic deaths, which were 36 below the average, and were equal to an annual rate of 2.7 per 1,000. The deaths referred to diseases of the respiratory organs, which had steadily increased from 124 to 273 in the six previous weeks, further rose to 323 last week, and exceeded the corrected weekly average by 38; 213 were attributed to bronchitis, and 77 to pneumonia. Different forms of violence caused 54 deaths; 47 were the result of negligence or accident, including 22 from fractures and contusions, 3 from burns and scalds, 6 from drowning, and 9 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 42.9°, and 7.6° below the average. The coldest day was Wednesday, when the mean was only 34.4°, and showed a deficiency of 16.2°. The direction of the wind was variable, and the horizontal movement of the air averaged 10.7 miles per hour, which was 0.4 below the average. Rain or melted snow was measured on four days of the week, to the aggregate amount of 1.35 inches. The duration of registered bright sunshine in the week was equal to 10 per cent. of its possible duration. Scarcely any ozone was measured during the week, except on Saturday.

BEQUESTS, ETC.—Mr. John S. Surman, of Swindon Hall, near Cheltenham, has bequeathed £2,000 to the Gloucester Infirmary, and £1,000 to the Cheltenham General Hospital and Dispensary.—The St. George's and St. James's Dispensary has become entitled to £1,000 under the will of Mr. Henry Ludlam of Piccadilly.—The Middlesex Hospital has become entitled to £100 under the will of Mr. T. H. Wyatt, of Great Russell Street, Bloomsbury.—The Sussex County Hospital, at Brighton, has received fifty guineas from Mr. William Grantham, M.P., and twenty-five guineas from Mr. C. W. Catt.

MIDLAND MEDICAL SOCIETY.—The inaugural meeting for the session of 1880-81 was held on Wednesday, October 20th, at the Grand Hotel, Birmingham, Dr. Savage (President) in the chair. About 170 members and friends were present. Dr. Matthews Duncan delivered the address, taking for his subject the treatment of puerperal fever. At the close of the address, a hearty vote of thanks was proposed by Mr. Berry, seconded by Dr. Bassett, and carried by acclamation. About sixty remained to entertain Dr. Duncan at supper. After the usual loyal toasts, his health was proposed by the President. Dr. Duncan, in reply, proposed "Success to the Midland Medical Society". Mr. Lawson Tait proposed "The Visitors", to which Professors Poynting and Bridge replied. Mr. Thomas (ex-President) proposed the health of the officers. Mr. Harmar (Treasurer) and the Secretaries having replied, the meeting separated, after a very enjoyable evening. Before the address, Professor Poynting showed some interesting physical experiments, including electrified water-jets, and the phoneidoscope. Messrs. Salt and Son, and Mr. W. G. Mappin, each exhibited surgical instruments and appliances. Messrs. Southall Brothers and Barclay exhibited new and rare drugs, and Mr. Gamgee's absorbent pads. Mr. Bailey showed a collection of microscopes, with beautifully prepared specimens.

PETERBOROUGH URBAN AND RURAL DISTRICTS.—Dr. Thomson's reports on these districts err on the side of brevity. In both urban and rural districts scarlatina and measles were unduly prevalent, and a large proportion of the schools were closed in consequence. Typhoid fever is less fatal in the city than it used to be, doubtless on account of the great sanitary improvements which are at last being made there, under pressure from Whitehall. Several cases of diphtheria are reported in connection with sanitary defects. The annual death-rate in the city was 22.4, against 24.1 per 1,000 in 1878. In the rural district it was 17.5 per 1,000. The want of a hospital for infectious diseases, and of a disinfecting apparatus, has been much felt. Taken as a whole, the sanitary condition of the districts is improving, but a good many arrears have got to be made up.

BINGHAM RURAL DISTRICT.—This, for a first report, is one of great promise, and reflects credit upon the energy of Mr. Poyntz Wright. From a systematic inspection, Mr. Wright feels justified in saying that the condition of the district is, as a whole, satisfactory in point of health. Though several cases of zymotic disease were recorded, there was no serious epidemic in the district. It was deemed necessary, however, to close several schools in consequence of threatened outbreaks of measles and scarlet fever. Mr. Wright discusses at length the drainage and water-supply, as to both of which it is evident that much improvement is required. During the year, there were 441 births and 276 deaths in the district, equal to rates of 30.07 and 18.07 per 1,000 respectively. From zymotic diseases 22 deaths occurred, the cases being distributed over several parishes. Phthisis caused 28 deaths, the greater number of which (19) were amongst females. Mr. Wright adverts to the necessity of early information of infectious cases being given to sanitary officers, and says, truly enough, that "one of the principal drawbacks towards the furtherance of sanitary progress is the want of a greater catholicism of hearty co-operation on the part of the public with sanitary authorities, frequently looked upon as expensive machines, which fail to produce corresponding or equivalent results."

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN. The usual quarterly court of this society was held on Wednesday, October 13th at five P.M., in the library of the Royal Medical and Chirurgical Society. The president, Sir George Burrows, was in the chair. Applications for relief were read from sixty Widows and seventeen Orphans. It was resolved that annuities of £1,210 be recommended to be granted at the next meeting of the directors. The acting treasurer reporting favourably of the state of the finances of the society, the Court had the satisfaction of voting a Christmas present of £5 to each widow, and £2 to each orphan on the list of recipients, and £4 to each orphan on the Orphans' Fund. One member was elected. No new cases were reported among the members or recipients of grants, and only one orphan was declared ineligible, from age, to receive any further assistance.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M. Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M. West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. General Meeting. Dr. F. de Havilland Hall, "A Case of Pleuritic Effusion"; Dr. E. Symes Thompson, "A Case of Aortic Aneurism, in which Secondary Disease was set up in the Right Lung"; Dr. J. G. Thorowgood, "A Fatal Case of Atrophy of the Stomach".

TUESDAY.—Pathological Society of London, 8.30 P.M. The President (1) Myeloid Tumour of Femur; (2) Multiple Exostoses; (3) Specimens of Ainhum sent by Dr. Crombie. Dr. Norman Moore, Embolism of Cerebral Artery. Mr. Godlee (1) Fibrocellular Tumour from Knee-joint; (2) Epithelioma of Lung. Mr. Pearce Gould, Papilloma of Umbilicus. Dr. Payne, Joint-Disease in Tabes Dorsalis (living specimen). Dr. Thin, Histology of Molluscum Contagiosum. Dr. Lees, Teleotitis in a Syphilitic Infant (living specimen). Mr. Shattock, Dissection of Cleft Palate. Dr. Payne, Hemiatrophia Facialis (living specimen.)

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Specimens will be exhibited by Dr. Roper, Dr. Herman, and others. Papers: Dr. Wade (Birmingham), Case of Chorea in Pregnancy, successfully treated by Dilatation of the Cervix Uteri"; Dr. Braxton Hicks, "Congenital Abnormality of the Uterus simulating Retention of Menses"; Dr. Charles H. Carter, "Absence of the Vagina—Uterus distended by Retained Menstrual Fluid Operation Recovery".—Epidemiological Society of London, 8 P.M. Inaugural Address by the President, Mr. Netten Radcliffe, "On Certain Appearances of Cholera since 1873 in the Countries lying between India and Europe".

THURSDAY.—Harveian Society of London, 8.30 P.M. Mr. A. J. Pepper, "A Case of Trephining for Double Compound Fracture"; Dr. Broadbent, "A Case of Heart-Disease".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRITS NOT USED.

FARR TESTIMONIAL FUND.

SIR,—I am desired by the committee charged with the promotion of the Farr Testimonial Fund to request that you will add to their obligations by publishing, in your next issue, the following further list of subscriptions.—Faithfully yours,

NOEL A. HUMPHREYS, Hon. Sec.

Amount of subscriptions already published, £925 2s. 0d.

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As the committee proposes shortly to close the subscription list, intending subscribers, who have not yet intimated their intention, are requested to communicate with the Honorary Secretary, Mr. Noel A. Humphreys, General Register Office, Somerset House, London, W.C. All cheques or post office orders should be crossed Martin and Co.

ETSOM COLLEGE.

SIR,—I was not sorry to see the letter from "A Life Governor", asking for an investigation of the cause of the running away of six of the boys. The *régimé* of the College as to punishments, etc., ought to be looked into, if there be any truth in what one hears.—I am, etc.,

PATERFAMILIAS.

H. T., M.B.M.A., will obtain the information which he requires by writing to the French authorities, or in a more condensed form in the Foreign Educational Number of the *London Medical Record*, which is chiefly occupied with the regulations of the Continental universities and hospital schools.

A JOURNAL *versus* TRANSACTIONS.

GAILLARD'S *Medical Journal*, referring to Dr. Sayre's proposal, in his presidential address to the American Medical Association, to abandon the existing bulky and little read volume of annual transactions, in favour of a periodical publication, says: "It may be said parenthetically that (laying aside all theories and speculations in regard to this important matter), when the British Medical Association adopted this plan and created the BRITISH MEDICAL JOURNAL, that Journal showed the wisdom of such a course not only by cementing together the strong elements of that body, but by giving it a power and influence, and a triumphant success, of which the most sanguine had never dreamed. It is to-day the moving power, the very heart and soul of that Association; any interruption of its publication would be followed by a dissolution of the body which created it. The recommendation of Dr. Sayre met with deserved support, for a special committee of five has been appointed to report upon the matter at the next meeting."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor, not later than twelve o'clock on Thursday.

ARE SUICIDES LUNATICS?

SIR,—In relation to the above question, asked in the JOURNAL of October 9th, 1880, the following extracts from Lecky's *History of European Morals*, vol. i, may be of interest.

"Death, said the Stoics, is the only evil that does not afflict us when present. It frees the slave from his cruel master, opens the prison door, calms the qualms of pain, closes the struggle of poverty. It is the last and best boon of nature, for it frees man from all his cares." "Death, according to Socrates, either extinguishes life, or emancipates it from the thraldom of the body. Even in the first case, it is a blessing; in the last, it is the greatest of boons." "Accustom yourself," said Epicurus, "to the thought that death is indifferent; for all good and all evil consist in feeling; and what is death but the privation of feeling?" "The philosophers taught that death is a law, and not a punishment;" that it was the end of suffering. "Plato permitted suicide when the law required it; and also when men had been struck down by intolerable calamity, or had sunk to the lowest depths of poverty."

The roll of great suicides is not long, though it contains some illustrious names: among others, those of Zeno and Cleanthes. Cicero praised the suicide of Cato. The Stoics believed that every man had a right to dispose of his own life. Seneca emphatically advocated suicide. There can be no question that the ancient view of suicide was broadly opposed to our own. A general approval of it floated down through most of the schools of philosophy. Epicurus exhorted men "to weigh carefully whether they would prefer death to come to them, or would themselves go to death." Among his disciples, Lucretius, the illustrious poet of the sect, died by his own hand; as did also Cassius, the tyrannicide; Atticus, the friend of Cicero; Petronius, the voluptuary; and Diodorus, the philosopher. Pliny described the lot of man as, in this respect at least, superior to that of God: that man has the power of flying to the tomb; and he represented it as one of the greatest proofs of the bounty of Providence that it has filled the world with herbs by which the weary may find a rapid and a painless death. Hyesias taught that life was so full of cares, and its pleasure so fleeting and alloyed, that the happiest lot for man was death; and such was the power of his eloquence, so intense was the fascination he cast around the tomb, that his disciples embraced with rapture the consequence of his doctrine; multitudes freed themselves, by suicide, from the troubles of the world.

But it was in the Roman Empire and among the Roman Stoics that suicide assumed its greatest prominence, and its philosophy was most fully elaborated. The example of Cato, who had become the ideal of the Stoics, and whose dramatic suicide was the favourite subject of their eloquence; the indifference to death produced by the great multiplication of gladiatorial shows; the many instances of barbarian captives who, sooner than slay their fellow-countrymen, or minister to the pleasure of their conquerors, plunged their lances into their own necks, or found other roads to freedom; the custom of compelling political prisoners to execute their own sentences; and, more than all, the capricious and atrocious tyranny of the Cæsars, had raised suicide into an extraordinary prominence.

Seneca, the most influential teacher of Roman stoicism, ardently advocated it; and, as a general proposition, the law recognised it as a right. The suicide of Otho, who is said to have killed himself to avoid being a second time a cause of civil war, was extolled as equal in grandeur to that of Cato (who, being with Scipio Metellus when he was defeated at Thapsus in Africa by Cæsar, killed himself rather than fall into the conqueror's hands). On the death of Otho, some of his soldiers, filled with grief and admiration, killed themselves before his corpse. In the Dacian War, the enemy, having captured a distinguished Roman general named Longinus, endeavoured to extort terms from Trajan as a condition of his surrender; but Longinus, by taking poison, freed the emperor from his embarrassment. Death, too, was regarded as "the last physician of disease", and suicide as the legitimate relief from intolerable suffering. Thus died Silius Italicus, one of the last of the Latin poets. So, also, perished Tullius Marcellinus, a young man of remarkable abilities, and very earnest character, who had long ridiculed the teaching of philosophy, but had ended by embracing it with all the passion of a convert.

The doctrine of suicide, indeed, was the culminating point of Roman stoicism. The proud, self-reliant, unbending character of the philosopher could not be sustained when he felt that he had a sure refuge against the extreme forms of suffering or of despair. Stoicism taught men to hope little, but to fear nothing. It did not array death in brilliant colours as the path of positive felicity; but it endeavoured to divest it, as the end of suffering, of every terror. Life lost much of its bitterness when men had found a refuge from the storms of fate, a speedy deliverance from dotage and pain. Death ceased to be terrible when it was regarded rather as a remedy than as a sentence. And are not its terrors equally abated in modern times, when viewed in the same aspects, by the Stoics of the nineteenth century?

Were all these men I have mentioned, who took their lives upon these principles, or on other ones resembling them, lunatics? No one, I think, will say so. Then, who, should men who commit the act now, upon the same principles, be thought more mad than they? If the men who, for these reasons, acted themselves in past times were sane, so must those who do the same in modern days, and vice versâ. I have the honour to be, sir, your most obedient servant,

Bath, October 11th, 1880. T. H. SPENCER, M.D.

DR. STEDMAN, Danvers, Massachusetts, U.S.A.—Dr. Crichton Browne's paper, entitled "A Plea for the Minute Study of Mania", was published in *Brain*, a quarterly periodical of mental disease, published by Macmillan and Co., London and New York.

FLACCIDITY OF THE IRIS IN REAL DEATH.

SIR,—In the BRITISH MEDICAL JOURNAL of September 25th, Mr. Boyd B. Joll states, as an invariably true test of real death, that there is "complete flaccidity of the iris", so that by mechanical compression of the globe of the eye in two opposite directions the pupil will readily assume an oval or irregular shape; whereas, in cases of apparent death, no ordinary amount of compression will have the least effect in altering the usual circular form of the pupil. On the 5th September, a man was admitted to the Swansea Hospital in a comatose state, suffering from fracture of the base of the skull. On admission, the pulse was 36-44; respiration 6-8; temperature subnormal, the index not rising from the bulb. The pupils were equally and widely dilated, and on compression of the globe of either eye in two opposite directions, whether from below or laterally, the diameter of the pupil became readily increased in the opposite direction. In a child, comatose, and dying of tabes mesenterica—the pulse being over 160 per minute, the respirations 52, and the temperature 103.4—I found the pupils widely and equally dilated; and again I was most easily able to make the pupil assume an oval shape by synchronous compression of the globe of the eye in two opposite directions; and a few minutes afterwards, when the heart had ceased to beat, I could not see that the readiness with which this change could be produced in the shape of the pupil was increased. I cannot believe, therefore, that flaccidity of the iris is an invariably true test of real death; though, in both the cases I examined, the coma was deep and the pupils very widely dilated; and perhaps, as they were not cases of apparent death, Mr. Joll will consider his test did not apply to them; still, I take it, the test, if true, should decide the question whether or not the patient is alive.—I am, etc.,

Swansea. J. FARRANT FRY.

MORPHIA FOR SUBCUTANEOUS INJECTION.

SIR,—I can recommend the following formula to "G. P.", viz.: R Liq. atropiæ. sulph. fʒij; morphiæ hydrochlor. ℈ss; sp. chlorof. ℥x; aquæ distill. q.s. ad fʒiss. The atropine is valuable in preventing the nauseating and depressing effects of the morphia, and the chloroform helps the solution to keep. Six minims contain one-fourth of a grain of the hydrochlorate of morphia, and one-eightieth of a grain of the atropine salt.—I am, etc., G. F. HODGSON.

SIR,—In reply to "G. P.", in the *Pharmaceutical Journal*, February 1870, p. 451, I published the following formula for the above. The morphia will not crystallise from this solution, although it contains one grain of the acetate in six minims, is double the strength of the solution inserted in the additions to the *British Pharmacopœia*, and is much more easily prepared than the latter. ℞ Morphia (pure alkaloid) 45 grains; diluted acetic acid fl.ʒiv or q.s.; distilled water q.s. Add the morphia to the diluted acid contained in an ounce phial, and digest at from 80° to 100° Fahr. on a mantelshelf will do—for twelve hours; if not all dissolved, add a drop or two more acid, carefully avoiding excess, to make a nearly perfect solution; then filter into a graduated measure, and, the fluid being all passed through, wash the filter by sprinkling over it sufficient distilled water, that the whole filtered product may measure exactly six fluid drachms. In this solution one grain of pure morphia will have been dissolved in eight minims, and it will contain one grain of the salt—acetate of morphia—in six minims. It is almost void of colour; but if exposed to light, or not kept from the air, it gradually changes to a vinegar brown; yet I have a sample before me, prepared two years ago, which is not so dark as pale sherry. Complaint is often made about the crust that forms round the neck of the bottle in which it is kept. I find this is best prevented by coating the stopper with a little paraffin wax before putting it in the bottle. This is easily done by warming the stopper in the flame of a spirit-lamp, and rubbing it with a piece of paraffin. In placing the stopper in the bottle at any time after use, it is best, if coated with paraffin, to give it a screw into the neck of the bottle; all oozing and encrusting is thus avoided. Care should be taken to keep the syringe clean and the solution free from dust. The addition of one per cent. of carbolic acid does not interfere with its action, but I have never found the need of it. One per cent. of carbolic acid, in a solution of ergotine or sclerotic acid, will keep these for any length of time.

The tartrate of morphia has lately been recommended for hypodermic injection, but it requires twelve parts of water to dissolve it, and it is not so rich in the pure alkaloid as the acetate. The acetate answers well, only it must be freshly prepared, or it is not sufficiently soluble. For this purpose, it is best to make it direct from the pure alkaloid, as above suggested.—Yours obediently,

10, New Cavendish Street, October 11th, 1880. W. MARTINDALE.

CHIAN TURPENTINE.

SIR,—In the *Pharmaceutical Journal* last week, Professor Fluckiger suggests the probability of a supply of true Chian turpentine being found in Algeria. By letters received this week from competent authorities in that country, who have been making inquiries and searching for the trees, they report that the true *Pistacia Terebinthus* tree is hardly known, and very rare, in Algeria. The *Terebinthus Atlantica*, Desf., is the nearest variety that is found; a sample of the gum is sent for comparison. They are continuing the inquiries among the Arabs, and agree to distribute samples of true Chian that I am sending to the traders going into the interior. Mr. C. Hanbury informs me that his collector writes that, although he has found some more trees of *Pistachia Terebinthus* in the islands, the Government will not allow them to be touched with the view of tapping them, for fear of destroying the tree. Yours truly, THOMAS CHRISTY, F.L.S.

London, October 20th, 1880.

THE LOST MEDICAL SCHOOL.

SIR,—It seems to be a lamentably short-sighted policy of the University of Oxford, that, instead of constituting herself the mother and nurse of all the arts, and bringing herself into harmony with the spirit of the age, she should studiously ignore, and thus lose the sympathy of, the greatest, and in its effects on the human family the most important, of the professions, oblivious of the fact that in giving she receives. "Quis est nostrum liberal ter eruditus, qui non eruditores, cui non magistri sui atque doctores, cum tanto hujus ille mutus ipse, qui deus aut doctus est, cum grata recordatione in mente versetur?" (Cicero *pro Plancio*).—I am, etc., CIVIS.

GUY'S HOSPITAL.

SIR,—In the face of lay and medical editorial articles, condemning the too ready acquiescence of the staff of Guy's Hospital to do as they are ordered by the governors, and hosts of my medical brethren are anxious to know if the staff have reconsidered their untimely submission. Let them firmly and plainly intimate to the governors that they cannot accede to their demands. By doing so, and asserting their authority in matters purely medical, they will assuredly regain the confidence, and be accorded the thanks, not only of the profession, but also of the public in general.—I am, sir, yours obediently, A PROVINCIAL SURGEON.

Liverpool, October 11th, 1880.

A GENEROUS TRIBUTE.

SIR,—I send enclosed an extract from a child's book, recently published by J. F. Shaw and Co., Paternoster Row, as it contains a deserved tribute to our profession, which I think is rarely now to be found, for insertion in the JOURNAL, if you consider it admissible. Yours faithfully, M.D.

Extract from "Peggy's Little Brother", by Brenda, page 100. "I am anxious here to pay a tribute to doctors, for it seems to me that, as a class, they shine out more brilliantly than any other men. Their patience, their kindness, their zeal, their devotion, their courage, who has not proved it for themselves at some time or

other in their lives, or else heard of it from others? How the poor invariably speak of them, and who better than they can testify to their real worth? I often think what a bright array of doctors there will be in that day, when all the great things done in the dark shall be known in the light, and the army of the world's true heroes shall appear before the great white throne in heaven. How many a poor obscure country doctor, whose homely gig and hop-and-go-one horse have been the laugh and joke of the squire and his friends, when they have met him going his weary round on a sunny September morning, while they have been striding over the stubble with dog and gun, will be found in that day the better man of them all, amongst the little band 'who are unknown here, but well known there' for deeds of gallantry and true heroism which this world passes by, but which will gain the highest honours and the brightest crown in the Paradise of God."

An Advertisement.

The following is a cutting from the *Banffshire Journal and Aberdeen Mail*, Tuesday, October 5th, 1880, forwarded to us for comment; it speaks, however, for (or rather against) itself.

"Dr. Manson is happy to say that he has secured as partner Dr. Fergusson of Fraserburgh. For the last four years he has been assistant and partner to Dr. Grieve there, and during that time he has proved himself to be a gentleman possessed of the highest qualifications for the practice of his profession. Dr. Fergusson is a graduate of the Aberdeen University, taking the degrees of M.B. and C.M. with 'highest academical honours', and his testimonials from professors and teachers are also of the highest order.—Banff, September 13th, 1880."

Bromidrosis.

SIR,—I have had many cases of this unpleasant affection under my care, some of them notably bad ones. I never failed in making a perfect and speedy cure by the following treatment. I insist on ablution of the feet with soap and water night and morning (using terebene soap by preference). After carefully drying with a soft cloth, I make the patient sponge them over with the following lotion: ℞ Acetatis plumbi ʒj; aceti destillati ʒi; spiritûs vini methylati ʒij; aquam ad ʒxvj. Fiat lotio. This, with clean stockings daily, some tonic treatment in addition, I have always found to complete the cure. I attribute the benefit of Hebra's treatment to the lead in the soap plaister.—Yours, etc.

J. W. MARTIN.

Woodview, Portlaw, Ireland, October 23rd, 1880.

The Administration of Bichloride of Methylene.

SIR,—In reply to "Anæsthesia", in the JOURNAL of October 2nd, I beg to say that I have been in the habit frequently, for the past ten years, of administering methylene, both in hospital and in private practice, to patients of all ages. I much prefer it to chloroform (in fact, I hardly ever give the latter), chiefly because I consider it safer. If properly administered, a smaller quantity is required, the patient recovers more quickly from its effects, and sickness afterwards is an exception.

The inhaler generally used is made of stoutish leather, perforated with small holes at one end; and all that is necessary is to have a flannel bag made to fit loosely inside it, but longer than the leather part, so that the open part of the bag can be turned over the inhaler to keep the flannel from slipping out. I believe all instrument-makers supply it at a very moderate cost, or it could be made locally from a pattern. It should be large enough to well cover the mouth and nose; of course, a smaller one is required for children.

For an adult, a drachm of methylene is poured into the inhaler, and placed over the nose and mouth, held tightly there, and if possible not removed till the drachm has been inhaled; this can be ascertained by putting one's nose to the perforated holes; then from ten to twenty minims should be again put into the inhaler, and so on, till the patient is under its influence, when the inhaler should be removed altogether; but, as consciousness returns, from ten to twenty minims more should again be given—this is quite sufficient—till the operation is completed. I believe the essential point in giving methylene to lie in keeping the inhaler on, in the first instance, till the drachm is exhausted, and continuing it in small doses. Patients can be kept under its influence a considerable time with a small quantity. I recently kept one under sixty-five minutes with a little more than four drachms, for the removal of a large fibroid of the uterus; and no sickness followed the operation. With regard to sickness, I find that out of seventy-seven cases, of which I have lately kept a record, it occurred only in six instances, and of these, four were only slightly sick some hours afterwards.

The bichloride of methylene is manufactured by J. Robbins and Co., 372, Oxford Street.

If necessary, I shall be happy to give "Anæsthesia" any further information I can, either through the JOURNAL or by private letter.—I am, sir, yours obediently,

H. CULLIFORD-HOPKINS, Pathological Registrar and Curator,
Royal United Hospital, Bath.

The General Practitioner.

SIR,—I trust I may be favoured with a corner in your JOURNAL, to express an opinion on a letter in the number for October 16th, signed by "Esprit de Corps", in which he evidently gratifies himself, if he does not instruct or edify his brethren. The opinion is, that a gentleman, although imagining himself blessed with the feeling of "Esprit de Corps", should endeavour to possess himself of a little more charity, kindly feeling, knowledge about what he treats of, a little better arrangement of his ideas, even although it should involve "the agonies of composition, labouring to evolve from the depths or shallows of his consciousness ideas which may be true if not new", and, above all, a little more common sense.

Firstly, if it be "a misfortune of the family physician that he never seems able to get beyond the discussion of some elementary fact in midwifery", or if he will air himself on the "stale" subjects of *post partum* hæmorrhage, or the "yet staler subject of placenta prævia", it is a misfortune not wholly to be deplored. The "stale subjects are, to all thoughtful practitioners, of constant importance; and if our friend "Esprit de Corps" has satisfied himself as to all the points of etiology, pathology, and treatment which is best adapted, he is in advance of the best authorities on obstetrics. As to the further sneer about "the higher flights, such as the treatment of pneumonia or the differential diagnosis of measles", which result in "a sense of cerebral exhaustion and effectually deter him from further exertions", "the general practitioner" of the writer's circle of acquaintance must surely be not only "third and fourth-rate practitioners", but at the very bottom of the intelligent body of men who constitute the class of general practitioners; or the writer must suffer from nonsense the result of cerebral barrenness of culture; and, in all kindness, we trust this "may effectually deter him" from further such exertions.

Secondly, the littleness of the paragraph on "the weary, flat, stale, and unprofitable" proceedings of the Branch meetings and the puerilities about Smith and Brown, might deserve criticism, were it not that "Esprit de Corps" would possibly retort that the allusions were witty, and that we had failed to perceive it. If they are meant for such, in all humility, we confess we do. Why, in the name of all that is merciful, subject "Esprit de Corps" to such a strain on his ordinary "esprit" and politeness? if he be cursed with "sad forebodings of melancholy" and feels that his "polite attention" is unequal to listening to "the threadbare platitudes". Subject him not; let him have "no time", like Smith, or "have his wife send an urgent message for him", like Brown; or, better still, let him sever his connection with the Branch, and altogether abstain from connecting himself and his organising genius with so unworthy and miserable a class of men. We are convinced he will not be greatly missed, if his tongue is not more sensible and polite than his pen. If our friend had better informed himself as to the general practitioner, we do not think he would have written as he has done. In the past and present, the greatest names in medicine have come forth from the ranks of the general practitioner; and if "Esprit de Corps" has never served in these ranks, we question as to his value in the "non-commissioned grade" of the consultants.

Thirdly, the dispensing of medicine, the red lamps, and the painting like "the nearest gin-palace", the "advice gratis", "medicine sixpence", the provident dispensaries, and the fees, are all, without doubt, worthy of thought. But where is the novelty, if we have the truth in the observations made? Has it never occurred to "Esprit de Corps" that there are grades in all trades and professions? that, while we have crossing-sweepers in Regent Street and Pall Mall, they also exist in Whitechapel and Shoreditch? We do not defend the dispensing of medicine; personally, we have never dispensed; but that it is an absolute necessity in some particular localities, both in the "metropolis" and "the country, you know", is a patent fact. There is a distinct tendency towards wholly prescribing practice in the coming, and majority of the present, general practitioners. "The red lamps", of which we are not the proud possessors, are at least in London, in many insufficiently lighted streets, of very great value; we can testify from our own knowledge that they are appreciated by many an anxious hurrying patient. That the lamps might as well be white, or green, or blue, we do not deny; but if the public know the significance of the red lamp, why is it so reprehensible? As a matter of economy of gas, the "red lamp" will show better than the "white lamp". And we would ask, Are there no other trade-marks equally objectionable among so-called high-class practitioners? Do we not see equipages, peculiarities of dress and manner, of tone of voice, of behaviour, equally to be designated as "advertising trade-marks"? The painting of a medical practitioner's house in imitation of "the nearest gin-palace" we have never seen, nor can we credit it; but this (if so), the "advice gratis", and "medicine sixpence"—the former of which we have seen, and something like the latter—we are at one with "Esprit de Corps" in condemning most emphatically. Yet, will the "gratis advisers" or "the sixpenny mediciners" care two straws for us? Can we make a silk purse from a sow's ear? Are there not cads and quacks in all callings? Do such read papers at Branch meetings of the Association? If they do, we have never known of it; and when they do, they are on the high road to getting a fee for the advice and a shilling or half-crown for their medicine. The provident dispensaries are, for the most part, like the "advice gratis", in the hands of the dregs of the profession. But, in some cases, we have known of districts in which a well arranged and united scheme on the basis of a provident dispensary, enabled the poor residents to pay their doctors, and the doctors to live on something beyond "the dignity of their order". Fees must be regulated by the class of patient and practitioner; it would be well if every district in town and country could have a recognised tariff. It is the unfortunately despicable conduct of some trying to undersell others, the discords among practitioners, and the overstocking of the profession, which renders it no easy task to effect a better return for our services.

Our friend is indeed "a Daniel come to judgment"; but if a little more judgment would come to him, he would see the absurdity of writing as he has done. Till the millenium of medicine, we will not have all we could wish for; but it is not by taking a jaundiced view of our brethren that we can ameliorate their fallen state. We trust that "Esprit de Corps" will work along with us; nay, we will be glad to follow him, at a respectful distance, if required; but we would venture, in parting with him, to suggest that the "esprit" might with advantages be refiltered or re-distilled, and the "corps" a little better drilled before he again appears as censer of the general practitioner. If not so, we would humbly advise an alteration in his *nom de plume*, that he might take it from his place of abode, and sign himself, for the future, "Muddled One Maximus".—Yours faithfully,

A. G. P.

P.S.—The plural has been used, as the views expressed are those of most sensible men in the profession, hence the presumption to employ the editorial "we".

The Medical Profession and Intemperance in Alcohol.

SIR,—Your correspondent, Mr. Baker, has seen fit to write in a style which, I trust, will find no imitators. He charges Miss Hellena Richardson, formerly (if not now) a member of the Bristol School Board, and a lady respected by all who know her, with making "gratuitous and unqualified accusations"; which are "a gross libel on medical men", "utterly unfounded on facts", "transparent falsehoods"; and with writing something "whose only characteristics are its virulence and mendacity". On the other hand, he challenges "this traducer of an honourable profession to name the individuals upon whose authority she makes this astounding charge".

Now, sir, if Miss Richardson is asked to substantiate her statements (and all who know her will be confident that she has not written anything she cannot substantiate), it appears somewhat premature, to say the least of it, to make such serious charges of mendacity, even if no manly or gentlemanly feeling acted as a restraint.

The appeal to which he refers, and of which I, also, have received a copy, puts the matter in a very strong way, often the only way of reaching some people; but anyone with a very little common sense will be able to see that the writer refers to certain cases which have occurred. Whatever Mr. Baker's negative experience may be, such experience will be worthless compared with that of others which is quite the opposite. It reminds one of the man who declared he was innocent of a murder, although half a dozen witnesses said they had seen him do it, because, he said, he could bring five hundred witnesses who had not seen him do it.

I attended a lady who was brought two or three times to death's door, and finally died, through constant use of champagne and brandy to "support" her; there was complete want of appetite, which was, of course, destroyed by the alcoholic drinks, yet nothing would persuade her to give them up; she "felt they did her good", while they were killing her. The origin of this was the recommendation of my predecessor that she should take a little brandy whenever she felt "sinking sensations"; and this was continually being cast in my teeth when I remonstrated and argued with her. Another lady is at the present time suffering from alcoholic paraplegia; one medical man was dismissed because he would not countenance the use of spirits in such a case; another medical man, then called in, and said of the brandy, "Oh! let her have it", knowing all the circumstances of the case. Mr. Baker, no doubt, would have refused it, and lost his patient like any honourable man; but there are some who do not act thus, and who do, either thoughtlessly or wilfully, recommend patients to fly to, or rely on, alcoholic liquors;

and there are no persons more liable to fall into intemperance than those who resort to alcohol for the relief of sinking sensations, low spirits, and other morbid feelings. All narcotics, chloral, opium, chlorodyne, alcohol, etc., have their victims through the feeling of necessity for them which their use creates in proportion to its extent; and the danger is so great, the habit so insidious, and the consequences so awful, that the profession ought to retain all such drugs in their own hands, and give them, if necessary, without the knowledge of the patients, so that they may not be able to administer to themselves more than is proper. Prescriptions of such drugs ought to be valid only for a definite time, after which it should be penal to dispense them without their being countersigned by a medical man. In this way, all, or nearly all, abuse would be prevented.—I am, sir, yours truly,

Enfield, October 1880. J. JAMES RIDGE, M.D.

EFFECTS OF CHLORAL AND MORPHIA.

SIR,—I shall feel obliged if you, or any of your readers, can tell me where to find the best account of chloral and morphia, and their effects. I suffer fearfully from insomnia, and should be glad to know of any means to procure sleep without the aid of narcotics; but, suffering from a painful spinal complaint, any violent measures would be out of the question. I think the frequency of insomnia would form a very good subject for discussion.—Yours faithfully, INSOMNIA.

SUSPENSORY BANDAGES FOR CIRSOCELE.

SIR,—My attention has recently been directed to the subject of "suspensory bandages" for cirsocele by the receipt of a catalogue of surgical "specialities" by a London maker, in which an apparatus for this purpose is figured and recommended. Having worn a suspensory bandage constantly for upwards of forty years, I may be supposed to possess some experience in the matter, and this I will now detail for the benefit of those who may be required to wear a similar appliance.

In the days of my youth, when a pupil of the late Mr. Syme of Edinburgh, I recollect his saying in his class, when touching upon the subject of cirsocele, that he would recommend any young man present, who might be affected with this complaint, to get a suspensory bandage at once, and wear it constantly. This arrow "shot at a venture" stuck in me, for I was then suffering from enlarged scrotal veins, and I made haste to follow my preceptor's advice, and by so doing have, through a pretty long life, hitherto escaped anything worse than an occasional inconvenience from the malady. I have always worn the simplest form of appliance—a net bag of rather fine cotton twist, crocheted, not woven, pretty open in the mesh, so as to admit of free transpiration. The bag is hollowed out above in front, to afford free passage to the penis, and is suspended by a band of tape, which passes across and is fixed to the upper edge of the bag, is then carried round the waist on each side, crossed behind, and brought back again and tied in front. The bag is steadied in its position and prevented from shifting to one side or the other by the aperture through which the penis passes, this member being encircled beneath and at the sides by the hollowed out edge of the bag, and bounded above by the suspending tape. If the aperture be made of proper dimensions, there is no risk of the testicle protruding through, as sometimes happens when the opening is unduly large. A bandage thus made and applied can be put on and off with great facility, is pleasant and convenient to wear, and when required, it can be washed and ironed, and made as good as ever. I much prefer this simple arrangement to those complicated contrivances, with perineal bands, India-rubber rings, *et hoc genus omne* of uncomfortable contrivances. In the matter of expense, also, the simple bandage has greatly the advantage. As to the inconveniences portentously attributed, in the instrument maker's circular, to the simple bag and tape, I can only say that I have never experienced them when the apparatus was properly made and fitted.—I am, sir, yours, etc., M.D.EDIN.

AN EXTENSIVE CARBUNCLE.

SIR,—In your clinical memoranda of this date, Mr. W. H. Walter records a case of extensive carbuncle, and asks whether any of your readers have seen similar cases. In 1860, I was called to a Chinaman, in good position, living in Batavia, who had a large carbuncle over the right shoulder, extending from the acromial process to the bend of the elbow; it had involved the whole circumference of the arm, and bid fair to terminate the life of its owner. Old tarred rope was teased out fine and wrapped round the large sloughing surface, which was daily dressed, and large quantities of slough pulled and cut out; indeed, it seemed as though all the intercellular tissues of the muscles of the arm were removed, each muscle being most beautifully and distinctly dissected out and cleaned. Eventually, the man battled through the disease, living entirely on rice and dried fish, nothing inducing him to take more strengthening diet; the wound healed up, but how was a puzzle, as every particle of skin had sloughed off, and a fairly useful, though mutilated, member was the outcome of all his sufferings. The day of epidermic grafting had not then dawned; otherwise, doubtless, the cure would have been even more satisfactory.—I am, etc., RICHARD NEALE, M.D.LOND.

60, Boundary Road, South Hampstead, N.W., October 23rd, 1880.

P.S. A case of triple ovariotomy, at page 673, is noted as unique. Dr. Winkler, at Dresden, in 1577, also removed three ovarian tumours from the same patient (*vide Lancet*, February 1579, p. 241).

THE TREATMENT OF NÆVI.

SIR,—Having lately read many letters in your valuable JOURNAL on the treatment of nævi, as my experience has been somewhat extensive in this direction, I beg to offer some remarks. One gentleman eulogises vaccination, another injections of lead, etc. Vaccination is all very well when the nævus is small; but no one, I should say, would expect any good from it when the nævus is larger than a shilling, or between that and the palm of a man's hand. I have had several cases brought to me where the nævus has only been as large as my thumb nail, and vaccination has been tried two or three, and failed. I have also seen cases where the lead injection have failed. I think I have given all the various methods a fair trial, viz., lead, iron, and tannin injections; threads steeped in liquor ferri perchloridi passed through the nævus, and left in two or three days. I have ligatured them in various ways, cut them off with harelip-pins and ligature; have burnt them with strong nitric acid, acid nitrate of mercury, and chylate of sodium (this last is certainly the least of the three applications). With all these different ways and means, I have had, I suppose, about the average results, and in one way and another caused the children a good deal of suffering, and myself much anxiety: especially on one occasion, when a child, ten months old, was brought to me with a small nævus on the front and right side of the head. I injected five drops of tincture of perchloride of iron (not *fortior*), with two drops of distilled water. Having steadied the nævus, I turned away, to wash the instrument, when, in about one minute, the mother gave a scream. I turned to see what was the matter. The child was fainting, and the child's face was of a peculiar pea-green colour, with blue streaks. I do not see as what I had done, the tip of the syringe had entered a small vein. How could that have been prevented? After four hours of hard work and the greatest care, I saved the child's life. Since then, I have never used injections for the cure of nævi.

But this catastrophe led me to seek some other method of treatment, and I shortly began to use electrolysis. Since then (seven years ago), I have treated a large number of cases, both at St. Mary's Hospital and in private practice, with constant success. It makes no difference where they are; the needles will reach them. I have done them on the ear, nose, eyelids, lips, neck, body, arms, legs, fingers, toes, and the vulva. This latter was a case where the labia majora and minora on one side were implicated, extending some distance upwards and inwards; it recovered. The size of the nævi treated by this method has varied from a split-pea to the size of the palm of my hand. I have never seen a case fail. A fainter cicatrix is left by this than by any other method. I have never had any anxiety or trouble; the pain ceases within a few minutes of the removal of the needles. This, then, I hold, is the treatment above all others for nævi; for it matters not what may be their kind, shape, size, or locality—it cures them all. And having now treated a very large number, and given nearly everything I ever heard of a fair trial, I have every confidence in advising electrolysis to those of the profession who have not used it.—I am, sir, your obedient servant,

Burwood Place, W., October 18th, 1880. SYDENHAM J. KNOTT.

VACCINATION FOR ECZEMA.

SIR,—If Dr. Drury will consult the BRITISH MEDICAL JOURNAL of January 27th, 1872, or Dr. M'Call Anderson's excellent treatise *On Eczema*, third edition, published in 1874, he will find vaccination referred to as a cure for chronic eczema.—Yours truly, JAMES ADAMS, M.D.

MR. TREVOR FOWLER.—In the remarks referred to, there was no intention of imputing blame either to the sanitary authority or its officers; but we believe the facts are as stated. To Mr. Fowler's own personal action, no exception was, or could be, taken. We willingly recognise the energy displayed by the authority when the gravity of the situation was recognised; but it must, at the same time, be observed that the outbreak had attained wide-spread dimensions before an attempt was made by the authority to secure the isolation of any of the sufferers.

THE NEWCASTLE-ON-TYNE THROAT AND EAR HOSPITAL.

WE have a communication from Mr. Torrance on the subject of the late Throat and Ear Hospital, Newcastle-on-Tyne, in which that gentleman produces satisfactory evidence that he and Dr. Wicks publicly retired from the Throat and Ear Hospital then in existence, in consequence of their finding it undesirable that they should be any longer associated in any way with Dr. Ellis. Dr. Wicks and Mr. Torrance publicly advertised, on February 4th, 1880, the necessity which they felt of severing their connection with the institution, inasmuch as Dr. Ellis declined to retire from it.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. J. Broadbent, Manchester; Mr. T. Holmes, London; Mr. G. Eastes, London; Dr. C. Y. Biss, Sydenham; Dr. E. Mackey, Brighton; Our Edinburgh Correspondent; Dr. Patterson Cassells, Glasgow; Dr. Stirling, Aberdeen; Dr. J. Mackenzie Booth, Aberdeen; M.R.C.P.; Dr. Nelson, Birmingham; Dr. Godson, London; Mr. R. Kershaw, London; Mr. H. E. Wright, Bootle; M.D.Brussels; Mr. R. Torrance, Newcastle-on-Tyne; Mr. W. R. Stewart, London; Dr. James Forrest, Stirling; Mr. F. Coley, Newcastle-on-Tyne; Mr. J. R. Jenkins, Ruthin; Dr. J. Adderley, Cork; Dr. A. Hughes Bennett, London; Mr. G. Tweddell, Houghton-le-Spring; Dr. A. Ogston, Aberdeen; Mr. A. de Watteville, London; Mr. J. Martin, Portlaw; Dr. A. H. Carter, Birmingham; Mr. F. A. Maciver, Edinburgh; Our Dublin Correspondent; Professor Donders, Utrecht; Dr. Thin, London; Dr. Kelly, Taunton; Mr. C. Davidson, London; Dr. W. F. Fernie, Malvern; Dr. Peter Eade, Norwich; Mr. Sydney Henson, Manchester; Dr. T. F. Chavasse, Birmingham; Sir Edwin Lechmere, London; Dr. L. Lewis, London; The Registrar of the King and Queen's College of Physicians, Dublin; Mr. Donovan, Whitwick; Mr. Robinson, London; Mr. H. Sinclair, Edinburgh; Dr. Moinet, Edinburgh; Dr. Haughton, Norwood; Dr. Bernard, Liverpool; Mr. T. M. Stone, London; Our Glasgow Correspondent; Dr. Eustace Smith, London; Surgeon-Major Fitzgerald, Mirzapur; Mr. Gamgee, Birmingham; Dr. Galabin, London; etc.

BOOKS, ETC., RECEIVED.

Hints on the Application of the Poro-Plastic Jacket in Spinal Curvature. By Paul Swain, F.R.C.S. Plymouth: W. Brendon and Son.

St. George's Hospital Reports. Edited by T. T. Whipham, M.B., F.R.C.P., and Thomas Pickering Pick, F.R.C.S.; vol. x; 1879. London: J. and A. Churchill. 1880.

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REMARKS
ON THE
INCUBATION PERIOD OF ENTERIC FEVER.*

By ALEX. COLLIE, M.D.,
Medical Officer of the Homerton Fever Hospital.

THE object of the present paper is to relate some facts pointing to the conclusion that the incubation period of enteric fever may be longer than the two or three weeks which it is generally supposed to be. But, before doing this, I will consider briefly some of the instances upon which the belief in short incubation periods has been founded. The evidence in favour of these appears to me to be either insufficient, as in the cases mentioned by Professor Griesinger (*Handbuch der Speciellen Pathologie und Therapie*, Band ii, Sect. ii; Virchow, 1864, p. 149), or to consist of observations, inaccurate in respect of the etiology, or the diagnosis, or of both of these together, as in the Clapham cases recorded by Dr. Murchison (*Continued Fevers*, 2nd Ed., p. 472), and the Cowbridge cases recorded by Dr. W. Budd (*Typhoid Fever*, p. 72. Longman and Co., 1873).

To enter into a consideration of these cases in detail would require more time than is now at my disposal. I must therefore limit myself to a very few remarks on each, and shall consider first the Clapham cases recorded by Dr. Murchison. In these, the main points to be noted are sudden onset by vomiting, early death, and enlargement of the mesenteric, the solitary, and Peyer's glands, with slight ulceration of the latter. Now, whatever these symptoms and these appearances point to, they do not point to enteric fever. Even admitting that in certain circumstances this fever might run as rapid a course as was the case at Clapham, yet, as we of the present day know it, it is not a disease which is fatal within a few hours or days. Death during the first week even, is extremely rare. Sir William Jenner, Dr. Bristowe, and Professor Trousseau each record but one case in which death occurred within the first week. Dr. Murchison, in his exceptional experience, met with only one clear case, and I know of but one other, a case which was admitted into the Homerton Fever Hospital. The history of sudden onset is not the history of enteric fever; on the contrary, no acute disease, of all our English acute diseases, creeps so insidiously upon its victims; and not only the actual suddenness, but the mode of its manifestation by vomiting, is unlike enteric; and, finally, the *post mortem* appearances were not the *post mortem* appearances of enteric fever. For these reasons I submit that the diagnosis of the Clapham cases as cases of enteric fever has not been established, and is, moreover, strongly negatived when we reflect that the symptoms and the *post mortem* appearances, such as they are, correspond with what is known of scarlatina, a fever to which children are specially liable, and of which they often die at an early stage. To begin with the incubation, it is, in scarlatina, in a large number of cases from one to two days; the onset is sudden, and is nearly always attended by vomiting. Death is not unusual on the second or third day, and may occur within a few hours. Indeed, no acute disease, of our English acute diseases, not even malignant small-pox, is so rapidly fatal as scarlet fever; and the *post mortem* appearances described in the Clapham cases are exactly such as are sometimes met with in scarlet fever. I therefore maintain that the symptoms and the *post mortem* appearances described, if they prove anything, prove that the Clapham cases were cases of scarlatina; and have, therefore, no bearing on the question of the incubation of enteric fever.

An error in exact diagnosis applies to the Cowbridge cases described by Dr. Budd. There is, in my opinion, no evidence that these were cases of enteric fever; and the evidence such as it is, whilst insufficient to enable us to form a correct judgment, points to scarlet fever, or, more probably, to poisoning from eating putrid meat, of which there have been notable instances in Germany, rather than to enteric fever, a disease, permit me to remark, not characterised by vomiting and purging.

It would be interesting now to consider the assigned causes of the Clapham and Cowbridge cases, but time will not permit this; and I am compelled to content myself with saying that, in my opinion, these were not proved; and thus from this second side the conclusions as to the shortness of the incubation period were not justified. And here I should like to say that, although I differ from Dr. Budd in this particular instance, his views on the etiology of enteric fever are, in my opinion, in the main, right, and those of his opponents, in the main, wrong. He is probably wrong on minor points; but in the main, I think he is right; and he deserves no little admiration for his bold advocacy of truth at a time when it was almost sneered at by nearly all the leading authorities, with the honourable exception of Sir Thomas Watson.

Professor Griesinger's cases require no comment.

With these preliminary observations I will now relate my own cases. Nurse Broom, aged 22½, entered the service of the Homerton Fever Hospital on July 10th, 1879. From the 11th of that month to the 21st of the following August, she was wholly occupied in nursing scarlet fever in the scarlet fever block. From August 22nd to the 3rd of the following September, she was engaged nursing enteric fever in the enteric fever block. On September 5th she was transferred to the scarlet fever block, where she remained in charge of scarlet fever patients until October 31st, when she was sent back to the enteric fever block, where she nursed enteric fever up to November 11th, when she was herself admitted as a patient with symptoms of enteric fever, having been ill about fourteen days. As nurse Broom had been ill some days previously to November 1st, we cannot look for the cause of the illness among the enteric cases which she nursed between the 1st and 11th of that month; and, since previously to this she had not nursed enteric after September 3rd, and began to be ill somewhere about October 27th, this would give an incubation period of about fifty-four days, calculating from September 3rd, the last known time of exposure to enteric fever, and October 27th, the time about when the symptoms began to appear, *i.e.*, nearly eight weeks. Of course it by no means certainly follows that Broom's illness was caught by exposure either to the enteric patients whom she nursed between August 22nd and September 3rd, or to a drain specifically infected by them. There might have been by mistake an enteric patient amongst the scarlet fever patients whom she nursed between September 5th and October 31st, and this possible unrecognised enteric patient might have been the cause of her illness. Or she might have caught it by visiting nurses or friends in enteric wards; or from exposure to fever-air in her bedroom, or in the dormitory closet which she must have occasionally used. Or she might have caught it outside the hospital from visiting friends, from sitting next a person sick of it in a crowded railway carriage with closed windows. She may have drank somewhere contaminated milk or water, or have made use of a specifically infected closet at a railway station, or elsewhere; or, lastly, the diagnosis may have been wrong. She may not have had enteric fever. These and other more remote possibilities were considered, and the conclusion arrived at was that, granting the illness to have been enteric, about which there might have been some doubt as the case was not a well-marked one, and the woman recovered, its most probable source was the enteric cases of which she had charge between August 22nd and September 3rd. This conclusion led to the further conclusion that the incubation period must have been about fifty-four days, calculating from September 3rd, the last known time of exposure, to October 27th, the time about which symptoms appeared. There is one other possibility, and that is this: sometime between September 3rd and October 27th, nurse Broom might have had an attack of enteric fever too mild to interfere with her ordinary work, and the attack for which she was treated might have been a relapse. This was considered, and the nurse was specially examined on the point. And, although she could not be certain of the commencement of her illness to within a week, which might throw the illness back to October 20th, and thus reduce the incubation period by seven days, previously to October 20th, she was clear that she was perfectly well. This would give an incubation period of forty-seven days at the least, and it may have been more, because the fifty-four and the forty-seven days are arrived at by assuming that the disease was caught on the last day when she had a known chance of doing so, that is on September 3rd.

Albert Ingham, aged 42, was admitted into the Homerton Fever Hospital, on April 13th, 1880, suffering from enteric fever. He was one of the porters of the Homerton Small-pox Hospital, which had been used for the treatment of enteric fever from September 29th, 1879, to January 27th, 1880, on which day the last enteric patient was admitted there. Between this last date and February 7th, the whole of the enteric patients in the Small-pox Hospital were either discharged or transferred to the Homerton Fever Hospital, and the Small-pox Hospital, having been disinfected, was opened for small-pox on February 8th. Ingham's duties at the Small-pox Hospital, temporarily used as an enteric fever hospital, were to bathe the male patients on their admission; to help to carry these and the female patients to their respective wards; to help to carry the dead to the mortuary, and generally to take charge of the latter. He was in these ways brought into close contact with persons sick of enteric fever, and it is here important to note that he was the only servant, not a nurse, an assistant-nurse, or a ward-

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

servant, in direct and frequent contact with the enteric sick; and the only servant, not a nurse, an assistant nurse, or ward-servant, who contracted enteric fever. Briefly, the one general servant of the hospital exposed to contagion, in the ordinary sense, took the disease; whereas those general servants not so exposed escaped. To a possible sewer-air contamination Ingham had been exposed just as others of the general servants had been, although to a much less extent, for his duties did not take him to closets and sculleries. To the decomposed stools he was not to any appreciable extent exposed, for he had not to remove bed-pans nor clean out closets or drains. These latter, and decomposition, are in Ingham's case excluded as far as they ever can be, so long as drains and closets form part of our houses. What his duties brought him into contact with, was not a drain, that being the duty of a special labourer, not a decomposed stool to which nurses, assistant nurses, and ward-servants, might be exposed, but sick persons. This etiological digression is necessary to show that the probability is against the notion that Ingham's illness might have been due to drains containing enteric stools, and that, on this supposition, it might have arisen sometime after the Small-pox Hospital was closed for enteric fever, and that, consequently, any conclusion as to the length of the incubation period is founded on a false premiss.

In trying to make out the history of his case two difficulties presented themselves: first, the apparent length of time between exposure and attack; and, second, the impossibility of fixing, accurately, its commencement. The man was generally weakly, and probably liable to be ailing from slight causes. From his own statement, it would appear that he began to ail soon after the admission of the fever cases to the Small-pox Hospital. He said that he was not well when it was closed on February 7th; that two months previous to his admission to the Fever Hospital on April 13th, he had not been feeling himself, but that he had been definitely ill for four weeks previous to his admission to the Fever Hospital, having eaten little or nothing during that time; all which is very unsatisfactory. Ingham is probably one of those weakly people who are never quite well, and, in trying to fix the commencement of his illness, I will set his evidence aside. On his admission, he looked like a person who had been ill for two or three weeks, and on April 30th his temperature was normal throughout the day, and had been falling for days before. Taking then six weeks as the extreme limit of the duration of cases of ordinary severity, and this was one of these, this would lead us up to March 20th as the commencement of Ingham's illness; and from March 20th to February 7th, the last time he was in known contact with enteric sources, would give an incubation period of forty-one days, or about six weeks at the least. In thinking over possible sources of this man's illness, one had to think of the fact that his wife lived with her father in a house near the hospital, and that he sometimes visited there. With this house I was familiar, as one of many noted during the last ten years for two things: defective sanitary arrangements, entire freedom from enteric fever. As regards this house, however, it must be noted, out of respect for opinions in which I do not share, that the drainage had not been satisfactory from January to May. The houses on each side of Ingham's father-in-law's had their closets out of order in April, and fluid from the drain had flooded Ingham's father-in-law's yard about the end of April; be it observed long after the beginning of Ingham's illness. Here possibly some would find the cause of Ingham's fever, but unfortunately for that view the drainage of the neighbourhood is the same, but better generally speaking in this house than in most. As regards Ingham, moreover, one must remember that he did not live there, but only went there occasionally to see his wife, and that there was not a single case of enteric fever amongst the families living in the neighbourhood and exposed continuously to such sewer-air as might exist. I conclude, then, that Ingham did not catch his illness at his wife's home. All the possibilities thought of in the case of Broom were also thought of here, and the conclusion which seemed the most probable was, that Ingham caught his illness whilst in contact with persons sick of enteric fever, which led to the further conclusion that the incubation period was at least about six weeks. There remains one objection, an objection not affecting the incubation except to lengthen it; and that is, that Ingham's illness may have been caused by assisting at *post mortem* examinations, when he would be exposed to the decomposed or decomposing contents of enteric intestines. To this there is a satisfactory reply. My friend Dr. Gayton informs me that, during the time the Small-pox Hospital was open for enteric fever, three *post mortem* examinations were made, one of which was found to be cancer of the rectum, and two others cases of acute pericarditis.

My last case, which was published in the JOURNAL of the Association for November 30th, 1878, time only permits me to mention. It was the case of Sarah Allen, a laundry-maid in the Homerton Fever Hospital laundry. For upwards of two years it had been her duty to sort the linen, and to clean what was soiled; and this duty, notwithstanding the exposure to decomposing enteric stools, she performed with impunity, but contracted the disease about six weeks after she had last visited her sister sick of it.

One remark before concluding. My thanks are due to my colleague Dr. Twining for the assistance which he has rendered me in the preparation of this paper.

ON THE ETIOLOGY OF ENTERIC FEVER.

BY SEYMOUR J. SHARKEY, M.B.OXON.,
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IN an able paper, which was published in the BRITISH MEDICAL JOURNAL for January 17th, Dr. Collie supports the view that enteric fever is contagious, confining himself to the proposition, that by some means or other, it spreads from person to person; while he leaves the method by which the contagion is carried an open question. This opinion is opposed to the pythogenic theory, which places the cause of typhoid fever in decomposing filth; and which found so eminent an exponent in the late Dr. Murchison. But it is in no way incompatible with the more usually accepted etiology, which maintains that the poison ordinarily enters the system by means of air and drink contaminated with the excreta of patients suffering from the disease. Dr. Collie merely affirms that enteric fever is propagated by contagion passing directly from one person to another; and my experience at St. Thomas's, extending over three or four years, certainly corroborates this view.

In forming an opinion upon this question, it must be borne in mind that the conditions are somewhat different from those in which we are placed when determining whether other fevers are contagious or not. If, on admission of a case of typhus, for instance, into a general ward, those near the patient be attacked with the disease, we look upon this as a proof that it is contagious. But if the patient be isolated in a neighbouring room, and the disease fail to spread, we do not withdraw from the conclusion we had formed: we know that the poison has not had the opportunity of acting. For, experience showing that the contagion of typhus seems to hover closely round its victim, we remove the other patients beyond its range of action, and so prevent infection. Now, in the case of enteric fever, we seem to forget that, if we artificially render a poison inert, we thereby deprive ourselves of the means of judging of its clinical properties. Believing as we do that the poison here resides mainly, if not exclusively, in the excreta, we make every effort to disinfect them at the time, or immediately after they are passed, and carry them beyond the reach of other patients, so that it becomes almost impossible for the virus to take effect. The success of these preventive measures is shown by the rarity of enteric cases arising in hospitals, and the absence of epidemics of the disease in these institutions. Yet, after taking such precautions, we lay great stress on the fact that nurses and patients rarely contract the disease in a hospital, in order to show in how small a degree typhoid fever is contagious. We should rather go to the houses of the poor, where no endeavours are made to prevent infection, and there observe the spread of the disease. A difficulty, however, meets us here. For it is generally presumed that the first case arising in any locality becomes infected by water or air contaminated with the typhoid fever poison; and how are we to know whether cases which occur subsequently are due to the same cause, or to contagion from the person first affected? In fact, our observations, whether conducted on the spot where the disease originates, or at a hospital, are rendered very difficult. Of the two, the latter is the better field for research, as we have a more complete knowledge of our patients' surroundings, and can watch them under fairly well-known conditions. But, in considering the etiology of typhoid fever, great importance should attach even to single cases originating under such circumstances, if we have good reasons for considering the patient to be free from all chance of contracting the disease, except from his companions; and still more if we have done our best to prevent such an occurrence by precautions which are taken in all well-arranged modern institutions.

To show how rarely nurses and patients are supposed to contract enteric fever in hospitals, I will quote the following passages from Dr. Murchison's treatise on *Fevers*. Speaking of the disease under consideration, he says: "Hospital experience lends little support to the doctrine of contagion." "Dr. Wilks informs me that he has never known a nurse in Guy's Hospital contract enteric fever." "In 1856, Dr. Peacock remarked that he had never known enteric fever communicated to the nurses and attendants at St. Thomas's Hospital." "The only instances of enteric fever contracted in all the general hospitals of London which Messrs. Bristowe and Holmes could discover, in their official inquiry in 1863, were those of two nurses in the Royal Free Hospital." "My

experience, in fact, has led me to the conclusion that, when enteric fever originates in a hospital, as a rule, there is something radically defective in the sanitary arrangements: and that either the air or drinking-water is polluted with decomposing excrement."

Dr. Bristowe also says, in his work on the *Theory and Practice of Medicine:* "It (typhoid fever) occurs only among those who are exposed to the influences of defective drains, or foul and overflowing cesspools; especially when these are so situated as to pour forth their fœtid gases into the interior of houses, or to contaminate by their emanations, their soakage, or their leakage, water, and other articles used for food."

In *St. Thomas's Hospital Reports* for 1873, page 18, Dr. Peacock records the case of a nurse who, he thought, had probably contracted typhoid fever by contagion; and he there says: "Doubtless, typhoid is most readily communicated by contamination of the drinking-water or other beverage, so that the poison is directly introduced into the alimentary canal; but it is also fair to suppose that the disease is capable of being disseminated by inhalation of emanations from the body of the patient; and especially from the stools."

My experience is in accordance with the later opinion here expressed by Dr. Peacock, and is at variance with the statements quoted from Dr. Murchison's and Dr. Bristowe's works. For, while it is somewhat rare for patients and nurses to contract typhoid fever from others, the propagation of the disease by contagion appears to me to be of sufficiently common occurrence to be put down as one of the causes of enteric fever; and to be much more common than the quotations given above would lead one to suppose.

The four following cases I had the opportunity of watching during three and a half years' residence in St. Thomas's Hospital. A few other cases also occurred, for which the evidence, though strong, was not conclusive.

CASE I.—Nurse S., aged 36, was admitted, under Dr. Murchison's care, in April 1877. During March she had been nursing in Charity Ward, where there were cases of enteric fever, and after that she was one week in Alice Ward before falling ill. She had an undoubted attack of the disease with the ordinary eruption.

CASE II.—Nurse M., aged 33, was admitted, under Dr. Murchison's care on November 19th, 1878. She was, at the time, nursing in Job and Lydia Wards, which had been temporarily opened solely for the reception of cases of enteric fever, as the disease was very prevalent about that period. She affirms her belief that she caught it from a little girl who died, and who had been passing all her evacuations in bed. This nurse had a severe attack, accompanied by the typical eruption, and hæmorrhage from the bowels.

CASE III.—Nurse M., aged 25, was admitted, under Dr. Murchison's care, on May 28th, 1878. Three weeks before she was sent to bed, she had been acting as special nurse to a very severe and finally fatal case of typhoid fever in Mary Ward. The patient was passing her evacuations constantly in bed, and the nurse complained that it made her feel sick. The latter had a typical though mild attack of the disease, which lasted three weeks, and was accompanied by the usual eruption and enlargement of the spleen.

Dr. Ord has kindly allowed me to record the following case.

CASE IV.—M. J. C., aged 22, was admitted into Alice Ward, under Dr. Ord's care, on November 23rd, 1878, suffering from a very large bronchocele, which she first noticed four years previously. Her condition remained much the same until January 14th, 1879, when her temperature began to be constantly raised, reaching as high as 103 or 104° Fahr. The fever began to decline again about February 3rd or 4th, and by the 12th the temperature was normal throughout the day, the febrile attack having lasted about four weeks. She emaciated greatly, but had no symptoms pointing unequivocally to enteric fever. She died on February 13th, 1879; and at the necropsy, which I performed, were found the usual intestinal lesions of typhoid, the ulcers being cleanly punched out and in the stage of early cicatrisation. This patient occupied bed No. 13. In bed 10 lay a very severe case of typhoid, who was admitted on September 25th, and had a relapse, which did not terminate in recovery until November 14th. Next but one to her, in bed 12, was a person who was admitted, on October 17th, with a joint-affection. From November 25th to December 26th, she had a fever, which was obscure in its nature, but which was thought, by Dr. Ord and others, to be enteric, and from which she recovered after one month's illness. The patient in bed 10, and the one in bed 13 (Case IV), had typhoid fever without a doubt; but, however probable, it cannot be positively asserted that the person in bed 12 had the same disease. The fever terminated, in the case of the patient in bed 10, on November 14th, 1878. In the case of the patient in bed 12, it began on November 25th, and ended on December 26th. In Case IV, who lay in bed 13, it began on January 14th, 1879, and terminated on February 12th. The probabilities seem to me to be that the patient in bed 12 caught the disease from the patient in bed 10, and that Case IV, who lay in bed 13, caught it from the patient in bed 12. But whether this be so or not, Case IV undoubtedly had enteric fever, which she contracted in the hospital.

The following facts will be observed in reading the short account given of these cases.

1. They arose in four different wards—viz., Mary, Alice, Charity, and Job, all of which are set apart for the reception of medical cases.

2. On each occasion that the disease originated in the hospital, there were other cases of typhoid fever in the ward in which it arose.

3. In every instance, the person attacked was either in attendance on cases who were suffering from enteric fever, or she was a patient occupying a bed in close proximity to them.

4. In two out of the four cases, the individuals from whom the disease was supposed to have been contracted were passing their excreta in bed, and had severe diarrhœa.

If it be objected that, notwithstanding this strong evidence in favour of contagion, the disease may have owed its origin to some unsanitary condition of the hospital, I would add to the foregoing arguments the following.

5. The water-closets and sinks are entirely shut off from the wards, and are ventilated by opposite windows, which are kept constantly open; while the utmost cleanliness is observed in the wards themselves. The sheets of enteric fever patients are changed at once if fouled in the least degree by excreta, and in any case they are changed several times a week, and the draw-sheet oftener still. There has never, in my time, been the slightest indication of the drains, etc., being out of order.

6. On this fact the greatest stress should be laid. On no occasion, I believe, has a case of typhoid fever arisen in any surgical ward in the hospital; nor, in the case of nurses who fell ill, had they been nursing in surgical wards within the supposed limits of incubation of the enteric fever poison. Every case which occurred was in connection with medical wards, which contained, at the time, patients suffering from the disease.

Considering, then, that the same nurses do duty in the surgical and medical wards, remaining a month in each; that there are more surgical than medical wards; that the drainage and other arrangements are the same throughout the building; and that enteric fever, when arising four times in as many years, always occurred in medical wards which contained cases of the disease at the time—I cannot but look upon such facts as clearly indicating that typhoid fever is contagious.

THE ORIGIN OF ENTERIC FEVER IN ISOLATED RURAL DISTRICTS.

By R. BRUCE LOW, M.D.Edin., C.S.Sc.Camb.,
Medical Officer of Health, Helmsley, Yorkshire.

As a country practitioner in an isolated and thinly populated rural district, I have had frequent opportunities for tracing the origin of fever cases, free from the ordinary sources of error which surround similar investigation in large towns or populous centres. The inhabitants of my district are almost entirely engaged in agriculture. They are not a shifting population. Many of them are able to boast that they and their "fore-elders" have farmed the same place for centuries. Among a people of this kind, where the farms and the hamlets are widely scattered among the dales and on the moors, the movements of any one person are easily traced. Visits to and from these places are easily remembered from their infrequency; and, when fever has attacked an individual, it is not difficult to obtain a complete history of his actions for any given time previous to the attack. In these isolated farmhouses, or in the hamlets, there are, of course, no sewers. As a rule, there is no attempt whatever at drainage; the slops are thrown into the nearest rivulet, or else allowed to sink into the porous soil or rock. Sewer-gas, therefore, has had no hand in the propagation or generation of the contagion in any of my cases. The water-supply is unusually pure and abundant, being for the most part obtained from springs as they issue from the rock. Owing to the configuration of the surface, there is not the slightest possibility of the springs being previously contaminated. The gathering-ground is the wide and uninhabited moor. The district is situated on the oolitic limestone formation. Of all the cases I have investigated during the last eight years, only one was due to drinking contaminated river-water. The water-supply, in the cases to which I shall afterwards refer, was proved perfectly pure and above suspicion. No surface-wells, tanks, nor cisterns, were found in any house where I had my fever cases; and we had, therefore, no case originating in the drinking of water contaminated by sep-

cific discharges. The milk-supply, too, was easily watched. Many of the cottagers keep their own cow; and, if not, the milk is obtained from the nearest farmhouse. In my inquiries, I have traced no case to contaminated milk, nor have I seen or heard of any cow, calf, or pig suffering from a disease like typhoid fever, in this vicinity.

With the exception of two cases, to which I shall allude further on, I have not traced any case of fever to eating diseased or putrid meat. I have been informed that rabbits suffer from a contagious and epidemic disease, alike in all respects to typhoid. There are, in the numerous wooded valleys of this district, swarms of rabbits; it is just possible that some cases, otherwise unaccountable, may have originated from eating the flesh of a diseased rabbit, or perhaps from drinking water from a moorland stream, into which the specific discharges of diseased rabbits may have been washed by the heavy rains. Dr. Burdon Sanderson has shown that rodents are peculiarly susceptible to infective processes. Rabbits may have received the contagion from the discharges of a typhoid patient, and may be able to poison susceptible men in return by the same channel. Beaugrand, in the *Annals d'Hygiène*, vol. xvii, has described cases of diarrhœa and other illness from eating rabbits; and also gives a case of typhoid fever, caused by eating the flesh of a wild kid caught in a snare. From personal observation, I am aware that cats are carried off by a disease resembling typhoid fever, in all its symptoms. Some years ago, a number of cats died here in this way, young cats being the principal sufferers. Towards the close of the epidemic, I instituted a series of clinical observations on one of these cats. From my observation of this case, and from two *post mortem* examinations which I made on two victims to the disease, I distinctly made out that the epidemic was typhoid. No cases of fever in the human subject, however, occurred in any of the houses where I had known the cats to have suffered; so that, practically, the infection from cats cannot be recognised in these inquiries.

The system of excrement-disposal in these parts is the old-fashioned garden-privy. In many cases, this is neglected, and allowed to remain unemptied for long periods. Accumulations of filth, level with the seat, were often found, when inspecting the back premises of houses where enteric fever had appeared. During the eight years I have been medical officer of health, I have only discovered two cases where the patients came into the district from a distance with their illness upon them.

In the BRITISH MEDICAL JOURNAL for May 27th, 1876, I published two groups of cases (affecting eight persons), where no previous specific contagion could be traced. In the one outbreak, there was a very foul garden-privy; and, in the other, the disease was not traced beyond the washing of some linen, soiled by a boy apparently in good health, and attending school. I have made repeated attempts to gain some further clue to the origin of these outbreaks, but have hitherto failed. I propose now to relate, in some detail, four cases which I have very carefully investigated. They appear to give illustrations of two, if not three, modes in which typhoid may be received. Neither sewer-gas, contaminated water-supply, nor exposure to direct infection, had anything to do with their origin.

CASE I.—A young tailor, aged 19, for a year previous to his illness from fever, had suffered from occasional attacks of diarrhœa, the last attack being three months before he took to his bed with typhoid. With the exception of a few days at home with diarrhœa, he had been steadily at work. The workroom was close and ill-ventilated. Here he worked with two other apprentices, having his meals with his master, but going home to sleep. The lad was dirty in his habits, sometimes not washing his face for three or four days at a stretch. He became ill, and unable to work. The medical attendant was called in, and diagnosed typhoid fever. A second medical man also saw the case, and confirmed the soundness of the first opinion. The patient died on the twenty-first day, after the disease had run a typical course, but with severe abdominal complication. He had not been away from home for months: no strangers had visited at the house. There was no fever in the district, the last case having occurred eight months previously, in a sequestered valley eight miles away. With this previous case, there could have been no possible communication. The water-supply was pure and abundant; it was piped from a distant spring to the house, but the tap had been out of order for some months, during which time, water was obtained from a neighbour's tap, in whose house there had been no case of fever. There were no drains nor channels of any kind to carry off slop-water. The slops were taken by hand across the road, and thrown into the rapid stream which ran in front of the house. The cottage was damp, dirty, and overcrowded. The garden-privy was in bad repair, the filth level with the seat. The smell was very bad. The habits of the inmates of the house were in keeping with the surroundings. I have seen a tub-ful of soiled napkins (from a child eighteen months old), with excrement adhering to them, placed in the pantry where all the eatables and dishes were kept! This tub-ful of filth, I was told by one of the family, was allowed to stand there for several days. The house at all times smelt close and dirty. The child just referred to, took typhoid fever after the death of the lad. There were no other cases in the house; but, emanating from the case of the lad just described, I traced four subsequent cases. After considerable difficulty, I succeeded in discovering that there had been five cases of "slow typhus" in this cottage thirty years previously. A young illegitimate nurse-child, aged 11 months, died in this house, two months before the lad, its death being certified as from diarrhœa. On inquiry, the medical attendant informed me that the diarrhœa was of tubercular origin.

This case did not owe its origin to direct infection, and the question naturally arises, Was this a case originating *de novo*, or had the poison been due to infection in some way or another from the cases which occurred thirty years previously? The lad had had attacks of diarrhœa during the year which preceded his fatal illness, and to this circumstance I wish to direct particular attention. Many observers have noticed that, previously to some severe epidemics of diphtheria, there have been epidemics of mild sore-throat, and that these sore-throats gradually develop greater virulency, until diphtheria itself at last appears; those who had suffered from mild sore-throat, suffering again from the more virulent disease, diphtheria, which, although a specific contagious disease, seems to have been developed from cases of mild sore-throat, under a certain suitable combination of circumstances. Is it then possible that typhoid, by this same progressive development of infectiveness, may gradually elaborate its specific nature from a succession of attacks of diarrhœa, produced by filth-fermentation? Burdon Sanderson says, "that it is possible to proceed from an inflammation of a purely non-infective origin to the artificial induction of a process of the most intense virulence". He proved this assertion by a series of experiments in guinea-pigs and dogs. He induced peritonitis in a guinea-pig by the injection of ammonia. The resulting fluid, when injected into the peritoneum of another guinea-pig, and so on from one to another, produced increasing effects manifested in shorter periods, till at last, when transferred to a dog (an animal less susceptible to infective processes), death resulted in seven hours, the first injection killing the guinea-pig in twenty-four hours. The gradual evolution of a contagion is, therefore, a demonstrated fact in science; and from this we might argue, that diarrhœal discharges received into a foul garden-privy in the first instance, cause further and severer attacks of diarrhœa, the contagion after each attack becoming increasingly virulent, till the summit is reached, and typhoid fever—a specific contagious disease—is produced.

From personal observation, I know that a foul and overflowing garden-privy can produce a contagious diarrhœa. Let me give an example. A double cottage was occupied by ten persons (two families). The garden-privies were about twenty yards from the back doors of the house, and they were usually emptied from a door leading into a back lane; but, owing to a dispute about the right of way, this door was blocked up. In consequence of this, the privies remained unemptied for over twelve months. The month of January of the present year was unusually dry; the rainfall for the whole thirty-one days measured only .30 inch. Early in February, seven persons in these two houses were attacked, one after the other, with violent sickness and diarrhœa, the motions in some cases being bloody. There was feverishness for a few days, and then rapid recovery. The attack nearly proved fatal in three cases. Besides the seven persons so attacked, more than one visitor who came to see the sick, and who was in the sick-room at the time when the patient's bowels were moved, was seized with the same violent symptoms in a very short time (the period varying from twelve to forty-eight hours). So soon as the privies were cleaned out, by order of the sanitary authority, the epidemic stopped. It might be argued that, if this epidemic of diarrhœa had been permitted to go on unchecked, the later cases might have developed greater virulence, until enteric fever itself was established. That the privies were at fault, is further shown by the fact that the two fathers and one grown-up son (the bread-winners of the families), who left home early and returned late, probably never using these privies, escaped the diarrhœa; the women and children suffering the full effects of the poison.

In the experiments of Burdon Sanderson and of Bergmann, who produced a particular contagion out of an infusion of putrid muscle in the one case, and out of a chemical solution of sugar, ammonio-tartrate, and inorganic salts in the other, both observers found that the first crop of bacteria in these infusions left the fluid innocuous; but, after each successive crop, the fluid gained in infective power; thus a specific contagion "pyrogen" was produced from a non-specific fluid. Pyrogen, when introduced into the veins of dogs, gives rise to certain definite fever-symptoms, with diarrhœa and intestinal irritation.

Although these symptoms are not exactly those of enteric fever, yet we know that dogs are not so susceptible to infective processes as man; and, therefore, the same poison might affect man in a worse form. It is not unlikely, therefore, that a contagion can be produced in the atmosphere of a dirty garden-privy, from the putrefaction of unhealthy human discharges. This is not in reality the production of something out of nothing; the poison is only evolved out of previously existing elements. In this manner, the *de novo* origin of fever-cases may be accounted for. There is, however, another view to be taken of the facts. It is maintained that the infection of such diseases as typhoid and diphtheria is conveyed by, if not actually existing in, minute vegetable organisms, and that their rapid multiplication propagates the disease. Among certain low forms of plant-life, there are spores known as blind-spores, which do not undergo the usual changes which other germs undergo; but, on the contrary, defying heat and cold, and the lapse of time, suddenly, under certain favourable conditions, develop and multiply. Could it have been possible that some of the blind-spores from the cases occurring thirty years previously, had remained all that time in or about the garden-privy, and, by aid of the presence of the diarrhœa-stools and other filth, had started to life, and, gaining power, attacked the susceptible lad who fell a victim to the typhoid? According to this view, the origin of the fever would not be spontaneous.

CASE II.—A middle-aged farmer, residing in a remote valley, with miles of moor around the house, was attacked with typhoid fever, the abdominal complications being very severe. Two medical men saw the case with me, and confirmed the diagnosis. With the exception of an occasional visit to our little town of Helmsley, where there had been no fever-cases for nearly two years, he had not left his farm for many months previously to his illness. He had had no visitors. The water-supply at the farm was pure and good, coming direct from the wide and uninhabited moor. There were no drains in or about the house, which, by the way, was damp, and rather overcrowded. The garden-privy was dirty, and full of foul filth. There was a pool of liquid filth behind the privy. The attack occurred in August. The patient gave the following history of his illness. One day, while at the butcher's, a man threw down on the ground before him a "beast's hide", to which some flesh in an advanced state of decomposition was adhering. The sight was revolting, and the smell abominable. The farmer felt at once a sense of disgust, and became nauseated. His sickness remained for several hours. On his way home, he called at a friend's cottage, and, still feeling ill, he rested half an hour, and drank a cup of tea. Fourteen days after this, he developed typhoid. At the house where he called, there had been a case of fever three years ago; and, as he had had a great dread of the fever, he had not been near the house during that period, till the time just mentioned, when, owing to his illness, he forgot his caution. The water-supply of the friend's house came from a spring two hundred yards away. It was analysed, and found pure. After the fever, three years before this, the walls of the cottage had been scraped, limewashed, and repapered; the house was fumigated, the stools disinfected and buried at a distance. The privy had been regularly cleaned out, and well treated with chloride of lime. In the farmer's case, there are three explanations of the fever-outbreak. 1. He was poisoned by infection, developed *de novo* from his foul privy; but, against this theory, it must be admitted that he had seldom, if ever, used this privy, preferring to evacuate his bowels in the woods or in his fields. 2. He was poisoned in some mysterious way by the putrescent emanations from the decomposing skin. Morsels of flesh rolled up in a moist skin might develop crops of bacteria, and elaborate a "pyrogen"; and, if the skin were suddenly opened under the nose of the farmer, he might inhale the pent-up miasm, and thus receive the newly produced infection. I am sorry to say I was unable to trace the possessor of the skin; and, therefore, the important fact, as to whether or not the hide came from a diseased animal, is lost. 3. The fever was originated by some remains of the previous specific contagion in the house of his friend. In the face of the unusual precautions taken with the case three years before, and also considering that the farmer only remained half an hour in the cottage, and had nothing but a cup of tea made with pure water, it is difficult to believe that he could have got his fever in this way. I may say that the friend had three young children, none of whom had had fever. I had attended two confinements in the house previously to this, and they made good recoveries. I have also myself taken sundry cups of tea there, and have not suffered. I have been much puzzled by this case, and am still in doubt as to its cause. The farmer himself stoutly asserts that he "never got over that smell".

CASES III and IV are of a different nature. A farmer opened a package of American bacon in his kitchen. The bacon smelt badly. His shepherd, who lived a mile away, but who took his meals at the farm, assisted to wash the bacon and hang it up. The farmer had three daughters; and these were doing their household work, in and out of the kitchen, during the time that the bacon was being cleansed. The packing-case was placed outside the kitchen-door. The shepherd tells me that, for a week afterwards, he was rendered sick by the smell from the box every time he had to pass it in entering the kitchen. One evening, about a week after the bacon was unpacked, the shepherd entered the kitchen *at dusk*, and seated himself at the table, helping himself to the bread and bacon laid ready. After a few mouthfuls, he felt something was wrong; he called for a light, and, to his horror, discovered that the bacon he was eating was perfectly black and had a "queer" smell. He felt unwell at once, and returned to his home without finishing his supper. During the following week, he felt ill, but managed to work; but at last, ten days after he ate the bacon, he called in his doctor, who diagnosed his case as typhoid fever. On the same day, the same medical man was called in to see one of the farmer's daughters suffering from the same fever. There were no other cases of fever in the district. Neither the shepherd nor the farmer's family had been from home; they had had no visitors. The farmhouse was well built, and its sanitary arrangements good. The water-supply was obtained from a spring three hundred yards from the house. The shepherd's cottage, although too small for him and his family of twelve children, was nevertheless clean. The water-supply was pure and abundant. From the fact that the shepherd and the farmer's daughter developed their fever on the same day, we may assign a common origin to both cases. I regret to say that the farmer and his family, feeling very sore about the illness, said to have arisen from the bacon, would give no information; so that all the above particulars were obtained from the shepherd. The disease must have originated in one of two ways from the bacon. 1. The "black" bacon must have been part of a diseased animal. It is now admitted that eating the flesh of an animal which has suffered from typhoid fever can bring on the disease. With regard to this bacon, it was, of course, impossible to trace it beyond the place of its purchase on this side of the Atlantic. 2. The putridity of the meat, shut up in a box, may have developed a "putrogen", which gave rise in these two persons to "filth-fever", identical in all respects with typhoid. I have no reason to believe that this was really an outbreak of trichinosis. Two medical men saw the patients, and agreed in the diagnosis. Some writers account for all obscure cases by saying that specific contagion has been received through tramps or others suffering from ambulant typhoid. In my capacity of workhouse medical officer, I have been called upon during the last eight years to treat a very large number of sick tramps; but I have not yet seen one suffering from any ailment resembling enteric fever. There are two common lodging-houses in our little town (population 1,500); but I have not seen in either of these any fever cases at all, with one exception, and that was in a child permanently residing in the lodging-house, which was close to a slaughter-house. The floor of the slaughter-house was very imperfect; the soil underneath the flags being saturated with putrid blood, and emitting a most unpleasant odour. I have refrained from giving this case in detail, as I was unable to exclude, definitely, infection from without by tramps.

Although favourably situated for tracing the origin of fever cases, I confess to having met with great difficulties. The cases I have already briefly described are a proof of this assertion. If my brother country practitioners would record their cases, a mass of material would soon be accumulated; and, in the hands of a Jenner, a Burdon Sanderson, or another Murchison, the conflicting theories of the origin of typhoid would soon be swept away. The testimony of my neighbouring medical friends in this rural district is distinctly in favour of the *de novo* origin of this fever. The large majority of cases, I admit, do arise from previous contagion; but I am inclined to believe that, under certain insanitary conditions, the fever may be bred, as already described, much in the same way as "pyrogen". Many eminent men have held this view, or at least admitted its possibility. I may be pardoned if I quote shortly the opinions of a few. Trousseau says, in his *Clinical Medicine*, vol. ii, p. 374: "As it is frequently impossible, notwithstanding the most painstaking researches, to discover the origin of the contagion, and as it is obvious that typhoid fever, at some time or another, had a beginning, we cannot refuse to admit the possibility of its arising spontaneously, although we hold that it is a contagious disease." Niemeyer says, in his *Practical Medicine*, vol. ii, p. 575: "The miasmatic origin of abdominal typhus is rendered probable by cases occurring in places removed from travel, where no cases of this disease have occurred for years, and where there is not the slightest suspicion of a contagious origin.....The most simple and probable explanation of them is, that the low organisms which we suppose to constitute the germs of abdominal typhus may originate and increase, not only in the bodies of patients and their dejections, but outside of them

also. We at least partially know the circumstances that favour the origin and development of this poison, since we know that abdominal typhus occurs sporadically and in so-called house-epidemics, especially in places where quantities of animal matter are decomposing. The absorption of the germs appears to take place chiefly through the lungs." Murchison's views on this subject are well known. He proposed to disuse the words typhoid and enteric, substituting the term pythogenic fever, as expressing some meaning as to its origin from filth. Parkes says, in his *Practical Hygiene*, p. 488: "Enteric fever is a poison of animal origin.....There is doubtless a frequent transmission of the disease by the diarrhœa of mild cases. One mode of propagation is by the intestinal discharges of persons sick of the disease. Other modes of origin and transmission are not disproved.....Although the origin of typhoid merely from putrefying non-typhoid sewage is not at present considered to be probable, *it is not disproved;* and it is certain that the disease may spread by sewers and fæcal decomposition." Dr. Alfred Carpenter, in his *Preventive Medicine*, p. 352, says that enteric fever arises apparently *suâ sponte*, "because certain germs or foci of potent matter have been altered by the circumstances in which they are placed, and infective power has been added; just as infectivity is produced in the peritoneal secretion by inflaming the membrane which secretes it. The ordinary excreta of carnivorous animals, which contain the *débris* of animal food, may or may not be so placed as to produce the germ upon which filth-disease depends; just as dry rot may or may not arise in a building, according as to whether ventilation has been provided for, and new wood kept out of the fabric. But, if these germs be introduced into the human economy, the disease arises and spreads in the usual manner." Dr. Robert King, in an interesting paper on the Etiology of Typhoid (*Medical Times and Gazette*, August 2nd, 1878), after expressing his opinion that it may be produced *de novo* by the putrefaction of albuminous stools, says: "Let it once be admitted that such poison can be produced by fæcal decomposition, and that such decomposition can occur within our own dwellings; and let it be moreover acknowledged that, just as in the case of the septic poison, decomposing matter is deadly, while that already putrid is rather offensive to our senses than toxically dangerous; and we shall hear much more of house-drains and far less of sewer-gas.....The evacuations of patients suffering from intestinal inflammation or ulceration—such, for example, as we meet with in typhoid fever or tubercular disease—are always albuminous; and possibly it is by the splitting up of this highly complex compound that the poison is generated." In connection with this idea of Dr. King's, I may mention that the child, whose death was registered from diarrhœa, in the house where the lad died (Case 1) two months afterwards, was tuberculous. It is, therefore, possible that the albuminous stools from this infant assisted the development of the true typhoid poison, which has since then affected four other persons. Dr. Thorne Thorne, whose exceptional experience in this kind of investigation renders every word he says valuable, has expressed his views very clearly in a paper read before the Epidemiological Society. In speaking of what he terms the progressive development of the property of infectiveness, he remarks: "If the contagia of acute specific diseases do, as has been suggested by more than one observer, belong to the vegetable world, I know of no grounds for refusing to believe that organisms capable of producing a minor and incommunicable disease in particular stages of their growth, may, in other stages of their growth, or in the course of their subsequent development, become capable of producing a major disease communicable from person to person; the affair being essentially one of soil. This is not at all a question of the development of a living organism out of matter independently of antecedent life, but merely the production, by means of a process of evolution, of that which gives to an already existing organism that property by which it becomes infective—a property which it may, perhaps, lose directly it is deprived of the circumstances which favoured its development, in much the same way as special characteristics may be artificially developed in higher plant-life, and be as easily lost again."

With the opinions before me of learned physicians such as I have quoted, I have less hesitation in yielding to a belief in the occasional development of enteric fever *de novo;* and, if the doctrine be a true one, every medical practitioner must lend his aid to suppress the abominations which exist in the methods of excrement-removal both in towns and villages. The doctrine is a safe one; for it makes us more solicitous about the sanitary surroundings of those entrusted to our care; and it also gives a ready solution to a very difficult question to answer sometimes—viz., Whence did the infection come? To our rural practitioners I appeal for evidence on this point. Dr. Cayley, in his able Croonian Lectures for the current year, says that the weight of evidence is against the *de novo* theory; but I respectfully submit that the evidence has only been heard on one side as yet; and, when the "obscure" country practitioner rouses himself from his apathy, he will find material ready to his hand. To him, then, we look for more evidence before closing the case against the spontaneous origin of enteric fever. In conclusion, I may say that no one denies that puerperal septicæmia, pyæmia, erysipelas, or hospital gangrene, may develop autogenetically under a given combination of circumstances; and that, when once developed, they may spread by contagion. I think it does not require a great stretch of the imagination to place typhoid fever in the same category.

THE ETIOLOGY OF ENTERIC FEVER.

By SHIRLEY F. MURPHY, M.R.C.S.Eng.,
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THE contention between Dr. Collie and myself is practically limited to the question, How far is he justified in assuming that certain cases of enteric fever, which occurred among the attendants of the Homerton Fever Hospital, are due to conditions special to the nurses, and not to any structural condition of that institution? With a view to showing that the incidence of this disease upon the attendants of the Homerton Fever Hospital was exceptional, I published, in the BRITISH MEDICAL JOURNAL of April 19th, 1879, the statistics of the number of attacks occurring among the staff of the London Fever Hospital during a period of twenty-four years. I then showed that, during this period, 5,569 cases of enteric fever were treated in this hospital; that eight attendants on persons suffering from this disease were attacked; while seventeen others, employed in other parts of the building, whose duties did not therefore bring them into contact with enteric fever patients, also contracted this disease. The Homerton Fever Hospital differs, therefore, from the London Fever Hospital, in the fact that, in the former institution, the incidence of disease was, with the exception of certain laundry-maids, entirely upon attendants engaged in the enteric fever wards; while, in the latter, the incidence of disease has been in the proportion of two cases among those not engaged in the enteric fever wards to one case among those so engaged. Moreover, I pointed out that the large number of enteric fever patients in the London Fever Hospital warrants the opinion, that no fewer nurses were engaged each year in the enteric fever wards of the London Fever Hospital than of the Homerton; and that, if the latter institution were to maintain the number of attacks among attendants in enteric fever wards which it has hitherto done, it would have had in twenty-four years sixty of its attendants attacked, as compared with the eight attacked among those similarly employed during the same period in the London Fever Hospital. This difference of the behaviour of the disease in the two hospitals, Dr. Collie has attributed to a difference in the age of the nurses engaged in these institutions; and he has been at some pains to show that, after thirty years of age, the probabilities of a person being attacked with enteric fever are comparatively small. I am fully prepared to believe, with Dr. Collie, that age is an element which must be taken into consideration; but, even if we admit that the nurses of the London Fever Hospital are older than those at Homerton, and that this has been a reason for the immunity from attack enjoyed by the former while engaged in attending on enteric fever cases, how are we to reconcile this theory with the fact that the nurses in the new enteric wards at Liverpool Road have suffered out of all proportion to the nurses similarly engaged at Homerton? Age, here, must have an entirely opposite influence to account for this behaviour of the disease. Dr. Collie attributes the attacks among these nurses at the London Fever Hospital to the possibility that they may have conveyed messages to the enteric fever wards; but this is as likely to occur at Homerton as at Liverpool Road, and yet the nurses of this class do not contract enteric fever there as at the London Fever Hospital. There must, then, be some condition other than the age of nurses operative at one hospital and not at the other. However, few of us will be prepared to believe that the air of a ward containing enteric fever patients can be so highly infectious as to endanger the lives of persons who may exceptionally visit it for a few moments. I cannot help thinking Dr. Collie has been too ready to assume that the nurses at the London Fever Hospital were of an age which would render them insusceptible to the influence of enteric fever poison. In his last paper, he says: "That the staff at the London Fever Hospital was to some extent protected, appears in a recent report of the hospital, which states that one of the nurses had been in the service for the long period of nineteen years. One such nurse as this will account, in no small degree, for the comparative freedom from enteric fever which the staff of that hospital shows." It will surprise no one that a conclusion, based on the age of one nurse, should prove to be erroneous; and I am informed by past physicians to the hospital, as well as by the matron (the nurse of nineteen years' service), that Dr. Collie's assumption is not justified by fact. Indeed, were I to follow his example, and argue from one case, I might be tempted to draw deductions from the fact that, among the list of nurses who suffered

from enteric fever in his hospital, I find the name of one (Procter) who, for a year or two, had been previously in the service of the London Fever Hospital, sometimes engaged in the female enteric fever ward, and who yet escaped until, at a riper age, she contracted enteric fever at Homerton. The attacks among the nurses in the other wards will sufficiently show that there was abundance of susceptible material at Liverpool Road.

Dr. Collie finds some difficulty in allowing that the attacks of attendants at the London Fever Hospital are due to drain conditions—seeing special drain defects were only found contemporaneously with twelve cases out of a total of nineteen, leaving six for which no explanation had been given; and, in his last paper, he states: "That drain defects were not the cause of the Homerton cases is rendered probable by the absence of enteric fever among the general staff, and still more by the fact that, on every occasion upon which enteric fever arose, due inquiry was made into the condition of the drainage.....The drains were found to be right." It is clear, therefore, that there is no point of agreement between Dr. Collie and myself concerning the conditions under which enteric fever can arise from drains.

The Homerton Fever Hospital is built in pavilions of two stories, the main drains of which communicate with each other. Each pavilion is provided with a soil-pipe, in connection with the sluice-pan and water-closet from each ward; these are trapped by S-bends at the point of their communication with the soil-pipe, which then passes down below the earth's surface, where it is again trapped by another S-bend, holding four inches of trapping water. The soil-pipe then passes into a main drain common to all pavilions in the hospital. The soil-pipe is, therefore, closed at both ends by traps, and would be a closed cavity but for a one-inch pipe which connects its interior with the open air. Dr. Collie has found that this one-inch pipe is sufficient to prevent the water in the traps becoming displaced when hot water is thrown into the soil-pipe; and he has assumed that, inasmuch as the air in the soil-pipe cannot be forced through the trap, that the *materies morbi* cannot escape from the soil-pipe into the ward. It is upon this point that I entirely differ from Dr. Collie; it is sufficiently obvious that, with but one small opening into this length of pipe, the exchange of the internal and external air can barely take place. The air in the soil-pipe must, therefore, become charged in the highest degree with the emanations from enteric excreta; and it is difficult to understand how the water in the upper trap can fail to become itself charged, and to give off the emanations Dr. Collie supposes it to retain.

In the London Fever Hospital, the wards are differently arranged; the soil-pipe is trapped at its upper end by the usual S-bend, as at Homerton, but the trap at its lower end (which is present in all the soil-pipes in the latter institution) is altogether absent in those of the former. Hence the passage of air from the main drain, common to all the wards of the hospital, to the trap at the upper end of the soil-pipe is uninterrupted by the intervention of the lower trap. As a consequence, the air in the soil-pipe is not confined, and does not therefore become so highly charged with poisonous matter as at Homerton; but, although the absence of the lower trap is beneficial, so far as the enteric wards themselves are concerned, a corresponding disadvantage is found in the other wards not being so thoroughly cut off from the main drain containing enteric matter. Hence it is not a matter of surprise that the upper trap in the enteric ward of the London Fever Hospital should become less poisonous than the corresponding trap at Homerton; and that the incidence of disease upon the attendants engaged in these wards should be less marked than at the latter institution. Moreover, the upper trap in the non-enteric wards at the London Fever Hospital must become to some extent poisoned, and the attendants in these wards from time to time be attacked with enteric fever—a result which could hardly happen at Homerton.

In conclusion, I would point out that the risk to attendants upon enteric fever patients will depend upon conditions which render the water in the upper trap of the soil-pipe more or less infectious; and that the ventilation in the soil-pipe at Homerton cannot be secured by *one* small opening. It is unnecessary here to enter into all the physical conditions which would tend to render the upper trap more poisonous at one time than at another, but I will confine myself to referring to the outbreaks (described in my previous paper) which occurred at the London Fever Hospital coincidently with the obstruction of a drain. It will not, however, do to assume that the upper trap can never become a source of danger without such obstruction, even when some effort has been made to secure the ventilation of the soil-pipe and drain.

It is enough, at the present moment, to show that no ventilation worthy of the name exists in the Homerton drains; and, until this defect is remedied, I would submit that Dr. Collie has no grounds for eliminating so well-known a source of danger as a badly ventilated soil-pipe from being a possible cause of the disastrous results which attend the nursing of the enteric fever patients at the Homerton Fever Hospital.

ON THE ENDEMIC CONTINUED FEVERS OF SUBTROPICAL LATITUDES.*

By WILLIAM G. DON, M.D.,
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THE title of my paper of course broadly indicates its scope; but, as that opens up a wide field of doubt and controversy, it is necessary to begin by explaining the special points upon which I wish to engage your attention.

The first question obviously is, What do I mean by the endemic continued fevers of subtropical latitudes? I am not about to essay the impossible task of attempting, in a short paper, any widely comprehensive survey or scientific classification of these fevers; only the more salient points can be touched upon. I intend to follow merely the arrangement and nomenclature of the Army Medical Blue Book; not that it is a strictly scientific classification probably, but wholly and solely because these returns afford us data nowhere else to be found.

The continued group of fevers in the Blue Book may be taken to include only:

1. Febricula (all forms);
2. Simple continued fever;
3. Enteric or typhoid fever.

True typhus we may exclude, from its fortunate rarity now-a-days; yellow fever, also, because it has a heading to itself; and likewise the exanthemata wholly; and the purely paroxysmal or malarial, although the latter often complicate and produce hybrid forms with the continued fevers. To a consideration of the above three forms I will limit myself, and endeavour to expound what seems to be their mutual relationships and etiological affinities.

The second question naturally is, What do I mean by subtropical? The term is more a geographical expression than anything else. It just means those belts of the earth's surface which, while tropical in summer, are more or less temperate in winter. Although, broadly speaking, they lie between the twentieth and fortieth parallels of latitude, north and south, they do not follow the rigid geographical lines, but more strictly the isothermal, or isotheral, which indicate the areas of like summer temperature. It is temperature that determines the true subtropics, whether of animal or vegetable life, or of disease; and especially is summer heat the chief factor in the genesis and evolution of the endemic continued fevers. Subtropical meteorology becomes, therefore, of great interest to epidemiologists; for, to broad general climatic influences, rather than to mere local unsanitary conditions, must we look, I think, for an explanation of much in the etiology of the endemic fevers. We are still comparatively ignorant as to how the imponderable forces of heat, light, and electricity, variations of atmospheric pressure, radiation, and evaporation, affect vital processes; but that they do so in a very marked way, I think there can be no doubt. The subject, however, is much too recondite for present discussion.

We have lately in this Society had interesting discussions on certain endemic fevers in India, but to-night I shall almost avoid that country, and elect to speak, by way of illustration, chiefly of Bermuda and Gibraltar, two of our stations with which I happen to have a personal acquaintance. Both of these places lie between 30° and 40° north. Bermuda is strictly insular; Gibraltar only partly so; the former is rainy all the year round, the latter only in winter and spring, and is very hot and parched in summer. The summer temperature of both ranges between 78° and 90° Fahr., but is more sustained, with less diurnal range, in Bermuda than Gibraltar. Both climates are trying in summer, but very pleasant and healthy in winter. The physical and geological structure of the two places is most unlike. The soft and very porous coralline rock, with no elevation over 200 feet in Bermuda, is replaced in Gibraltar by a dense impervious limestone, towering up in a steep ridge 1,400 feet. No springs proper exist in either place, and good drinking-water is obtained by catching the rain on the roofs of houses or cemented slopes, and conducting it into built tanks in the ground.

The conservancy of the two places is not at all alike. Earth-closets and water-closets exist in the military and naval barracks in Bermuda; but the ordinary privy is usually a mere hole in the porous rock, which allows the fluid excreta to drain away, and retains the solid as a pasty mass. In Gibraltar, a complete system of main drainage exists; water is pumped up into reservoirs, with which the drains are flushed; while shafts, carried up the face of the rock above and beyond habitations, ventilate them. When this drainage-system was completed

* Synopsis of a paper read before the Epidemiological Society of London.

some years ago, it was hoped the notorious fevers of the "Rock" would disappear, but such expectation has not unfortunately been realised. I mention this fact not certainly to discredit such sanitary effort, but only to show that the endemic fevers are not mere products of supposed defective sanitation.

The population in Bermuda is chiefly scattered over the islands in homesteads; in Gibraltar, it is wholly massed into a crowded town at the western base; but the people neither do, nor are allowed to, live like pigs in either place; especially in Gibraltar are they under the strictest police, military, and sanitary supervision.

I have sketched these places just to show that, while widely different in many physical, sanitary, and social points, the indigenous fevers of both are, nevertheless, essentially the same.

This observation and contrast equally applies to Malta, Hong Kong, Mauritius, the Cape, and many parts of India.

I firmly believe the endemic continued fevers of all subtropical countries are essentially alike and allied; they vary chiefly according to the amount of malaria mixed up with them, whereby they assume a less or more remittent, relapsing, or other anomalous type.

Let me review very shortly the three fevers already named, comprised in the continued group of the Blue Book.

1. *Febricula.*—It has a variety of names, of which may be mentioned: *a.* Ephemeral fever (from its shortness); *b.* Ardent fever (especially in India, from its sharpness); *c.* Broken-bone (in Bermuda, the West Indies, and the Southern States, from the frequent severity of the neuralgic symptoms). Whatever the name, the essential feature of febricula is, that it only lasts so many days or hours, and is neither fatal nor complicated. It is *the* seasoning or climatorial fever, which very few Europeans escape during early residence in the tropics. It has been ascribed to almost anything or everything of the nature of an exciting cause. My opinion is that, if we only knew its true pathology, we would have a clue to the pathology and etiology of the more dangerous and complicated endemic forms.

In the West India areas, the broken-bone variety (not to be confounded with dengue) occasionally prevails epidemically, as a prelude to yellow fever outbursts. This is shown in Bermuda as follows. The continued group of fevers there (of which febricula would form 80 or 90 per cent.) gave, in a series of years, the figures 55.3 in an annual ratio of 1,000 of mean strength; but in 1863, preceding the yellow fever epidemic of 1864, the ratio rose to 153.6. The prevalance of febricula, therefore, in Bermuda is always viewed with apprehension, as indicating one of those pandemic waves of epidemic influence so well described by Inspector-General Lawson.

2. *Simple Continued Fever.*—When febrile symptoms do not subside, but go on and on for several weeks, but without specific complication, the disease is called simple continued fever. Some maintain the term "simple" is not only a misnomer, but a paradox. For, say they, we do not believe in any continued or prolonged fever without a lesion somewhere; and therefore the term simple, meaning uncomplicated, is inapplicable. I will not argue this point, but remark that, which is the experience of hundreds of others, cases of continued fever constantly occur in the subtropics which have not only no constant specific complication, but no lesion that can be detected of any kind whatever. There is no malaria in Bermuda, and cases of continued fever pure and simple can be well studied there. But in Gibraltar and Malta, where malaria exists, peculiar anomalous hybrid forms of continued fever are found, which have had a variety of names. Marston calls them gastric remittent. Such fevers are most intractable, and often followed by persistent neuroses, which are a source of much inefficiency and invaliding from our Mediterranean garrisons.

3. *Enteric or Typhoid Fever.*—This form is specially interesting to epidemiologists, because of the controversy which has centred and still rages around it. Surgeon-General Ewart lately ably introduced a discussion here on this fever as it appears in India, and we also know the very able and exhaustive reports of Surgeon-General C. A. Gordon on this disease within the Madras command. I know of no disease which has been more strongly dogmatised upon; a few years ago it was perfect heresy to question, however deferentially, the views of the eminent exponents of the fever in England. Now, however, doubts are pretty freely expressed on its generally recognised causation, especially by army medical officers whose experience of it extends to all parts of the world. Buckle, in his *History of Civilisation*, says that, as unquestioned authority means stagnation and deadness, so honest doubt becomes the parent of progress and reform; let us therefore welcome honest doubt on any subject. Let us first come to some understanding as to what we severally mean by the term enteric fever; otherwise, if we begin by mutual misapprehension, we may end in a battle over mere words and names. Let us agree to a mere anatomical or pathological definition, committing to no theory of causation, specific or otherwise; that enteric is a continued fever presenting certain signs and symptoms, of which the chief and essential one is: infiltration, inflammation, and ulceration of the solitary or aggregate glands of Peyer in the intestine. The fever of which the above is the characteristic complication has of late years figured largely in military statistics as a source of much mortality in all our intertropical stations.

But only a few years ago it scarcely figured at all in these statistics. Are we therefore to conclude that it has become endemic in all our stations from east to west only during the last quarter of a century? The medical history of these stations warrants no such conclusion. Enteric fever is now the chief cause of death in these stations. But did no soldiers die from fever in these places before the term enteric came into use? Of course they did, with a higher death-rate than now, only they died under fever called continued merely or remittent.

The conclusion is therefore irresistible, that the chief change in the fatal type of intertropical continued fever is only one of name. Such change may indeed indicate an advance in pathological knowledge, but it is quite another matter how far it necessitates or involves an entire change in an etiological view.

I need not recite the pathognomic symptoms of enteric fever; suffice it to say, that in Gibraltar these symptoms are usually as well marked as in London. In Bermuda, however, I do not think I ever saw the so-called characteristic rash; nor were the stools light or ochry, but generally dark and bilious. Some may say these were not true enteric cases; but if not, what were they? For the fatal cases showed the essential bowel-lesion, even passing to perforation.

I have rapidly glanced at these three forms of continued fever constituting the Blue Book group. Let me now further glance at some points in which they seem to be mutually allied, and mixed up both in their etiology and their epidemiology.

The first broad fact is that their early symptoms are usually so much alike that it is primarily often impossible to distinguish them, and to determine what form will ultimately supervene. Often have I seen cases admitted under febricula, changed to simple continued, and finally to enteric fever, just as the phenomena slowly developed.

The second is, that the three forms occur simultaneously, concurrently, and mixed up at the same time, in the same place, or regiment, or community. From the same barrack-room, on the same day, comrades present themselves, one suffering from febricula, another from simple uncomplicated fever, and a third from the enteric form.

The third important fact is, that all three forms have the same seasonal period of prevalence, and that period corresponds to the months of highest average temperature, and the maximum of solar elevation and power. June to October is the period in north latitudes, and a corresponding reverse period in the southern hemisphere.

When such allied forms of disease as these fevers present such points in common as place, circumstance, and season of occurrence, may we not reasonably conclude that the causation of each is also common to all? If the exciting causes are distinct, how are they be differentiated? If the subjection of a body of men to influences, apparently identical, results in the evolution of three different forms of fever, some explanation must be forthcoming.

I have often found medical officers who at once conceded that the exciting causation of the short febricula and the longer simple continued was probably identical, but that they considered in enteric there was a *plus quelque chose*. Whether this something more was always specific, or might be evolved *de novo* from pythogenic sources; whether, in truth, it was wholly outside the patient at all, was the difficulty.

From what I have seen and read, I cannot help thinking that the broad factors of all climatorial fevers are, if not identical, entirely similar; that mere local insanitation, however much it may aggravate the type, is not the original or essential exciting cause.

I may be asked, if the general causation is so utterly vague and indefinite, how are the different types and varieties of climatorial indigenous fevers to be accounted for? I have tried to do this by looking narrowly into internal or predisposing causes in the individuals affected, as well as trying to search out external or exciting causes.

The individualising of the patient in such cases I consider to be of much importance. In Bermuda, I endeavoured to carry this out, and noticed, as a rule, that while everyone, of whatever constitutional type, seemed liable to febricula, or simple continued fever, the subjects of enteric fever were almost entirely those presenting some of the physical evidences of a strumous or tubercular tendency. The hard drinkers also were singularly free from enteric fever, probably because such men are generally of a robust, vascular, arthritic type.

If such generalisations are of any value or significance, can it be that like endemic causes acting on individuals of different constitutional types will give rise to different forms of climatorial fever?

The individualising of the subjects of these endemic fevers naturally

leads to the question of predisposing causes, of which I will mention three: 1. Constitutional, hereditary or acquired (which I have already touched upon; 2. Age; 3. Want of acclimatisation.

Youth and immaturity very strongly predispose to all forms of endemic tropical fever; even in this country, enteric fever is chiefly a disease of early manhood. But, as far as military statistics are concerned, age and acclimatisation are not to be separated as predisposing causes. This arises from the fact that the young soldier is necessarily a recent arrival, and a recent arrival is nearly always a young soldier.

I am indebted to Deputy Surgeon-General Tydd for the following statistics for British troops in Bengal, for 1878, with regard to enteric fever. In that year there were 166 deaths from enteric fever, which were reported from nearly every division, and indeed from almost every station, in the Presidency. This was nearly three times in excess of the average of previous years; and note the following: about 75 per cent. of the deaths took place in the second and third quarters of the year (summer and autumn); nearly 50 per cent. were among men during their first year in the country; and 60 per cent. were those under twenty-four years of age.

The process of natural selection, or weeding out of the subjects most susceptible to endemic causes of disease, is, therefore, a very rapid one; and, whatever may be the true etiology of enteric fever in these Indian stations, it is certainly not to be disassociated from the very marked proclivity which constitutional type, age, and want of acclimatisation (or weeding out) exercises among a body of men.

I will conclude by a short special reference to intertropical enteric fever, as seen in the army.

I assume we are agreed that we may call any case of continued fever, in which the specific bowel-lesion is recognised, enteric, without reference to an assumed cause. Starting from such an hypothesis, I cannot help thinking that the said enteric lesion is to be found in several forms of a closely allied fever; and that, although anatomically specific as a lesion, it does not necessarily spring from only one specific cause.

Enteric fever is usually seen in this country in an epidemic form—that is, it tends to propagate itself through the media of air, food, or water; and I doubt not that it may occur and spread in an identically similar way in tropical countries. But we can at once subscribe to the doctrines of such eminent exponents of the disease as Budd and Murchison, and at the same time not shut our eyes to the fact that the theories of these great men cannot and do not, always and wholly, explain the phenomena of sporadic enteric fever in such places as Bermuda, Gibraltar, or an Indian cantonment.

Surgeon-General Gordon has shown that fever, with enteric lesion, occurs in India, which cannot reasonably be accounted for either on an assumption of direct propagation, or a filth origin *de novo*. Propagationists say that it is not the theory that is at fault, but the observer, who does not bring sufficient science or skill to bear on the investigation. If the disease arise only from specific germs, then we must assume an almost certain ubiquity and indestructibility for such germs. If the disease always have a filth-origin, how do we account for its appearance, say, in the virgin wilds of Zululand? I maintain that in hot climates the theories of propagation, or of pythogenesis, applied to enteric fever, often seem utterly at fault.

I could give many instances of this which have come under my own observation. Over and over again, in Bermuda and Gibraltar, I have seen isolated cases of enteric fever, both in barracks and private houses, which a filth-theory alone could not possibly explain. For, if such cases arose from soil or water pollution, how came it that scores of other people, living under identically the same conditions, were not similarly affected? Or, if soil and water contamination be the cause of the disease, why should it be so only in summer and autumn? Such sources of the disease are equally present, and ought to be quite as active, during the mild winter and spring in subtropical localities.

If a cesspit system and a porous absorbent rock be at the bottom of the mischief in Bermuda, as has been often asserted, then we must find some other explanation in Gibraltar, where there is impervious limestone, and elaborate main drainage conservancy. And so, by a process of logical involution, the etiology of endemic sporadic enteric fever in the tropics becomes a matter of exceeding difficulty and perplexity. We are bound to look at causation from every point of view; but this becomes difficult when preconceived opinions are apt to beset us on every side.

Apropos of this remark, I conclude by quoting from a paper on Pandemic Influences, by Inspector-General Lawson, in which he says: "The advance of knowledge has been much impeded by the disposition, so strong among medical writers and observers, to regard disease as they individually see it, and refer its prevalence and character to circumstances affecting obviously the population within their immediate sphere; which, had their observations been extended to other countries, a similar prevalence of disease might have been found under local circumstances very different from those thought so essential to its occurrence among themselves."

A CONTRIBUTION TO THE ETIOLOGY OF TYPHOID FEVER.

By J. MCNEILL, M.B., Homerton Fever Hospital.

AT the present time, when eminent men differ much in their opinion regarding the etiology of typhoid fever, it might be of importance were I to give the history of sixteen cases which I attended in the Island of Colonsay in 1876. The Island of Colonsay lies off the west of Argyllshire. It is separated from the neighbouring islands of Mull, Jura, and Islay, by belts of the Atlantic, twelve to eight miles broad. Small eminences and intervening hollows, scarcely deserving the name of hills and valleys, make the surface of the island very irregular. The soil of the valleys is peat, clay, sand, and gravel, pure and in combination. The valleys are generally cultivated. The hills are mostly made up of hard whin rock, covered with a thin layer of peaty soil, giving growth to a fine crop of heather. The population in 1871 was 456. The people are distributed all over the surface of the island, so that at any place there are not more than a dozen families, within several hundred yards of each other. With the exception of a few fishermen, the people are all given to agriculture. They generally build their houses in the valleys, or a little way up the hills. They never meet in large numbers, except at kirk, at a wedding, or a funeral. Typhoid fever broke out in six houses. Three had the disease in the first house, four in the second, two in the third, one in the fourth, five in the fifth, and one in the sixth. With the exception of one man, all the patients were under thirty years of age. The distance between the houses in which the disease broke out, with the exception of the second and third, was more than two miles. Between those two there was only a distance of about one hundred yards of level ground. All the affected families got their water-supply from different wells. Each family had a sufficient number of cows to provide their own milk. Their other provisions were got from various sources. They had no drainage in common. The subsoil water could not possibly permeate from the premises of any one of the families to those of another, as rocky eminences, cultivated valleys, and lakes, intervened between all the houses, with the exception of the second and third; these two got their water-supply from two different wells, with a distance between the wells of about two hundred yards of level ground. None of the houses had a sewer in connection with it. The bedpan was used for all excretions, and emptied immediately at a safe distance from the house. During the epidemic, carbolic acid was poured into the utensil before use; and immediately after use the contents were poured into a hole dug in the earth forty or fifty yards from the house, and covered over with chloride of lime and earth. When I visited the island in April, the first family were convalescent, and the second family were suffering from the fever. At first, I thought that the impure water which this family drank was the cause of the disease, as the water was renewed by the drainage of a manure-heap. On inquiry, I found that three other families drank the same well-water, and they were all in perfect health. I was also told that the well must have been polluted in the same way for years, and no one was anything the worse for it. On further inquiry, I was told that a servant-girl went home to the island from Bridge of Allan, four or five months before, in a state of ill health; and that this girl was a particular friend of the first member of the second family that suffered. This was probably the origin of the whole epidemic, as will be afterwards shown.

First Family.—A member of this family was the servant-girl already alluded to. From the description which she gave me of her illness, I came to the conclusion that she suffered from typhoid fever. As soon as her employers in Bridge of Allan could get quit of her, they sent her home to Colonsay. Her clothes were not washed, and she suffered from diarrhœa after going home. Her mother and sister washed her clothes. In a short time, her brother and two sisters had an attack of fever and diarrhœa. The father and mother, who escaped, were considerably above forty years of age. This family lived in a house about two and a half miles from the second.

Second Family.—The first member of the second family that suffered was a particular friend of the girl who came home from Bridge of Allan. She went to see her friend, and remained a night, nursing her brother and sisters. Between two and three weeks afterwards, she felt ill, and went through a very severe attack of typhoid fever. In succession, a brother and two sisters suffered from the same complaint. This is the family that was ill when I visited the island in April. The first family was by that time, as I stated, convalescent.

Third Family.—This family lived about one hundred yards from the second. Some member of this family used to call on their neighbours daily, to inquire how they were getting on. In a short time, a daughter (about twelve) suffered from fever and diarrhœa. She was not confined to the house longer than a fortnight. After her recovery, her father (about thirty-seven) had a very severe attack of typhoid fever.

Fourth House.—As soon as the parents of the last girl saw fit, they sent her to school. The school-house was about three miles and a half away. As the girl was weakly after the fever, her parents engaged lodgings for her near the school. Her clothes were washed, but not disinfected, before she left her parents. She did not suffer from diarrhœa after leaving her home. She slept with the servant-girl in her new abode. In about a month, the servant-girl became very ill, and suffered from typhoid fever. This servant-girl never visited any of the sick people before she took ill. She was sent home, a distance of about six miles, before diarrhœa commenced. No one in her employer's house suffered after her departure.

Fifth Family.—The servant-girl's home was a low, badly ventilated, two-chambered dwelling-house. After she went home, the father, mother, and seven of the family lived in the house. Six of them slept in one apartment about fourteen feet square, and three slept in the kitchen. In succession, three sisters and two brothers suffered from typhoid fever, two of whom died. A little baby (about one year and a half), the father (about fifty), and mother (forty-five), escaped.

Sixth House.—When the last family were ill, a woman came a distance of about six miles, and visited them. She did not stay in the house longer than ten minutes. She did not partake of anything in the house. She noticed a very disagreeable smell from a recent alvine discharge. She went home, and remained in her usual state of health for three weeks. At the end of that time, she commenced to suffer from a severe attack of typhoid fever. All who lived in the house left immediately, except the husband, and an old woman who acted as nurse. In about two months, she was convalescent. The house was disinfected, and no one else suffered from the disease. The nurse was above forty, and the husband considerably above thirty, years of age. Both escaped.

I may mention that the cases occurred in the above order, and that eleven months elapsed from the time the servant-girl came home from Bridge of Allan till the last case was convalescent.

Taken in a straight line, the distance between the first and the last house is about seven miles. Taken in the zigzag way by which the contagium must have passed, it is over seventeen miles.

Conclusions or Inferences.—1. The exhalation from the lungs, skin, urine, or fresh stool, must be infectious; because the sixteenth case could not have got the disease in any other way. 2. There is danger of infection for some time after the stoppage of the diarrhœa; for the only reasonable way of accounting for the way in which the servant-girl in the fourth house got the disease is, because she slept with the girl who suffered from the fever and diarrhœa a few weeks before. Whether the breath, the exhalations from the skin, urine, or fæces, contained the contagium, I cannot say. 3. Persons over thirty are not so susceptible as under that age; and over forty, they are less susceptible still, because the father and mother, both above fifty, escaped in the first house; father and mother, both above forty, escaped in the second; mother, above thirty, escaped, but father, above thirty, took the disease in the third house; husband, above thirty, and nurse, above forty, escaped in the sixth. All these had to attend to the sick during their illness. 4. The period of incubation was twenty or twenty-one days in the sixteenth case.

IS ENTERIC FEVER CONTAGIOUS?

By H. DONKIN, M.B., F.R.C.P.,
Assistant-Physician to the Westminster Hospital.

THE following facts tend to support the contagiousness of enteric fever: a view lately maintained in this JOURNAL by Dr. Collie of Hemerton, whose series of papers on this subject is most valuable, from the careful observation and accurate reasoning by which it is marked.

During a period of over three years, three nurses, all young women, took enteric fever in the East London Hospital for Children at Shadwell. The cases were typical, and declared themselves within a few weeks after the nurses had begun to tend enteric patients. These nurses, in common with the rest of the residents in this hospital, had been exposed to the chronic influence of bad drainage for some time before they became ill with enteric fever: two of them for many months: one of them for at least two years. The fact of the very faulty drainage (which is now being thoroughly rectified) was established by a recent exhaustive inspection, and with almost equal force by a long series of maladies, chiefly incident on the resident staff, and referable, from their nature, to poisoning by sewer-gas.

But, spite of the numerous cases of diarrhœa, sore-throats of great severity, and nondescript, albeit marked, cases of pyrexia, which took place during these three years with such persistence that at last the term "Shadwell fever" became commonly used amongst our residents, *the only cases of enteric fever which arose in the hospital were those of the nurses to whom I have alluded.*

What was there to make a distinction between the circumstances of these nurses and those of their fellow-residents, most of them probably liable, through their youth, to take the disease; and all of them living in a sewer-poisoned air, which often, presumably, included in its baneful ingredients the exhalations from the decomposed stools of many enteric patients admitted from time to time into the wards? *They had all been in constant attendance on cases of enteric fever.*

I submit this piece of evidence, apparently confirmatory of the unpopular, though, if true, important view, of the contagiousness of enteric fever, under the impression that the *drain-theory*, supported as it is by a great cloud of no mean witnesses, has an authority somewhat out of proportion to the amount of strict and unbiassed reasoning on which it rests. The evidence brought forward by the late M. Piedvache of Dinan has been over lightly treated; nor can we omit to observe that, even in Dr. Cayley's Croonian Lectures, no mention is made of the recent arguments urged by Dr. Collie in favour of this serious disease possessing, like its relatives, the quality of being, in some manner, "catching".

ENTERIC FEVER IN THE PACIFIC.

By P. HERBERT METCALFE, M.R.C.S.Eng., Norfolk Island.

Dr. GEORGE WILSON, in his *Handbook of Hygiene*, points out somewhat particularly the necessity of attending to the periodic cleansing of wells. A case lately under my care would seem to confirm Dr. Wilson's opinion, and at the same time point to the theory that typhoid fever may be generated *de novo*.

I am the resident medical officer to the community of Norfolk Island; and on this island, in latitude 29° 3′ S., longitude 167° 58′ E., four hundred miles from the nearest inhabited land, in January this year I visited a gentleman who had arrived from England the September previous. I found him suffering from an unmistakable attack of typhoid fever. The most prominent symptoms of that disease were well marked. The supervention of the attack was gradual. Headache and aching limbs, with a feeling of exhaustion and loss of appetite, had existed for some days; and giddiness was complained of. The tongue, at first moist and coated, subsequently became red and glazed; and the face was somewhat flushed. About the twelfth day, there was abdominal tenderness on pressure in the right iliac region, and the typical rose-rash was very distinct. Abdominal pain increased during the succeeding week; whilst about the nineteenth day there was slight diarrhœa, with traces of blood in the stools. A gradual rise and fall of temperature extended over a period of six weeks. The thermometer rose above 105.6° Fahr. Convalescence was gradual and tedious. Now, this gentleman joined the Melanesian Mission on this island in September 1879; and up to that date he had never had any illness. Several years before he left home, he lost a sister from enteric fever; and a brother also suffered from it at the same time; but since that date he had never come into contact with any case of this disease. How, then, did he contract this attack?

To my certain knowledge, there has been no enteric fever here for upwards of fifteen months. In the beginning of the year 1877, a man is *reported* to have died of it at the Mission; and in 1868 there was an epidemic of some fever here, though I cannot ascertain of what kind. These are the only instances of which I can hear of anything like typhoid fever existing on the island. Anyway, here is a veritable case of typhoid fever generated in an island of the Pacific, four hundred miles from the nearest land, fifteen months for certain (probably much more) after any fever has existed in the island, and only one person has been attacked.

The water-supply at the Melanesian Mission is obtained from wells; and, after careful inquiries, I found that my patient was the only person who had been drinking water from a well that had a reputation, unknown to him, of being unclean. The water in this well was used for washing purposes and cooking only. Upon examining the well, I found that on one side of it, at a distance of about seven feet, was an open sewer; and that, just opposite to the well, much of the sewage-water became so stagnant as to form an offensive cesspool. I suggested that the well should be cleaned out; and my suggestion was at

once most courteously acted upon by the bishop. After the removal, by buckets, of about eighteen feet of water, there was found at the bottom of the well *four feet of [illegible] sewage-mud*, the skeleton of a duck, a pig's jaw, three empty preserved-meat tins, and thirty old tin mugs in various stages of decomposition, besides many other like articles. The well was so situated that, had there been any typhoid fever previously to this case, the water could not have been contaminated by the specific poison, as the above-mentioned sewer only conveyed water from the kitchen, which is a building detached from the dwelling-houses; and it (the well) is far from, and on a higher level than, the open closets in use.

Does not this circumstance seem to point to the possibility of typhoid fever being generated *de novo?* For it is impossible that my patient could have been contaminated by enteric poison, unless that poison can lie dormant in the constitution, or in extraneous matter, for upwards of fifteen months.

CLINICAL MEMORANDA.

A CASE OF INFANTILE PARALYSIS.

On August 7th I was asked to see J. E. L., aged three years, who, as his mother stated in her letter requesting my attendance, "had lost all power in his legs, and could not stand." The following was the history of the case. The child to all appearance was perfectly well on the previous day, and was taken out in a perambulator by a nurse, accompanied by his aunt. When passing over a very rough portion of the country road, the perambulator was suddenly checked by the wheel falling across a deep rut, the concussion being so great as to throw the occupant of the carriage violently forward, and immediately to jerk the body back again. The child commenced crying directly after this occurrence, exclaiming, "Oh my back!" continuing this with such variations as, "Oh my back does hurt," etc., till he reached his home. On being partly assisted out of the perambulator, he walked in a doubled-up manner, and still complained of his back. During the evening, before his bedtime, he seemed fretful and irritable, and passed a restless and disturbed night. In the morning his nurse could not persuade him to stand; and, after trying both coaxing and scolding with no avail, his mother sent for medical advice. When I saw him he was completely paraplegic, though there was little, if any, loss of sensation. The child has been under my observation from his birth, and, although rather a backward child, with the exception that when about two years old he fell off a chair and fractured his humerus, he has never had a day's illness. It is now nearly six weeks since the paraplegia first commenced, and although the patient's strength has decidedly increased, there is still a considerable loss of power in the legs.

As regards the treatment, I paid great attention to the general health of the patient, giving mild purgatives occasionally, followed at a later period by tonics and nerve-stimulants. He is now taking minute doses of strychnia, the limbs being shampooed, and stimulating liniment rubbed in.

The above case is by no means an uncommon one, and it is only to the cause of the paralysis that I wish to call attention. The causes of infantile paralysis are always doubtful, and it may be brought on by painful dentition, entozoa, irregular feeding, blows, phimosis, etc. The little patient may to all appearance be put to bed perfectly well, but, after passing a miserable and disturbed night, the nurse finds in the morning that he is unable to move an arm or leg. This loss of power unfortunately is often put down on the part of the domestic to temper, and the poor little child is harshly treated; till, as time advances, it becomes evident that the loss of power is real, and then alarm is taken, and advice is eagerly sought for. In my opinion, too great care cannot be taken to watch from the first commencement each case of loss of power, real or imaginary, in young children and infants; and although, in some cases of paralysis in adults, the result of railway accident or other causes, the person may be suspected of malingering, it is surely unreasonable to suspect that such can be the case, when the patient is a child of tender years. In this particular case, in the absence of any other cause, I think it may with justice be said that the paralysis was due to concussion of the spinal cord, the result of the sudden shock. And here perhaps I may be allowed to mention an old and oft-repeated warning, which it is most essential that mothers should endeavour to impress on those who have the care of their children; and that is, "on going over rough places, to carefully lift the perambulator either on the front or back wheels, according to the nature of the obstacle to be passed, instead of roughly pushing it over". This would save the little passenger's delicate nervous system from many an unnecessary, not to say dangerous, shaking.

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SURGICAL MEMORANDA.

A SEVERE CASE OF FACIAL NEURALGIA CURED BY A NEW SURGICAL OPERATION.

In April of this year, a lady, aged 56, who had suffered many years from a most severe facial neuralgia, called upon me, and implored me to do something for her relief. I shall not readily forget the careworn expression of her face as she related to me the terrible nature of her sufferings. She told me that, for a period of upwards of ten years, she had endured the most fearful torture from constant attacks of neuralgia, which caused her to scream, and left her in an exhausted condition; and that, although she had incurred very considerable expense to obtain relief, she had failed to do so; and that the attacks were gradually increasing in violence, frequency, and extent. She also informed me that she had been an in-patient, for some weeks, in the London Hospital, under the care of Dr. Fenwick, and that she had left that institution no better. I need not enumerate the various medicines and remedies which had been tried in this case—ice, electricity, etc.—for all alike had failed; even subcutaneous injections, although at first mitigating the paroxysms, began to lose their influence. Impressed by the supplications of my patient, I promised to do something for her. After considering the case for a week, I resolved upon a plan which I carried out on May 11th, 1880. In this case, the pain commenced in the mental nerve of the right side, just at its exit from the mental foramen; from this spot, it ran backwards to the front of the ear, then upwards to the vertex, forwards to the frontal nerve, down the right side of the face and neck to the arm, and backwards to the scapula. On examining the mouth, I found the gum, above the starting-point of the pain, of a veined and congested appearance, thickened, and harder to the touch than the gum of the opposite side. The tongue was white and tremulous, and all the teeth had been extracted. Six years ago, she had a portion of the alveolar process removed: the idea then being that the pain was produced by the pressure of a buried stump of a tooth; but the operation proved that this was not the case. Mr. Penny and Dr. Rowntree kindly assisted me with the operation. As soon as the chloroform took effect, I made an incision along the lower border of the jaw, and dissected up a flap till I reached the mental foramen. I then ran into the foramen a red-hot steel wire for a quarter of an inch or so, and thoroughly destroyed the nerve. On withdrawing the wire, the artery bled considerably, and I was obliged to plug the foramen. This plug was the cause of some amount of suppuration and delay in the healing of the wound. However, it came away in a few days in the discharges, and then the wound healed kindly, and my patient, from that time, has been entirely free from pain, and is now restored to health. Anything more satisfactory than the result of this operation I have never known. She is now able to take food without fear, to sleep without narcotics, her tongue has regained its colour, and she now takes an interest in her household affairs. Much, lately, has been said and written about nerve-stretching; but the result of this operation proves that in the cautery we have another remedy upon which we may depend, and which, in many instances, may supersede nerve-stretching; also one which possibly may be of great benefit in tetanus.

Augustus Brown, M.D., Barnsbury Park, Islington.

THERAPEUTIC MEMORANDA.

THE INUNCTION OF CASTOR-OIL AS A PURGATIVE.

The communication of Mr. McNicoll on this subject, in the British Medical Journal of October 16th, page 620, bears out my own experience of castor-oil exhibited in a somewhat similar way.

I have frequently applied castor-oil to the abdomen, under spongiopiline, or other waterproof material, in cases where the usual way of administering by the mouth seemed undesirable, and with the happiest results. Within the last few days, in a case of typhoid fever, I applied half an ounce of castor-oil in this manner, under a hot water fomentation, which relieved the constipation and tympanitic distension that had been present, without undue purging or irritation of the bowels.

R. Harvey Hilliard, M.D.,
Fairmead House, Upper Holloway, N.

Professor Fleischl of Vienna has, we read in *Nature*, recently examined fresh corneæ in polarised light; and has found that the corneal fibres became, under tension, doubly refractive, and then occasionally give phenomena similar to those occurring in starch-granules (the theory of which has been examined by von Lang). With this condition, also, is connected the opacity of the cornea on rise of intra-ocular pressure.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

GENERAL INFIRMARY, HEREFORD.

A CASE OF CHLOROSIS IN THE MALE SUBJECT.

(Under the care of Dr. BULL.)

[Reported by Mr. C. J. DEVIS, House-Surgeon.]

J. P., AGED 16, printer, a tall ill-developed lad, first came under observation on January 8th, 1880, giving the following account of himself. Otherwise than always having been pale and weakly, and unfit for exertion, he had had good health. He had never had rheumatism, or any serious illness that he remembered. There was no history of hæmorrhage or of consumption, either in himself or in the family. One sister had been very pale, like himself, but recovered on treatment. He had grown very rapidly lately, and had not lived very well. He did not remember ever having had any colour. For the last three months, he had complained of indefinite feelings of pain and weariness, especially after exertion, accompanied by palpitation, shortness of breath, headache, drowsiness, and disinclination for any kind of exertion. Lately he had had pain after food, bad tastes in the mouth, and anorexia. He had no lumps about him anywhere. He now presented the ordinary symptoms of chlorosis; viz., great pallor of the skin and visible mucous membranes, shortness of breath, palpitation, giddiness, and headache, as well as cardiac phenomena. Superadded were those of atonic dyspepsia. On physical examination, his general contour was fair, though he was very lanky. The bones and joints were well formed; the muscles but slightly developed. The chest was long and narrow. The epigastric notch was narrow. There was slight bulging in the left hypochondrium. The ribs were very sloping, laterally from the sternum. There was marked pulsation in the second, third, and fourth interspaces, close to the sternum. The apex-beat was in the fifth interspace, an inch and a half outside the left nipple-line, nine inches from the mid-sternum, one inch below the horizontal line through the nipple. The respiratory movements were good. The carotids were pulsating. The cardiac impulse was diffuse and forcible, heaving. Vibration of the second sound was felt in the second and third left intercostal spaces close to the sternum. The superficial cardiac area was bounded above by a line drawn from the upper border of the third left cartilage through the nipple to the apex-beat, this line being nine inches and three-quarters in length. The pulmonary percussion-note was good. Hepatic dulness was normal. The first cardiac sound at the apex was intense and prolonged; the second sound was accentuated. There was a faint systolic *bruit*, increasing in intensity on approaching the base. At the base, the first sound was accompanied by a loud slightly musical *bruit*, having its point of maximum intensity at the second left costo-sternal articulation, and being conducted upwards and to the right; it was heard also at the apex and sterno-clavicular articulations, as well as over the subclavian and carotid trunks. The second sound was reduplicated. *Bruit de diable* was heard over the jugulars. The pulse was small and feeble. The urine was pale, of specific gravity 1015, free from albumen. There was no enlargement of the spleen or of the lymphatic glands. The blood was pale and watery; the red cells were diminished in number. The bowels were constipated. The appetite was very good at times; at others, not able to eat. Temperature was normal.

But little progress was made by a two months' treatment, by good diet, iron, strychnia, and cod-liver oil. The gastric symptoms, palpitation and dyspnœa were relieved, though the pallor did not decrease, nor did the cardiac phenomena abate in intensity.

REMARKS.—This seems to be an ordinary though inveterate case of chlorosis, all possible causes of anæmia having been disposed of, in the male subject, accompanied by, as is suggested by the cardiac phenomena, an unduly narrow aorta, and in all probability other vessels; and, consequent upon this condition, cardiac hypertrophy. The fact of the case being so little amenable to what is usually highly successful treatment, together with the persistence of the physical signs, leads one to surmise that the fault may lie in the vascular apparatus. From the history of the case, the anæmia was probably congenital, although doubtless remaining latent until such exciting causes as poor living and rapid growth fully developed the group of phenomena termed chlorosis. It seems to be a safe inference, therefore, that the above case is fairly typical of chlorosis due to an ill-developed vascular apparatus, such as described by Virchow (*vide* vol. xvi of Ziemssen's *Cyclopædia of Medicine*, article Chlorosis), in which very interesting article by Immermann, at page 104, he describes a very similar case, except that his case had no signs of vascular hypoplasia, and was amenable to treatment.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 2ND, 1880.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Report of the Morbid Growths Committee on Mr. Gay's Specimen of Recurrent Mammary Tumour.—The tumour was found to be a well marked example of spindle-celled sarcoma.

Multiple Exostoses.—The PRESIDENT exhibited photographs of a boy who presented exostoses in the neighbourhood of both shoulder-joints, elbows, knees, and ankles. The symmetry, as regards position, was exact, but the growths were larger on the right side than the left. There was a remarkable history of heredity. The tendency to exostoses had shown itself in four or five generations. Three generations ago, there was an intermarriage of first cousins, which might have intensified the tendency. The boy's father presented exostoses in exactly the same position as his son. In several ancestors, the knee was the joint chiefly affected. The boy was one of five children, none of the others being affected. The father said that the growths appeared to reach their maximum at the age of fourteen; and, from that age, to remain stationary. There was a remarkable example of multiple exostoses in the museum of the hospital at Newcastle-on-Tyne. He had also seen a case of the same kind, some years ago, at the London Hospital. He had removed a large exostosis from the femur; but the man had nearly died from pyæmia. Since that experience, he had never attempted to operate upon the growths. He had seen cases of girls with two or three exostoses, but he had never met with a case of multiple exostoses in the female sex.—Dr. PAYNE mentioned the case of a girl aged 17, that had been brought before the Society some years previously by Mr. Arnott. She had died after the removal of a bony growth; and at the *post mortem* examination, exostoses were found on every bone in the body, except those of the skull and the pelvis.—Dr. POORE had seen a little girl with multiple exostoses.—Mr. BARKER had also seen a case of this disease in a girl aged 17.—Dr. ALLEN STURGE had seen a case of multiple exostoses in a man, who presented symmetrical exostoses on nearly all the bones of the upper extremities and on the lower jaw.—Mr. GOULD had seen a case of twins—both boys—both of whom presented multiple exostoses on the upper and lower limbs.—Mr. EVE mentioned the case of a lad who presented multiple exostoses, and whose bones were in the museum at St. Bartholomew's Hospital. He exhibited also a lower jaw, with symmetrical exostoses on the inner surface opposite the molar teeth.

Tumour of Leg.—The PRESIDENT exhibited a tumour removed from the leg of a woman aged 46. It had been growing for twenty years, and had given rise to considerable enlargement of the glands in Scarpa's triangle. Both the original tumour and the glands were removed.—Mr. PARKER had examined the tumour, and found it to be composed of lobulated masses, with strands of connective tissue between. It appeared to take its origin from sebaceous structures. Microscopically, it was composed of epithelial cells, which, in some places, were disintegrating. The glandular growth resembled the original tumour. It was unusual for a growth, apparently of sebaceous origin, to affect the neighbouring lymphatic glands; and he thought that the case constituted another link in the chain between malignant and non-malignant growths.—Dr. THIN thought the case of great interest in connection with one shown by Mr. McCarthy last winter, in which a tumour, corresponding in its character to epithelial cancer, had been growing for twenty years. He himself had examined such a tumour that had been growing for forty-three years. He did not think the evidence was at all conclusive, that these tumours were of sebaceous origin, though they were evidently not developed from epidermis.

Primary Cancer of Lung.—Dr. NORMAN MOORE exhibited this specimen. The growth was composed of a firm fibrous stroma with spaces lined by epithelium, and hence was certainly glandular in origin. The growth in the lung was continuous with a similar one round the main bronchus. The bronchial glands were involved. There was no other growth to be found in the body; hence the cancer would appear to be primary. It probably began in the crypts of the mucous membrane of the bronchus. Shortly before death, the patient, a woman

aged 56, was seized with right hemiplegia and aphasia, which was found to be due to an ordinary fibrinous embolism in the middle cerebral artery. The embolism appeared to be in no way connected with the lung-condition.—Mr. PARKER had shown a case of primary cylindrical cancer of the lung. He did not see why there should not be primary cancer of the lung; because, in early fœtal life, the epithelium of the lung was columnar, and it only became gradually changed to squamous after birth.

Blood from a Diabetic Patient.—Dr. MOORE showed this specimen. The patient, a boy aged 18, had suffered for some time from diabetes, and died comatose, but without symptoms of acetonæmia. At the *post mortem* examination, the blood flowing from the heart, etc., had a pink appearance, like raspberry-juice, the serum being milky. This was found to be due to the presence of a quantity of free fatty matter in the blood, which rose to the top when the blood was allowed to stand in a test-tube. Professor Gamgee mentioned this kind of blood as occurring in diabetes; and Dr. Klein had seen it in fifty guinea-pigs that had died of an epidemic disease. The patient had been taking ordinary diabetic food, and, for some time before death, had eaten very little.—Dr. TAYLOR asked what Dr. Moore meant by "acetonæmia"? He, himself, was accustomed to look upon it as a somewhat indefinite term, referring generally to a comatose state in diabetes, without convulsions.—Dr. MOORE, in reply, stated that he had no very definite notion of what might be included in the term "acetonæmia". In using it, he meant to refer to nervous symptoms associated with a strong ether-like odour about a patient, a few hours before death.

Fibro-cellular Tumour from Knee-joint.—Mr. GODLEE showed this specimen, removed from a woman aged 38, who had suffered from synovitis in the right knee-joint for four years. The tumour was felt outside and above the right patella. An incision was made through the capsule, and the tumour removed. The patient made a good recovery.

Secondary Epithelioma of Lung.—Mr. GODLEE showed two specimens of this condition. In one case, there were numerous tumours in the lungs, secondary to epithelioma of the tongue. In the other case, there was an epitheliomatous nodule in one lung, secondary to epithelioma of the bladder. The epitheliomatous nature of the growth was more marked in the latter than in the former case, which showed a very slight tendency to the formation of nests, or to crenated cell-margins. In the former case, there was typical secondary epithelioma in the kidneys, and suprarenal capsules.—The PRESIDENT had removed a man's tongue for epithelioma. He had remained well for two years, and had then died of secondary epithelioma of the lung.

Papilloma of Umbilicus.—Mr. GOULD showed this specimen, removed from a child aged five months. The growth had been noticed at the time that the umbilical cord fell off. It was of the size of a large currant, and had a small aperture at the top. It closely resembled a mucous polypus of the rectum, and probably sprang from the remains of the umbilical vesicle.

Joint-disease in Locomotor Ataxy.—Dr. PAYNE showed a man who had suffered from syphilis, and now presented well marked symptoms of locomotor ataxy. He had considerably improved under antisyphilitic treatment, but had recently developed hydrarthrosis in the left knee-joint. Gastric symptoms were absent till a week ago, when he had an attack of vomiting without obvious cause, bringing up clear fluid.—Dr. BUZZARD had ascertained from the patient, that he had been liable for the last three or four years to attacks of retching and vomiting. He had previously called attention to the frequent association of joint-disease with gastric attacks in locomotor ataxy; and, since that time, he had seen three cases of joint-disease in ataxic patients, two of whom presented, also, gastric symptoms. He thought the attacks of nausea and vomiting in the present case were of some importance from this point of view.

Living Specimen of Hemiatrophia Facialis.—Dr. PAYNE showed a man aged 42, who was well known in various European countries, and was stated by Virchow to have been one of the cases on which Romberg had founded his theory of trophic nerves. The face and head had apparently been normal till the patient was eight years old. He then had measles, followed by a swelling of the size of an egg beneath the lower jaw on the left side. This slowly went away. The skin of the left side of the face was said then to have turned yellow, and that side of the head ceased to grow. After three or four years, the skin became healthy; but the left side of the face and head had never grown much larger than they were at that time. There was no loss of cutaneous sensibility. All the special nerves, however, are deficient in activity on that side. The hair and eyelashes were thin. The tongue was markedly smaller on the left side than on the right. The limbs and trunk were normal. The question arose, whether the sympathetic, or the fifth nerve, was involved. The case was quite different from any cases of disease of the sympathetic in the neck that he had seen. He thought the condition was probably one of some peculiar lesion of the fifth nerve.—The PRESIDENT believed that, as a rule, hemiatrophy of the face resulted from morphœa. He had, however, never seen a case from this cause at all comparable to the man shown by Dr. Payne. He quoted a Russian physician, who believed these atrophic conditions to be due to permanent spasm of vaso-motor nerves.—Dr. POORE thought the case was not so much one of atrophy as of non-development of the face. He thought there were no signs of its having been due to morphœa, nor of any vaso-motor spasm. Whatever cause had given rise to the condition had now probably entirely passed away.—Dr. BUZZARD had published a somewhat similar case. He believed such cases constituted a form of infantile paralysis, due to the destruction by inflammation of those parts in the ganglia at the base of the brain which represent the upward prolongation of the anterior horns of grey matter in the spinal cord.

Living Specimen of Morphœa.—The PRESIDENT exhibited this patient. There were large symmetrical ivory patches on the legs, not corresponding to any nerve-distribution. There were also two patches symmetrically situated on the abdomen, not round, but of a long oval shape, closely resembling the distribution of a group of vesicles in herpes of the abdomen. The disease had begun four or five years ago with aching in the legs. He thought that the symmetry, the shape of the abdominal patches, and the fact that the patches were confined to the lower part of the body, pointed to a neurotic rather than to a blood-origin.

Gelostitis with Suppuration in a Syphilitic Infant.—Dr. LEES showed a baby who had presented well-marked symptoms of hereditary syphilis, and in whom the left elbow and right knee-joint had become much enlarged; the child being then six weeks old. Both joints had suppurated, and had opened spontaneously. The left knee-joint subsequently suppurated, and had been aspirated. The child had recovered under mercurial treatment, with a fair degree of movement in all the joints. The noteworthy points in the case were: (1) the multiplicity of the affection; (2) the early age at which the bone-disease had occurred; (3) the good recovery under mercurial treatment.

The following specimen was shown by card.

Mr. SHATTUCK: Dissection of a Case of Cleft Palate.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 6TH, 1880.

W. S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

Congenital Malformation of the Hip-joint.—DR. POOLE showed a little girl, aged 4, who had been delivered by turning. No abnormality was noticed until the child began to walk, when it was observed to limp. There was lordosis, with projection of the abdomen, and there was a space between the thighs in the standing position.—Mr. W. ADAMS said that it was a well-marked case of the so-called congenital dislocation of the hip, which he thought would be more accurately described as malformation of the acetabulum with displacement of the head of the femur. In this case, both hips were similarly affected, and the lordosis, prominence of the abdomen, large size and prominence of the nates, shortness of the legs as compared with the trunk, and wide separation of the thighs were characteristic. The top of the great trochanter, on each side, in the standing position, rose above the level of a horizontal line drawn from the anterior superior spine; but when the child was lying down, and a little gradual traction was made from the knee, the great trochanter descended fully as low as its normal position: an inch and a half below the level of the anterior superior spine. This was demonstrated by Mr. Adams to the Society. It had been said that this condition arose from traction on the thighs in breech-presentations. This was not, however, in Mr. Adams' opinion, the real explanation. He believed it to be a malformation arising from defective development of the acetabulum.—Drs. Wynn Williams, Graily Hewitt, Cleveland, Gervis, and Herman made remarks on the case.

Rotatory Action of the Forceps.—Professor STEPHENSON of Aberdeen read a paper on this subject. He said, with the head in the firm grasp of the forceps, there was a tendency to bring down both ends of the head through an equal space, and so prevent due flexion. If, however, the blades were applied with a diagonal grasp, the compressing power of the forceps might be made to promote flexion. This was done better by following the rule that, whilst the force should always be exerted with strict reference to the direction of the axis of the pelvis, the line of traction should be in a slightly curved direction; the curve passing out of the line of the axis in a direction corresponding to that of the sagittal suture, towards the side where the forehead lay, for flexion; to the side on which the occiput was, for extension. Rotation forwards of the occiput could also be attained by rotating the forceps on its own axis. As the

head passed under the pubic arch, the forceps, whilst being drawn up to the mother's abdomen, should be rotated, so as to bring the sagittal suture into coincidence with the mesial line. The application of the forceps in narrowed pelves tended to rotate the head from a transverse to an oblique diameter. To avoid the impaction of the frontal bone on the promontory of the sacrum, the head should be rotated on a vertical axis, and slight extension given to the head, to bring the fore part down at the side of the pelvis.—Remarks were made by Drs. Playfair, Roper, Edis, and Braxton Hicks.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, OCTOBER 6TH, 1880.

DAVID LITTLE, M.D., President, in the Chair.

Spontaneous Arterio-venous Aneurism of the Orbit.—Dr. GLASCOTT showed a woman, aged 46, the mother of twenty-one children, and the subject of a spontaneous arterio-venous aneurism of the left orbit. There was no history of any injury, and the orbital tumour appeared suddenly during convalescence from erysipelas.

Extroversion of the Bladder with Successful Operation.—Mr. THOMAS JONES showed a patient (a young girl, aged nine years) whom he had brought before the Society two years ago. She had been treated by operation twice; the first time by Ayres' operation, but the flaps had sloughed; later on, it was attempted to remedy the defect by sliding a large flap brought from the left side of the abdominal wall. This had united firmly, and greatly relieved the patient from the sufferings she previously underwent from the exposure of the sensitive surface of the wall of the bladder.

Extroversion of the Bladder.—Mr. CULLINGWORTH showed, for Dr. LLOYD ROBERTS, a case of extroversion of the bladder occurring in a male child (the scrotum and its contents were normal), aged three months; and remarked on the comparative rarity of this condition in children of the male sex.

Antiseptic Treatment of Empyema.—Dr. ASHBY related three cases of empyema, treated antiseptically, two of the patients being shown at the meeting. The ages of the patients were two and a half, five, and seven years respectively; all three had a history of five to seven weeks' illness. The treatment consisted in opening the chest under the spray, after the fashion of Hilton's method of opening abscesses—*i.e.*, making a free incision through the skin of the ninth intercostal space, just in front of the angle of the rib, and pushing a pair of dressing-forceps through the muscles into the pleural cavity, thus avoiding all chance of wounding the diaphragm. Then, about half an inch of the ninth rib was excised by a pair of bone-forceps, and a short drainage-tube inserted. The dressings were renewed daily for the first week, but, by the end of the first month, the discharge had become scanty, and dressing every third or fourth day was sufficient. In two of the cases, the discharge had ceased and the wound healed by the end of two months; and in the third, in two months and a half. One of the children weighed twenty-six pounds on June 27th, when operated upon, and thirty-one pounds ten ounces on August 27th, when the wound had healed. In October, three months after the operation, all three were well; there was no reopening of the wounds. Only one had any deformity of the chest visible to the eye, and that only a slight flattening. A physical examination of the chests showed impaired resonance; and the presence of weak but distinct vocal resonance and fremitus over the whole chest demonstrated fairly, if not fully, expanded lungs.

Hemianæsthesia, Hemiplegia, and Hemianopsia.—Dr. DRESCHFELD showed the brain from a patient who had suffered from left hemianopsia, hemiplegia, and hemianæsthesia. The case (along with some others in which the effect of the electro-magnet for the cure of anæsthesia was tried) was in part reported in the BRITISH MEDICAL JOURNAL, August 7th, 1880. At that time the patient was suffering from slight left hemiparesis, with involuntary spasmodic movements of the left arm and leg. The hemianæsthesia had yielded considerably to the application of the electro-magnet; the hemianopsia had remained stationary. As the disease further progressed, the loss of power on the left side increased, the involuntary movements ceased, and the mental condition of the patient grew much worse; he became delirious, and at times violent (preventing any investigation as to the state of sensibility), and at last died on September 5th. The diagnosis as to the nature and [illegible] of the lesion (see BRITISH MEDICAL JOURNAL, page 295) was fully confirmed by the *post mortem* examination. There was found a sarcomatous tumour, partly softened, and surrounded by altered and softened brain-substance, occupying the posterior part of the internal capsule, and encroaching and partly replacing both the thalamus opticus and the lenticular nucleus on the right side of the brain. The right optic tract was found flattened and softened by pressure from the tumour.

Acute Atrophy of the Liver.—Mr. CULLINGWORTH briefly narrated the history of a case of acute atrophy of the liver, which occurred in a married lady, aged 28, and terminated fatally in four weeks. The patient, who was nursing her first child, had an attack of jaundice, which, for the first three weeks, appeared to be of the mildest character and simply catarrhal. Severe symptoms suddenly supervened, ending in delirium, coma, and death. The temperature did not rise until the last twenty-four hours; an hour before death it was 105° Fahr. The jaundice became intense, and hæmorrhage occurred. After death, the liver was found atrophied and softened, for the most part reddish in colour, with large irregularly distributed patches of orange-yellow. The weight of the organ was 977 grammes (about 1½ lbs.). Hæmorrhagic spots were found over the heart, the mesentery, and the large and small intestines. Microscopic examination showed destructive changes to have advanced further in the red portions of the liver than in the yellow; in the former, the liver-cells had entirely disappeared. Professor Arthur Gamgee had made a chemical examination of the liver, and of the whole of the urine passed during the last thirty-six hours of life. His results, with full details of the case, will be published *in extenso*; in the meantime, it may be stated that the amount of urea found in the urine was considerable; and that, while abundance of leucin and tyrosin was found in the liver, the urine contained no trace of either of these substances.

REVIEWS AND NOTICES.

A TREATISE ON COMPARATIVE EMBRYOLOGY. By FRANCIS M. BALFOUR, M.A., F.R.S. In two vols. Vol. I. London: Macmillan and Co. 1880.

A COMPARATIVELY short time ago, we had the satisfaction of reviewing in these columns a work emanating from the University of Cambridge, which we confidently asserted was destined to become a standard work in the English language—we refer to Dr. Michael Foster's treatise on *Physiology*. This we might perhaps call the first fruit of the restored medical school at Cambridge. It is now with pleasure that we have to announce a second work of the same character, in Mr. BALFOUR'S *Treatise on Comparative Embryology*. Although this subject has not been studied for much more than half a century, it has made such rapid advances of late years as to necessitate its being portioned off as a separate branch from anatomy and physiology, under which it was but a short time ago included. In this country, until recent years, little attention has been given to the study of embryology; indeed, it has been greatly neglected except by a few workers, amongst whom the names of Allen Thomson, Darwin, Huxley, Parker, and Ray Lankester, will ever stand prominently forward. Fortunately, in the various continental universities, it has been most assiduously studied by a band of workers to whose labours it in a great measure owes the position to which it has already attained. Slowly but surely, thanks to the continued perseverance of its supporters, it has been gaining ground in this country; and we trust, by the hearty support given to it in the University of Cambridge, its progress will be more rapid in the future than it has been in the past. As it is at present, no Englishman desirous of prosecuting embryological research need leave his own country, seeing the opportunity is afforded him of placing himself under such teachers as Huxley, Lankester, and Balfour, in institutions as well equipped with the requisite appliances as in any of the continental schools.

The work in question, when complete, will consist of three parts: firstly, a general history of the changes that take place in reproduction; secondly, a description of the development of the invertebrata; and thirdly, the development of the vertebrata, with special histories of the several organs. The first two parts are published in Volume I, while the third part will be treated of in the second and concluding volume, which is still in the press. The object of the work is to give such an account of the development of animal forms as may prove useful both to students and to those engaged in embryological research. It is, with the exception of a small work by Packard, the first attempt—and we have no hesitation in saying it is a most successful one—that has been made to deal with the whole science of embryology in its recent aspects. Moreover, much of the matter contained in it is not to be found in ordinary text-books. The author has for these reasons done well, we think, in giving very ample references to the original sources of his information, by placing at the end of each chapter, and in some cases at the end of each section, a list of the most important papers treating on each subject dealt with. Those references are again collected at the end of the volume in the form of a bibliography, which will doubtless be of the greatest use to those who wish to consult the original papers. Another

important feature in the book is, that the more general parts are printed in large type, while, for much of the theoretical matter, the details of various special modes of development, the histories of the less important forms, and for controversial matter generally, a smaller type is used. This is of great use to the students who are only beginning embryological studies, as it enables them at once to see what portions are of primary importance for them to learn, a thing that is especially difficult in a new and as yet only partially explored branch of science such as embryology, owing to the number of incomplete and contradictory observations, still to be settled, which it contains.

Although the work is primarily intended for students of embryology, yet the introductory chapters on development in general will prove most useful to students of medicine. The first of these is devoted to a description of the ovum and spermatozoon; the second to that of the maturation and impregnation of the ovum; while the third treats of the internal phenomena and internal features of its segmentation. By a careful perusal of those chapters, a good knowledge of the earliest stages of the development of the embryo may be acquired. The remainder of the book is also not without interest to the practitioner, as, in the systematic embryology of the invertebrata, he will find clear and lucid accounts of the development of the various parasites which infest the intestinal canal and other parts or organs of man and other animals, and which he is frequently called upon to use his skill in destroying. An accurate knowledge of the nature and development of these forms of animal life will doubtless place him in a better position to treat patients in which they occur. The work is profusely illustrated by means of clearly executed woodcuts, which greatly facilitate the elucidation of difficult portions. Finally, we can confidently recommend the work as one which will supply a want long felt by students of embryology. It is, moreover, one which will rank in future as a standard work on the subject.

NOTES ON BOOKS.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, M.A., F.R.S., with the co-operation of W. ARCHER, F. M. BALFOUR, and E. KLEIN.—The October number opens with an elaborate paper by Mr. Balfour, in which he gives a comparative view of the nature, origin, and affinities of larval forms. The paper is one of extended research and carefully worked out observation, affording important data for starting views of embryological research in the direction of "phyllogeny". Dr. Hubrecht's paper, on the peripheral nervous system in Palæo- and Schizo-Nemertini, describes and pictures a remarkable nervous layer in the body-wall of two of the Nemertean suborders, which is of the highest interest in relation to nerve-development. Perhaps the most important of the papers in this number is Professor Ranvier's paper on the Terminations of Nerves in the Epidermis, which describes and illustrates the exquisite researches on the nerve-endings of which Professor Ranvier showed the histological pieces at Cambridge. The drawings are excellent, as are all the drawings in this most valuable periodical; but the preparations themselves are so perfect, that no drawings can equal their delicacy, exactness, and schematic beauty. Professor Klein concludes the number by a brilliant research on the Termination of Nerves of the Mammalian Cornea, as to which, however, we confess to some scepticism as to the pictured delicate nerve-ramifications (which look more like cell-outlines). This paper also is ordinarily interesting.

The Causes and Results of Pulmonary Hæmorrhage, with Remarks on Treatment. By R. E. THOMPSON, M.D. Pp. 135, with Illustrations. London: Smith, Elder, and Co. 1879.—It would require a much larger space than is at our command fully to review this book. We must content ourselves, then, with doing little more than recommending the work as containing much that is new and original, and as being the result of much thought and extended experience. We do not think Dr. Thompson's views will be all accepted without criticism; indeed, we would say that criticism, and that careful attention which alone renders criticism justifiable, are their due. The chapters on the Pathogeny of Pulmonary Hæmorrhage, the Relics of Hæmoptysis, and on Structural Inheritance with Special Reference to the Hæmorrhagic Tendency, are the most interesting and instructive. The illustrations are by the hand of the author; and well related cases are plentifully interspersed through the text.

IT is ordered that, in future, medical officers of station-hospitals are, on the written application of any established friendly society, to furnish such society with a certificate as to the nature of the illness from which any soldier under their charge, who is a member thereof, may be suffering.

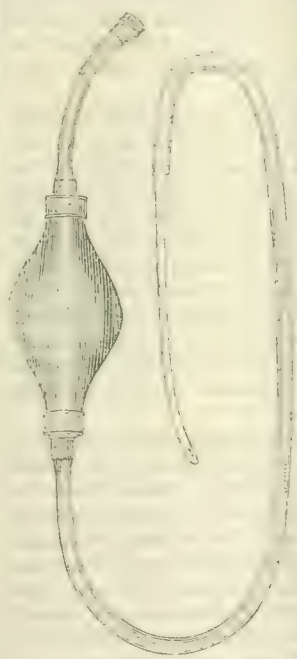
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MISTURA PEPSINÆ CO. c. BISMUTHO (HEWLETT'S).

MESSRS. HEWLETT AND CO. have introduced a compound bismuth mixture containing stated doses of pepsine, solution of bismuth, solution of opium, hydrocyanic acid, and tincture of nux vomica. It will be seen that it is quite a complicated prescription, but one obviously likely to be of much advantage in the frequent cases of irritative dyspepsia, with atony of gastric or intestinal muscular layers. It is said to be especially useful in relieving the pain accompanying gastric carcinoma, and in dyspepsia with water-brash.

THE URETHRAL IRRIGATOR, FOR THE TREATMENT OF GLEET AND THE PREVENTION OF STRICTURE.

THIS instrument, which was introduced by Mr. Reginald Harrison, Surgeon to the Liverpool Royal Infirmary, has now, it is stated, been used by many members of the profession with satisfactory results. In explaining and describing his instrument, Mr. Harrison says: "If I am correct in my assumption that the urethra at, and posterior to, the bulb (excluding, of course, the prostate) is the seat of the chronic inflammation we call 'gleet', how utterly inert our treatment of it must be by injections, as usually and popularly practised. For some time past, I have been employing a very thorough irrigation of the urethra through its whole length, by means of an apparatus which I have had specially constructed for the purpose. So far, the results obtained have been highly satisfactory in speedily curing the gleet, and, consequently, preventing the formation of stricture."



The patient is directed to seat himself in a chair, with his pelvis inclined forward to the edge, to introduce the soft catheter and gently pay it into the urethra, having previously anointed it with some vaseline; the other end of the syringe is placed in a tumblerful of the fluid to be used, tepid. He steadies the catheter in his urethra with his left hand (not squeezing the meatus around it), and slowly compresses the ball of the syringe with his right hand, the vessel containing the fluid to be injected being placed by his right side. In this way, the patient continues to use the apparatus until the urethra is completely washed out. The fluid, after it has circulated between the walls of the urethra and the catheter, escapes through the meatus, and is received into any convenient receptacle. This irrigation is repeated twice or thrice daily; the fluid most suitable for the purpose being fifteen grains of sulphocarbolate of zinc in half a pint of water.

The urethral irrigator is constructed, with a special (velvet-eyed) catheter, by Symes and Co., pharmaceutical chemists, Liverpool; the London agents are Messrs. Burroughs and Co., Snow Hill, Holborn Viaduct, London.

YORK RURAL DISTRICT.—The report on this district needs but little comment, except that it shows good work on the part of Mr. Marshall. During the last year, the birth- and death-rates were 35.4 and 17.2 per 1,000—both higher than the average. Of the total deaths, 40 occurred from zymotic diseases, against 48 and 41 in the two previous years. Scarlatina, which caused 11 deaths, is reported as having been epidemic during the last four years, "recurring again and again in various parts, and baffling all exertions to prevent its development". As usual, schools and the ignorance and apathy of parents have played an important part in the dissemination of the infection.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 6TH, 1880.

RECENT STUDIES IN THERAPEUTICS.

VI.—HYDRASTIS AND HYDRASTIN.

THE *Hydrastis Canadensis*, or golden seal, is a somewhat rare native of the rich shady woods of North America. The root, or more strictly speaking the rhizome, with its adherent rootlets, is the part used in medicine. The flower-stem is pushed up early in the spring, and the fruit, which resembles a raspberry, is ripe in July. A good idea of the general appearance of the plant may be obtained from a glance at the plate in Bentley and Trimen's *Atlas*.

Hydrastis has been used in medicine from the time of the discovery of America. The aborigines employed it as a general tonic and also as a wash for sore eyes, and for ulcers. They set great store on the root from the brilliant yellow colour it affords. This colour is permanent, and an attempt has recently been made to revive its use in the arts. Durand states that it imparts to linen a rich and durable light-yellow colour of great brilliancy, which by proper mordants can be made to give every shade of colour, from pale yellow to orange. Mixed with indigo, it yields a bright green. As a medicinal agent, hydrastis has been making its way slowly but surely. That its value is not unrecognised in the United States is shown by the fact that, in the last revision of the *Pharmacopœia*, it was transferred from the secondary to the primary list of the materia medica.

The root contains a white crystallisable alkaloid called hydrastia or hydrastin. It is tasteless when solid, but in solution is very bitter. From the root is also obtained the resinous body—*Resina Hydrastis*—commonly sold under the name of hydrastin. It is of a yellowish colour, and is said to be identical with berberin. This berberin, or berberia, was first discovered in the common barbery, and has since been found not only in hydrastis, but in various other medicinal substances, especially in those combining a bitter taste with a yellow colour, as calumba, coptis, and podophyllum. In addition to hydrastin and the resin, a third active principle has been extracted from the root, but, at present, very little is known about it, and it has not even been named.

The preparation of hydrastis commonly employed in this country is a tincture made by exhausting one part of the root with four of rectified spirit, the dose being from half a drachm to a drachm or more, three or four times a day. The dose of the resin is from three to six grains, and it is most conveniently given in the form of pill. The dose of the pure alkaloid hydrastia is from one to two grains. There is also an American fluid extract of hydrastis, the dose of which is from ten minims to half a drachm.

Our knowledge of the physiological action of hydrastis is at present somewhat limited. The tincture possesses a decidedly bitter taste, and promotes the flow of saliva; also, probably, of gastric juice; and it is found that increased appetite and digestive power result from its administration. Phillips states that the toxic effects of the alkaloid resemble those of quinine; large doses give rise to noises in the ears and a sense of rushing in the head, but there is no disturbance of the alimentary canal, beyond a slight feeling of warmth at the pit of the stomach. Dr. Rutherford, by his recent experiments, has shown that the resin is a powerful stimulant of the liver, and a feeble stimulant of the intestines. Speaking on purely physiological grounds, he says, "It seems to be a substance eminently worthy of the attention of the profession."

Hydrastis is largely used in America as a substitute for quinine. Bartholow speaks of it in the highest possible terms as a remedy for intermittent fever and other complaints of malarial origin. It should be given, he says, under the same regulations as those which govern the administration of quinine, which in its physiological and therapeutical action it closely resembles. Hydrastis is a stomachic tonic, and is often used in the treatment of atonic dyspepsia. It is one of the best remedies for the gastric catarrh of chronic alcoholism, and probably the best substitute for alcoholic stimulants, when their use has to be abandoned. For habitual constipation, depending on inaction of the liver, it is undoubtedly a valuable remedy. The tincture should be given in half-drachm doses in an ounce of water four times a day. It makes a nasty unsightly mixture, but it is efficacious. For piles, both external and internal, it is most useful; and it is of especial value in bleeding piles, or when there is a discharge of mucus or muco-purulent matter from the rectum. In addition to the internal administration of the tincture, a weak infusion of the root may be injected into the bowel night and morning, or may be applied externally on lint. In prolapse of the rectum in children, in fissure of the anus, and in ulceration of the rectal mucous membrane, it is highly praised.

In gonorrhœa it is a most useful remedy. Bartholow recommends a drachm of hydrastia (the alkaloid) to four ounces of mucilage of acacia, and has found no injection so uniformly successful. Phillips prefers an injection made by adding one or two drachms of the tincture to a pint of water, and of this he orders a syringeful to be injected up the urethra every half hour for seven or eight hours, and then every six or eight hours for two or three days.

In cracks and fissures of the nipple, hydrastis has been strongly recommended, and it is said to be a good application for chronic indolent ulcers of the lower extremities. It has been successfully employed in stomatitis, otorrhœa, ozæna, conjunctivitis, leucorrhœa, and other chronic inflammations of the mucous membranes. It was formerly used by the Cherokees as a remedy for cancer, but there is no evidence to show that it exerts any influence on this disease. Phillips says that, although glandular swellings frequently yield to its action, he has never perceived any advantages to result from its employment in true malignant disease. When, however, the general system is debilitated, this medicine operates in a remarkably efficacious manner, its action being not unlike that of quinine.

The resin of hydrastis may be given in all cases where there is inaction of the liver. One or two pills, each of three grains, may be administered every night, at bedtime; or one may be taken three times a day. It should be borne in mind that, although this substance acts powerfully on the liver, it has little, if any, action on the intestine, and it is consequently desirable to give a mild purgative to carry off the increased bile-secretion. The pills, if taken at bed-time, should be followed in the morning by a teaspoonful or more of effervescing sulphate of soda in half a tumblerful of lukewarm water.

Taking hydrastis all round, it may be safely affirmed that it is a valuable remedy, and that it will prove a useful addition to the *Pharmacopœia* of the future.

THE INDIAN MEDICAL SERVICE.

IT is some time since this JOURNAL has dealt with the important questions involved in the present condition of the Medical Service of India. Our silence has arisen from no lack of sympathy with those whose interests have suffered, or are likely to suffer, from changes recently made in the organisation of the service; and, above all, from no want of appreciation of the public interests involved in the important issues awaiting settlement by the Viceroy of India, to whose impartial consideration the whole case has been submitted by Lord Hartington.

Like every other public service, the Medical Department of the Army of India exists, not for the advantage and aggrandisement of its

officers, however meritorious they may be, but for necessary and important public ends. This being so, it is obvious that the Government of India, when it introduces such changes in the organisation and administration of the service as the public interests seem to demand, acts entirely within its rights. This is only a truism; but we think it right to insist upon it here, because it is sometimes overlooked by zealous advocates of service-claims, in a way not calculated to bring about a right settlement of the matters at issue between the Government of India and its medical officers. At the same time, we freely allow that it is not only the plain duty, but the obvious interest, of a wise Government, when introducing changes in the organisation of a long established service, to be at some pains to carry out reforms in such a way as not only to avoid, as far as possible, injury to existing interests, but even to deal tenderly with the susceptibilities of a body of officers who have largely promoted the public weal, and, by the admission of the most competent authorities, have done more to reconcile the people of India to British rule than any other class of public servants.

In former articles on this subject, we have been at no pains to conceal our opinion that considerations of this kind were too much neglected when the Government of India promulgated, and that in piecemeal fashion and harsh terms, the order which so wounded the feelings and altered the prospects of the medical officers of India; and we warned the Government that, unless more care was taken, men of high professional qualifications would cease to seek a career in the medical service of India. It is a well known fact that, for a long time, the Indian service commanded the best qualified men in the medical market. Signs are not wanting that the tide has turned. At the last competitive examination in London, the marks of the candidates for India were far below those for the British army. The first man for the British army has 2,510 marks; the first Indian man has 2,385. In the British list, 9 men have over 2,000 marks, while only 4 have that number in the list for India. The inferiority of the men for India is equally marked to the end: the twenty-sixth on the list having only 1,460, against 1,715 for the man in the same position in the British. Nothing like this state of things has been known since the Army Medical School was established. Is it the beginning of the end? If so, it will be a great misfortune for India. We venture to remind those whom it concerns that, when deterioration begins in a service, it is apt to be progressive.

We do not think there is anything unreasonable in the petitions which Indian medical officers have submitted to the Secretary of State. They claim equality with British medical officers as regards rank, privileges, promotion, chances of destination, pensions, and pay. The inequality in all the above important particulars since the publication of the Royal Warrant of last November, is glaring and most unjust, particularly when it is considered that the whole of an Indian medical officer's career is passed in a hostile climate, while his British brother's residence and interests in India are comparatively temporary. It is not denied that the changes which have been introduced into the Civil Department of the Indian service have been beneficial; but the benefits are not shared by the service generally, having, in fact, been confined to a few favoured officers. None of the recent changes have given more deep offence than the rule which restricts the military surgeon-generalship in each presidency to the British service; it is at once unjust and impolitic, and affixes a stamp of inferiority on the Indian service which has deeply wounded a body of officers who have always been second to no medical service in the world. Under the new system, the best circles of administration are invariably given to British officers, to which in reason and justice they have no exclusive claim. There is one rule of the Indian service which, more, perhaps, than any other, has caused a feeling of discontent and a stinging sense of injustice; and that is placing Indian medical officers in arduous and responsible positions, often on active service, and in some of the worst climates in the world, as in the passes of Afghanistan, on what is insolently called "unemployed pay"; whilst their juniors in the British service, merely doing duty with their regiments, draw the full allowance of their rank. No notice of this is ever given to Indian candidates by the India Office; they are left to find it out when they arrive in India. The attention of our readers has more than once been called to another, perhaps the greatest, affront ever put upon a body of officers: the names of Indian medical officers who had distinguished themselves in Afghanistan, and were mentioned in despatches, were withheld from the gazettes.

We respectfully commend the above facts to the consideration of Lord Hartington. Another competitive examination for candidates is announced for February in the coming year; it would be well for intending competitors, unless the above inequalities are removed between this and then, to think "once, twice, thrice", before they commit their fortunes to an Indian career.

THE CAUSES OF DIPHTHERIA.

THE necessity of a Government inquiry into the causes and conditions which determine the origin, spread, and intensity of diphtheria is daily becoming more urgent. Since the inquiries which were made by Drs. Sanderson and Greenhow for the Medical Department of the Privy Council twenty years ago, when the disease first attracted attention in this country, there have been no official investigations into the circumstances in which the disease occurs, beyond a number of inquiries into isolated epidemics, which have produced no results of any definite value. A general inquiry into the disease is, indeed, needed, if for nothing else, in order to clear up, and, if possible, to reconcile, the varying opinions as to its etiology, which competent observers have formed from its behaviour within their own personal experience. Dr. Charles Kelly and Mr. G. H. Fosbroke are both of them known as energetic and observant medical officers of health, and both work over large tracts of country where diphtheria is more or less prevalent. In their last annual reports, both these gentlemen deal at some length with the circumstances of diphtheritic outbreaks in their respective districts; but while Dr. Kelly's experience accords with the generally received opinions about the disease, Mr. Fosbroke's conclusions differ so startlingly from them that it seems needful to consider his remarks somewhat in detail. The only way in which the differences are capable of explanation would seem to be that, in one district, a condition or circumstance may come prominently forward in an epidemic, which, while equally potent for evil in another, works its way more insidiously, and thus remains unrecognised and unrecorded. Even this, however, does not explain a large proportion of the differences which exist; and the comparative value of the conclusions arrived at can only be determined by a general inquiry into the etiology of the disease.

Mr. Fosbroke, since his appointment in 1873, has witnessed no fewer than seven epidemics of diphtheria, in addition to many smaller outbreaks; and, as the result of his investigations, has arrived at the following conclusions with regard to its etiology. 1. "That it is more liable to appear and spread in rural than in urban districts." This is quite in accord with general experience, though the reason of the unequal incidence has not yet been satisfactorily explained. 2. "That geological position has little, if any, connection with the disease, but that local influences of various descriptions have a most important relationship to it; for it is marvellous how diphtheria, when once fairly established, persistently clings to the immediate neighbourhood." Granting the latter proposition, it is difficult to reconcile the former with general experience, for the partiality of diphtheria for clayey soils has been often noticed. Dr. Kelly, indeed, in his report for last year, observes that "a comparison of soils seems to show that diphtheria is far more frequent on the weald clay than elsewhere; and, next, upon the upper greensand, where this formation crops out just above the impervious goult." 3. "That dampness of site does not, in my experience, bear that intimate relationship to the disease that some very competent observers are prone to believe." Mr. Fosbroke's conclusion, in this regard, is exactly opposite to that of almost all observers. Dr. Thursfield, who has had great experience of the disease, says there is the closest connection between dampness of subsoil and of dwellings and the disease. This view is corroborated by Dr. Woodforde of Berkshire, and is very generally

held amongst etiologists. 4. "That the dissemination of diphtheria is not dependent upon 'seasons', and that excessive rainfall does not materially influence the disease." Here, once more, Mr. Fosbroke is at variance with general opinion, for undoubtedly it is in the autumn that diphtheria is most prevalent. The influence of rainfall does not seem to have been separately studied; but, if dampness be associated with the disease, then excessive rainfall must also. The remaining conclusions of Mr. Fosbroke do not need any special notice. They relate to age and family susceptibility as predisposing causes; to the lesser chances of recovery of the young, and to the little influence of sex; to the origin of the disease *de novo*, and to the intimate association with its origin of dissemination of all unsanitary conditions, particularly polluted water; to its most infectious character, its transmissibility by a person who has not had the disease, and its pertinacious clinging to certain dwellings; to its very frequent and wholesale distribution by schools, and to its not having been, in his experience, distributed by unwholesome milk. But there is enough in the conclusions to which we have drawn special attention to warrant a request and a demand that the influence, or want of influence, upon diphtheria of the conditions referred to by Mr. Fosbroke may be settled without delay by a generalised inquiry into the disease throughout the country: an inquiry which no one but the Government has the means or the time to undertake.

THE CONTAGIOUSNESS OF ENTERIC FEVER.

In a report just presented to the Local Government Board on the prevalence of enteric fever in the Pontardawe Rural District, Dr. Franklin Parsons records an outbreak at a place called Mawr Llanguicke, which seems to strengthen the argument of those who contend that this fever is, in fact, contagious. It appears that last year a young man, who had been living in Swansea—where an epidemic of typhoid was occurring at the time—came home ill to this village on or about September 4th, with pains in the head and diarrhœa; but was not seen by any medical man until a week after his return, when he was found suffering from enteric fever. In the meantime, he had been visited by his relations and friends living in the neighbouring houses, who assisted in nursing him, and of whom six took the disease; the dates of their commencing to be ill being September 14th (two cases), 16th (two), 17th, and 26th. One of these cases died. The persons attacked in this outbreak resided in five cottages about fifty or one hundred yards apart. Two of the cottages were at the side of one road; two of the others by the side of another road at a lower level; the cottages in each case being on the side of the road on which the ground was highest. The sanitary condition of the cottages was good. Each cottage had its own privy, at a distance from the house. All drew their water-supply from a spout on the other side of a small ravine, used by many others, and which could not possibly be contaminated by the excreta of the fever cases. It was stated that the excreta of the first patient were mixed with disinfectants and buried in the earth; but this was probably not done at the commencement of his illness. Altogether, it did not appear that there was any mode by which the infection could have been conveyed from case to case, except by direct transmission. The medical officer of health for the district states that the relatives, friends, and neighbours of a sick person commonly assemble at the house to assist in the nursing; that, after doing so, they are not always careful to wash their hands before eating or preparing food; and that, with a view to induce the patient to take nourishment, they often drink out of the cup which he has tasted and put it aside. The history of another outbreak in the township of Rhyndwyclydach is similar to this. A young woman, who was in service near Swansea, returned home to her parents' house at Clydach, suffering from what proved to be enteric fever. Within a short time afterwards, several of her neighbours, who had been to see her, sickened with fever; and three of them died. The sanitary condition of these houses is excellent; the water is good; the privies are at a distance, and on lower ground.

It is reported that Professor Rose of Zürich will succeed the late Dr. Wilms at Berlin.

Dr. Levis of Philadelphia, the advocate of bromide of ethyl as an anæsthetic, reports a second fatal case—this time in his own practice.

The number of *Nature* for October 21st contains an excellent memoir of Professor Owen, F.R.S., for many years Hunterian Curator and Professor. With the memoir is published a good portrait.

Dr. Robert Smith has been elected Assistant-Physician, and Mr. Morgan has been elected Assistant-Surgeon, to the Charing-Cross Hospital.

M. Lancereaux has lately read an elaborate paper on absinthism, in which he suggests that the cases of hysteria observed in men are cases of absinthism transmitted by heredity.

Dr. H. Franklin Parsons has been commissioned by the Local Government Board to investigate the causes of the outbreak of typhoid fever at Totnes, referred to in our last issue.

An outbreak of typhoid fever is reported at Winkleigh, in the Torrington rural sanitary district, in association with a variety of sanitary defects.

Several cases of scarlet fever, and two of diphtheria—one of the latter being fatal—were reported to the Northam Local Board at its last meeting. The cases of diphtheria are stated to have been traced to a "cesspit", for the removal of which orders have been given.

The fatal cases of scarlet fever in London, which had been 70 and 58 in the two preceding weeks, rose to 88 last week, and exceeded the corrected average weekly number by 8; the increase last week occurred mainly in the East and South groups of registration districts.

At the last meeting of the Liskeard rural sanitary authority, the medical officer of health reported outbreaks of enteric fever in three separate parishes. In the worst outbreak, the cause seems clearly traceable to the pollution of the water-supply by the soakage from the dirty and uncleansed cesspit-privies of the place.

The Municipal Council of Paris has passed a resolution requesting the Government to take the necessary steps for making cremation experiments with the subjects which have been used for anatomical purposes.

We would remind our readers that at the next meeting of the Pathological Society, on November 16th, the discussion on the pathology of rickets will take place. Dr. Hilton Fagge will open the debate, and it is anticipated that Sir William Jenner and Dr. Dickinson will take part in the discussion. Several members of the Society, who have devoted special attention to children's diseases, have already intimated their intention to be present. It is hoped that all who wish to speak will send in their names to the Secretaries as soon as possible.

The physiological teaching in the medical school at Cambridge is of a very high order, both as to intrinsic merit and completeness. This term, Dr. Michael Foster will lecture on elementary physiology; Mr. Langley will lecture to the advanced class on general physiology twice a week; Mr. Lea takes physiological chemistry; and Dr. Gaskell the physiology of the circulation. Here is a model which might well be followed elsewhere in England. How sad it is to turn to Oxford, where the main energy of the biological teaching seems to be directed to zoology and comparative anatomy; and where such classes as might be used by medical students are arranged without reference to the medical curriculum. The great endowments of Lee are perverted from man to beast.

We are requested to state that Newlyn, near Penzance, on Mount's Bay, is entirely free from typhoid fever, and is not to be confounded with a place of the same name about thirty miles distant, of which we have had to speak as the seat of repeated outbreaks of typhoid fever. A correspondent, who writes to us on the subject, says: "At Newlyn, on Mount's Bay, my family spent the month of August last; and I am far from denying that this veritable 'fishing village' bears a very near olfactory relationship to Cologne, as celebrated in the verse of Coleridge; but we all left it, not only enchanted by the varied beauties of the neighbourhood, but so entirely renewed and reinvigorated, that we are most unwilling for its reputation to suffer undeservedly."

THE ASSOCIATION OF HOSPITAL REGISTRARS.

At a meeting of the Association of Registrars of the Metropolitan Hospitals, held at King's College Hospital, at 8 P.M., on November 3d, the following officers were elected: Dr. Mahomed (Guy's Hospital), President, and Chairman of Medical Section; Mr. Harrison Cripps (St. Bartholomew's Hospital), Vice-President, and Chairman of the Surgical Section; Dr. Dunbar (St. George's Hospital), Secretary in General, and of the Medical Section; Mr. Boyd (University College Hospital), Secretary of Surgical Section. The following resolutions were carried *nem. con.*

1. "That the Association will draw up a form of index of medical and surgical cases available for the use of each hospital.
2. "That it will, if possible, compile on the same model a combined index of cases admitted into the metropolitan hospitals during the year.
3. "That one of the objects of the Association be to co-operate for the investigation of questions of obscurity.
4. "That the Secretaries of the Medical and Surgical Subcommittees shall summon a meeting for Wednesday, November 17th, at 8 P.M., at King's College Hospital, for the purpose of drawing up a form of index of medical and surgical diseases."

DEATH FROM CHLOROFORM.

The coroner at Devonport held an inquest at the Royal Albert Hospital on Saturday afternoon, on the body of Annie Pillar, aged 18, who died in the hospital from the effects of chloroform. The deceased had been an inmate of the lock-ward for a short time; and it is stated that, for the purpose of undergoing an operation, chloroform was administered in the presence of Dr. Archer, the visiting-surgeon, and Mr. Cant, the house-surgeon. The effect of the drug was too powerful; and, notwithstanding that a galvanic battery was applied, consciousness could not be restored, and the girl died. In consequence of the accidental omission of the ordinary intimation from the police that an inquest was to be held, the investigation on Saturday was not attended by any representative of the press. The coroner was, however, subsequently applied to for permission to see the depositions, but he declined to permit it. It is understood that the jury desired to obtain medical testimony independent of that of Dr. Archer and Mr. Cant, and for this purpose the inquiry was adjourned. In the meantime, a *post mortem* examination of the body is to be made.

MEDICAL OFFICER OF HEALTH FOR MARYLEBONE.

The vacancy caused by the death of Dr. John Whitmore has been filled by the election, on Thursday last, of Dr. A. Wynter Blyth, late Medical Officer of Health to the North Devon Combination of Sanitary Authorities, and author of a *Dictionary of Hygiene and Public Health*, and a *Manual of Practical Chemistry as applied to the Discovery of Adulterations in Food*. There were thirteen candidates, from whom Dr. Blyth, and Dr. C. E. Saunders, Medical Officer of Health for the Herts and Middlesex Combined Sanitary Districts, were selected for final competition.

TYPHOID FEVER AT NEWLYN EAST.

The St. Columb rural sanitary authority has appointed a committee to co-operate with the local relief committee at Newlyn East. Pure water is being supplied to the inhabitants; the immediate sinking of a new well has been ordered in the place of that condemned; a quantity of lime has been ordered for whitewashing purposes; a scavenger has been appointed to use disinfectants, and act as deputy inspector of nuisances; precautionary instructions have been printed and issued to the villagers; and efforts—unhappily at present abortive—have been made to secure a building for isolation purposes. It is greatly to be deplored that all this activity has been delayed. Every sixth inhabitant has been struck down by the fever, and two more deaths occurred on Saturday, and one on Monday, last.

WICKERSHEIMER'S PRESERVING LIQUID.

The composition of the original fluid, to which we lately referred as of remarkable value, has been gradually somewhat altered, so as to facilitate its manufacture, and to make it better applicable for various purposes. Messrs. Poetz and Flohr of Berlin prepare two kinds, one intended for injections, the other for macerating and immersing bodies, etc. Their composition is as follows.

	For Injecting.	For Immersing.
Arsenious acid	10 *grammes.*	12 *grammes.*
Sodium chloride	80 ,,	60 ,,
Potassium sulphate	200 ,,	150 ,,
,, nitrate	25 ,,	18 ,,
,, carbonate	20 ,,	15 ,,
Water	10 *litres.*	10 *litres.*
Glycerin	4 ,,	4 ,,
Wood-naphtha	¾ ,,	¾ ,,

SYNTHESIS OF CITRIC ACID.

Another brilliant synthesis has recently been accomplished in the domain of organic chemistry. Messrs. Grimaux and Adam have succeeded in building up the characteristic acid of lemons from glycerin. Glycerin may be regarded as trihydroxypropane, $C_3H_5(OH)_3$, and citric acid as hydroxypropanetricarboxyllic acid, $C_3H_4(OH)(CO_2H)_3$. To convert glycerin into citric acid, it was therefore necessary to replace two hydroxyl groups, and one hydrogen atom, by the group CO_2H (carboxyl).

GUY'S HOSPITAL.

The nursing question has reached the stage of popular doggrel ballads. One such effusion which reaches us contains the following verses.

"Shade of kindly Thomas Guy,
Shall the poor be left to die?
Things are daily growing worse,
Doctor's power usurped by nurse,
Governors writing letters long,
Right to-day, to-morrow wrong:
Tell, O tell us, who's to blame
For this tale of death and shame.

"It has proved of small avail
That a nurse was sent to jail.
Wilful women still pretend
They a broken skull can mend;
With a pill prevent disaster,
Set a leg with sticking plaister;
And they feel supreme surprise
If a patient 'goes and dies'."

The poet concludes:

"You were placed in power *on trust*,
Heed the people's voice you must.
Shade of kindly Thomas Guy,
We'll not leave the poor to die."

THE SMOKE NUISANCE.

The authorities in Birmingham seem to be more active in the suppression of this nuisance than the police in London. We find, in Dr. Alfred Hill's quarterly report of the health of the borough, ending October 2nd, that the number of observations of chimneys was 2,050; of manufacturers reported for the emission of dense smoke, 80; of manufacturers summoned, 16; convicted, 14; cautioned, 64. The amount of penalties inflicted was £10 10s.; and of costs, £5 19s.

BABY-FARMING.

Dr. Hardwicke recently held an inquest on the body of a child, aged 18 months, of an envelope-maker, who had placed it under the care of Mrs. Mary Ann Shepherd, who occupied one small room, which the authorities refused to register as a fit place for the care of infants. Mrs. Shepherd, however, persisted in taking them; and had, at the time of

the death of the child, two others as well. Two women, herself, and the children, all slept in the room. Mr. Thomas Murphy said the child's death was due to tubercular disease of the lungs, caused by the impure atmosphere and overcrowding. The jury returned a verdict in accordance with the medical evidence, and added that they thought the attention of the inspector under the Infant Life Preservation Act should be directed to the case. The coroner said, had it not been for the leniency of the jury, he should have felt it his duty to at once institute criminal proceedings against Mrs. Shepherd. As it was, he did not think it was the last she would hear of the matter.

GERMAN MEASLES IN THE NEW FOREST.

In a report to the New Forest rural sanitary authority, Mr. R. W. Jenkins has given particulars of a severe and remarkable epidemic of spurious or German measles at Totton. About two hundred cases of the disease have occurred in the village; and, of these, six have proved fatal. The first child attacked was absent from the British school on June 4th last. She was the daughter of a miller's carter, who delivered flour in Southampton to many families among whom the disease was prevalent, his brother's children being among those affected. No other cases occurred until June 14th, when three more children were absent from school. After this, the disease spread so rapidly, and parents became so alarmed, that the daily school-attendance fell to seventeen, instead of over one hundred, and the school was closed. The national school suffered subsequently, though not so severely, and had also to be closed. German measles is not often fatal, and all the deaths in the recent outbreak were caused by inflammatory affections of the lungs. In two out of the three houses in which the deaths occurred, the sanitary surroundings were very faulty.

CORONERS' EXPENSES.

At the October Middlesex sessions, the following amounts were allowed for coroners' expenses:—Mr. John Humphreys, Eastern District, for 204 inquisitions, from the 5th of August, to the 30th of September, £315 2s.; Dr. Hardwicke, Central District, 209 inquisitions, from the 6th of August to the 30th of September, £425 6s. 2d.; Dr. T. B. Diplock, Western District, 104 inquisitions, from the 6th of August to the 30th of September, £171 8s.; Mr. W. J. Payne, liberty of the Duchy of Lancaster, six inquisitions, from the 1st of July to the 30th of September, £10 10s. 6d.; Mr. St. Clair Bedford, city of Westminster, 47 inquisitions, from the 1st of August to the 30th of September, £97 17s.

ROYAL COLLEGE OF PHYSICIANS.

In the forthcoming session, the Harveian Oration will be delivered by Dr. Barclay, the Lumleian Lectures by Dr. Southey, the Croonian Lectures by Dr. Moxon, and the Gulstonian Lectures by Dr. Coupland. We have the pleasure of adding that, by arrangement with Dr. Southey and Dr. Moxon, their lectures will be published, from the authors' manuscripts, in this JOURNAL.

LITERARY MEDICAL ACTIVITY.

One short year has elapsed since the Royal Medical and Chirurgical Society issued the three handsome volumes which constitute the catalogue of their library. The legion of medical workers in the civilised world is so vast, and their labours are so unremitting, that no member of the Society can be much surprised when he learns that already a supplemental catalogue of one hundred and one pages has been published. Bearing in mind this fact, and glancing at the fearful array of novelties heralded regularly by the transatlantic *Index Medicus*, the student of medicine—we mean the life-long qualified student—may at first be struck with dismay, since his constant desire to "keep up with current literature" must, under such circumstances, represent a hopeless effort of conscientiousness. His attempt to find out the newest writings on his particular branch of medical science is made all the harder, in that the supplement is arranged by authors' names, and not by the subjects, in alphabetical order. A genuine hard worker, when consulting the supplement, is probably well versed in the latest opinions of the Listers, Charcots, Billroths, and other leading authorities of medicine and surgery; he will eagerly look up the latest researches of well-known rising men; but, to find out the productions of men as yet unknown to fame, he must waste much of his valuable time in a tedious inspection of the whole catalogue. It is only in a purely secondhand manner, in fact, from some previous reference, that he can avail himself of the supplement as a means of finding out the perhaps valuable work of a new writer, who may prove some day a leader in the profession, and whose researches are soundly recorded—which is still more to the point. On the other hand, if we have once heard of a new publication, this supplement will prove most useful in showing us if it is to be found in Berners Street. The subject of each separate part of certain serial works, such as Pitha's or Volkmann's collections, is always indicated; and the list of new journals and reports is very complete. Of course, many additions consist merely of old books presented by Fellows of the Society. The practice of presenting special papers already included in *Transactions* and *Proceedings* regularly taken in for the library, though open to certain obvious objections, has its advantages. A Fellow who studies some special subject will be interested in the researches of some Dr. Brown or Mr. Jones working in the same groove. He may not find time to look all through the indexes of the *Pathological* or *Clinical Transactions*, and thus may fail in finding Brown's and Jones's latest papers, which he may easily do, should those gentlemen have presented them separately. In appearance and form, this supplement does not differ from its predecessors. As to the vastness of recent additions to professional literature, that is a subject on the evils of which it is useless to expatiate; and, as to the value of these novelties, time and those who use the supplement will settle that question.

THE SMOKER'S CATARRH.

Habitual smokers are notoriously liable to colds in the head, and to bronchitis, and other congestive affections of the air-passages. On this subject, Dr. J. F. Rumbold says (*Hygiène of Catarrh*): "The congestion occasioned by the action of tobacco on the mucous membrane of the superior portion of the respiratory tract resembles in many respects the congestion resulting from the effects of a cold, and, like the effects of a cold, some of its effects are transitory and some are permanent. The local effect of tobacco on the mucous membrane of the nose, throat, and ears, is as predisposing to catarrhal disease, as is inefficient and insufficient clothing in the case of females. The local effect of tobacco on the mucous membrane of the superior portion of the respiratory tract causes a more permanent relaxation and congestion than any known agent. As tobacco depresses the system while it is producing its pleasurable sensation, and as it prepares the mucous membrane (by causing a more permanent relaxation and congestion than any known agent) to take on catarrhal inflammation from even slight exposure to cold, it should require no further evidence to show that its use ought to be discontinued by every catarrhal patient. The only question remaining to be answered is, shall its use be discontinued at once, or shall the victim 'taper off' in his endeavour to become master of himself?" The writer acknowledges but one successful method, viz., its discontinuance at once.

THE SPECIFIC GERM OF MALARIA.

Dr. Lauchlan Aitken of Rome writes to us: "The proof of the existence of a specific malarial germ has just received important confirmation. At the Italian Medical Congress held in September at Genoa, Dr. Marchiafava, assistant to the Professor of Pathological Anatomy at Rome, announced that he had found the bacillus malariæ in the blood of three patients during the cold stage of the malarial fever from which they suffered. Since that time, twenty-four cases have been examined, with the result, in every instance, of showing the presence of the bacillus in the blood during the period of invasion, while the spores alone could be seen when the fever was at its height. The same careful observer, as long ago as last autumn, had found the rods and spores of the bacillus in the lymph, blood, spleen, and medullary cavities of bones at the *post mortem* examinations of three persons who had died from pernicious fever, but no one had hitherto succeeded in demonstra-

ting the presence of the bacillus in the blood of living patients, owing to the specimens examined having been always taken during the hot stage of the fever. Professor Perroncito of Turin (one of the leading mycologists of Italy), has repeated Dr. Marchiafava's observations in the Hospital of Vercelli, in Piedmont, which annually receives about four thousand cases of malarial fever, though not of a pernicious type, from the surrounding district, which is covered with rice-fields. The result is that he, too, has found the bacillus, occasionally in large quantity, in the blood, during the cold stage of all the cases examined, and sometimes also in the last hours of the intermittent period. I saw, to-day, at the Santo Spirito Hospital, a specimen of blood within five minutes from the time when it had been taken, with all due precautions, from a patient just entering on the cold stage, which contained two or three bacilli in all respects identical with those exhibited at Cambridge, got, it may be recollected, by the cultivation of some mud from near Selinunte, a very malarial port in Sicily. Observations are now to be made, both at Rome and Vercelli, according to a common programme drawn up by Professor Tommasi Crudeli, of the blood of the spleen drawn off by aspiration through a hypodermic syringe during the last hours of the intermittent period, and also of the perspiration and urine during the stage of resolution. Professor Tommasi Crudeli hopes that British practitioners, who have many opportunities, both in India and the Colonies, will make similar researches, but cautions them that a good illumination is essential, and that it is useless to work with less than a one-eighth-inch object-glass."

THE HOSPITAL ACCOMMODATION OF THE METROPOLIS.

THE discussion at the last meeting of the Metropolitan Asylums Board raises again the question of the proper method of providing for the infectious hospital wants of the metropolis. Sir Edmund Currie drew attention to the fact, that fever was greatly on the increase in London—so much so, indeed, that at Homerton there were only seventeen vacant beds, while the cases were rapidly increasing. Several speakers made suggestions for meeting this emergency; but Mr. Galsworthy was right in saying that it would be a good thing if the sanitary authorities were stirred up in the matter. As a matter of fact, and despite the provision in the Poor-law (Amendment) Act of 1879, which enabled sanitary authorities to contract for the reception of non-pauper cases into the hospitals of the Metropolitan Asylums Board, none of the authorities have taken any real steps to discharge their duties in this regard. The Asylums Board seem to have made up their minds not to provide any more accommodation until the Hampstead Hospital case is decided; so that, unless the authorities take some steps themselves to supply the wants of their districts, the result must speedily be a deadlock, and a still further extension of the fever.

ACROBATIC ACCIDENT.

OUR Paris correspondent writes, on November 2nd: "One of the most terrible accidents that could happen to an aeronaut occurred in Paris on Sunday afternoon. A balloon (a Montgolfier), measuring 2,500 cubic *mètres*, was let up, after having been inflated with heated air, at a fair that was being held at Courbevoie; and it was calculated that it would have come down very slowly, as its descent would have been effected by the gradual cooling of the air in its interior. A young man, aged 28, named Auguste Navarre, an acrobat by profession, was induced to ascend with the balloon, to which was attached a *trapèze*, and he was to perform certain gymnastic evolutions in the air. The balloon started at about half-past 4 P.M., with the gymnast holding on to the *trapèze*. Its ascent was rather rapid; and when it got up to about 500 *mètres* (nearly 550 yards), the unfortunate man let go his hold, and he came down, with a vertiginous fall, in a garden at Neuilly, about half a mile or a mile from Courbevoie. The fall occupied about seven seconds, the body turning round on itself, and when at about 200 *mètres* from the earth, it assumed the horizontal position, in which position it reached the ground. The velocity of the fall, at the seventh second, was estimated at more than 240 *mètres;* and supposing the body to have weighed 65 *kilogrammes*, the velocity would have acquired a force of more than 15,000 *kilogrammes*, or nearly 14 cwt., when the body reached the ground. The shock of the fall was so great that the body, on reaching the earth, rebounded about 4 *mètres;* and the soil, which was rather hard, was sunk to about 50 *centimètres;* and prints of the head, the trunk, the legs, arms, and even the fingers, could be distinctly traced on it. The bones were completely smashed, the skull fractured, and blood oozed from the ears. The balloon, relieved of its ballast, continued its ascent, was soon lost in the clouds, and was next seen, a little after five, on the ground at the Place Saint Michel, in Paris, where it fell after having burst in the air. I should mention, that the unfortunate victim of this most hazardous feat evidently had some misgivings as to his safety, and very imprudently drank three glasses of absinthe, in order, as he said, to give him courage, by which he was evidently stupefied, as, when he was about 100 *mètres* from the ground, his head leaned on one side, and the body was observed to be motionless. He was most probably already dead, or, at any rate, insensible."

THE NEW GOVERNMENT OFFICES.

MR. RAWLINSON, at the late meeting of the Sanitary Institute at Exeter, was unofficially communicative about the sanitary defects of the new offices of his department, saying that people who came there "complained that they could sniff the sewer-gas as they came along the passage; and advised him to set his own house in order before ordering localities to sewer". He added, pleasantly, that "perhaps he was not wise in making these remarks; but he was so old, and had become so independent, that, if he got a 'wigging', he should not very much care". Whether the publication, far and wide, of these heretical remarks has been followed by the result that Mr. Rawlinson anticipated, it would be indiscreet to inquire; but another result, and one for which the occupants of the building must undoubtedly be grateful, seems, in fact, to have ensued. For the last three weeks or so, workmen have been engaged, first at the Colonial Office end, and now at the Home Office end, in making deep excavations in front of the building, apparently with the view of putting down fresh sewers—though the exact nature of the operations is veiled from the vulgar gaze. From the fact, however, that huge mounds of black greasy mud have risen at the side of the excavations in question, and that a number of new drain-pipes lie scattered about, it seems but fair to assume that an attempt is at last being made to improve the drainage of the buildings, or, at all events, to rid the sewers of their accumulated deposit. Certainly this improvement (if it be one, and not another piece of the patching which is characteristic of the Commissioners of Works) will not have been effected before it is wanted. Complaints, loud and long, have for years been made, by both the occupants of, and visitors to, the new Government offices, of the sickening atmosphere of the corridors.

ANTIVACCINATION TALES.

IT is one of the customary tactics of the antivaccinators to take some case of ordinary skin-affection in a vaccinated child, and, after copiously exaggerating its symptoms, to publish the case far and wide as one of "terrible injury from vaccination". An instructive instance of this kind has lately occurred at Ventnor. A certain antivaccinator, who had been elected on the Ventnor Local Board, wrote to the Local Government Board to draw their attention to two cases of "blood-poisoning" at Ventnor "from vaccination". "Two perfectly healthy children", about ten days after vaccination, were stated to have "broken out into a mass of running sores", and to have "continued in the same state ever since: the elder child being, even to this day, a most frightful spectacle". The complainant added, sententiously, that he had no doubt in his own mind that "the lymph used on the occasion must have been impregnated with the germs of syphilis". On the receipt of this communication, the Local Government Board, in accordance with their invariable practice in complaints of injury from vaccination, sent down their senior medical inspector, Dr. Stevens, to inquire into the actual facts of the case; and his report has just been communicated to the Isle of Wight Board of Guardians as the vaccination authority for the district. Dr. Stevens has gone carefully into the history of the vaccinifer and of the

two children alleged to be injured, and has been able satisfactorily to prove the complete inaccuracy of the allegations in every particular. The general results of his inquiry may be thus summarised: As to the allegation that, about ten days after their vaccination, both children "broke out into a mass of running sores, and had continued in the same state ever since", the accuracy of this statement is absolutely denied by the mothers of the children, and other competent witnesses, and was inconsistent with the state of the children when seen by Dr. Stevens. As to the expression of opinion that the lymph used on the occasion of the vaccination of the two children must have been "contaminated with the germs of syphilis", it was found that the child from which the lymph was taken had a perfectly pure history; and the evidence was uniform that no complication occurred in the course of the vaccination, either at the points of insertion of the lymph, or during the development or decline of the vesicles. There was, moreover, an absence of any indication, even the slightest, of syphilis among the children implicated in the inquiry, each having being subjected to a careful examination by Dr. Stevens. The Local Government Board, in commenting upon these facts, expressed their opinion that the imputed contamination of the lymph used in the vaccination of the children in question was wholly unsupported by the facts disclosed; and that there was no evidence whatever that the lymph was other than perfectly pure: an opinion at which even the most rabid antivaccinator will find it difficult to cavil.

VIOLENT DEATHS.

THE deaths in England and Wales last quarter referred to different forms of violence were 4,254, and exceeded those in the previous quarter by 311, a result mainly due to fatal colliery accidents: they were equal to an annual rate of 0.66 per 1,000 living, and to 3.2 per cent. of the total deaths, slightly exceeding the average proportion in the ten preceding corresponding quarters. In the twenty large towns the deaths from violence were equal to an average rate of 0.70 per 1,000, and ranged in the several towns from 0.33 and 0.41 in Norwich and Bradford, to 0.89 in Sunderland, 1.10 in Newcastle-upon-Tyne, and 1.14 in Liverpool.

INQUESTS.

DURING last quarter, 6,151 inquest cases were registered in England and Wales, equal to 4.7 per cent. of the total deaths; this proportion differed but slightly from that prevailing in recent corresponding quarters. In the twenty large towns the proportion of inquest cases averaged 5.1 per cent., and the rate ranged from 2.5 and 2.6 in Oldham and Bradford, to 7.5 and 7.8 in Bristol and Plymouth.

ISOLATION HOSPITALS.

MR. ILIFFE'S report on the borough of Derby, for the third quarter of this year, shows an increasing appreciation of the value of hospital isolation for cases of infectious disease. Mr. Iliffe states that, of the 54 cases of scarlet fever reported during last quarter, 19 were induced to go to the sanatorium, with the result of convalescence in every case. On the other hand, 7, or 20 per cent. of the thirty-five patients treated at home, died. This fact is, as Mr. Iliffe observes, "very significant, and speaks volumes for the good that efficient ventilation, cleanliness, good nursing, and proper food will effect in lessening the mortality from the disease. It also stands out in most favourable contrast to the seemingly inevitable evils to which most of the patients who are left at home are subject through closeness of apartments, inefficient nursing, and indifferent feeding." A further proof of the value of isolation is to be found in the fact that while, of the fourteen houses from which the 19 patients were removed to the sanatorium, in one only was there a spread of infection (and this could be accounted for by the lateness of the removal of the first case), the infection spread in seven of the thirty-one houses from which the cases were not removed. He further says: "Such facts as the above must dispel all hostile criticism as to the utility of a place for the isolation of cases of infectious disease; and it is much to be regretted that the present sanatorium is in such a condition as to render it useless for a considerable portion of the year. It is now (October 10th) closed against all fresh cases, as it would be a criminal proceeding to receive anyone into it in severe weather; and no one with a reputation to lose would undertake the responsibility of subjecting patients to the fatal risks which would be involved by such an act." It does not seem to have occurred to anyone that it is an equally wrong proceeding on the part of the Council to allow their hospital to remain in such a state that, during the greater part of the year, it is absolutely unusable.

DEATHS IN PUBLIC INSTITUTIONS.

OF the deaths registered in England and Wales last quarter, 10,588, or 8.1 per cent., were recorded in workhouse establishments, hospitals, and public lunatic asylums. This rate showed a considerable decline from that which prevailed in the corresponding quarter of last year. In the twenty large towns, 5,418, or 12.5 per cent., of the deaths occurred in public institutions; the proportions in the several towns ranged from 5.4 both in Norwich and Sunderland, to 15.8 in Bristol, and 16.6 in London. Excluding the twenty large towns the proportion of institution deaths in the rest of England and Wales did not exceed 5.9 per cent.

LORD LYTTON ON MEDICAL SERVICES.

PRINCESS Christian on the 29th ultimo opened, at St. Leonards-on-Sea, the new buildings for the Hertfordshire Convalescent Home. Lord Lytton, who, at the luncheon which was given on the occasion, proposed the health of the honorary medical officers, illustrated the value of their services by the following graceful apologue. He said that in the wise old literature of India there was a little story told, which forcibly recurred to his mind in connection with the day's proceedings. It was the story of a king who was famous for his virtues, but especially for two which it was not always easy to reconcile—namely, justice and compassion. A dove pursued by a falcon sought refuge with the king. The falcon, however, who was a remarkably, in fact a supernaturally, clever bird—as logical as the late Mr. Mill, and as eloquent as the present Prime Minister—pointed out to the king that he was entitled to his prey; and proceeded, just as if he were a statesman out of office, to impugn the motives of the king, who, he remarked, shrank from the disagreeable dictates of justice which caused him pain, while indulging at the expense of others in the luxury of compassion. Moved by the falcon's arguments, the king ultimately agreed to give up as much of his own flesh as was equal in weight to the dove. Scales were sent for, and the king, drawing his sword, cut from his own body one pound of flesh. But the dove in the opposite scale outweighed it, and the king hacked and hacked and cut at himself till he was little more than a skeleton, still without the desired result. At last, in desperation, he himself jumped into the scale. Then, indeed, did the scale sink, but at the same moment, the dove and the falcon rose to heaven and were transfigured; and so, continued the Hindoo chronicle, the king learnt the whole theory and practice of morals, which began and ended in self sacrifice. That was the moral pointed by this convalescent home, and more particularly by the efforts of the honorary medical officers, who, like the king in the Hindoo story, threw not merely their purses—for time to them was money—but themselves into the scale.

THE PECUNIARY ADVANTAGES OF SANITATION.

ACCORDING to the *Montreal Witness*, New York city is a notable example of what may be done by efficient sanitary government in improving the health of cities. About ten years ago, the present Board of Health was organised, and immediately set to work, though obliged to contend with much ignorant and selfish opposition, to enforce the sanitary laws which have proved so beneficial. Four years after the Board was organised in New York, such preventable diseases as scarlet fever and diphtheria decreased fully seventy-five per cent. Destructive diseases that before were epidemic are now unknown. The general mortality is steadily declining, while the population is constantly increasing. At least three thousand lives are now annually saved that before perished for lack of sanitary prevention. Not long since, one of

the largest merchants in New York declared, in a public meeting, that the cash value of the Board of Health to the branch of business in which he was engaged—trading in hides and rags, which could not, previous to the action of the Board, be carried on in the summer—could not be estimated at less than one million dollars.

SCOTLAND.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At the annual meeting of the Royal College of Surgeons, the following office-bearers were elected for the ensuing year: *President:* Francis Brodie Imlach (re-elected). *Secretary and Treasurer:* Joseph Bell. *Librarian:* David Wilson, M.D. *President's Council:* Andrew Wood, M.D.; William Walker; Henry Duncan Littlejohn, M.D.; Patrick Heron Watson, M.D.; John Smith, M.D.; William Turner. *Ex Officio:* Joseph Bell. *Examiners:* Archibald Inglis, M.D.; Peter D. Handyside, M.D.; James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D.; David Wilson, M.D.; John Smith, M.D.; D. M. C. L. Argyll Robertson, M.D.; Joseph Bell; John Duncan, M.D.; Robert J. Blair Cunynghame, M.D.; Alex. G. Miller, M.D. *Dental Examiners:* Patrick H. Watson, M.D.; Francis B. Imlach; H. D. Littlejohn, M.D.; John Smith, M.D.; David W. Hogue, M.D.; Andrew Wilson, L.D.S. *Assessors to Examiners:* William Brown; James Spence; William Walker; James S. Combe, M.D. *Conservator of Museum:* Robert J. Blair Cunynghame, M.D. *Curator:* James Robertson; *Officer:* Colin Mackenzie.

GLASGOW EAR HOSPITAL.

A new institution, to be known as the Glasgow Hospital and Dispensary for the Diseases of the Ear, was opened on October 26th, Dr. Andrew Buchanan, President of the Faculty of Physicians and Surgeons, occupying the chair. Part of the building has for some time been used as a dispensary for outdoor patients, but a large portion of the remainder of the tenement has been taken in, and now there is a comfortably and admirably equipped hospital, the different wards containing fifteen beds. There are also a lecture-room, a waiting-room for the patients, a matron's room, kitchen, and laundry. At the end of the proceedings, a vote of thanks was awarded to Dr. Buchanan for presiding, and for his gift to the institution of a valuable set of drawings bearing upon medical teaching in connection with the ear.

THE REGISTRAR-GENERAL'S RETURNS.

From the returns of the Registrar-General for the week ending October 23rd, it appears that the death-rate in the eight principal towns was 19.6 per 1000. This rate is 2.5 above that for the corresponding week of last year, but 2.8 below that for the previous week of the present year. The lowest mortality was recorded in Edinburgh—viz., 16.1 per 1000; and the highest in Leith—viz., 25.8 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.3 per 1000, being 1.1 below that for last week. Scarlet fever continues to be rather prevalent, but appears to be almost confined to Glasgow, Edinburgh, and Leith. Acute diseases of the chest caused 129 deaths, being 22 above the number recorded last week. The mean temperature was 39.3, being 7.2 below that of the week immediately preceding, and 8.8 below that of the corresponding week of 1879.

WOODILEE ASYLUM.

The annual report by Dr. Arthur Mitchell, with regard to the above asylum, states that, at the date of the visit, there were resident in the building 486 patients—250 men and 236 women. The figures of admission and discharge of patients disclosed very satisfactory results of treatment. The death-rate was low, and the rate of recovery high. Evidence was seen of able and successful management, the special features of which consisted in the large employment of the inmates of both sexes in active healthy work, and in the removing from the minds of the patients of all sense of imprisonment. The number of patients actively and profitably employed was 409—205 men and 204 women; and the idle, who consisted of 45 men and 32 women, were ill registered as physically incapable of work. These figures were regarded as highly satisfactory.

ADDITIONAL UNIVERSITY ASSESSORSHIP.

It seems that between two and three hundred of the voting papers issued by the Registrar have failed to find the persons to whom they were addressed, and are now lying as returned letters on the Registrar's hands. This simply means that there are so many votes lost. The ordinance University Commission, 1858) provides that a voting paper shall be sent to each member of General Council to "his address, *as appearing in the Register*". The ordinance further states that each person ought to notify any change of address to the Registrar. Those who have failed to do so, have, of course, failed to receive their voting-paper, and so have lost their vote; and it cannot be doubted that many of these votes must belong especially to medical graduates who have recently left college. It is highly desirable, therefore, that every medical man who has changed his address since his name was put on the *Register* ought at once to write to the Registrar, and give him his correct address, to be inserted in the *Register*. It is to be hoped that some method will be devised at the next meeting of the General Council to get the *Register* corrected up to date.

SICK CHILDREN'S HOSPITAL IN GLASGOW.

The plans for this institution have now received the sanction of the local authorities, and are to be proceeded with forthwith. The hospital is to accommodate in all fifty-six patients, with the necessary rooms for matron, nurses, and servants; and, in its construction, it will embrace all the improvements which experience has suggested in the best institutions of the kind throughout the kingdom. No cases of infectious diseases are to be admitted.

UNIVERSITY OF GLASGOW.

The entrance of medical students at this University is large, especially of first year students. At the recent examinations in October, 195 candidates appeared for the various examinations, of whom 123 passed. At the preliminary examination in general education for medical degrees, there were 234 candidates, and of these about 70 per cent. passed. Compared with previous years, there is still an increase in the numbers entering the medical profession. Professor Charteris gave his inaugural lecture on Wednesday, the 3rd instant. At a recent meeting of the General Council of the University, Professor Gairdner moved, and Professor McKendrick seconded, a motion, calling the attention of the University Court to the present anomalous position of Pathology in the University, and suggesting the institution of a Chair for that subject. The motion was carried; and we believe that steps will shortly be taken to attain that object.

A PERMISSIVE BILL FOR SCOTLAND.

It is understood that an important Conference has recently been held in Glasgow, attended by representatives of the Scottish Temperance League and the Permissive Bill Association, at which a proposal to prepare, and get introduced into Parliament, a Bill on the principle of local option, applicable to Scotland, was considered. There was complete harmony as to the lines upon which the Bill was to be drawn; and it was agreed to ask Dr. Cameron to take charge of it in the House of Commons.

GLASGOW SCIENCE LECTURES.

On the evening of October 26th, Professor Tyndall delivered to a large audience the first of this winter's series of lectures arranged for by the Glasgow Science Lectures' Association. There was a good attendance of the University Professors and of medical men upon the platform. Professor Tyndall's subject was "Complementary and Subjective Colours". He advanced no new theory; but showed how Sir David Brewster was misled, in his theory of light, by confounding the mixture of pigments with the mixture of lights. In fact, the lecturer dealt with

his subject almost entirely experimentally, and the address might be regarded more as a brilliant demonstration than an exhaustive lecture; its merit consisting in being able to show to a large audience such different physiological experiments, as subjective after-images, on so extensive a scale. The effects could not have been produced without the splendid electrical appliances with which Professor Tyndall was furnished.

ADULTERATION IN GLASGOW.

AT the opening of the winter session of the Royal Infirmary School of Medicine in Glasgow, on October 27th, Dr. Clark, the lecturer on chemistry, gave an interesting introductory lecture, in the course of which he reviewed the various Acts for preventing the adulteration of food, and the work done under them, both in Glasgow and the United Kingdom. He stated that, while the average percentage of adulteration over the United Kingdom in articles of food was 19.12, in Glasgow the figure rose to the extraordinary one of 54. In order, however, to lessen the alarm which this announcement might otherwise have created, he added that, on the whole, the public were more cheated than poisoned. Butter, tea, oatmeal, and whisky seemed to be the main articles of consumption which were adulterated; but, in most cases, the ingredients with which these had been mixed had been found to be altogether innocuous in their character.

EXHIBITION OF GAS AND ELECTRIC APPARATUS IN GLASGOW.

THERE has just been held in Glasgow, under the auspices of the Philosophical Society, a most successful exhibition of apparatus for the utilisation of gas and electricity, and other matters. The exhibition was divided into classes, the first of which dealt with coal-gas—showing its manufacture, residue products, purification, storage, measurement, regulation of pressure; also its utilisation in lighting, heating, cooking, ventilating, and as a motive-power. The second class comprised oils, oil-gases, candles; while the third section was taken up with electricity, its generation, and application for lighting, telegraphy, and motive-power. The fourth class consisted of hydraulic appliances; and the fifth of architectural ones, more especially those relating to lighting, ventilation, and lightning conduction. A collection of miscellaneous apparatus, such as sanitary appliances that could be shown in the open ground, miners' safety-lamps, fire-damp indicators, etc., completed a display of gas and electric apparatus, which is the largest of the kind that has ever been made in this country. To add to the interest of the exhibition, a series of lectures, on different subjects connected with it, were given by well-known lecturers; and, to afford visitors an opportunity of comparing lighting by gas with lighting by electricity, one-half of the exhibition was lighted with the former and the other half with the latter. The public largely took advantage of the opportunity which the exhibition afforded of seeing the many useful purposes to which gas can be turned; and the Philosophical Society of Glasgow are to be congratulated on the successful manner in which the exhibition has been carried out.

UNIVERSITY OF EDINBURGH.

THE candidates for the office of Lord Rector were nominated, at a meeting of students of all the faculties, held within the University on Saturday night. There were proposed and seconded, Sir Robert Christison, Bart.; the Earl of Rosebery; Mr. Bradlaugh; Mr. Parnell, etc. The latter gentlemen, with one or two other "public" characters, were only nominated as a specimen of the "chaff" that takes place at all such meetings, and the almost idle form of a show of hands soon left the field to the first two mentioned. On a division being taken between them, the Chairman decided that the vote was slightly in favour of Sir Robert Christison. A poll was then demanded on behalf of Lord Rosebery, which will take place on Saturday. The two sides are working hard to attain their object; and, in the holding of meetings, production of literature and cartoons, and canvassing, both Liberal and Conservative show undiminished zeal. All the medical classes are now open, and the work of the session fairly begun. The class of clinical medicine was opened by Dr. Grainger Stewart, who entered into an exposition of the methods of clinical teaching; and referred to the loss sustained, for the present, by the class through the illness of Professor Sanders. Professor Rutherford, in his opening lecture, dwelt on the benefits that had accrued to the public and the profession through vivisection. Professor Grainger Stewart, in his two opening lectures, dwelt on the important knowledge that has been gained by the study of germs, in their relation to disease and its treatment. Professor Turner, in his introductory address, and as appropriate to the opening of the new University, gave a history of the teaching of anatomy in Edinburgh University. Professor Simpson announced a valuable prize (the interest of £1,000), which will be given annually in his special subject, and which is due to the liberality of Mrs. Buchanan, who has already done so much for the ward named after her in the Royal Infirmary. Professor Annandale dwelt on the advantages conferred by the new Infirmary during the year it has been open.

THE DUCHESS OF TECK IN EDINBURGH INFIRMARY.

VISITS of Royalty to Edinburgh are now of such rarity that there was quite a flutter of expectation in Edinburgh Infirmary, when it was intimated that the Princess Mary of Cambridge would visit there last Friday. She did so, and was received by various members of the staff, who conducted her through the building. Before leaving, she distributed flowers among the patients. She left evidently highly pleased with her insight into hospital management in Edinburgh.

DEATH OF AN INCAPABLE PRISONER IN EDINBURGH.

A CASE has occurred in Edinburgh, showing the necessity for extreme care in police cases where drunkenness may be simulated by serious disease, or where serious disease may be concealed by drunkenness. A woman, who was evidently drunk, fell down in a passage. She was taken by the police to the police-office; the officer did not mention to the lieutenant on duty that she had fallen; she was placed in the cells. Next morning, she was tried, pled guilty, and was sentenced; after leaving the bar she complained of being ill, and was seen by Dr. Littlejohn. Nothing was said to him of her having fallen or hurt herself, and she stated she had been drinking; and he administered the treatment he considered fittest for one charged as she had been. Shortly afterwards, the female turnkey drew Dr. Littlejohn's attention to the state of the woman, and he at once sent her to the Infirmary, where she was treated, but afterwards died. *Post mortem* examination showed that the fall had caused such injury to the skull and brain as led to her death.

IRELAND.

WE understand that Dr. Hudson, Crown Representative for Ireland on the General Medical Council, has sent in his resignation, owing, we regret to say, to failing health.

DR. JOHN BURNS, of Tandragee, county Armagh, died on the 27th ultimo, in consequence of a piece of meat having become impacted in the larynx. Before assistance could be obtained, a fatal result occurred.

THE CORK MATERNITY.

IN the triennial report of the Cork Maternity ending September 1880, it appears that 878 natural, and 143 difficult, labours occurred. There were, in addition, 17 abortions. The forceps was used 33 times, version was performed 9 times, and craniotomy 3 times. There were three maternal deaths, of which one resulted from placenta prævia, one from pneumonia, and one from scarlatina. Dr. T. Gelston Atkins remarks that, in the treatment of *post partum* hæmorrhage, hot water injections had proved sufficient; but that, had they failed, he should have resorted to injections of perchloride of iron. The forceps used was Simpson's or Barnes's long forceps: the preference being given to the latter. The forceps was never applied except when the os was fully dilated or dilatable. No death occurred after the use of the forceps,

nor after version or craniotomy. There were 26 breech (including footling) presentations, 5 arm presentations, 4 cases of placenta prævia, and 7 cases of twins.

QUEENSTOWN INTERCEPTING HOSPITAL.

THE case of small-pox to which we alluded last week as having occurred in one of the American steamers, and which was transferred to the Cork Union Hospital, has turned out, on closer scrutiny, to have been merely a mild case of chicken-pox. A considerable amount of dissatisfaction exists that, notwithstanding the large outlay for the intercepting hospital at Queenstown, which, we understand, was completed several months since, yet this supposed case of small-pox could not be admitted there for the very conclusive reason that the wards were not furnished. The subject came before the Cork Board of Guardians last week, when a communication was received, asking why no arrangements had been made for the reception of this patient at the Intercepting Hospital; and whether steps had been taken to appoint a medical officer and nurse for the institution? The only explanation was that given by the chairman, who stated that, a fortnight previously, he had directed the master of the workhouse to send the necessary things down, who, however, considered it premature until there was some one to take care of them. After some discussion, it was resolved to appoint Drs. Townsend and Downing as the medical officers, to be paid only for the services performed; but we trust that no further loss of time will take place in having proper accommodation at the hospital; as at present, after the large expenditure incurred, the institution is practically useless.

THE SEWERAGE AND WATER-SUPPLY OF BANGOR.

BANGOR is a fashionable watering-place in the North of Ireland; but the sanitary arrangements, as regards sewerage and a proper supply of good water, have been so deficient, that these drawbacks have neutralised, to a great extent, its reputation as a sea-side health-resort. The open sewers and cesspools have long been an eyesore; and repeated complaints were made during the past summer to the Town Commissioners, the urban sanitary authority; and, as a result, that body have decided upon plans for the sewerage of the place, and for providing a sufficient water-supply, which will be duly submitted to the Local Government Board for their approval. These will include a reservoir, covering some ten acres, near Conlig, which it is estimated will contain a supply of water for six months, allowing twenty gallons as a daily allowance to each person, with double the present population of the town. A proper system of sewerage will also be undertaken; and it is probable that the sewage will be utilised and disposed of at a remunerative price for farming operations. The estimated cost of the water-supply and sewerage is £11,000.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

THE annual general meeting of this society was held on the 27th ult., when the following officers and Council for the ensuing session were elected. *President:* Dr. George Johnston, President of the King and Queen's College of Physicians, *ex officio*. *Vice-Presidents:* Dr. Walter Smith, Vice-President K.Q.C.P.I., *ex officio*, and Dr. Banks. *Council:* Drs. Benson, Churchill, Finny, Fitzpatrick, Foot, Gordon, Grimshaw, Harvey, Hayden, Kennedy, J. W. Moore, and Purser. *Honorary Secretary and Treasurer:* Dr. Alexander Nixon Montgomery. A vote of thanks was passed to Dr. George F. Duffey, expressing the regret of the society at his resignation of the office of its honorary secretary; and recording its grateful sense of the services rendered to the society by him throughout the seven and a half years during which he had ably filled that responsible post.

PATHOLOGICAL SOCIETY OF DUBLIN.

THE first ordinary meeting of this society for the present session will be held this day (Saturday), at 4 o'clock P.M. At the conclusion of the ordinary meeting, the annual general meeting for the election of Vice-Presidents, Council, and Secretary will take place. Dr. A. Wynne Foot, of the Meath Hospital, has been appointed by the Council to the Presidency of the society; and Dr. Bennett, the outgoing President, will revert to the post which he has ably filled for many previous years, of Secretary to the society. There are several nominations for the Council, for election on which twelve members will have to be balloted for to-day.

BELFAST WORKHOUSE.

THE Local Government Board for Ireland having had their attention directed to certain alleged abuses and irregularities in this workhouse, are prepared to institute a searching inquiry on the following points: the general management of the workhouse by the board of guardians, and its present condition; having regard especially to the discipline and classification of the inmates, and the alleged results of the want of due classification which, it is stated, has existed; to the state of health and the rate of mortality among the children; and to the extent of the accommodation for the destitute poor, having regard to the recent limitation order issued by the board. The inquiry will be conducted by two inspectors of the board, Dr. MacCabe and Mr. Richard Burke, who have received the necessary instructions, and who will give the guardians due notice of the time they may fix for the purpose.

PHARMACEUTICAL SOCIETY OF IRELAND.

AT a meeting of the Council of this Society, held on Wednesday last, the following gentlemen were appointed examiners for the ensuing year. *In Arts:* J. W. Moore, M.D., F.K.Q.C.P.I. *In Materia Medica and Botany:* George F. Duffey, M.D., F.K.Q.C.P.I. *In Chemistry:* Edmund Davy, F.R.C.S.I.; and in *Pharmacy:* J. Harley, M.D.

THE NEW PHYSIOLOGICAL LABORATORY OF TRINITY COLLEGE, DUBLIN.

THE Provost and Senior Fellow of Trinity College have again shown the importance they attach to their School of Physic, by their liberality in providing suitable means and opportunities of instruction for its students. Within the last few years—and chiefly, if not entirely, it should be stated, owing to the exertions of the Rev. Dr. Haughton, the late medical registrar—a new dissecting-room, chemical laboratory, and anatomical and pathological museum, have been added to their medical school. Immediately adjoining the latter magnificent building, the board have now erected a large and handsome massive cut-stone building, at a cost of £3,000. The opening of this building—which is quite complete and separate in itself—was inaugurated on Monday last by an address from the King's Professor of the Institutes of Medicine, Dr. Purser, which will shortly appear in our columns. On the ground-floor, in addition to rooms for the professor and his assistants, is a long and splendidly lighted room, with four rows of tables running its entire length, and affording ample space, with suitable cupboards, etc., for seventy students, who will also be provided with microscopes and other appliances requisite for their work. Above this room is a large lecture-theatre, capable of accommodating at least one hundred and twenty students, and fitted with all necessary appliances for the lecturer. The number of physiological apparatuses as yet provided is but small; and it is much to be regretted that original work on the part of the able professor and his pupils is much hampered by the prohibition of all experiments on living animals. We trust, however, that, from the enlightened spirit the board have hitherto shown, it will soon still further add to its reputation by freeing itself altogether from any connection with the antivivisection party; since, by their present course of action, they impede the progress of that most important branch of medical study which now they have done so much to promote.

SPECIAL FEES IN DUBLIN HOSPITALS.

AT a meeting of the Physicians and Surgeons of the Dublin hospitals, held on July 30th, 1877, a resolution was adopted fixing an uniform scale of fees for the certificates of hospital practice. This scale—which was an increase on that previously charged in most of the hospitals—was adopted with the view of preventing one hospital from underselling another. At the same time, the system of perpetual hospital pupils,

who used to be taken at a reduced fee, was abolished. During the present year, and on the initiative of a member of the Council of the Royal College of Surgeons in Ireland, who is surgeon to an ophthalmic hospital, and ophthalmic surgeon to a general hospital, a resolution was adopted requiring a special certificate of instruction in ophthalmic surgery from all candidates for the licence of the College after January 1st, 1881. Most of the hospitals made arrangements for meeting this requirement. It was felt by the staff of some hospitals that, if they were able to teach ophthalmic surgery, they should give the certificate required without demanding an extra fee for the same from the students. For, if the principle were adopted of charging an extra fee for every special certificate, it would be equally proper to charge one for the special certificate for attendance on fever, required by the King and Queen's College of Physicians and Trinity College; and instruction in fever, as well as in ophthalmology, was given in some of the hospitals, at least, at the time the resolution of July 1877 was adopted. Acting on this view, one of the Dublin clinical hospitals published, in its prospectus, a statement that the ophthalmic and fever certificates required by the Colleges of Surgeons and of Physicians respectively could be obtained by students of the hospital without extra fees. The gentleman, to whom we have above referred, wrote to the medical staff of the hospital to which he is ophthalmic surgeon, enclosing a copy of the objectionable prospectus, and calling attention to the terms on which ophthalmic certificates were issued by the hospital in question. The staff of this hospital then took steps to have a general meeting of the hospital physicians and surgeons summoned; and a meeting was held on Monday last, in the Hall of the College of Physicians, Dr. R. McDonnell being in the chair. Finally, a resolution was carried, by a small majority, "That, in accordance with the spirit of the resolutions passed at the meetings of the Physicians and Surgeons held to secure uniformity of fees for hospital practice, a special fee of three guineas be charged in each hospital for the certificates in ophthalmic surgery". This, however, by no means settles the question; as it is probable that more hospitals than the one at which the resolution aims will, on receiving an official copy of it, decline to be bound by its terms.

AN ABATTOIR FOR DUBLIN.

His Excellency the Lord Lieutenant of Ireland laid the foundation-stone on Monday last of an *abattoir* for this city. It has long been a matter of regret that an institution of this kind did not exist in Dublin; and that, with its comparatively limited area of 3,808 acres, the metropolis of Ireland had within its boundaries no fewer than ninety-seven private slaughter-houses, each contributing its quota to swell the enormous mortality bill of the city. In the recent Report of the Royal Sanitary Commissioners, much stress was laid on the existence of these slaughter-houses, as contributing to this, from their position, defective structural arrangements, and defective surface-drainage; the offensive liquids from them often passing into, and lying stagnant on, the adjacent roadway. It is estimated that the building—for which an excellent site of ten acres adjoining the Cattle Market has been secured—will cost £15,000. The Corporation of Dublin are to be congratulated on carrying out this much needed reform; and they will, we trust, continue to use every effort to put down the abominable nuisance of private slaughter-houses.

THINGOE RURAL DISTRICT.—Dr. C. Scott Kilner is evidently making a beginning of good sanitary work here. The chief want of the district would appear to be the supply of pure water to the villages, which are now chiefly dependent upon shallow surface-wells and ponds. During the year 1879, there were 474 births and 291 deaths in the district—equal to a ratio of 26.9 and 16.5 per 1,000. The proportion of deaths amongst infants to the total births was 97.0, or considerably larger than in 1878. Of zymotic diseases, measles was very prevalent, nearly all the children in one parish being attacked. Several cases of scarlatina occurred, but only one of diphtheria. A number of cases of typhoid fever, associated with bad water-supply, are also reported in different parishes. The subject of overcrowding in the dwellings of the agricultural labourers is one that needs early attention, on moral as well as on sanitary grounds.

IRISH MEDICAL ASSOCIATION: DEPUTATION TO THE CHIEF SECRETARY FOR IRELAND.

An important deputation from the Council of this association had an interview, on Monday last, with the Chief Secretary for Ireland, the Right Hon. W. E. Forster, M.P., with reference to the existing limitation of salaries of medical officers of health, and also as to the including of public health salaries and lunacy fees in the computation of superannuation allowances. The deputation, which was introduced by Mr. Meldon, M.P., consisted of Dr. Chapman, President of the Association; Dr. J. W. Moore, Chairman of the Council of the Association; Dr. Hayes, Naas; Dr. Ridley, Tullamore; Dr. A. O. Speedy, honorary secretary; Dr. Pollock, Blackrock; Dr. Peele, Dr. Drapes, Enniscorthy; Dr. Browne, Rathmines; Dr. Thomson, Dr. J. R. Harvey, Dr. Jacob, Dr. G. F. Duffey, etc.

Dr. CHAPMAN explained to the right hon. gentleman the position in which the dispensary medical officer was placed, as regards his salary for the performance of the duties of sanitary officer. By the tenth section of the Public Health Act, 1874, it was rendered obligatory that each dispensary medical officer should be the medical sanitary officer for the district, at such salary as was fixed by the local sanitary authority, subject to approval of the Local Government Board, and regulated according to a scale to be approved of by the Treasury. In the third annual report of the Local Government Board, it appeared that that board proposed a scale of one-fourth of the salary of the dispensary medical officer as the maximum of remuneration which he should receive for his salary as medical sanitary officer. It was soon found that that scale would not afford sufficient remuneration for thoroughly discharging the duties. Great dissatisfaction was felt by the sanitary medical officers at the fixing of a maximal scale. In 1878, a Bill, which was introduced, but had to be withdrawn, from political reasons, the previous year, was passed as the present Public Health (Ireland) Act. In this Bill, the scale was omitted, on the understanding that the amount of salary in each case should be decided on its merits. The Act of 1876 was repealed, and dispensary medical officers were appointed, under the new title of medical officers of health. Instead of their salaries, as such, being raised, the general tendency throughout the country was to reduce them. In some instances, the local sanitary authorities, on whom the initiative of a salary depends, offered so little as £2 or £3 a-year, where the district comprised several thousand inhabitants. The scale fixed by the repealed Act of 1877 is still adhered to by the Treasury, so that, even in those very few (four) instances where an adequate salary was fixed by the local sanitary authority, the Local Government Board had been obliged to refuse their sanction to it. Dr. Chapman, therefore, asked whether the Treasury had power to enforce the repealed scale. He further remarked that, if it were intended that due effect should be given to the provisions of the Public Health Act, it would appear desirable that a liberal minimum scale of salary should be fixed, that proper and independent supervision should be provided, and that efficient officers should be equitably remunerated.

Dr. J. W. MOORE said the point the deputation wished to bring out was, that no proportion should be drawn between the salaries as medical officers of health, and the salaries as dispensary medical officers. As an example, he gave two cases. In one of the South City Districts, with a population of nearly 39,000, the dispensary medical officer was paid £125 a-year as such, and £25 as medical officer of health; and he sent in 342 reports in one year. In a suburban district, with a population of under 4,000, the medical man was also paid £125 as dispensary medical officer, and £30 as medical officer of health; and he sent in but three reports during two years.

The CHIEF SECRETARY, in replying, said that, as regards the law of the matter, the Local Government Board believed the Treasury to be justified in fixing a maximum scale, and that was a matter upon which he thought they ought to see the Treasury. As regards the other important question, that they ought to be better paid than they are, he must say they had a strong case. Were he in their place, however, he should say very little about this maximum scale, but he should collect and prove cases of undoubted insufficient pay, and then say there ought to be some sort of arrangement by which better pay should be secured.

The second subject upon which the deputation waited upon the Chief Secretary, viz., the superannuation of Poor-law medical officers, was brought under his notice by Dr. Jacob. The Acts of Parliament by which the grants of pensions were ruled being first cited, it was stated that, without change in these Acts, the Local Government Board refused sanction to a portion of the pension granted to two Poor-law medical officers, stating, as their reason for so doing, that they had been advised that salaries payable under the Public Health Act, and fees for examination of lunatics, should not be included in the computation of pensions, inasmuch as they were emoluments which accrued under

Secretary to use the authority of Government for the passing of an Act to give ballot-boxes effect, under certain conditions, the right to a poll; and, as regards the first question on which he had consulted, to permit an experiment to be tried by the powers of the Crown upon the machinery of the Local Government Board.

The Chief Secretary, in reply, said he thought the deputation had made out a primâ facie case. He was aware of the very many speeches (frequently two) which had been delivered in the Irish House of Commons in which they had charged their hearers. As regarded the question of public health, it was hard to expect sanitary improvements to be carried out unless the sanitary medical officers were satisfied with their position, and felt that they were fairly treated in the matter of compensation. He (Mr. Forster) could not say that a strong case had been made out. In addition, his power was very limited, as it was a matter more for the Treasury: but the views of the deputation should be considered.

NUMBER OF STUDENTS AT THE MEDICAL SCHOOLS.

The following are the numbers of students found this session at medical schools. The list is corrected to that published in the BRITISH MEDICAL JOURNAL of October 23rd, page 670.

	Entered this session.	Total.
St. Mary's Hospital [illegible]	[illegible]	[illegible]
Middlesex Hospital [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
Westminster Hospital [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

3. Mr. G. F. Hodgson: Case of Mucous Polypus growing from Fundus Uteri, with preparation.

4. Dr. Treutler: Case of Hemiplegic Unilateral Anasarca consequent on Scarlatina.

Notice of intended communications is requested to be sent at once to the Secretary, in order that they may be inserted in the usual circular.

THOMAS TROLLOPE, M.D., *Hon. District Secretary.*

9, Maze Hill, St. Leonard's-on-Sea, November 2nd, 1880.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of this session was held at the Kent County Ophthalmic Hospital, Maidstone, on October 26th; J. MEREDITH, M.D., in the Chair.

The Next Meeting was appointed to be held at Gravesend; R. Innes Nisbett, Esq., Chairman.

Papers.—The following were read:

1. Mr. Adams gave an interesting address on Conjunctivitis.

2. Dr. Monckton showed a case of Lymphadenoma, with Remarks.

Dinner.—Sixteen visitors and members afterwards dined together at the Mitre Hotel.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE second meeting of the session will be held in the Medical Institute, New Edmund Street, on Thursday, November 11th, 1880. The Chair will be taken by the President, Mr. R. PROSSER, at three o'clock P.M.

The following papers are promised:

Mr. Lawson Tait: A third series of Fifty Cases of Ovariotomy; and a second series of Fifty Cases of Abdominal Section for various purposes.

Mr. Lloyd Owen: On Colour-Blindness.

Mr. J. F. West: On the Treatment of Empyema by Excision of a Portion of a Rib.

Members are invited to exhibit patients, pathological specimens, new drugs, instruments, or appliances, at the commencement of the meeting.

E. MALINS, M.B.,
E. RICKARDS, M.B., } *Hon. Secs.*

November 3rd, 1880.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

A MEETING of the above District was held at the White Hart Hotel, Reigate, on Thursday, October 14th, 1880; Dr. JOHN WALTERS in the Chair.

Papers, etc.—The following papers and communications were read:

1. The Albuminuria of Pregnancy, and its relation to Puerperal Eclampsia. By A. L. Galabin, M.D. (This paper was published at p. 697 of last week's JOURNAL.)

2. A Brief Retrospect of some of the more important Advances in Obstetric Practice during the last Thirty Years. By C. Holman, M.D. Dr. Holman briefly touched upon each of the following points, viz.: Anæsthetics; Sedatives; Pressure applied externally to the Fundus Uteri to assist the Expulsion of the Placenta; The Use of the Pad and Binder; Hydrostatic Dilators; Forceps; Craniotomy; *Post Partum* Hæmorrhage; Intra-uterine Injections; Albuminuria in Pregnancy; Puerperal Fever; Injuries to the Perinæum.

3. Dr. Walters exhibited two cases of Hip-Disease, illustrating the Advantages derived from the Use of Thomas's Splint. In one case, an abscess had been cured by two aspirations. These patients were convalescents from the Queen's Square Hospital.

4. Dr. Walters showed three cases in which he had excised the Hip-Joint with excellent results, all other treatment having failed, and the patient existing in a critical state when the operation was performed.

5. Dr. Walters also exhibited four cases showing the good results obtained by the use of Sayre's Jacket, etc., in Angular Curvature of the Spine. In one of these, a lumbar abscess had formed prior to the commencement of the treatment; in another, complete paraplegia had been present for some considerable time; and again, in a third, partial spinal hemiplegia, before treatment was commenced. All these cases were quite convalescent, and the paralysis had quite disappeared. In two of the cases great advantage had been derived from the use of house-maid leather jackets after the plaster-of-Paris had been given up.

6. Mr. Burridge read the notes of a case of Acute Intestinal Obstruction caused by an Impacted Gall Stone. Abdominal section was performed by Dr. Walters on the seventh day. The patient was much relieved, but died rather suddenly twenty-four hours after the operation.

Dinner.—Twenty-five members and visitors sat down to dinner.

EAST YORK AND NORTH LINCOLN BRANCH: HALF-YEARLY MEETING.

THE half-yearly meeting was held at the Infirmary, Hull, on October 20th, at 1.30 P.M.; the President, T. M. EVANS, Esq., in the Chair.

Communications.—The following communications were made.

1. The President showed a case of Arrested Development of the Genital Organs in an infant. The penis was bound down to the scrotum; but it seemed likely that an operation would be of service.

2. Dr. King showed a patient whose Carotid and Subclavian Arteries he had Ligatured at one operation for Aneurism at the root of the neck. The wounds healed by first intention, and the patient was discharged with great relief to the urgent symptoms; but it was a question whether the disease was not extending toward the middle line.

3. Dr. King also showed a patient on whom he had performed Excision of the Upper Jaw for malignant disease. He was discharged cured in eighteen days.

4. Mr. Craven showed a patient who had just been admitted with Malignant Disease of the Upper Jaw of six weeks' duration.

5. Dr. King showed a child on whom he had performed Double Osteotomy.

6. Mr. R. H. B. Nicholson showed a girl on whom he had performed Double Osteotomy a year ago. At that time, she could not walk thirty yards without pain; but now she was taking a part in Hengler's Circus.

7. The President introduced a discussion on Anæsthetics by reading a short paper. The conclusions of the paper were summed up in the following propositions. 1. Anæsthesia, however induced, is attended with a very certain danger from asphyxia. 2. This danger may be averted by watchful and prompt attention to the respiration. 3. The depressing action of chloroform on the heart, which is sometimes suddenly manifested, is a much more serious danger, and should determine us to prefer ether for general purposes.—Many gentlemen took part in the discussion which followed.

8. Mr. Craven related the particulars of a case of Lithotomy which he had recently performed on a patient aged 50. The bladder was found to be full of stones, two being of large size; together they weighed six ounces and a half. This was his most remarkable experience as regards the size and weight of urinary calculi.

9. Mr. Dix related the particulars of a case of Tumour of the Brain, and showed the specimen. The patient was a female child, aged 7, who had been ill for a year before death. She suffered from intense pain, with progressive debility and emaciation, but retained her faculties and memory to the last. The tumour was a very large one, encroaching on both hemispheres, and also on the cerebellum. It had been examined by Dr. Mason, who said that it was a glio-sarcoma.

A case of Emphysema by Mr. R. H. B. Nicholson, and a paper on Injuries of the Brain by Dr. Mason, had to be postponed for want of time.

Dinner.—In the evening, the members dined together at the Victoria Hotel.

WEST SOMERSET BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Railway Hotel, Taunton, on Thursday, October 21st, at 5.15 P.M.; J. MEREDITH, Esq., President, in the Chair. There were present fifteen members and two visitors.

Papers.—The following were read.

1. Hypertrophy of the Tongue, exemplified by a typical case in a child, which was brought from the Taunton and Somerset Hospital and exhibited. By G. W. Rigden, Esq.

2. On Congenital Cleft Palate. By W. A. Hunt, Esq., of Yeovil. Mr. Hunt brought forward and discussed the following points. 1. It is absolutely needful, for such patients to acquire distinct speech, that they should be furnished with a soft palate which, from its length and mobility, can be raised by muscular action, whenever needed, backwards and upwards; so that its free edge may, by resting against the posterior wall of the pharynx, cut off all passage of air through the nares. 2. Such a soft palate it is absolutely impossible to give by surgical operation in the majority of cases, especially in adults; hence the nosey, twangy, disappointing speech, after successful surgical treatment in very many cases; and, especially when the gap is very wide and the speech very bad, the surgeon has so little tissue that he cannot make a velum sufficiently long or sufficiently mobile for his patient ever to be able to speak intelligibly. 3. By a method elaborated by Dr. N. Kingsley of America, all congenital clefts, no matter how large, could be closed by mechanical means; the hard palate as a hard palate; the soft palate by a peculiar velum of delicate India-rubber, which would

do all the duties of a normal soft palate, and by which perfectly distinct speech could be acquired by the patient.

Mr. Hunt exhibited casts from life, and artificial soft and hard palates made after Dr. Kingsley's method.

Question.—The question for discussion, as settled by the Council—viz., "What, in your opinion, is the best method to be adopted by the profession, the public, and the sanitary authorities, in order to check the spread of infectious diseases?"—was put from the Chair. After verbal replies had been given by members present, and a written reply sent by Dr. Cordwent had been read, it was resolved: "That it is the opinion of this meeting that the best method to be adopted, in order to check the spread of infectious diseases, would be: 1. That, on the occurrence of any case of infectious disease, a notification thereof should be immediately sent to the central sanitary authority of the district; and 2. That this information should be given by the head of, or responsible person in, the house in which the disease occurs."

SOUTHERN BRANCH: DORSET DISTRICT.

THE eleventh meeting was held at the Yeatman Hospital, Sherborne, on October 20th, under the presidency of Mr. WILLIAMSON DANIELL.

Officers.—The following were elected: *President-elect*, R. P. Simpson (Weymouth); *Vice-Presidents*, F. C. Griffin, M.B. (Weymouth), W. H. Williams, M.D. (Sherborne); *Honorary Secretaries*, W. G. Vawdrey Lush, M.D. (Weymouth), C. H. Watts Parkinson, Esq. (Wimborne) re-elected.

New Members.—Dr. W. H. Williams and Mr. N. Davies, of Sherborne; Dr. Gregory White, Dr. J. F. Woodroffe, Dr. W. H. Blenkinsopp, Mr. W. E. Husband, and Mr. A. E. B. Leve, of Bournemouth; Mr. H. W. Hartford, of Christchurch; Mr. Arthur Butler of Evershot; Mr. F. B. Fisher, of Dorchester; Mr. Benjamin Jumeaux, of Swanage; and Mr. E. O. Scallon, of Milborne Port,—were elected members of the Branch and District.

Next Meeting.—It was decided that the next meeting should be held at Dorchester.

A Discussion on Difficult Parturition and its Treatment took place.

Cases of Compound Fractures and Wounds of Joints treated with Glycerine and Carbolic Acid were read by Dr. Griffin.

Specimen.—Glass Tubing, removed from the Muscles of the Neck, was shown by Mr. Nunn.

Dinner.—The members and friends, twenty-one in number, dined at the Digby Hotel.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Hospital, Monmouth, on Thursday, October 14th. About twelve members were present; PEARSON R. CRESSWELL, Esq., President-elect, in the Chair.

New Members.—The following gentlemen were elected members of the Association and Branch: Owen Williams, Esq., Burry Port; E. E. Price, M.D., Dowlais; Eleazar Davies, Esq., Dowlais.

Communications.—The following were made.

1. Mr. S. H. Steel, M.B. (Abergavenny), related notes of an interesting case of Hepatic Abscess, with necropsy.

2. Mr. Prosser (Monmouth) showed the patient, a specimen of a recent successful case of Ovariotomy, giving, briefly, points of interest in the case.

3. Mr. Owen Willis (Monmouth) exhibited some palatable Medicated Aërated Waters, containing definite quantities of Bromide of Potassium, Carbonate of Soda, etc., which are likely to prove serviceable. The manufacturer is Mr. Hyam of Monmouth.

Dinner.—The members and visitors afterwards partook of an excellent dinner at the King's Head Hotel.

YORKSHIRE BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Grand Hotel, Scarborough, under the presidency of Mr. MIALL.

Communications.—1. The subject of Paracentesis in Pleurisy was introduced by Dr. EDDISON (Leeds), and Dr. TIBBITS (Bradford). Papers on the same subject were read for Dr. CHURTON (Leeds), and Mr. ROBSON (Leeds).

2. Mr. MOSSOP (Bradford) read a paper, entitled Remarks on Umbilical Hæmorrhage.

3. Mr. J. W. TEALE related a very interesting case of Herniotomy.

1. The PRESIDENT (Mr. Miall) read a paper on Diseases of Joints.

Dinner.—After the meeting, the members dined together at the Grand Hotel; the PRESIDENT (Mr. Miall) in the chair. Mr. DALE, in proposing the health of the President, spoke at length of the pleasure the Scarborough medical men had in welcoming the Branch; and went on to say that they would have greater pleasure still in giving a heartier welcome to the whole Association, if they could manage to meet the last week in July instead of the first week in August. It would be a specially interesting opportunity if it could be arranged for next year. Mr. Dale was warmly seconded by his Scarborough brethren; and the PRESIDENT, in replying, concurred with the proposition. The health of Mr. J. W. Teale, to whom the Branch was indebted for all the excellent local arrangements, was heartily drunk; and the members separated pleased with everything, excepting the weather.

CORRESPONDENCE.

ON THE COMPULSORY INTIMATION OF INFECTIOUS DISEASES IN EDINBURGH.

SIR,—At the last meeting of the Social Science Congress, I gave the statistics relating to the carrying out of the compulsory intimation of infectious diseases.

The local Act in question came into operation on November 7th, 1879, and, up to September 6th of the present year (a period of ten months), no fewer than 4,502 intimations had been received by the authorities. These comprised: typhus, 22 cases; typhoid, 226 cases; diphtheria, 127 cases; scarlatina, 917 cases; measles, 3,210 cases. In 412 cases, the circumstances were such as to justify the removal of the patient to a hospital, with the concurrence of the medical attendant.

As your readers are aware, the intimations are made by the medical profession, who are furnished with suitable slips and stamped envelopes, and who receive two shillings and sixpence for each intimation. Last July, a sum of £519 was sent out to the profession; and so convinced is the Corporation of the value of the information thus received, that they have set aside £1,000 to cover the expenses of the current year. Our experiment has been a great success. No complaints have reached us from the medical profession, who have loyally assisted the authorities in carrying out what was feared to be an unworkable and objectionable clause. The information as to the existence of infectious disease has been prompt and effectual; which, I am convinced, would not have been the case had we trusted, in great part, to a poor ignorant population to supply it. No doubt, here we enjoy exceptional advantages from the large number of students attending our hospitals and dispensaries, and it is comparatively rare to find a person dying without medical advice. This is mainly due to the custom, introduced by myself twenty years ago, of causing an official inquiry to be made by the police into all cases of death occurring without a medical man seeing the patient during life. This inquiry entails on the relatives considerable annoyance, and has gradually led them to recognise the importance of seeking medical assistance. One of the subsidiary advantages of this procedure is, that the number of uncertified deaths in Edinburgh is very small.

To the Health Department the intimations have proved of great service—first, in showing how inadequate was the existing accommodation for infectious diseases in our various hospitals; and, second, in enabling us to arrive at the true cause of outbreaks of these diseases, and thus prevent their spread.—Yours, etc.,

HENRY D. LITTLEJOHN, M.D.,
Medical Officer of Health, Edinburgh.

UNCERTIFIED DEATHS.

SIR,—As medical men practising in the district referred to in a paragraph in the BRITISH MEDICAL JOURNAL of October 16th, we wish to state that we are by no means surprised at the number of deaths registered here as uncertified. There are several unqualified men practising in the neighbourhood of Clapham Junction, who represent themselves as being qualified, and who are supposed to be so by the poorer classes. These men cannot in many cases get the deaths of the persons they attend certified by a qualified man—though we regret to say that in some instances they do—and such deaths are registered as uncertified. In some of these cases, even when a qualified practitioner has refused to certify, in consequence of his not having seen the patient before death, the coroner has not thought it necessary to hold an inquest. At the same time, we would call attention to the fact that there are in this district four of the largest provident dispensaries in London, where all the poor can obtain skilled advice for a nominal sum. We therefore hope that the suggestion of the Wandsworth Board of Works, viz., "that in all cases of uncertified death, where no inquest is held, an investigation should be made, and a certificate of the cause of death given, by the

medical officer of health of the district, before burial", will be forthwith carried out.—We are, sir, yours faithfully,

M. G. Biggs, M.R.C.S.Eng., L.S.A. Lond., New Wandsworth.
J. Brown, L.K.Q.C.P., L.R.C.S.I., Clapham Junction.
John H. Gray, M.B., Wandsworth Common.
R. R. W. Oram, L.R.C.P.Lond., etc., Clapham Common Gardens.

ETHER *v.* CHLOROFORM.

Sir,—I observe, in the Journal of October 30th, that Dr. Benham of Ipswich questions the propriety of your zealous advocacy of the general substitution of ether for chloroform. Will you allow me to express an earnest hope that you will continue that advocacy as long as necessary; that is, until ether is universally employed in all suitable cases? As regards its superior safety, in competition with chloroform, I have not the slightest doubt; and I am, I think, in a position to record a kind of experience which ought to be convincing to all. I have been familiar with anæsthetics from the date of their introduction, and have taken great interest in the prevention of mortality from their use. Many years ago, when my duties in connection with the *Medical Times and Gazette* required my daily attendance in the operating theatres of the various hospitals, I was the witness of more deaths from chloroform than have probably fallen under the observation of anyone else. I studied and recorded every case that came to my knowledge. Since then, I have habitually read all reports of deaths from anæsthetics; and, during a long period, have also had very large opportunities, both in hospital and in private practice, for judging of the comparative merits of the different ones in use, and also of different modes of administration. The result has been the formation of an opinion so strongly in favour of ether, that I should consider myself very culpable if I ever permitted the use of chloroform, except in certain cases. The exceptions are the old and the very young; under six months and over sixty years, chloroform is, I think, preferable. At all other ages, regardless of states of health, I employ ether. Nor can I understand how any one can give attention to the constantly recurring records of deaths from chloroform without coming to a somewhat similar conclusion. Scarcely a week passes by but a case of this kind is recorded; and the victim is very often (as in the case given in your Journal of October 30th) a young and healthy person, respecting whom beforehand there was not the slightest ground for anxiety. At Moorfields Hospital, when chloroform was used, we usually had a death every year, and the subject of it was, in most instances, a child about to undergo the operation for strabismus. It may be replied, that ether has its victims also; but, in comparison with those of chloroform, their number is most insignificant. I can testify, in the strongest possible terms, to my own feeling of security with the one, and of risk with the other. In former times, when using chloroform, alarming cases of syncope were not unfrequent; now, with ether, they never occur. This appears to me a very important fact. It is not alone the comparative number of deaths which we must count, but the number of cases in which cause for anxiety occur. I have, personally, lost only one patient (a chloroform case), nearly twenty years ago; but many times have I been alarmed for my patient's safety, and not unfrequently obliged to practise artificial respiration long before signs of returning animation were produced. Now, with ether, these cases do not occur; and, during the last seven or eight years that I have used it exclusively, I have never once had to practise artificial respiration, or encountered any cause for alarm. The comfort of being able to proceed with an operation, without the slightest anxiety as to the anæsthetic, is very great indeed. I never feel to care who is administering it; for, if only complicated instruments be avoided, and if nothing but the towel and sponge be used, I believe there is absolutely no danger. It is next to impossible for the exhibitor, however inexperienced, to go wrong. The apparatus which I use is not literally a towel and sponge, but almost so. It is a leathern mask or cup, into which a towel and sponge are thrust. The towel overlaps the mask widely, and its edges are allowed to cover the patient's face, so as to prevent escape of ether. When the anæsthetic is given for me by a specialist, I, of course, leave the choice of apparatus to him, but I greatly prefer the simple one just described. I most particularly dislike those fitted with an India-rubber bag, so as to compel the patient to rebreathe his expired air. It is to the employment of inhalers which obstruct respiration, I believe, that the occasional ill results of ether inhalation are mainly due.

My reason for making the rule as regards age is this. With aged persons ether often disagrees, leaving headache or tendency to stupor for many hours afterwards. Chloroform, on the contrary, agrees well with the old, and appears in them to be almost free from risk. The same freedom from danger appears to exist in early infancy.

Used in the way I have described, ether really gives no trouble. It requires only a little more patience in commencing, and then boldness in pushing it, and it is not more troublesome than chloroform. I admit that the plan is wasteful of ether, and perhaps slightly so of chloroform; but these are not considerations which should weigh an iota against the greater safety of the patient. I must admit also that, excepting in point of safety, ether has no advantages; it is less pleasant than chloroform, and some patients dislike it very much. Still, I repeat, it is our duty, regardless of such considerations, to seek safety.

I have often wished that you could afford space to devote, every week for a year, a page to the record of accidents from anæsthetics. Let it be ruled in columns for the patient's sex, age, etc., the nature of operation, and the mode of death. The kind of anæsthetic should, of course, be most prominently stated. Let the cases accumulate for a year, reprinting week after week those recorded, and adding new ones. The dangers of chloroform would, I feel confident, be soon made obvious to all, and the triumph of ether would be established and extended.—I am, sir, yours, etc., Jonathan Hutchinson.

Sir,—I have just read, in your issue of October 30th, an account of the twentieth death from chloroform which has been recorded since January 1st of this year. In another column are reported some observations, made by a speaker at one of the Branch meetings, with regard to the attitude of the Journal on the anæsthetic question. Perhaps, the following *résumé* of some statistics bearing on the subject may be of interest.

It is now nearly five years since a report, in your columns, from the principal London hospitals, showed that, in most of our great surgical centres, ether was adopted as the regular anæsthetic (except for children); and that to the great satisfaction of the anæsthetists engaged. It is difficult to exactly estimate the numbers of such administrations; but, in several of the London hospitals, ether must be administered more than a thousand times *per annum*; here (in Leeds) it is probably given more than seven hundred times a-year; and it is extensively used in other large provincial towns. The cases, then, are numbered by tens of thousands, and are quite comparable with those of chloroform administration.

Taking the deaths reported in the principal English journals since 1875, we find the following list of deaths from chloroform: 1876, ten deaths; 1877, twelve deaths; 1878, thirteen deaths; 1879, eight deaths; 1880 (ten months) twenty deaths: sixty-five in all, omitting six cases where a mixture of drugs had been used, or ethydene, or ethylic bromide, administered. In not more than five of these cases was the operation of a serious nature. Operations on the eye, amputations of fingers and toes, sequestrotomy, tenotomy, and the like, figure largely in the list. In the case of two deaths, however, which occurred in 1877, there might be some doubt as to whether the chloroform was wholly to blame for the mischance.

Turning, now, to the list of deaths from ether, I find ten reported—five of these only being in England. Of the latter, three were severe cases of intestinal obstruction with collapse; (two being of hernia, both at the London Hospital; the third, a case lately reported in the *Lancet*, in the practice of Mr. Teale), where considerable doubt seems to have been felt as to whether the patient could stand any kind of operation. Another death seems to have been from fright, before the patient (who was suffering from cancer of the breast and lungs) had taken half-a-dozen inspirations. The fifth took place from œdema of lung, two hours after the operation. Taking the cases reported from America, in two there was severe renal disease, one having valvular disease of the heart, and there was besides some carelessness in administering the ether; a third died from pulmonary affection, some hours after an operation, in which half a pound of ether was used; a fourth seems to have died from cerebral hæmorrhage; and of the last (for extraction of teeth), no particulars are given. The contrast of this list with that of the chloroform casualties must strike every observer. I have no wish to minimise the dangers of ether, and dangers there are; but I maintain that the time is now come for a most exact estimation, on the basis of a large number of cases, of the relative mortality of the two anæsthetics; and that, if one is proved to be considerably less dangerous than the other, the difference should be clearly apprehended in the use of these agents. Other nations are looking to us to make the comparison required. In the recent volume of Billroth's *System of German Surgery*, which is devoted to anæsthetics, Dr. Keppeler, after remarking on the difficulty of deciding on the relative dangers of different anæsthetics, so as to attain to a correct percentage of deaths, goes on to say: "Yet it is probable, that if, in England, the country most favourably situated by the number and concentration of its medical institutions, and the advanced standing of its medical societies, and the careful attention which from the beginning has been devoted to this subject, the deaths from ether shall be published with

the same conscientiousness with which those from chloroform have heretofore been made known, the materials will soon be obtained for the decision of a question so important as well for medical science as for suffering humanity."—I am, sir, yours, etc.,

Leeds, October, 1880. ERNEST H. JACOB, M.D.

SIR,—Under the above title, there is a communication in the JOURNAL of October 23rd from "F.R.C.S.", denouncing the general use of chloroform as an anæsthetic (when other "incomparably safer" anæsthetics, and ether is particularised), are available; cases of "severe bronchitis, phthisis, and extreme abdominal distension" are allowed to be more suitable for chloroform administration.

Now, I submit that chloroform has always been heavily handicapped, if I may be allowed the expression, when the mortality resulting from its administration has been compared with that resulting from the use of other anæsthetics.

Cases of severe bronchitis, phthisis, and extreme abdominal distension are, by "F.R.C.S.", in common with the profession generally, considered more suitable for chloroform than for ether, on account of the obvious disadvantage arising from the embarrassment to the respiration caused by the use of the latter anæsthetic. Taking into consideration the frequency with which certain forms of heart-disease and of bronchitis are associated, some proportion of cases of heart-disease might perhaps be added to the list.

These cases, the most obnoxious to *all kinds of anæsthetics*, are those on which chloroform is almost exclusively employed; hence it happens that chloroform is given to a far larger proportion of generally recognised dangerous cases than is any other anæsthetic. There exists a still more potent cause for the higher rate of mortality accruing from the use of chloroform. It is this: chloroform is the anæsthetic almost exclusively used in operations in the cavity of the mouth and on the palate, for the same reason as in severe bronchitis, etc. In all such operations, we know the mouth is necessarily kept widely open by some means, which may be either a wine-bottle cork or a gag of complicated structure, but the effect on the patient is the same; the saliva, its secretion being increased by the irritation caused by the operation, collects with the blood and tenacious mucus in the glottis; deglutition is impossible, and semi-asphyxia speedily ensues, unless the patient gets temporary relief by coughing the fluid into the mouth, from which it quickly finds its way back to the glottis.

If anyone, happening to read the above statement, doubt its accuracy, let him, after placing a large cork between his molars, attempt to swallow his saliva. He will find it a nearly or quite impossible feat; then, if he will imagine himself to be a patient undergoing an operation in the mouth, with a greatly increased flow of viscid saliva mingled with tenacious mucus and blood, he will be able to realise the danger to which the patient is exposed in such operations, altogether irrespectively of the effects of the anæsthetic.

In conclusion, I submit that, if ether and chloroform were given in cases of a similar degree of risk, the mortality from the two would be found to be very much on a par.—I am, sir, yours obediently,

D. L. BECKINGSALE, M.D.,
Registrar and Administrator of Anæsthetics,
November, 1880. Victoria Hospital for Children.

ATROPIA AND CHLOROFORM.

SIR,—In the BRITISH MEDICAL JOURNAL for October 16th, Mr. E. A. Schäfer recommends the administration of atropia before the inhalation of chloroform, to prevent the sudden arrest of the heart's action from reflex irritation during an operation. Now, I would suggest that this danger can be better guarded against by the surgeon not operating until the patient is thoroughly under the influence of the anæsthetic; while the treatment of sudden arrest of the heart's action from reflex irritation should consist in boldly pushing the administration of the chloroform, in the hope that relaxation of the spasmodic contraction of the heart will speedily occur. This, I feel, we would be justified in doing in such a grave condition, from what we know of the physiological action of chloroform. The patient being already under its influence, a little more would quickly take effect, so that it might be possible to overcome the spasm, and for the heart to recover itself. Galvanism under such would, I consider—and in this I agree with Mr. Schäfer—be very apt to increase the danger. On the other hand, when syncope occurs from an overdose of chloroform, the subcutaneous injection of digitalis should be employed as a stimulant to cardiac action, along with artificial respiration. In those rare cases where the danger is due to paralysis of the respiratory function, then atropia, judiciously employed, would probably be of service by stimulating the respiratory centres.—I am, etc.,

FRANCIS W. MOINET, M.D., Edinburgh.

SIR,—In to-day's JOURNAL (page 715), you mention that Professor Fraser of Edinburgh has for some years worked out the subject of atropia in chloroform anæsthesia. I think it only fair to myself to point out that, five years ago, I wrought out this subject experimentally in animals, and sent the results to the British Medical Association (for whose Committee I did the work); but that the Committee, for reasons best known to themselves, have not published those results (partly because the committee of investigation into the question of anæsthetics generally was appointed soon after). In my notes, I distinctly showed (as I mentioned in a letter to you, published in the JOURNAL of 7th August last) that atropia, administered previously to the giving of chloroform, is a powerful heart-protector, making it impossible for the latter to kill, even *when administered with that intention*, in some cases, and being useful in all.

I also showed the uselessness of giving atropia *after* the chloroform, as was done only a short time ago, in a case published in the JOURNAL, which I cannot at present find.

I may mention that, early in 1877, being in conversation with one of the sub-editors of the *Daily Telegraph*, I mentioned these experiments to him (in a private conversation in his own house), and, to my utter astonishment, saw the results mentioned soon after in a leader in that paper.—I am, yours, etc., W. MUNRO, M.D.

102, Earl Street, Lower Broughton, Manchester,
October 30th, 1880.

GUY'S HOSPITAL.

SIR,—On several occasions, the British Medical Association has been able to exert considerable influence upon the legislature. I believe that the present is a time when its action is imperatively called for. I would urge that the Association, as a body, should petition Parliament for a revision of the "Guy's Hospital Act". The co-operation of other medical men should also be invited.

It is evident that the present constitution of the governing body of the hospital is as contrary to the intention of the founder as to justice and common sense. It is equally evident that it can only be altered by the help of Parliament. And the present is a peculiarly favourable occasion.

Parliament does not often trouble itself with the merely possible evils of any existing system, however absurd in principle the system may be. Under former treasurers, who had the good sense to consult the staff on questions which especially concerned them, things went well. Then, it would have been impossible, even if desirable, to obtain a change in the form of government. But, *nous avons changé tout cela*. Mr. Lushington has appeared, as a *deus ex machinâ*, to show what a bad treasurer can do, without forfeiting the support of the governors, and without acting *ultra vires* as far as the law is concerned.

It would not be sufficient, however, to remove the present treasurer and matron. The constitution of the governing body must be so altered, that it shall never be possible for any future treasurer to act as Mr. Lushington has.

One word in defence of the much-abused staff of Guy's. The *Times* asserts that they have "thrown away their chances by injudicious letter-writing". But is it not due to the published letters of the staff that the treasurer, and the governors who support him, now stand condemned at the bar of public opinion of having sacrificed the welfare of the hospital, the patients, and the medical school, for self-will—if not for self-interest and nepotism? It was necessary to excite public attention; and the letters of the staff have done this.

Again: the staff are blamed because they did not, at all risks, maintain the position they at first took up. But, what were the risks? It is evident that the governors were quite willing to dismiss the entire staff, rather than give way. It is equally evident that they had legal power to do so. The inevitable result would have been ultimate victory to the staff; but at the cost of terrible distress and danger to the patients, and of ruin to the medical school. An outsider might consider it enough to answer that the responsibility of all this would rest on the governors, and not on the staff. But that would be small consolation to a Guy's man. If my brother were in the power of the king of Dahomey, and his sable majesty sent me a message—"You called me an unmitigated savage; withdraw your words, or I break your brother's head"—I should probably withdraw the offensive expression. But his majesty of Dahomey would be an unmitigated savage for all that.

The staff, therefore, cannot, with safety to the interests of the hospital, proceed in the work of reform which they have so well begun. But they have a right to look to the medical profession for prompt aid. —I am, sir, your obedient servant,

FREDERIC C. COLEY, M.B.

9, Picton Place, Newcastle-on-Tyne.

ON THE RELATION OF THE PROFESSION TO THE HOSPITAL.

SIR,—It will be well, before agreeing in the necessity for, and expecting any results from, a Commission of Inquiry into the subject of Hospital Reform, that we should see how it has come about that the necessity has arisen.

In the first place, it may be asked, whether the intimate connection which has grown up between the medical school and the hospital has not placed the former at a great disadvantage? That liberty of action, which was enjoyed in former times by celebrated teachers of anatomy and surgery in London, is now restricted by the possible interference of the hospital authorities with the work of teaching. Generally, the school is the tenant of hospital property; and, in proportion as the treasurer may favour the teachers or not, things work well or ill. Again, in the matter of hospital appointments, the school looks to its own advantage in having juniors willing and able to assist in the teaching; while possibly the treasurer disputes any right of this kind, as favouring the medical school at the expense of the charity. Thus, there are conflicting interests constantly at work, and the elements of discord are ever present. It must be allowed, however, that, from our knowledge of human nature, we should predict more favourably of a system like that at Bartholomew's or Guy's, where there are men of high character to appeal to as the governing body, than to most of the unendowed hospitals, where rival interests among the members of the medical staff frequently exist.

It is a very important matter that a hospital physician or surgeon should clearly realise his position, and should not hesitate to make known the basis of his relation to the institution. There is no use to disguise the fact that this is a business question, one of pecuniary interest of rather a delicate nature, where voluntary service is conditionally rendered, but where the conditions are assumed rather than expressed. The public take one view of the matter, the individual a very different one. If the appointment of physician to Guy's be worth about £1,000 a year—a third of which is paid by the charity, and the other part by school fees, etc.—it becomes a serious matter if the treasurer can exert an influence over the whole sum quite out of proportion to what is paid by the charity. If this condition exist, then the medical staff has sacrificed its freedom; and if the treasurer or governing body happen to be disposed to be autocratic, the medical staff must yield, or be serious losers.

I am inclined to think that, in the anxiety to obtain hospital appointments, sacrifices have been made, from time to time, to such an extent, that now very little consideration exists for a hospital staff; and, from the fact that the treasurer knows well that he can usually play off one member of the staff against another, the medical school is placed in rather a pitiable inferiority. It is unfair to expect any individual member of a staff to make himself the champion of his colleagues, when, perhaps, some of them would gain by his defeat; and there is very little encouragement to a man to fight for his party if he has the feeling that, at any moment, he may find himself deserted. But, at such a hospital as Guy's, with such a governing body, there ought to be no difficulty for the staff to work in harmony with the governors, for the conditions on which the physicians and surgeons are appointed are distinct and business-like. The salary paid is not altogether inadequate to the duties performed, and there ought to be less tendency for the staff to look to indirect profit from their appointments, as is the case at the gratuitous service hospitals. If the salaries are not high enough, it would be far better for the members of the staff to say so, and not allow themselves to be placed in a false position. When medical men will work, as they do, for nothing, they must not grumble; nor must the treasurer or governors of hospitals be much surprised if a medical staff should take a very different view of the purpose of a hospital, when they are giving valuable time for almost, if not quite, gratuitous recognition. The system is a false one, and is likely to continue so, if physicians and surgeons undertake duties with one object, while their employers entertain a different one.—Yours,

ROBERT LEE.

November, 1880.

PHTHISIS AND DAMPNESS OF SOIL.

SIR,—On reading an article, under the above heading, in your JOURNAL of the 23rd instant, I was surprised to see that Dr. Charles Kelly, in his report as Health Officer for West Sussex, had stated that "in these rural districts there has been no change in the drainage; and, as far as the removal of subsoil water is concerned, the houses are in much the same state as they were twenty years ago".

I demur to Dr. Kelly's premises. I consider that, so far from there having been "no change whatever in the drainage", there has been great change.

I can speak positively concerning the parishes in which I am myself a landowner—viz., Yapton and Barnham. In these, the fields have been very generally drained; and there is now nothing like the quantity of stagnant water, and of saturated soil, that there was twenty years ago.—I am, etc.,

ARTHUR D. WHITE, M.D.

Osterley Park, Southall, October 26th, 1880.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL RELIEF IN SLEAT AND STRATH, ISLE OF SKYE.

WE have received from Dr. W. R. S. Jefferiss of Isle Ornsay House, Skye, a long communication describing his treatment at the hands of the Parochial Board of Sleat; and, as his case aptly illustrates the necessity for a radical alteration in the system of Scotch Poor-law Medical Relief, if medical officers are to be other than mere dependents of the parochial boards, etc., we proceed to tell his story somewhat in detail.

Eighteen months ago an advertisement appeared, stating that a medical officer was required for the conjoint boards of Sleat and Strath, Isle of Skye, at an annual stipend of £250, with house-rent free. The vacancy was caused by the resignation of the late medical officer, after a tenure of office of two or three months. The district, as is frequently the case in the Highlands, is a widely scattered one, and contains a population of about four thousand persons.

On returning home from a visit he had made, ten miles away, one Sunday evening, last August, he found that a message had been awaiting him since the morning, requesting his attendance at Lord ——'s, at Ar—— Castle, seven miles off. No particulars were left, no second message sent. His horse, the only one he had, was so jaded, that he could not take him out again, and no other was procurable; and as no urgency was shown, he decided to postpone his visit to the following morning. On arriving at the Castle, he found that a lady, a visitor there, was simply suffering from toothache. He explained the reason why he was prevented from going the night before, apologised for his apparent neglect, prescribed some simple remedies, and left. Two days afterwards, he called again, and found that the lady was quite well; but although she and her ladyship were at home, he was not asked in, nor thanked for the long journey he had had to visit her.

A few weeks afterwards, and in despite of his having performed his duty to the satisfaction of the poor of the two parishes and of the two parochial boards, the chairman, through his factor, took steps to deprive him of his appointment; and at the next meeting of the Sleat Parochial Board, the factor informed them, in the presence of his lordship, that the doctor had been very careless in not attending at the Castle when sent for and thereupon proceeded to dictate a minute, calling on him (Dr. Jefferiss) to resign. On this being communicated to him, the doctor wrote and asked for an explanation; when he was curtly told, they did not mean to go into particulars. He thereupon wrote to the nobleman for the grounds on which he had been called on to resign, and received for answer, "that the board were all of one opinion, that he was not a suitable medical officer for the parish".

This treatment of a public servant, not for any neglect of his official duty, but simply owing to personal pique on the part of the chairman, arising out of his inability to attend, at the moment, one of his lordship's visitors, is probably without parallel in the history of the poor-law medical service. High-handed proceedings have occasionally taken place in England, but in Scotland, factors, parochial boards, and the sick poor, are all at the mercy of the landlord, if he be disposed to be tyrannical.

Our correspondent further points out that, as the law stands at present, no parochial or burgh medical officer of health can carry out the provisions of the Public Health Act (Scotland), without incurring the risk of disfavour, and probable loss of office, at the hands of the local authorities, notably if he be bold enough to point out unsanitary conditions in a burgh or parish, entailing the possible increase of the rates. Dr. Jefferiss further refers to the fact, that no medical officer has any power of appeal to the Board of Supervision; and that this latter body, the analogue of the Local Government Board here, has no authority to intervene in any difficulty which may arise between the medical officer and a parochial board, though they, the board of supervision, claim the right to dismiss a medical officer, if neglect be shown.

Dr. Jefferiss goes on to argue for a modification of the law, in accordance with that which prevails in England: where permanence of appointment is the rule, and where no medical officer can be called on to

resign, except after general unfitness or marked incongruity between him and the board which appointed him.

Whilst thus citing the case of Dr. Jefferiss somewhat at length, we would point out to him, and to all Scotch poor-law medical officers, that every needful alteration requisite to place the service on a satisfactory footing was urged by Mr. Walker, chairman of the Board of Supervision, in the evidence he gave before the Select Committee on Scotch poor-law relief, which sat eight years ago. Clauses founded almost entirely on that gentleman's evidence, and embodying all the suggestions he made for the reform of Scotch medical relief, were included in the Bill brought in by Mr. Crawford. Unfortunately, that Bill was lost on the second reading, on points in no way connected with the medical relief clauses. Since that date, several half-hearted attempts have been made, by successive Lord Advocates, to deal with the subject. Some months ago, a deputation waited on the Premier, and urged him to take up the subject. A sort of promise was obtained, that the question should be dealt with in the next session. Now, if Scotch Poor-law medical officers really feel that they are labouring under grievous disabilities—and the case of Dr. Jefferiss is a striking instance in point that they are—then let them at once petition the House of Commons for a redress of their grievances. Not content with that, let them write to every M.P. they may happen to know, whether representing Scotch, Irish, or English constituencies, and urge on them the necessity for their aid.

Let the prayer of their petition contain the points advocated by Mr. Walker, which are: first, permanence of appointments; second, stipends regulated in accordance with the area and population; third, the provision of all medicines and appliances; and, lastly, absolute superannuation in all suitable cases. Petitions containing these heads should be sent in so soon as Parliament meets in February.

THE SANITARY MEDICAL SERVICE.

DR. H. W. LARKIN, of Bilston, writes to us in reply to the letter of "Floreat res Medica", and our remarks thereon. In reply to our own remarks on the facts as stated, he says: "Allow me to remind you that there are circumstances, other than the reduction of the salary of an officer, which may render sanitary administration in any district 'nothing but the mockery of the Public Health Act'. It may, under certain exceptional conditions, even be possible that the course named may be the only practicable means of dealing with such a travesty. Whatever exalted conception may be associated with the 'sanitary supervision of 25,000 persons, housed as the inhabitants of the Black Country are known to be', and for which you think 'the initial salary of £60 ludicrously inadequate,' it has for years, in this district, practically amounted to from forty to fifty inspections, of the most common-place character, annually; which, at the salary paid—£60 and £50 *per annum*, respectively—have cost from 20s. to 30s. for each act.

"The board here is not indifferent to sanitary measures. For years, it spent £1,050 annually, in inspections and removals. This annual amount has, for the last two years, been reduced to £840, without the slightest detriment to the public service. When a medical officer can show services rendered, either practical or experimental, for the promotion of sanitary science, and in the interests of the public, the board will not fail fully to recognise, and adequately to remunerate, such intelligent enterprise. It will probably surprise you to learn that the present medical officer is younger than, and that his powers of locomotion are fully as two to one compared with those of his predecessor in office."

Dr. Larkin's communication does not, however, alter our opinion as to the insufficiency of the salary at present attached to the office of medical officer of health for Bilston. Whether the former officer was adequately remunerated for the services which he actually performed is another question, upon which we can of course form no judgment.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

SAUNDERS, George C., M.R.C.S.Eng., reappointed Medical Officer of Health for Lower Edmonton, at the increased salary of £— per annum.

LITTLE, George, M.R.C.S.Eng., appointed Medical Officer of Health to the Northern Division of the Houghton-le-Spring Rural Sanitary District, *vice* W. Lyon, M.D.

POOR-LAW MEDICAL APPOINTMENTS.

CASE, Perkins W. P., M.B., appointed Assistant Medical Officer to the Infirmary of the Whitechapel Union, *vice* J. H. Gibson, M.D., resigned.

CUNNINGHAM, Andrew, M.B., C.M., appointed Medical Officer to the North West Oldbury District of the West Bromwich Union, *vice* W. H. Hayward, M.R.C.S.E., resigned.

CURRIE, Andrew S., M.D., appointed Medical Officer to the Sydney District of the Chepstow Union, *vice* W. J. S. Tuckwell, M.R.C.S.Eng., resigned.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 28th, 1880.

Marlow, Frank William, Wantage, Berks.
Powell, Simpson, Upper Woburn Place.
Whiting, John, Ringsfield, Beccles.

The following gentlemen also on the same day passed their Primary Professional Examination.

Burton, Charles Frederick, Queen's College, Birmingham.
Cheyne, Robert, King's College, London.
Wyborn, Samuel, Charing Cross Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ASHTON-UNDER-LYNE INFIRMARY.—Consulting Surgeon.

BAWNBOY UNION.—Medical Officer for Newtownrie Dispensary District. Salary, £30 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 16th November.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser. Salary, £100 per annum, with board and residence.

*CHARING CROSS HOSPITAL.—Assistant Physician. Applications, with testimonials, on or before November 20th.

CORK NORTH INFIRMARY.—House-Surgeon and Apothecary. Salary, £105 per annum, with apartments, etc.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Salary, £100 per annum, with board and lodging. Applications, with testimonials, on or before November 18th.

FULHAM UNION.—Medical Officer to the Third District. Salary, £60 per annum. Applications, with testimonials, on or before November 10th.

GLENNAMADDY UNION.—Medical Officer for Glennamaddy Dispensary District. Salary £100 per annum, with £20 as Medical Officer of Health, registration and vaccination fees. Election on the 16th November.

GLENNAMADDY UNION.—Medical Officer for Workhouse, at a salary of £5 per annum, and £10 as Consulting Medical Officer of Health. Election on the 19th November.

HAILSHAM UNION.—Medical Officer to the Third District.

*HULL GENERAL INFIRMARY.—Assistant House Surgeon. Salary, £50 per annum. Applications not later than November 8th.

*LEAMINGTON FRIENDLY MEDICAL SOCIETIES.—Medical Officer. Salary, £200 per annum. Applications to the Secretary not later than November 20th.

LEEDS UNION.—Assistant Medical Officer to Workhouse.

*LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY.—Resident Medical Officer. Salary to commence at £175 per annum, with house, etc. Applications, with testimonials, to the Secretary on or before November 12th.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—Resident Surgeon and Apothecary. Salary, £— per annum, with lighting, fire, and attendance. Applications not later than November 20th.

METROPOLITAN FEVER HOSPITAL, Homerton.—Assistant Medical Officer. Salary, £15 per month, with board, attendance, and furnished apartments. Applications, with testimonials, to the Medical Superintendent.

NORFOLK AND NORWICH HOSPITAL.—House Surgeon. Salary, £105 per annum, with board, lodging, washing, coals, gas, etc. Applications, with testimonials, on or before November 15th.

OMAGH DISTRICT LUNATIC ASYLUM.—Resident Medical Superintendent. Applications to Under Secretary, Dublin Castle, up to November 17th.

*ROYAL SURREY COUNTY HOSPITAL, Guildford.—House-Surgeon. Salary, £75 per annum, with board, lodging, and washing. Applications, with testimonials, on or before December 1st.

ROYAL COLLEGE OF SURGEONS.—Examiner in Anatomy and Physiology. Applications, with testimonials, on or before November 13th.

ST. ANDREW'S PAROCHIAL AUTHORITIES.—Medical Officer.

*ST. BARTHOLOMEW'S HOSPITAL, Chatham.—Assistant House-Surgeon. Salary, £— per annum, with board, lodging, washing, etc. Applications, with testimonials, on or before November 15th.

ST. SAVIOUR'S UNION, Walworth.—Assistant Medical Officer and Dispenser to Infirmary. Salary, £150 per annum, with furnished apartments, rations, washing, etc. Applications on or before November 11th.

*SURREY COUNTY LUNATIC ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, with washing, attendance, and furnished apartments. Applications to the Superintendent before November 25th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

PATTERSON, R. L., M.B. Lond., appointed Medical Examiner of Recruits for the Regular Army and Militia at Berkhamsted.

BRODIE, William Hampden, M.B. and C.M., Aberdeen, appointed House-Surgeon in the Northern Infirmary, Inverness.

COLLINS, E. Wolfenden, M.D., appointed Surgeon to the Hospital for Diseases of Women and Children, Sydenham Park.

FRAZER, William, B.A., M.D., appointed Medical Officer to the Boscombe Infirmary, Bournemouth.

GUBBIN, G. F., M.R.C.S., appointed House-Surgeon to the Westminster Hospital, *vice* S. Smyth, M.R.C.S., resigned.

HEMMING, W. Douglas, F.R.C.S.Ed., appointed Medical Officer to the Boscombe Infirmary, Bournemouth.

HOPWOOD, Edgar C., B.A., M.B., appointed Assistant Resident Medical Officer of the London Fever Hospital, *vice* C. D. Adam, M.R.C.S.Eng., resigned.

NELSON, Thomas, M.B., appointed Resident Surgeon to the Birmingham General Dispensary, *vice* H. C. Wilson, M.D., resigned.

STEWART, W. R. H., F.R.C.S.Ed., appointed Surgeon to the North West London Hospital, *vice* Frank Godfrey, L.R.C.P.Ed., resigned.

WHITE, Joseph, F.R.C.S.Ed., appointed Consulting Surgeon to the Nottingham General Hospital, on retiring, after twenty-one years, from the office of surgeon.

MR. ARTHUR PRICE has been appointed Surgeon to the Royal Naval Artillery Volunteers (London Brigade).

DONATIONS.—The Bishop of Cork, Mrs. Lombard, and Miss Hyde, have each given £50 towards the funds of the Home for Protestant Incurables, Cork.

DURING the past four weeks of the current quarter, the metropolitan death-rate has averaged 20.8 per 1,000, against 20.4 and 20.7 in the corresponding weeks of 1878 and 1879.

PUBLIC HEALTH.—During last week, being the forty-third week of this year, 5,424 births and 3,826 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 23 deaths annually in every 1,000 persons living. The annual death-rate was 22 in Edinburgh, 24 in Glasgow, and 35 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bradford, 19; Leeds, 20; Newcastle-upon-Tyne, 21; Sheffield, 21; Portsmouth, 21; Plymouth, 22; London, 22; Birmingham, 22; Leicester, 22; Bristol, 23; Wolverhampton, 23; Sunderland, 23; Manchester, 24; Nottingham, 25; Oldham, 25; Salford, 25; Norwich, 26; Brighton, 26; Liverpool, 27; and the highest rate, 28, in Hull. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 1.8 in Norwich, and 2.1 in Plymouth and Newcastle-upon-Tyne, to 6.3 and 6.4 in Sunderland and Leicester, Scarlet fever showed the largest proportional fatality in Sunderland, Leicester, and Oldham; and measles in Salford and Leicester. The highest death-rate from enteric fever occurred in Leicester and Salford. In London, 1,521 deaths were registered, which exceeded the average by 18, and gave an annual death-rate of 21.7. The 1,521 deaths included 2 from small-pox, 37 from measles, 88 from scarlet fever, 10 from diphtheria, 24 from whooping-cough, 21 from different forms of fever, and 28 from diarrhœa—being altogether 210 zymotic deaths, which were 22 below the average, and were equal to an annual rate of 3.0 per 1,000. Nine deaths were referred to puerperal fever, which exceeded the average by three. The deaths referred to diseases of the respiratory organs, which had steadily increased from 124 to 323 in the seven preceding weeks, further rose to 333 last week, which, however, exceeded the corrected weekly average by but 7; 231 were attributed to bronchitis, and 66 to pneumonia. Different forms of violence caused 49 deaths; 38 were the result of negligence or accident, including 20 from fractures and contusions, 6 from burns and scalds, 2 from drowning, and 8 of infants under one year of age from suffocation. Nine cases of suicide were registered during the week. At Greenwich, the mean temperature of the air was 42.0°, and 6.5° below the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 13.0 miles per hour, which was 1.6 above the average. Rain fell on four days of the week, to the aggregate amount of 1.72 inches. The duration of registered bright sunshine in the week was equal to 14 per cent. of its possible duration. No ozone was recorded during the week, except on Wednesday and Thursday.

DEATH OF A MEDICAL STUDENT.—Dr. Danford Thomas lately held an inquest, at the Clerkenwell Coroner's Court, on the body of Francis Henry Howell, twenty years of age, a medical student at St. Bartholomew's Hospital, who was found dead in bed at his lodgings. Mrs. Normell, the landlady, stated that, at one o'clock on the day in question, as the deceased had not come down, she knocked at his bedroom door. She got no answer, and subsequently the door was forced. Deceased was found dead in bed. A letter was found in the room, which deceased had evidently intended to send to Dr. Norman Moore, at the hospital. In this, he expressed his intention to take some hydrate of chloral, as he had lately suffered from sleeplessness, and desiring the Doctor to come to him if he did not put in an appearance at the hospital at the appointed time. This letter was dated October 25th. The medical evidence was to the effect that death had been caused by chloral. The jury returned a verdict of "Death from misadventure".

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M. - Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Dowse will exhibit a patient with Tumour of the Cerebellum; Dr. Sansom, a case and specimen illustrating the Causation of the Presystolic Murmur; and a paper on "The Cause and Significance of Reduplication of the Sounds of the Heart".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Cavafy, "On Amœboid Movements of the Colourless Blood-Corpuscles in Leucæmia"; Mr. Birdhurst, "On the Nature and Treatment of Genu Valgum".

WEDNESDAY.—Hunterian Society, 7.30 P.M., Council Meeting. 8 P.M., Mr. Cooper, "A Case of Nephrectomy"; Mr. Waren Tay, "Notes of a Case of Colotomy performed six years ago for (1) Annular Stricture; patient still living". Royal Microscopical Society, 8 P.M. Mr. Charles Stewart, "Notes on some Acanthometridæ"; Dr. Carpenter, C.B., "New 'Working' Microscope".

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. James Adams, "A Case of Ligature of the Common Carotid and Subclavian Arteries for an Aneurism, supposed to be of the Innominate Artery"; Dr. Duckworth, "Two Cases of Myxœdema"; Dr. Sturge and Mr. Godlee, "Stretching of the Facial Nerve for Relief of Spasm of the Facial Muscles"; Dr. F. Colcott Fox, "A Case of Persisting Gyrate Erythema".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

H. P. E. asks for information as to the gases which may arise from human faeces fermenting in an open drain; and also what authorities are the best to consult on the subject?

FETID SWEATING OF THE FEET.

SIR,—My attention has been drawn to the subject of a very distressing and, I hope, very rare affection of the feet—viz., fœtid sweating. I have never forgotten a very severe case of this disease which occurred many years ago in Yorkshire. The subject was a boy, aged about 14, whose health was constitutionally delicate, though otherwise sound. He wore cotton socks, and these used to be simply soaked through and through with the most fœtid perspiration, rendering it an infliction to be in the same room with him. In this case, a perfect cure was effected (after many remedies had been unavailingly tried), by making him wear fine soft lambs' wool socks, changed frequently. No other remedies, beyond a nourishing diet and out-of-door exercise were used. After the commencement of the change of socks, as above described, the cure was speedy and permanent.—Yours truly,

October 1880. T. CAYLEY HUTCHINSON.

G. H. R.—The subject is not one of medical importance, however interesting to archæologists.

PORTABLE STOVES

SIR,—I have a patient who requires her bedroom to be kept at an equable temperature during the winter months. There is no fireplace in the room. Will you kindly advise the best kind of portable stove that can be used for such a purpose? and oblige, yours, etc., A MEMBER.

CONSULTING PRACTICE.

SIR,—A gentleman wishes me to consult with his medical man, relative to his wife's case. I agree to meet him; but to-day receive a letter (from the gentleman), stating that, before his medical attendant can meet me, he must be furnished with the names of medical men I have before met in consultation. For some years past, I have had a purely consulting practice, but never before had such a request made. I would add that the name of the medical man is withheld from me. Might I ask if such a course is usual, and how I should act under the circumstances?

Apologising for trespassing on your valuable space—I remain, yours obediently, IGNORANT.

PUBLIC HEALTH LECTURES.

SIR,—Would you, or any of your readers, kindly tell me where I can procure the best series of health lectures for the people, or any essay on the subject of the laws of health for the people, that would be suitable to read at a Working Men's Institute in a country parish during the winter months?—Yours truly, PHYSICIAN.

*** The best lectures for the purpose are probably the admirable *Health Lectures*, first, second, and third series, delivered in Manchester under the auspices of the Manchester and Salford Sanitary Association. They are published, in a collected form, by John Heywood, Excelsior Buildings, Bridgefield, Manchester, and 11, Paternoster Buildings, London.

UNIVERSITY DEGREES IN MEDICINE.

SIR,—Allow me to endorse fully the letter of your correspondent "Veritas". A degree of good practical value, and obtainable after examinations of no extraordinary difficulty or expense, has long been a desideratum in this country; and for this we must look to the University of London, and that alone. It has already achieved for itself a reputation second to none of the older universities, and superior to many of them; and what we now require is, that its degrees, or some of them, may be made more available to the profession at large. I cannot but think, from the liberality which has always distinguished it, that some change of this kind will ere long be made by the Council. At all events, the present state of matters urgently calls for reform. It is, to say the least, absurd that we should be under the necessity of going to other countries in search of what should be obtainable at home.—I remain, sir, yours obediently, M.D. BRUSSELS.

THE M.D. OF PARIS.

SIR,—Will you favour me by stating (1) whether or not the examinations for this degree are open to persons upon the English *Medical Register?* (2) whether or not the M.D. of Paris is registrable in England, so as to confer, upon those not otherwise qualified, a legal right to practise?—I am, etc., M.R.C.P.

*** The examinations for the M.D. of the University of Paris are, we believe, open to registered practitioners of Great Britain; but no foreign degree is registrable in this country, at present.

BRACHIAL NEURALGIA.

SIR,—Can any of your readers give me any suggestions upon a case which, for want of a better name, I will call "brachial neuralgia"? A lady, four months ago, lifted two heavy stone statues, and ever since has complained of excruciating agony in bringing the arm back, as if to lace the stays, or in placing the hand of the affected arm on the opposite shoulder. At night, also, if she lie on the affected arm, she suffers from frightful pain and numbness, which shampooing relieves. Galvanism (faradisation), small repeated blisters, all the anodyne liniments, etc., have been tried without avail. She declares that her arm is becoming worse. I should be glad of any advice. There is no swelling.—I am, etc., INQUIRER.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

THE REGULATIONS OF THE UNIVERSITY OF LONDON.

IN the Regulations for the Second M.B. examination of the University of London in the Educational Number of the BRITISH MEDICAL JOURNAL (September 11th, page 423, col. 2), Clause 5 should have been as follows.

"Of having, *after having attended Surgical and Medical Practice for at least twelve months subsequently to passing the first M.B. examination*, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months:—such attendance not to be counted as part of either the surgical or the medical hospital practice described in Clauses 4 and 5."

COMA.

SIR,—Dr. Quill invites discussion upon his case of coma in the BRITISH MEDICAL JOURNAL, October 30th, p. 701. I gave a woman, for after-pains, a somewhat large dose of laudanum, probably half a teaspoonful. Anxious to watch the case, I visited her, say, about two hours afterwards. She was sitting up in bed. She joked me because the drug had taken no effect. That instant, she fell suddenly back, completely narcotised, and in great danger. I was alarmed. It took Mr. G. and myself two hours of hard work to resuscitate the woman. About fifteen years ago, I gave an ounce of laudanum, in the course of an hour, to a woman for abortion. So great was her agony, that the drug had no apparent effect. I related the case to my partner, who said it was heroic treatment. An hysterical woman feigned trance while sitting in a chair. The head was thrown back; the body rigid. On lifting up the eyelids, which twitched, and generally do in feigning cases, I touched her eye. She flinched and quickly came to, asking my pardon. A boy was found apparently in a trance, on the roadside, by the police. The eyelids twitched. He flinched upon touching the eyes, also when pinched. He remained fixed in whatever position we placed him. Evidently, he wished to appear like a log of wood. I noticed he managed to get supported by the walls; and so I had him placed at the end of a bench. He was resting on the right buttock, the other and limbs suspended in the air. It was an extraordinary gymnastic feat he effected to keep himself so or else fall. He did not dare to fall like a log of wood, and soon gave in. This case might have deceived the most expert men of any class. It is needless to say the lad received the chastisement due to him from the magistrates. Fear depresses the action of the heart: will it dilate the pupils?—I am, sir, your obedient servant, SAMUEL W. SMITH, M.D.

Pershore, October 30th, 1880.

THE RESUSCITATION OF INFANTS.

SIR,—Nitrite of amyl is a great help in these cases. If we can wait on the first catching sob of returning life with a single drop of the amyl, the best and quickest results will follow. Such is my experience.—Yours truly, G. H. R. D.

Shanklin, Isle of Wight, October 27th, 1880.

RECIPROCITY OF PRACTICE.

SIR,—In reply to your editorial remarks upon my letter to Dr. Acland of the 11th instant, and published in your JOURNAL of last week, permit me to say that the law, as regards the practice of the profession, remains precisely as it was before the passing of the Medical Act of 1858. In one of the prosecutions instituted in my name, and taken into the appeal court, our leading counsel (Serjeant Bompas) attempted to argue that the right to practise was acquired by registration; but he was stopped by the judges, who refused to entertain that part of his argument; and, as I always said we should do, we lost the case, and were mulcted in costs. The right to practise is vested in the qualification, and not in the registration; and I am tolerably confident that the Medical Council are well aware of this fact; at all events, two or three years since, they sent me a legal decision which, further on in the correspondence I shall continue to address to Dr. Acland, whether it be answered or not, will be found largely to govern the question I have raised. Other legal decisions will be given, also; though the one sent me by the Medical Council would be amply sufficient for my purpose; and the more especially so, as the Medical Council themselves have been guided by it, and acted upon it in some of their transactions with the Medical Alliance Association. In conclusion, I would ask, what appears to me to be a question very pertinent to the subject—If "reciprocity of practice" was established by the Medical Act of 1858, why have all the Government Bills, and the Bills of the Reform Committee of the British Medical Association, proposed to (in that case) re-establish it, by repealing the penal clauses of the Apothecaries' Act of 1815, and of the charters of the Colleges of Physicians and Surgeons? Have these repeals been proposed merely for the benefit and protection of the quacks? or was it not that it was known that they were absolutely necessary for the legalising of "reciprocity of practice"?—I am, sir, your obedient servant, R. H. S. CARPENTER.

October 25th, 1880.

MALTHUSIANISM.

SIR,—In reply to "D. A. H.", I beg to say Mulhall's work on *The Progress of the World* is to be obtained at Stanford's, Charing Cross. The cost is 12s. 6d., and the size crown octavo. Before getting the work itself, I would advise him to read the review of it in the *Daily Chronicle*, September 23rd. He will find some arguments against Malthusianism in the *Edinburgh Medical Journal* of September 1877 and September 1880. Mr. Cliffe Leslie, in the *Fortnightly Review* this month, says: "From a comparison of births and deaths among American-born and immigrant inhabitants of the State of Massachusetts; the vastly greater proportion of diseases of the digestive organs in the United States than in Great Britain; the premature fading of American women; the frailty of American teeth; the conclusion seems inevitable that a decline in vigour and fecundity is one of the causes of the small families of American-born citizens; and that the 'potential rate' of population is not constant, as Malthus supposed.....The slow growth of the native population of the Eastern States of America seem to lend probability to Mr. Herbert Spencer's doctrine that the increased cost in nervous structure and function attending the keener struggle for life, as human society advances, entails a diminution in fecundity." Then he says: "The richest countries are not those where nature is most prolific, but where labour is most efficient: not Mexico, but Massachusetts; not Brazil, but Great Britain. The cause of the depression of both the wages of labour and the interest on capital, and of the growth of poverty as society advances, is not in the increase of population, and does not lie in the conditions of production. It must, therefore, lie in distribution."—I am, sir, your obedient servant,

Kingston-on-Thames, October 1880. F. P. ATKINSON.

THE MEDICAL PROFESSION AND INTEMPERANCE IN ALCOHOL.

SIR,—I recently called attention to Miss Hellena Richards, and to name the individuals whose authority supported that hundreds and thousands [illegible] during the last year which led them to such a fearful death, with the facts elicited by the following specimens of testimonials upon which this lady justifies her sweeping assertions. "In Ayr, a woman who is not yet dead, and may live for years, is mentioned as addicted to drink, that all the weeping and praying has not been able to restrain her. It is some satisfaction to learn that this interesting individual is not likely to die soon". The mother of young children, who is intemperate that she sets her husband and all else at defiance—a proof, certainly, of vigorous health.

In the unsophisticated mind, the record of three nameless drunken women, still living, is rather an anomalous method of proving "that hundreds and thousands of women in their death-beds denounced the doctor who brought them to such fearful death". I am quite satisfied to leave Miss Hellena Richards to the unbiassed judgment of your readers. Hoping that the utter collapse of this reckless writer will deter any other lady, with more leisure than intellect, from inventing fanatical appeals, and slandering an honourable profession. I am, sir, your obedient servant, BENJAMIN BAKER, L.R.C.S.

Brentwood, Essex, October 20th, 1880.

ON THE EFFECT OF REMOVAL OF THE UVULA ON THE VOICE.

SIR,—So long as the correspondence on this subject was confined to the experience of one who had lost his uvula as the result of diphtheria, there was no need for serious interference; but the letter of Dr. Poulain last week calls for a few words of reply. I feel bound to say that I cannot agree with his remarks with reference to removal of either tonsils or uvula, two very different procedures, by-the-by. As to the first, not only has it been long recognised that removal of the tonsils is followed by extension of upward range, rather than of loss of high notes; but, in my own experience, I can recall two instances; one of a deep bass, the other of a pure tenor, in which removal of the tonsils was followed by the best results to the purity and certainty of the voice, without any alteration whatever in range. The first case was that of the late Mr. Jules Perkins, who suffered from enlarged tonsils, subject to frequently recurring attacks of follicular inflammation. He sang in opera a few nights after I had removed the diseased glands. The second case was that of a well-known tenor—Signor Stagno—a Spaniard by birth. He expressly asked me to remove the left tonsil, because of the improvement he had experienced since removal of the right some years previously in Madrid. These names I may mention, since Mr. Perkins is since dead of acute rheumatism, and Signor Stagno has ceased to sing in public; but other cases could be quoted equally convincing.

As to removal of a portion of—not excision of the whole of—the uvula, there is much misconception. Singers are not, as a rule, well educated. In the class of cases under consideration, they have often lost notes in their voice, or their entire singing voice, from a chronic laryngitis, largely induced or kept up by an elongated uvula; and because they do not always recover all their voice after removal of the source of irritation, they are too apt to accuse the operation of the failure. Dr. Poulain quotes Mr. Hedley (misprinted Wedley in the JOURNAL) of the Albert Hall Choral Society. I removed a portion of his uvula some years ago, with, as I believe, the best results, if I may judge from the many good reports I have had from him personally, as well as from the many patients he has since recommended to me for similar treatment. I should be, indeed, surprised to hear that his own experience was against the operation, though I should not allow it to greatly influence me against my own results, as a whole, and the following weighty fact: namely, that Professor Carlo Labus, President of the recent Laryngological Congress at Milan, read a paper on that occasion, on this very subject; and that not only was his experience strongly in favour of the operation with especial regard to the voice—which is not, by the way, by any means the most important point—but that of the many authorities present, such as Drs. Stoerte (Vienna), Elsberg (New York), Krishaber and E. Fournié (Paris); not one of them—and they all spoke on the paper—said one word in detraction of the operation as to its effect on the singing voice. When I add that Dr. Labus's experience is based on treatment for various throat-affections of 1,132 singers of different sexes and quality of voice, it will be granted that he speaks with some authority. I have written to Dr. Labus to send an abstract of his paper; and I am sure, sir, that you will find room for so valuable a contribution.

Removal of a portion of an unduly elongated uvula is a slight operation of such very great value in a large number of really distressing throat affections, that it is a pity it should be subjected to depreciation; and it is on this account that I venture to trouble you with this letter. Yours faithfully,

LENNOX BROWNE, F.R.C.S.E.

P.S.—I would advise your first correspondent, Mr. Philpot, to consult *Diseases of the Throat*, by Dr. Mandl, whose position as professor at the Paris Conservatoire of Music entitles him to speak with authority. He says, at page 182: "This operation encounters, on the part of some artists, the same ill-founded opposition as removal of the tonsils (q.v.)". I can affirm that, from the considerable number of operations of the uvula that I have made, I have always, when the operation was really indicated, seen the most happy effects result to the voice, since a permanent source of irritation had thereby been removed.

CONTAGIOUS DISEASE IN FLIES.

SIR,—Having, some time ago, by told a little attention to the fungus which, at the time of the year, affects the house-fly, may I trespass on your space to [illegible] my notice to the information contributed to your last issue by [illegible]. In the first place, I would dismiss all idea of its being contagious or infectious in any sense to the human subject. I gather, from the review of a paper by [illegible], which appeared in the July number of the *Quarterly Journal of Microscopical Science*, that the disease of the *Musca domestica* was observed by Dr. Cohn, and [illegible] that it was naturalised, the part [illegible] in the "Nests and Eggs" [illegible] of the fly. Necessarily, it was [illegible] to the microscope to [illegible]. It is, that only [illegible] Mr. Berkeley determined [illegible] by which [illegible] by which [illegible] that of [illegible] part [illegible] apparently [illegible] to [illegible] that the fly [illegible] to [illegible] attached [illegible] its [illegible] to the [illegible] whatever it had settled [illegible]. The [illegible] the [illegible] to [illegible] [illegible] the [illegible] separated by [illegible], and [illegible] suffering [illegible]. On dissecting such a fly in a little [illegible] and [illegible] of the [illegible] will be evident by the escape of a mass [illegible] similar spores to those surrounding the fly; almost all the soft tissues have disappeared, nothing being left save the tracheal tubes and the chitine, the fungus having preyed upon all the soft parts, and probably suspending its growth for lack of moisture. It is not easy to make a good dissection of such a fly, as its body is so completely dessicated that it breaks to pieces very readily; but, should moisture be supplied by floating the fly on the surface of water, the fungus will grow again rapidly. This fungus does not seem capable of propagating the disease in other flies, probably needing a predisposing habit for its development, as I have kept flies affected with the *empusa* in contact with healthy flies without their contracting the disease. Little is at present known relative to the life-history of this fungus; but if, just about this time of the year, the blood of a sickly fly be examined, a number of free cells may be noticed, which have been supposed to be the sporules of this disease; but this needs further investigation before it can be definitely settled. We are aware that fungoid diseases affect many insects, as instanced in the muscardine affecting the silkworm. The *Botrytis bassiana* principally concerned in the production of this disease is supposed to enter through the spiracles, the sporules being drawn into the tracheal tubes of the silkworm, where they develop so rapidly that the tubes become blocked up; now, in the fly, the tracheal tubes seem remarkably free, only the soft tissues being consumed by the growth of the fungus.

Dr. W. B. Carpenter, in his work *The Microscope and its Revelations*, states that it is not at all an uncommon sight in the West Indies, to see a species of *Polistes* (the representative of the wasp in our own country) flying about with fungoid plants of their own length projecting from some part of their body, their roots having a firm hold of the soft structures within; and he gives various instances of vegetable fungi infecting insects, but does not offer any explanation of their origin. This *Empusa muscæ* may be properly classed with these fungi; and, while admitting the fact that contagion may be carried by flies, no danger to the human subject need be apprehended from this disease, which is one peculiar to insect-life alone.—I am, sir, yours obediently, T. CHARTERS WHITE, M.R.C.S., F.L.S.

Science Club, 4, Savile Row, October 17th, 1880.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Collie, Homerton; Mr. F. Wallace, Hackney; Mr. Baker, Brentwood; Mr. A. W. Reid, Canterbury; Mr. E. D. Farmar, London; Mr. G. Eastes, London; Dr. F. P. Atkinson, Kingston-on-Thames; Dr. T. S. Dowse, London; Dr. D. Newman, Glasgow; Dr. P. M. Braidwood, Liverpool; Mr. T. S. Moore, London; Mr. P. Metcalfe, Norfolk Island; Dr. Stirling, Aberdeen; Mr. W. Robinson, London; Dr. G. H. Fitzgerald, Liverpool; Mr. R. Clement Lucas, London; Dr. [illegible], London; Mr. J. C. P. Muir, London; Mr. A. Jackson, Sheffield; Mr. R. W. Potter, Hanley; Justitia; Dr. Ernest A. Jacob, Leeds; Mr. A. Hallowes, Maidstone; Mr. W. D. Hemming, Bournemouth; Mr. B. Baker, Brentwood; Mr. W. Mac Cormac, London; Dr. J. Rogers, London; Mr. W. S. Byrne, London; Dr. W. Munro, Manchester; Mr. J. White, Nottingham; Mr. Donald N. Waser, Burnham; Mr. W. Holmden, Edgbaston; Mr. J. Hutchinson, London; Mr. St. Vincent Mercier, London; Mr. Lawson Tait, Birmingham; Dr. H. W. Larkin, Buxton; Dr. R. Saundby, Birmingham; Mr. F. Jordan, Birmingham; Dr. S. W. Smith, Pershore; Dr. F. Henderson, Helensburgh; Mr. M. J. T. Knight, Carlton; Dr. W. L. Winterbotham, Bridgwater; Mr. J. Clegg, Epping; Mr. James Allen, London; Dr. G. Whittle, Liverpool; Our Aberdeen Correspondent; Mr. J. C. Searle, Buxham; J. G. H.; Our Paris Correspondent; Dr. A. Duke, Dublin; Dr. Donkin, London; Dr. R. Lindsay, Salisbury; Mr. F. E. Cockell, jun., Dalston; Dr. W. H. Day, London; Mr. H. Armstrong, Newcastle-on-Tyne; Mr. J. Allan, Edinburgh; Mr. W. Rendle, London; Mr. G. Scudamore, London; Dr. T. Trollope, St. Leonard's-on-Sea; Our Edinburgh Correspondent; Dr. J. B. Power, Kingstown; Mr. Stanley Rogers, London; Dr. W. Moxon, London; Dr. Robert Lee, London; Mr. Walter Dunn, Manchester; Dr. C. H. Drury, Pulham St. Mary; Rev. H. S. Lush-Symms, Newlyn; Mr. W. Whitehead, Manchester; Mr. A. O'Doran, London; Dr. Louis Henry, Melbourne; Dr. Luke Armstrong, Newcastle-on-Tyne; Our Dublin Correspondent; Dr. G. R. Carter, Anerley; Mr. [illegible], Newcastle-on-Tyne; Dr. More Madden, Dublin; etc.

BOOKS, ETC., RECEIVED.

[illegible]. By William Cayley, M.D., F.R.C.P. London: J. and A. Churchill. 1880.

[illegible]. London: J. and A. Churchill, 1880.

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REMARKS
ON
COLOURS AND COLOUR-BLINDNESS:

Being an Introduction to a Discussion in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

By F. C. DONDERS, M.D., LL.D., F.R.S.,
Professor of Physiology in the University of Utrecht.

You know, Mr. President, that it is in accordance with your own kindly expressed wish, that I have the honour of being here on this occasion, and in this place. What I am going to say about the sensation of colours and colour-blindness has no pretension to be an address. It will be merely an introduction to the subject. I think an historical sketch will give the clearest understanding of the different questions to be touched on.

1. THEORY OF COLOUR-PERCEPTION.—Besides white, Wt., and black, Bk., we distinguish a great variety of *Colours*. These admit of being all arranged side by side, raywise, in a closed circle, but only in one certain order, not in any other. Starting from green, G, we come on the one hand through yellow, Y, to red, R; on the other hand through blue, Bl., to violet, V; and R and V meet in crimson, Cr. Proceeding quite empirically, selecting all the tints or hues which it was possible for a perfect sight to distinguish one from another by the slightest well appreciable gradations, I arrived at the number of one hundred; and it is remarkable that when these hundred are arranged with equal areas radially in their due order in a circle, those standing diametrically opposite to each other are, within narrow limits, the complementary ones. Chevreul, starting from three colours, R, Y, and Bl, as equidistant in the circle, was obliged to make very unequal stages from tint to tint, and did not obtain the complementaries opposite to each other.

Each *tint* or *hue* (nuance) has its various *shades* of *saturation*, and every shade its various *degrees of luminosity* (or *tones*).

This three-dimensional system of colour-sensations is quite adequate to the needs of common life, of art and industry. But the task of physiology extends further. It has to show the relations between light and sensation, and to examine the action in the retina, the conduction in the nerve, and the corresponding processes in the brain.

The first and the greatest step was Newton's discovery of the relation between refrangibility and colour, which he "found very precise and strict". Newton also examined the mixture of different rays. The mixture of all the rays forming Wt, he found "most surprising and wonderful". If not too far from each other, two colours form the intermediate. Whether Wt can be produced by only two sorts of light he never decided: "it was to be tried again". Even more than a century afterwards this was not yet done.

As to the action of the light on the retina, Newton considers that the rays "impinging upon the ends of the optic nerve" excite "vibrations", which will run through the optic nerve to the sensorium. Here they are supposed to affect the sense with various colours "according to their bigness and nature".

In reference to this hypothesis, Thomas Young remarks "that the frequency of these vibrations must be dependent on the constitution of the substance of the retina." And as it is almost impossible that every sensitive point should have an infinite number of different particles, it becomes necessary to suppose the number limited, for instance, to the three principal colours, R, Y, and Bl, and put in motion more or less forcibly by undulations differing, more or less, from *a perfect unison*. Each sensitive filament of the nerve may consist of three portions, one for each principal colour. Afterwards Young came to R, G, and V.

Clerk Maxwell and Helmholtz adopted the theory of Young. As to the fundamental colours, the former came to R, G, and Bl; the latter, after the experiments of J. J. Müller, who found that the (saturated) violet of the spectrum cannot be produced by blue and red, returned to the colours of Young.—To each fundamental colour seems to correspond not only a specific molecular action, but also a morphological element, of the retina. Helmholtz found the colours of the spectrum to be not saturated: he therefore concludes that all the luminous rays act on the three elements in the retina.

In this form, the theory presents some difficulty. The action of the light on the retina is to be considered as photo-chemical. Beyond the red, *no action at all* manifests itself. The theory requires three different actions on three different elements. Now it seems to be unintelligible, either from a chemical or from a genetical point of view, that two, or even three, actions, should begin just at the same wave-length. Each action must be supposed to be a special function of the wave-length, as it has its own maximum. According to this statement, R and V must be two fundamental colours, corresponding to the beginning and the end of the spectrum. With R and V, G alone suffices as the third fundamental colour; Y does not. Now G of the spectrum cannot be saturated, because the same rays excite necessarily red and violet. But the want of saturation of the extreme red and violet (omitting fluorescence) must have another cause.

We find this in the *sensorium*. Where the extreme red fails (in red-blindness) in the spectrum, there white fails. By this fact, white is excluded as a special energy (*contra* Hering). It ought to be considered as a *simultaneous production* with every other colour in the sensorium. And it may be produced there, where white is produced by combination of several impulses, *i.e.*, in the cells of the cortical substance corresponding to the retina (Ferrier, Munck). The *complete* molecular action in these cells may correspond to white; some *incomplete*, or partial, action to different colours. One action in the retina is supposed to excite a partial, and, in some degree, a complete action in these cells, producing a specific, but not saturated colour. Different actions are here combined: those of red and green to that of yellow; those of green and violet to that of blue (both less saturated than the fundamental); those of red, green, and violet, or of blue and yellow, to white (saturation = 0).

The resulting molecular action is not simply a compound of two or more, nor is the corresponding colour: the resulting process and colour both can be characteristic, as we find in white, yellow, and blue. In Cr we *see* R and V: simply a compound, both existing together. In Wt we do *not* see R, G and V; nor, in Y, R and G; nor, in Bl, G and V; the combination is *not* simply a compound; it is an action *sui generis*, produced by simultaneous action of the two or three, but different from these, *specific*.

In other combinations we do really distinguish the component colours in their resultant, *e.g.*, in the combination of white with every colour, in that of yellow with each of its component energies, R and G, in that of blue with each of its component energies, G and V. Here also the two actions may co-exist, the one beside the other.

These combinations explain the gradual transitions in the spectrum and in the circle of colours.

The difference in the notion of *simple* colour and of *fundamental* colour (energy) also clearly appears.

In the same cells of the centrum (cortical substance) we suppose the seat to exist of the simultaneous contrast and the induction of light, partially too of the successive contrast and the secondary images.

The action of peripheric cells can only manifest itself by an uniform effect on nerve-fibres; the central cells may, in diversity of action, directly represent every diversity of sensation.

II. COLOUR-BLINDNESS.—Dalton's case (1794) excited great interest. "I see", he says, "in the spectrum only two (or at most three) distinctions. These I should call yellow and blue (or yellow, blue, and purple). My yellow comprehends the red, orange, yellow, and green of others; and my blue coincides with theirs. That part of the image which others call red, appears to me *little more than a shade*, or defect of light: after that the orange, yellow, and green seem *one* colour, which descends pretty uniformly from an intense to a rare yellow, making what I should call different shades of yellow." Green and blue "are strongly contrasted"; "the purple appears to be blue much darkened and condensed." Dalton's defect was what is now called *red-blindness*. He drew no distinction between the cases he saw.

Seebeck distinguished two classes of colour-blindness; his second class is characterised by defect of light in the red, as in Dalton's case; his first class has no defect of light in the red. This class has been supposed to be, and has been called, *green-blindness*, according to the theory of Young.

Sir John Herschel supposed, and Clerk Maxwell proved, that the colour-blind see only two colours: they have a dichromic system (Herschel, 1832). In the spectrum, they see only two colours: that on the red side we call the *warm*, W; that on the blue side we call the *cold*, C. They see a grey stripe, N, between them, there, where

$$\frac{\partial W}{W} = \frac{\partial C}{C}$$

Green, yellow, orange, and red belong to W; blue and violet to C. W and C they distinguish easily. But the different colours belonging to W, or to C, are confessed by the colour-blind: such differences as

they do distinguish between these are differences of saturation and of intensity.

Trying to apply our words to their sensations, their W they call *red*, if much saturated (and brilliant); *yellow*, if intense and moderately saturated; *green*, if pale. And they often decide rightly. But red may be pale, yellow dark, green much saturated; and then confusion is inevitable. With the different colours belonging to C they have no success at all; they call them all *bluish*, or *blue*.

The stripe N produces a second series of confusions. It is found, as we saw, in the bluish green. Now, pink is another neutral colour, producing the same equilibrium of W and C; so that it also is seen grey. Bluish green, pink, and grey are therefore the same, all grey. But the least predominance of W or C is recognised.

All this holds good as well for red-blindness as for green-blindness. It is inherent in the dichromic system. But there are differences. C seems the same for both; but W is not. In the green-blind, W, in its curve of intensity, scarcely differs from our red; but in the red-blind it approaches green, and in some cases reaches it. Here the spectrum is darker and shortened at the red end; the maximum of intensity is much farther off, and N is nearer to the blue.

Hence many differences as to the confusion of colours. The red-blind person sees as black the dark-red brown of the green-blind. The same red and orange correspond to a dark yellow or green in the former, to a light in the latter, etc. Moreover, most remarkable differences occur in regard to the stripe N: that of the green-blind is W for the red-blind; that of the red-blind is C for the green-blind; and also there is a pink, which is blue for the former, red for the latter.

All the colours of our circle, as the red-blind or the green-blind see them, can be made up by yellow and blue with black and white. The differences are seen at once if represented, as in the diagram before you, on two circles inside the circle of our colours. In both the same tones recur twice, and twice the neutral stripe N—once between W and C in the greenish-blue, and once between W and C in the pink. But to the red corresponds a much darker yellow in the red-blind, to the bluish-green a darker blue in the green-blind. W and C must be considered as complementary colours. To which of our sensations they correspond cannot well be told: probably C is blue or violet, W is yellow, approaching to red in green-blindness, to green in red-blindness.

As to the *methods of investigating* or *testing*, many may be recommended, all rather satisfactory. The general principle in all is *comparison*:

a. Of *Similar* (Seebeck, Holmgren);

b. Of *Identical* pseudo-isochromatic colours (Maxwell, Rosen, Stilling, Cohn, Donders).

Holmgren's ingenious method is well known and much employed. Maxwell gave equations on the disc and with spectrum light; Rosen's colorimeter gives equations of the two neutral colours; Stilling used pseudo-isochromatic letters, Donders pseudo-isochromatic woollen stripes. The double spectroscope enables us to compare colour, saturation, and intensity for each length of waves. This is what we want for scientific purposes.

Differences between green-blindness and red-blindness are also detected by some of these methods; by those of Holmgren, Maxwell (chiefly used for scientific purposes), Rosen, Stilling (last plates 1880), by the stripes of Donders, and, with great accuracy, by the double spectroscope.

For practical use should be recommended:

1. The sorting out from a series of *blue* and *violet* woollens of different degrees of saturation. It shows the slightest degrees both of red-blindness and of green-blindness.

2. The *woollen stripes*. These enable us to distinguish between the typical cases of red-blindness and green-blindness.

3. The *double spectroscope*.

The various methods of investigation confirm the view that the two categories of colour-blindness should be distinguished, now generally called red-blindness and green-blindness. Though transitions are met with, the large majority of cases may be referred either to the first or the second class, thus showing that there are two classes; for, if all the cases represented, or belonged to, a single class, the majority would hold the middle place.

Another question is this: Are the two energies, in red-blindness and green-blindness respectively, the green and violet, and the red and violet, of the normal eye? As to the sensations, no answer can be given. As to the intensities and saturations, as functions of the wave-length, for W and C, we find C, in both, to be rather equal to the violet of the normal eye, and W, in the green-blind, to be rather equal to the red of the normal eye. But, in the red-blind, we find W very different. In the ordinary cases, certainly W does not descend so far as green; but, in rare cases, it may even go beyond.

We could not expect that the two energies of the dichromic system would exactly correspond to two of the energies of the normal trichromic. This result does not conflict with the theory of Thomas Young.

Violet-blindness.—Besides red-blindness and green-blindness, a few cases of violet-blindness have been observed. I examined one with great care. The spectrum is much shortened at the violet, somewhat at the red, end. The maximum of intensity is in the yellowish-green (about 560 millionths mm″ wave-length). A greyish band, very broad (one-third of the spectrum) in feeble light, separates the two colours in the spectrum. The middle of that band is about the yellow. W, which the violet-blind person calls red, is not intense, but rather saturated; C, which he calls blue, is more intense, but little saturated.

Now yellow objects appear colourless, pale green and pale blue also colourless; the blue of the sky is grey. Saturated blue and green look alike, but the blue looks darker. Blue and violet woollens of very different degrees of saturation are correctly sorted apart, though very slowly.

The sensibility for light, which does not differ from the normal in green-blindness and in red-blindness, is much diminished in violet-blindness; and the sensibility for colour still more so. The acuity of vision is normal. No pathological changes are visible in the eye-ground.

Complete Colour-blindness.—There are also rare instances in which the perception is reduced to white, black, and the intermediate shades of grey. The cases I have seen are still more pathological than those of violet-blindness.

Imperfect Forms of Colour-blindness.—In some cases, there is only a difficulty in distinguishing very pale colours, and in sorting out blue and violet. This may depend on unproportionate development or saturation of the three energies.

The *general formula for colour-perception is this:* The number of energies is from one to three; and each energy is, as to its intensity and its saturation, a rather variable function of the wave-length. It is very desirable that these functions should be determined accurately in a large number of cases of *imperfect* colour-blindness, in order to characterise some types of this, as has been done for *perfect* colour-blindness.

On the present occasion, I must confine myself to the mode of measuring the faculty of distinguishing colours in cases of imperfect colour-blindness for a practical purpose (railway service). The principle of the method has been to measure the angle of vision under which colours, chiefly red, green, and grey or white, could be distinguished *quickly* and *with certainty*. I used a light, behind a disc furnished with openings of different sizes, able to show each colour under different angles of vision, and in different degrees of luminosity. The disc contains several glasses, some colourless, others coloured, to resemble those used as signal-lights on railways. It had been previously determined at what distances of the light behind the disc the *normal* eye was able to distinguish each of the colours when applied to an opening of one *millimètre*, at a distance of five *mètres*. Now, in cases of *imperfect* faculty, I determined the distance and the size of the opening required to distinguish the same. In this way, the relative faculty of distinguishing was found for every colour.

The light could be made to approach or recede from the disc, in order to vary the degree of luminosity, by which the colour-blind are in the habit of forming their judgments about colours.

The same principle was applied by using reflected daylight; but, as this varies much in intensity, comparative determination with a normal eye is always required. The method is also of use in detecting colour-blind central scotoma, in some forms of amblyopia.

III. THEORY OF HERING.—In different quarters, and for a long time, objections have been alleged against the theory of Young. It was said not to account for some facts of normal vision, and to explain only in a forced way some facts relating to colour-blindness.

A few years ago, Ewald Hering altogether rejected Young's theory, in which he found little to praise, and he substituted a new one of his own in its stead. Consulting his sensations, Hering found, besides white, Wt, and black, Bk, four simple colours: R, G, Y, and Bl. These he combined into three pairs: Wt and Bk, R and G, Y and Bl. These three pairs are his six *variables*, determining every sensation of light and colour.

Wt and Bk he considers as corresponding respectively to *dissimilation*, D, and *assimilation*, A. R and G, Y and Bl, are supposed to be in the same relation to D and A. Which of each pair corresponds to D, and which to A, he does not decide.

Now the two colours of the same pair are said to annihilate each other; they are not regarded as complementary colours, combining into white, but as antagonistic colours (*Gegenfarben*).

In connection with his psycho-physical law, Hering develops his theory in a mathematical form, which may be omitted here.

The theory of Hering has not the same wide bearing as that of Young and Helmholtz. It relates exclusively to the central processes. These are supposed to correspond to the sensations, to which we readily agree. No attempt is made to find out what is going on in the retina, under the influence of light; no attempt to follow the retinal processes up to the brain; even no attempt to point out the relation between light and sensation. The whole theory is based upon the sensations, and on the supposed corresponding processes (of D and A) in what is called, in the most general sense, *optic substance* (*Seh-substanz*).

I consider, therefore, that the theory is incomplete. Still, having been set forth in lucid terms, and logically developed; being also simple in its conception, and easy of comprehension, it has been received with assent by some physiologists, but chiefly by ophthalmologists.

At first sight, it appears to account in a nice and simple way for every form of colour-blindness. Where R and G could not be distinguished, they might be regarded as absent. It was simply *red-green blindness*, as they call it, neglecting every difference between red-blindness and green-blindness. Yellow and blue would be the only remaining sensations.

But we have seen that this is quite a mistake. A slight notice of the degrees of saturation and intensity of the colours in the different parts of the spectrum would have prevented it. R and G are confounded, not because they are absent, but because they belong to the same colour, W, of the dichromic system, being at the same side of the neutral stripe N; and Y, belonging quite as much to W, is not any better distinguished from red or green, provided they acquire the same saturation and intensity (*e.g.*, on the revolving disc, by adding the required black or white). There cannot be a question of Y remaining, and of R and G being absent. For all of them, it is the same sensation, most likely approaching more to the red in green-blindness, more to the yellowish-green in red-blindness. To suppose that green and red are simply absent where they are confounded, is quite the same as to declare blue and violet absent because they cannot be distinguished the one from the other.

Objections have been advanced against Hering's theory, either directly or indirectly, by Bruecke, Von Kries, Küster, Kitto, Fick. In my own opinion, also, Hering has not succeeded either in his contention against Young and Helmholtz, or in making good his own theory.

My chief objections are these.

1. Wt and Bk may (generally speaking) be opposed to each other, as D and A; but there is no reason for opposing in the same way R and G, Y and Bl. Even Hering does not try to determine which of each pair should correspond to D, which to A. In fact, they all four are active in their specific line; all are in the same relation to D and A. Each of them is opposed to A, corresponding to Bk, the negative of Wt, and of every colour.

2. The *simple* colours are not *complementary*, as Hering's theory asserts. The complementary of R is not G, but bluish-green; that of Y is not Bl, but violet-blue. How, then, can they be considered antagonistic, as in Hering's theory they are?

3. The complementary colours (and the two colours of Hering's pairs) do not annihilate each other, but combine into white. This is proved by mixture. *E.g.*, in the double spectroscope, violet (a saturated colour) and intense yellow, covering each other halfway, produce a white manifestly more intense than the yellow. Another yellow, equal in luminosity to the violet used, joined to the same intense yellow, does not produce a yellow intenser than the white resulting in the first experiment. Now, according to Hering's theory, the luminosity should be the sum in the last, the difference in the first; but manifestly it is the same in both.

Two complementary spectrum-colours, s and s', pass through two slits illuminating the fundus of a dark chamber; I found, if $s = s'$, also $\frac{s+s'}{2} = s = s'$. I tried, also, to compare the acuity of vision at $\frac{s+s}{2}$ and s or s'. The experiment presented a difficulty: in violet, blue, and even in green light, the retina, after being allowed to become sensitive by repose in darkness, presents a great central scotoma, occupying the yellow spot, and making it impossible to distinguish any letter at a luminosity under which, in red light, reading is extremely easy. Here we were reduced to experiments with indirect vision. Of this, the acuity was found equally good at $\frac{s+s}{2}$ as at s or s'.

The scotoma mentioned I do not venture to explain. One of my assistants, Dr. Waelchli, is pursuing these interesting phenomena with the greatest care and industry.

4. White is not a direct, independent sensation: it is absent in the spectrum, where, in red-blindness or violet-blindness, the specific colour is absent.

5. The theory of Hering is quite insufficient to account for the different forms of colour-blindness.

AN ADDRESS
ON THE
STUDY OF PHYSIOLOGY IN RELATION TO MEDICINE.

Delivered at the opening of the New Physiological Institute, Trinity College, Dublin, November 1st, 1880.

By J. M. PURSER, M.D.,
King's Professor of the Institutes of Medicine.

ALTHOUGH the delivery, at the commencement of the session, of a formal introductory lecture has been wisely discontinued at this, as at most of the other Dublin schools, yet, on an occasion like the present, I feel it would be ungracious to you, and ungrateful towards my colleagues and the heads of the college, were I at once to plunge into the subject of our course without first bidding you welcome to this new building, and trying to present to you, as it were, a programme of the studies to be here followed, and without expressing publicly my sense of the wise and far-sighted liberality of the Board, who have, even at a time when money is not plentiful, supplied the necessary funds for the erection, furnishing, and maintaining of this institute. In this matter, I feel I may express your gratitude as well as my own; for, although my facilities for teaching are much advanced by the convenience which this place will afford, it is for your sake that the work has been done, and it is you who will benefit by the advantages which the ample space and appliances of this place offer. In this, as in most of the improvements in this school, the chief credit lies with Dr. Haughton, who, with the committee of which he is chairman, has in the kindest manner fallen in with all my suggestions, and in every way facilitated the carrying out of my wishes.

[Professor Purser, having contrasted the difficulties under which former courses of his lectures were conducted, in consequence of the ill-suited accommodation available, with the facilities which would now be at his disposal, to the great advantage of both student and professor, continued as follows.]

And now, gentlemen, I should like to endeavour to point out to you the position which the studies you have to pursue in this place occupy in regard to the whole course of your medical studies. It is too much the opinion among students, that each subject which they take up is distinct in itself, and has no relation to the other subjects in the course; that the chief object of anatomy is to pass the half, and that, once this is done, anatomy has served its purpose, and may be dismissed from the mind, in order to make way for those subjects whose utility will appear at the M.B. And I think we professors do not take sufficient pains to point out to you the connection which the different subjects we teach have with one another. I know that I am not singular in feeling that we take too little cognisance each of what the other is teaching; and that we endeavour too little to make our lectures and courses of practical instruction complementary one of the other, and continually to point out the unity of the whole medical curriculum. The ground which has to be traversed by a medical student in four years is enormous; and it is only by seeing clearly from the outset the whole lie of the country, and the course of the roads, that he will be able to make a straight and successful journey, avoiding false turns which may lead him altogether astray, or compel him to traverse the same part of the road twice over, and thus involve loss of time and energy.

The main point, I think, for students and teachers to bear in mind, is this: that you came here to learn medicine and surgery, not to be made anatomists, chemists, or physiologists; and that, if it were possible to teach you medicine and surgery as these should be taught, without teaching you anatomy, chemistry, and physiology, it would be dishonest on the part of the College to compel you to study these sciences, which are sometimes called accessory, but which I would call fundamental with regard to medicine. But this University does not believe this possible, and the smallest consideration will show the justice of this opinion.

The idea of the possibility of separating the study of medicine from that of the sciences on which it is based, is supported by the practice which prevails in this city more than anywhere else, and which is encouraged, I think mistakenly, by many eminent teachers; that is, the practice of attending hospital in the first year. To many students, this does no more harm than the loss of time involved; but to others, the injury is never recovered from. The injury consists in this: the student, after for a time attempting to understand things which, for want of preliminary knowledge, it is impossible for him to understand, gives up in despair, and becomes content to hear phrases and words which carry no meaning to him, and to use and repeat these expressions without having any clear understanding of their import, and to become addicted to that most pernicious and common habit, so fatal to all accurate thought and scientific advance, the habit of what the French call paying oneself with words. There is no feeling I would try to encourage so strongly in a student's mind, as the feeling of discontent which the knowledge of a word without a knowledge of its meaning should engender. But I am afraid this feeling of discontent finds but little place in the breasts of most students; and this fault is, in my opinion, largely due to their beginning their studies at the wrong end, and trying to learn the most complex and difficult things before they have mastered, or even begun to learn, the comparatively simple and easy elements of which these are composed.

The public have an idea of disease somewhat of this kind. They look on disease as something altogether distinct from the person diseased; and each disease has its own peculiar antidote, by which it may be expelled from the body it has invaded. This is the parasitic theory of disease in its crudest form, in which each disease or symptom is like a wild beast; and, as we can know the appearance, manners, and customs of a tiger without knowing anything of the man he eats, so we can know all about measles or small-pox without knowing anything of the body which is affected by these diseases. Many think that the study of the body in health is "theoretical", and something quite distinct from the study of the body in disease, which is "practical". But, gentlemen, this is not the medicine we wish to teach you. We wish you to know that, apart from the diseased man, we know next to nothing of disease; that disease is known only by the reactions which it produces in the animal body, by the disturbance it causes in the various functions; and that, unless these functions are known as they are performed in health, unless the various laws regulating their performance, the various means by which their performance can be influenced, are well understood, there can be no rational diagnosis of what are the disturbances under which the patient labours, or how the disturbed function can be brought back to its normal state.

An example will illustrate the two schools of medicine. Three patients come to you, all complaining of the same symptom, bad breathing or dyspnœa. The greater number of patients look on this symptom as a morbid entity, to be specifically treated, and to be exorcised out of the body by a more or less nauseous bottle. The enlightened practitioner, however, says to himself, "Here is a person suffering from dyspnœa, from a disturbance of the great function of respiration. This function, in order to be normally performed, involves three things: 1. The air must freely enter and leave the lungs; 2. The blood must flow freely through the pulmonary vessels; 3. The blood must contain sufficient hæmoglobin to carry the oxygen from the lungs to the tissues." In other words, the disturbance of respiration may be caused by lesion in the lungs, heart, or blood; and, examining with this view his patients, he finds that one has bronchitis—his air-tubes are choked with fluid, and the entrance of air is prevented; another has valvular disease of his heart, which prevents the even flow of blood through the lungs; while the third, with healthy heart and lungs, has a blood deficient in colouring matter. How these differences affect treatment is evident. Now, it would be a very easy thing, if such existed, to have what is vulgularly called a tip, or, scientifically, a specific, for bad breathing; while, to unravel the cause of bad breathing, or any other disturbed function, is difficult, and involves a knowledge of the healthy function, or, in other words, of physiology. And recognising this, and wishing you to follow the true, although difficult, path to real knowledge, the university has put physiology where it ought to be among the subjects which you are advised to study early; and, to facilitate your study, this place has been built.

Now, what is physiology? or what are the phenomena of the living body in a state of health? Many of these are of a purely physical character, such as the formation of the image on the retina, in a large part the circulation of the blood, the mechanism of locomotion, and many others. Others are purely chemical, as the change of the food in digestion, the taking up and giving off of oxygen by the blood, and a host of others. These are merely manifestations in the living body of the same physical and chemical phenomena which are manifested in dead matter; but, as they form such a very important part of the processes which go on in the living body, it is necessary to learn physics and chemistry, or to learn to understand these phenomena in their simple manifestations, before you study them in the body, where they are much more difficult to investigate and understand. Besides these, we meet in physiology a large class of phenomena which can be explained neither by physics nor by chemistry; these we call vital, because they are peculiar to living beings. Now, persons who do not know any better, and some who ought to know better, object to physiologists, "You are following after a vain shadow. Your first business is to find out what life is, and yet you know no more of this than was known a thousand years ago." The plain answer to this is, that it is quite possible to study the phenomena of life, and the laws regulating these phenomena, without knowing anything of what life itself is. The laws of light were well studied while it was believed to be caused by particles of matter emanating from the luminous body. The laws of electricity were successfully investigated before anything was known, if, indeed, anything is yet known, as to what electricity is. So of the other physical forces, and the laws of chemical affinity; and, by the same experimental method, the laws of life must be studied, and are being studied, with a success which, considering the enormous complexity of the problems, is truly amazing. And, in considering the place of physiology among the sciences, you will see that it is an experimental science, much more closely allied to physics and chemistry than to comparative anatomy, zoology, or systematic botany.

On the importance of a study of human anatomy, however, it is unnecessary to insist. It is manifest that the first thing which must be done, in order to understand the working of a complex machine, is to know the parts of which it is composed; and every child recognises this, for, if you give it a mechanical toy, it takes the first opportunity of breaking it up, to see what the inside is made of. So, gentlemen, you are directed to begin your studies by breaking into the wonderful machine of our body after it has come to rest, and to learn how its various parts are constructed.

Thus I divide your studies into three great parts, each dependent on that which went before it: 1. Anatomy, physics, and chemistry—three independent studies; 2. Physiology, which involves all these; 3. Pathology, or morbid physiology, or medicine, whichever you like to call it, which involve all that went before.

Now, gentlemen, I have said your business here is to learn medicine; and you learn the other subjects only as stepping-stones to this. You do not come here to be made anatomists, or chemists, or physiologists. If you want to be an anatomist, you must give your life to it; and so of the other sciences. But you learn those parts of these sciences which are essential, in order that you may take the next step safely: so much anatomy, physics, and chemistry as are essential for physiology; so much physiology as is essential for medicine, of which you should know all that is known. Now, here I wish to point out what seems to me to be one of the chief uses of lectures. In his admirable inaugural address last year, Professor Macalister stated that one of the most important uses of lectures was to keep the student in advance of his text-books, by bringing under his notice new discoveries of importance—thus teaching him more than his books. This is unquestionable; but I would say that the chiefest use of lectures is to teach less than is in the text-books, but to teach it in a different way. In the text-book, the importance given to each part of a science is in relation to the other parts of the same science; and this is the relation they should hold, if you were about to learn the science for its own sake. But, in our case, each science is taught in order that the next may be learned; and hence to some parts an undue prominence should be given, while others should be passed over lightly, or altogether avoided. In this way, what may be called a partial and distorted view of each science is taught. Of course, it would be better if all medical men were complete anatomists, chemists, and physiologists: and, if your life could endure for a thousand long years, you might hope to become so; but in four you had better not expect to be able to accomplish this. Now, it would be easier to guide yourself through the complete study of a science than through such a partial one as that which I have described. In such a study, you must have the guidance of one who knows the whole subject, and can apply its parts in such a way as to support safely the great structure which is to culminate in a knowledge of medicine. Moreover, in such studies as ours, which deal with sciences that are continually fluctuating, the partial views of each of these which should be given the medical student are continually changing; and it is by presenting these changed pictures, as they arise, to his class, that the lecturer has the advantage over the writer. This value of lectures will, I think, never be superseded.

As I said before, I feel strongly—and I know this feeling is shared by

some of my colleagues—that there is not sufficient combination among us; that we each know too little what the other is teaching. In the ascending scale of studies which I sketched, each teacher should teach with a view to his successor, and each should be able to refer to what his predecessor has taught. Although I admit my deficiencies, I have for a long time tried to do this. I omit some chapters of physiology almost completely, which, although long and difficult, have but little bearing on medicine, in order to devote myself to those subjects whose understanding is essential in almost every clinical case. And many of you know that, in the hospital, I am never tired of showing how every case, from the simplest to the most severe, must be investigated by reference to the teachings of physiology.

You live, gentlemen, in a transitional period of medical education. You are compelled to take advantage of the modern practical methods of instruction, while you are not as yet emancipated from one of the great abuses of the old system, namely, the excess of lectures you have to attend. When, on this day, twenty-two years ago, I became a medical student, and heard my first lecture in this school, there was no practical instruction given here or elsewhere in Dublin, except practical dissecting-room anatomy. We used to hear the professor of chemistry sometimes speak of the chemical laboratory; but, so far as I know, no medical students ever worked in it. There was not a microscope in the whole school; nor, with the exception of Dr. Bennett, then himself a student, any one in the school who could use one. There were, practically speaking, no museums; and the extent to which anatomy was studied may be judged of by the fact, that the anatomical lectures were given to a scanty audience in the room which is now Dr. Aquilla Smith's museum. Yet in those days we found the number of lectures quite enough to leave us little time for independent work. Now, while the number of lectures has increased, you have, in addition, two laborious and long courses of laboratory work to attend. Everyone admits that the present lecture system requires to be completely recast; but the practical question how this is to be done—to what branches of this overgrown tree the pruning-hook is to be laid—is not so easy to settle. Before long, however, I think some change must be made; and, although I cannot tell you what this change will be, I can pretty confidently tell you the direction in which it will tend. It will diminish the number of hours you are compelled to sit on benches listening to lectures, and will increase the number of hours you will be required to spend in using your eyes and fingers and brains in practical work in the dissecting-room, in the laboratories and museums, and in the most important practical department of all—the wards of the hospital. Whenever this change comes, it will be seen that Trinity College is not unprepared for it. Our school is now well provided. It has an unrivalled chemical laboratory, a noble dissecting-room; its pathological and anatomical museums are well housed, well arranged, easily accessible, and stored with ample and constantly increasing material; while this building, whose opening we celebrate to-day, will bear comparison with any similar institute in the kingdom. Of the work which has already been done in the other practical departments of the school it is unnecessary to speak. Here we are only beginners; we are only putting on our armour, and have our spurs yet to win; but we will endeavour not to fall behind our elder comrades. And I hope that throughout all time our three great practical departments—anatomy, chemistry, and physiology—will flourish side by side, and be a credit to the university and to our country.

HEBBURN.—This district has now lost the services of Mr. John Spear, through his appointment to the Local Government Board. The present officer of health, appointed, as it would appear, without being required to devote himself exclusively to public-health work, cannot be expected to rival Mr. Spear's sanitary activity; but it may be hoped that he will follow as closely as possible in the steps of his predecessor, and guide a reluctant authority into wise ways of thinking. Before he quitted office, Mr. Spear presented to the local board a report on the sanitary history of 1879, which records the lowest death-rate for Hebburn on record—20.1 per 1,000. The birth-rate (50.6 per 1,000) is unusually high; but Hebburn has a large youthful population. Doubtless to this high birth-rate must be ascribed in part the very large proportion (59 per cent.) of deaths under five years to the total deaths—a proportion which Mr. Spear records without comment. Zymotic diseases were by no means prevalent last year, the only one seriously fatal being whooping-cough. Twelve deaths were registered from diarrhœa, six in the summer quarter. The deaths from tubercular diseases numbered 34, of which 17, or 50 per cent., were caused by phthisis. Much still needs to be done in the direction of sanitary improvement. The question of the removal of refuse is especially one needing the early attention of the local board.

THE COMMUNICABILITY OF PUERPERAL FEVER BY THE MEDICAL ATTENDANT.*

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IT is difficult to imagine a subject within the whole range of practical medicine, on which it is more necessary that there should, if possible, be general agreement and acquiescence in reliable rules of action among professional men, than that which is the theme of the present paper.

According as correct views are accepted and acted upon by him, depend the peace of mind and comfort of the conscientious obstetrician in that sad hour of trial, which sooner or later falls to the lot of every experienced accoucheur, when it is his misfortune to meet with puerperal fever in his practice. Only by an intelligent and clear apprehension of the problem under consideration can just rules of conduct be established for the guidance of the obstetric practitioner, who is charged with the management of puerperal fever cases, so as to enable him to protect the interests of his patients on the one hand and prevent himself from being unnecessarily blamed or punished on the other.

It is accordingly of the highest importance that only correct and uniform ideas on the communicability of puerperal fever should be current throughout the profession. But it is more than doubtful whether at the present time such is the case. There appears to exist a kind of ill-defined dread of the ailment as a something whose degree of communicability is of terrible intensity, but the principles regulating which are very uncertain, so that the practitioner in a difficulty scarcely knows for certain what to do or not to do; what to avoid or not to avoid. With the exception of the writings of Dr. Matthews Duncan on this subject, the literature of puerperal fever contains few records of any efforts made to determine the limits in practice that may be allowable without risk, or to point out the value of modern antiseptics, when conjoined with strict caution, to deprive this calamity of at least a portion of its terrors.

As uncertainty of action on this head leads to much inconvenience and even danger, it is the duty of the physician-accoucheur, especially as on him centres the burden and the blame associated with an outbreak of puerperal fever, to do what in him lies to acquire and disseminate sound and reliable doctrines upon the subject of its transmissibility. This is all the more necessary, as there exists in the profession an undoubted tendency to press with undue severity upon the obstetrician in this matter, and to surround his path in practice with so many rules and restrictions as to remind one of the commands made by the Egyptian monarch of old to his Hebrew subjects in the matter of bricks.

The restrictions put upon the obstetrician, as a rule, take some such form as that he ought never to see a scarlet fever patient, or, in fact, any fever patient almost. As to erysipelas, he would hardly require to remain in the same district of the county in which a case of the disease is to be found; and if he happens to have a case of puerperal fever in his practice, then, in the interests of his patients, he must leave his practice for a period, varying according to his various advisers from eight days to eight weeks, or even more. It has been otherwise urged; and I have myself listened to a well-known physician, now deceased, when he argued that he believed the poison of puerperal fever entered the fluids of the medical attendant, and was evolved in his perspiration. Accordingly, such a person could not purify himself by any kind of ablution or disinfection, and unless he suspended the practice of his profession for a period sufficient to allow of his secretions removing the whole poison from him, his patients were not safe. Such a view is as grotesque as it is incorrect. I merely refer to it as an aggravated example of the kind of ill-defined ideas that float in the minds of the profession regarding the communicability of this disease.

But in passing we ought to ask whether the rules put upon us by some physicians and surgeons are acted up to by themselves, when placed in similar circumstances.

Suppose a physician is called to see a case of scarlet fever, does he for the next week or a fortnight decline to attend any case of pneumonia or of phthisis, except in the case of patients protected by a previous attack of scarlet fever? Or suppose a surgeon meets in his practice a case of phlegmonous erysipelas or of pyæmia, does he at once announce his determination to relinquish his practice for a week, or even a day, and hand over his amputations and resections, etc., to another? The answer to such questions is, that no one ever dreamed that such was necessary.

But I reply that those who are so fond of imposing hard terms upon

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

the unfortunate obstetrician forget that they are themselves doing with impunity every day the very things they try to prove it wrong for the obstetric physician to do. There is no one, who is acquainted with the misery and misfortune which a single case of puerperal fever brings with it to all concerned, who will not be ready to make any sacrifice, and to undergo any loss or privation, which is necessary in order to avoid the occurrence of such cases.

But the whole question turns upon what is necessary.

It appears to me that the time is come, when, in the light derived from a better knowledge of what puerperal fever is, and what is the exact nature of the infecting agent, we ought to reconsider our opinions regarding its communicability and endeavour to determine with greater accuracy what is lawful, and what is unlawful, in regard to our intercourse with patients suffering from this disease. I do not mean that we are to restrict the physician and surgeon in the direction of limiting their attendance upon patients. I mean to say that with proper care and cleanliness it ought to be the rarest occurrence possible for a physician or surgeon to be the means of communicating disease from one patient to another. But I mean to claim the same privileges, or rather rights, for the obstetrician in the performance of his duties. A physician, a surgeon, or an obstetrician, who neglects the strictest rules of cleanliness and the necessary precautions against being a carrier of infection, may become a circulating focus of infection any day. But such is not necessary and is, I hold, in every case avoidable.

The uncertainty in regard to what is admissible or inadmissible in regard to the obstetrician's dealings with puerperal fever, seems to me largely attributable to the existence of incorrect views regarding the essential nature of the ailment.

It was long customary, and in some quarters where one would expect clearer views is still so, to regard puerperal fever as a specific fever of very terrible intensity due to the creation of a specific virus, analogous to the poisons believed to give rise to zymotic fevers, but the laws regulating the contagiousness or infectiousness of which are very ill-known. In consequence of this, a state of great uncertainty and of unnecessary alarm has arisen in connection with the spread of the disorder. People have spoken and written of the disease becoming epidemic here and there, and have ascribed its spread to atmospheric and telluric influences, which are as little satisfactory as consoling in dealing with this important subject. The question of its epidemic nature has, it appears to me, been set to rest by means of the various statistical and argumentative contributions of Dr. J. Matthews Duncan to this subject—more particularly by the able statistical paper of that author published in the *Edinburgh Medical Journal*, March 1876.

In the famous, but eminently disappointing, discussion on puerperal fever in the London Obstetrical Society in 1875, it is sufficiently observable that certain of the speakers exhibited a leaning towards the specific fever idea, though the great preponderance of opinion was clearly towards regarding the disease as essentially a wound-fever. But I am anticipating.

The occasional occurrence of the ordinary zymotics in the lying-in woman, when they almost invariably assume specially severe forms, has again led to their being confounded with true puerperal fever. It would serve no good purpose to refer to authors specially, but it is fair enough to assert that in many quarters it has been held that those zymotics might give rise to true childbed fever, when they seized upon the woman in the lying-in period.

I need scarcely remark that I do not believe there is sufficient ground for such a view. Careful observation of such unfortunate coincidences as the occurrence of any of the zymotic fevers in the lying-in woman, will, I believe, satisfy any unprejudiced observers that those specific fevers retain their essential characteristics then as elsewhere. The only real peculiarity presented by them is the liability of some of them at least, more particularly of scarlet fever and of measles, to assume a specially severe character, and to be very fatal. But still, the illness is clearly generic in character, the involution of the uterus, etc., going on in scarlet fever undisturbed, as has been well pointed out by Olshausen and others, and has been confirmed again and again in my own experience.

But, leaving this negative consideration of the subject matter, it may safely be asserted that as a result of careful investigation of the phenomena involved, modern opinion is now very nearly at one in regarding puerperal fever as in all cases a septicæmia.

The essential element in our idea of this hitherto rather vaguely defined ailment is, that it is always due to the absorption through or from a wounded surface of some septic material by which the blood becomes poisoned. It is therefore in all cases a true septic intoxication—a fever of resorption—and differs essentially in no wise from surgical fever. I say essentially, because in regard to its entire phenomena puerperal septicæmia is extremely varied in intensity, and protean in aspect. But these peculiarities are undoubtedly due to the special anatomical and physiological conditions of the lying-in woman. Nor need we wonder at this, when we examine the very numerous causes that are present in every lying-in woman, calculated to facilitate the absorption of putrid matters into the patient's blood, and to favour its reproduction within her system.

I need only refer, in passing, to one or two of these. Thus the numerous fresh wounds in the genital tract, especially at the perinæum and the cervix, the imperfect condition of the mucous membrane of the body of the uterus, which is such as to reduce a considerable proportion of its entire area to the state of a freshly wounded surface, whilst the rest of it is covered over with a very rudimentary barrier of epithelium, not to speak of the large gaping sinuses in the placental area, combine to give too ready access to any putrid substance.

Then, without predicting any distinct imperfection in the blood of the pregnant woman, the metamorphic changes that commence with delivery, and are in full action during the lying-in period, are calculated to task the full energies of the secreting organs in health; and, if the action of the latter chance to be lowered in any way, even though temporarily, the blood is certain to become rapidly impaired and thereby to prove itself specially susceptible to the operation of septic influences.

When to these considerations is added the possible presence of putrescent materials, such as portions of membrane decomposing, or of placenta, or of retained clots, as also the natural lochia, which is so apt to become putrid, we need not wonder that any septic element should find ready access to the blood of the puerperal woman, and, when there, develop symptoms of very great intensity.

While the view that puerperal fever is always a septicæmia, and that only, presents us with a simple conception of the disorder, sufficient cause for its very varied degrees and intensity is afforded by a consideration of the various circumstances modifying the entrance and action of the septic matter.

Thus the virus introduced is often found to vary in degree as well as in intensity at the time of its introduction. The effects on the general organism and on special organs are found to vary according to the channel by which it enters—venous or lymphatic—as also by the rate at which it travels. The poison, whe nreproduced within the system, has been proved to become vastly more intense. Various patients present different degrees of resistance to the action of any morbific agent, and this is true also of puerperal patients. Consequently we have endless varieties of the disorder. Many cases, I believe, are not diagnosed with certainty, even by the most careful attendants. A considerable number of such cases are not even suspected of belonging to the proper category. For we know that acute cases die before time is afforded for the production of the grosser changes of pathological anatomy; and also that even in subacute cases the pelvic and abdominal organs may be left intact, the poison passing along the large veins without involving these parts, whilst death results from septicæmia acting on distant organs, such as the lungs.

But while the conception of puerperal fever as a septic wound fever supplies us with a view of the disease which is at once simple and comprehensive, there has been great advance in the same direction made within the last decade to determine the nature of the *materies morbi*, and to determine the means that can be adopted to prevent its spread from patient to patient.

The observations of Mayrhofer, Orth, Heiberg, Haussmann, Spillmann, Pasteur, Doléris,* and others, have within the last ten years accumulated such an amount of evidence, that it seems to me next to impossible to refuse credence to the belief that the septic changes which take place in the lying-in woman are dependent upon the action of certain microcci, which can always be detected in the fluids of the dead, and usually also in the blood of the living who are affected with puerperal septicæmia.

At any rate it seems proved that these minute organisms are an inseparable accompaniment of septic inflammation, and that, whether they cause the destructive changes themselves, or merely, as Burdon Sanderson† believes, give rise to the septic material which directly effects the destructive alteration in the blood, if we could destroy these organisms, we should destroy the self-formative power of the septic matter that is introduced into the patient's system.

Thus, if we regard the micrococci as causing the disease directly, to destroy the micrococci is to prevent the disease. If we regard the micrococci as producing the septic fluid, this septic fluid is not capable of multiplying itself without living micrococci, and there could be no great danger to our patients from the introduction of a small portion of this product, as the resisting powers of the organism could not fail to

* *De la Nature Parasitaire de l'Infection Purulente*, 8vo, Paris, 1880.
† British Medical Journal, December 22nd and 29th, 1877.

rapidly destroy it. The condition that makes a small amount of the septic material dangerous is, clearly, because the living germs of the evil are introduced and proceed to multiply within the organism.

From that point of view, a single micrococcus may be sufficient to induce a case of puerperal fever, as, finding an appropriate cultivation ground in the patient's organism, the single bacterium very quickly becomes millions.

But important advance has meanwhile been made in the collateral regions of pure surgery, which have the most important bearings on this subject. The investigations of Lister in this country, of Koch,* etc., in Germany, the experiments of Dr. Alexander Ogston† of Aberdeen, have combined to advance our knowledge a very long way in this department, and have given us a footing on which we can with a considerable degree of assurance rest our therapeutic or rather prophylactic action in dealing with puerperal septicæmia. Dr. Ogston, in a series of beautiful experiments, appears to have demonstrated conclusively that acute suppuration is always associated with the production of micrococci in the pus; that the severity of the general symptoms, and of the suppuration, vary with the number of these minute organisms, which, in severe cases, are found freely circulating in the blood; and also, that by the addition of a five per cent. solution of carbolic acid to the most putrid and virulent pus, its activity is entirely destroyed, and, when injected into the living tissues, it is without any irritating influence whatever.

According to Dr. Amédée Doléris the power for evil is taken away from septic micrococci by the addition of an equal part of a one per cent. solution of carbolic acid to a solution in which they are found.

It would thus appear that a solution of carbolic acid, which will not injure the hands of the physician, is sufficient to destroy the minute organisms on which, according to the modern idea, the poison of puerperal septicæmia depends for its existence and activity.

I therefore believe that we have now arrived at the time when we are able to state that, with the employment of extreme care and cleanliness, coupled with the use of proper antiseptic precautions, we may, without danger, attend patients suffering from puerperal fever, and do all that is required of us as doctors, without the slightest risk of communicating the disease to our other patients.

But a distinction ought to be made regarding what is the duty of a doctor as compared with what is incumbent upon a nurse. A medical man, to avoid carrying the infection, must not stoop to perform the work of a nurse. He must be careful not to expose his clothes to any discharge that comes from the patient's genitals, or that is about the bed —or indeed to allow them to touch the bedclothes.

I have seen medical men lifting puerperal patients by pushing the coated arm below their legs, and then carefully disinfecting their own hands. Such conduct can only end in disappointment. Before such an act were admissible the coat should be removed, and only the bare arm used; after which, the arms and hands should be thoroughly disinfected.

In proof of the practicability of what I maintain, I may mention an experience of my own in the spring of 1879. It was then my misfortune to meet with a case of puerperal fever in my practice. The social position of the patient, and certain other considerations, rendered it necessary that I should do more than is usually required of the medical attendant. The case was a well-marked one of septicæmia, and ultimately terminated fatally. I watched the case very closely for ten or eleven days; and twice daily, with my own hands, washed out the vagina with a disinfectant solution, and dressed a vulvar ulcer which had formed. Being at the time on duty at the Royal Maternity Hospital, and satisfied in my own mind that my disinfectant applications were sufficient to prevent any harm to my patients, I continued my services there. It so happened, that during these ten days there were several specially interesting cases treated in the maternity. Accordingly, I had to perform craniotomy on an out-patient for obstructed labour. The operation was tolerably difficult, and took up considerable time. The patient never had a bad symptom, and made an excellent and rapid recovery. I also had occasion to employ forceps in a case in the hospital in which the head was arrested high up. That patient also presented no febrile symptoms, and recovered uninterruptedly. I likewise performed version in another case, in which the head and arm presented. This patient, like the rest, did well. In consultation I saw and examined a patient suffering from hæmorrhage after abortion. In this case I passed my finger into the interior of the body of the uterus to make certain that no portion of membranes had remained behind. No bad symptom of any kind followed this manœuvre.

Had the remotest bad symptom appeared in the first case, I certainly should have at once desisted. But the success in it emboldened me more and more to trust to the disinfectant measures I had adopted. Besides, I had before me the experience of Dr. Thos. Keith, in his statement that with due attention to antiseptics he felt at liberty to perform an ovariotomy operation, although half an hour previously he had had his hands in the filthiest mess possible.

When called to treat such cases, however, it is my invariable rule to attend to the strictest antiseptic measures. If I have to examine or lift a patient suffering from puerperal septicæmia, I always take off my coat and roll up my shirt-sleeves. After doing this, I wash my hands in turpentine or rub them with carbolic oil. After examining the patient I again wash my hands, and, if need be, arms, in turpentine and soap and water, using a nail-brush freely. Then I wash my hands in a five per cent. solution of carbolic acid, and finally pour a stream of running water over them from a tap. Considerable importance appears to me to be attached to the latter proceeding, as the running stream makes it certain that everything is carried away as well as washed off the hands. If a basin be employed, the hands are brought from time to time into contact with any septic matter that might remain undestroyed in the basin.

In common with every consultant obstetrician, I am from time to time summoned to see and examine cases of puerperal septicæmia with my professional brethren. I am in the habit of doing as I have indicated in such cases, and I am satisfied that thereby no harm has resulted to any of my own patients. Nothing could be further from my intention in this contribution than to inculcate carelessness or do anything which could bring danger to patients or disgrace to obstetricians. But on the other hand, I am anxious that everything should be done for unfortunate patients suffering from puerperal septicæmia, which is consistent with fairness to the unaffected and to the obstetrician in charge.

I am further certain that the rules as to abstinence from seeing infectious cases, and as to suspension from professional duty so loudly preached by many heads of the profession, are not acted upon by them. Indeed, I believe, they are neither necessary, nor would they be effective for the purpose indicated. I agree entirely in the object, I disagree with the proposed means.

For aimless and haphazard suspension from professional duty, I would substitute the most thorough cleanliness and disinfection, believing that in the latter means the real safety of the patient lies. I have published my experience in this matter, in the hope that it may encourage others to trust to and practise disinfectant appliances in similar emergencies.

I must here enter my protest against the senseless and heartless proposal frequently made to the obstetrician to flee from such cases. He cannot do so if he would. A better object, surely, is to so regulate one's conduct as to enable him to attend and care for such sufferers; and at the same time do what is right for his other patients.

The exaggerated idea as to the communicability of puerperal septicæmia, or rather as to the great difficulty of getting rid of the infecting element, when once it gets attached to one, leads, I am persuaded, frequently to the spread of the disease.

The terrible consequences to a practitioner of having a case of septicæmia in his practice make him very unwilling to allow, even to himself, that a doubtful case belongs to that category. In that way, I believe, many cases are treated by the medical attendant, under the idea that he has to deal with simple metritis, parametritis, or other non-infecting ailment. In many cases, no harm results. In others, it may lead to the spread of the disorder to other patients.

Where the practitioner is convinced that, with due attention to cleanliness and antiseptics, no harm would result, he would not be so unwilling to recognise a case as septicæmia and take the necessary precautions to prevent communicating it to any other patient.

The principle of thorough, rapid, and complete disinfection ought also to be practised by nurses and midwives. If such measures were intelligently adopted, we should find less need to place nurses on a lengthened period of probation after attending a case of septicæmia than we do at present.

Their case is no doubt different from that of the medical attendant, if the latter restrict himself to his legitimate duty of superintending the nursing only. The intercourse of the nurse, and even of the professional midwife, with the patient, is more constant and more close than that of the doctor. But this fact only implies that the nurse and midwife should exercise greater care and thoroughness in disinfectant applications after attending a case of septicæmia. The disinfection should include both the clothes and person of the nurse. But, provided such measures are adopted, there appears no good ground for suspending a nurse for a series of weeks or months. Indeed, in the mere suspension there appears to be no real safety, as, unless measures of dis-

* *Untersuchungen über die Ätiologie der Wundinfectionskrankheiten*, Leipzig, 1878.

† *Ueber Abscesse*. Separat-Abdruck aus von Langenbeck's Archiv, Bd. xxv, Heft 2.

infection are duly adopted, it is impossible to say how long the person and clothes of a nurse may remain a source of danger. A very valuable contribution on this subject is made by Ahlfeld in the *Centralblatt für Gynäkologie*, 31st May, 1880. In this article the author protests against the State regulation adopted in Saxony, which compels a midwife, when a case of puerperal fever occurs in her practice, to cease from it for a stated period, instead of insisting upon rapid and thorough disinfection.

Nurses and midwives deserve great consideration at the hands of the obstetrical branch of our profession. It is our duty to provide them with sound instruction in regard to the use and application of disinfectants and antiseptics. By our so doing, not only will they as a class be greatly benefited, but lying-in women will be placed in much greater safety than by unjustly punishing unfortunate midwives.

It is to be regretted that the mover of the famous discussion on puerperal fever in the London Obstetrical Society in 1875, should, in his summing-up speech, have met the protest against the special act of injustice practised in the name of law upon midwives at that time, by something very like a sneer. It would be much more to the purpose to meet the question boldly as Ahlfeld does, and demonstrate to nurses that time is only a very uncertain element in disinfection, and that cleanliness and antiseptic applications are the only measures by which safety can be secured.

In regard to the prevention of puerperal septicæmia in maternity hospitals by strict application of antiseptics, and more particularly of carbolic acid, I may be allowed to refer to the successful practice of Dr. Lucas-Championniére in the Cochin Hospital of Paris, as recorded by Dr. Amédée Doléris, p. 294, *et seq.*, in his work entitled *La Fièvre Puerpérale*, Paris, 1880. There seems to me no good reason to doubt that with proper care as to hygiene and antiseptics, patients treated at a maternity hospital ought to be as free from septicæmia as those attended in the best private houses.

In conclusion, I would wish to express my belief: 1. That the diligent and intelligent employment of antiseptic precautions and appliances, good ventilation, and extreme cleanliness are capable of very largely diminishing the occurrence of septicæmia, both in maternity hospitals and in private practice; and 2. That, if antiseptics are carefully and systematically employed, there should be no case of communication of the disorder from one patient to another by the medical attendant, even when he performs to the sick person all the duties that are incumbent upon him as a medical adviser. It is always, however, to be understood that the doctor restricts himself to his own duties, and does not encroach upon those of the nurse; and that his measures to secure perfect antisepsis shall be thorough in all cases, when there is the slightest suspicion of septicæmia. It follows also, if these views are correct, that the recommendation so frequently given to an obstetrician, to leave his practice in case he meets with puerperal fever, is both unnecessary and unsatisfactory, inasmuch as it tends to the neglect of the most reliable measures of safety, namely, constant attention to cleanliness, and thorough and complete disinfection; whilst it puts upon the obstetrician a burden that is too heavy for him to bear, and which, indeed, is not borne by the very people who are loudest in recommending its necessity.

ON TOBACCO-AMBLYOPIA.*

By JOSEPH NELSON, M.D.

THAT cases of tobacco-amblyopia are not of unfrequent occurrence in Austria, is evident from statistics collected by Drs. Reuss and Fuchs; for, according to them, no fewer than 153 cases, all men, are recorded from Dr. Arlt's *Klinik*, during the eleven years ending 1876. During the last twenty months, I have had the opportunity of seeing nearly all the cases which presented themselves at this *Klinik*; and, through the kindness of Professor Arlt, I was allowed to investigate and have the charge of those cases which were able and willing to undergo treatment. Unfortunately for observation, however, many of these people lived far from Vienna. Of those who did remain in town, twenty-six afforded me material for the following notes.

Inasmuch as the bulk of my notes only confirm what has already been written on the subject by Leber, Hutchinson, Nettleship, and other authors, I shall confine myself as much as possible to a statistical view of my investigations. The patients were all men in good health, and between forty and sixty-six years of age, except three. The youngest was twenty-seven years old.

Failure of sight was, in most cases, about one-tenth, never so reduced that the patient could not go about readily. In the majority, sight failed in from two to six months; in a few, from two to six weeks. The duration of failure bore no constant relation to the degree of amblyopia, or to perception of colours. They saw better in the evening, or in subdued light. During daylight, especially bright sunlight, everything appeared fogged or clouded. All smoked; the smallest amount of tobacco consumed during the day being over half an ounce, the largest quantity an ounce and a half. In only four instances were patients free drinkers, in addition to the abuse of tobacco. I may remark that these four cases were the longest in seeking advice; or that their sight failed perhaps more gradually than in other cases; thus bringing to my mind Hutchinson's suggestion, that alcohol may have a balancing or counteracting effect upon tobacco (*Royal London Ophthalmic Hospital Reports*, vol. viii, p. 458). I should state that these people drank wine and spirits, not beer.

Failure of sight was generally equal in both eyes; there was never any marked difference that could not be accounted for by refraction, opacity, or other evident cause.

On testing with Holmgren's wools or colours of large surface, the colour-sense was, as a rule, normal; but, on testing with small coloured discs of six *millimètres* or less, on a black background, like Donders's discs, more or less impairment of colour-sense was present in the majority of cases. For the different colours, especially red and green, the perimeter almost invariably revealed a scotoma between the blind spot and the fixation-point, and embracing both. In all cases in which I tested, I found much the same shape and size of scotoma in both eyes. The peripheric portion of the field for colours was normal, and the field for white neither contracted or concentrated; thus differing from other forms of amblyopia—ataxic, cerebral, hysterical, glaucomatous, neuritic, and hereditary. The scotomata were negative, and differed much in intensity. In some, the square (of ten *millimètres*) would change colour or become indistinct, whilst in others the colour would be completely lost.

We have here a number of central scotomata, embracing both the fixation point and the blind spot; and I would ask, How do these scotomata begin? There are two possibilities: 1. They may begin at the fixation-point, and extend outwards to the blind spot; or, 2. They may begin at the blind spot, and extend towards the fixation point. The former, according to authors (Leber, Nettleship, Treitel) is that generally accepted; but, from the cases which came under my observation, I would hold that the scotoma begins at the blind spot, and extends towards the fixation point. The points upon which I rest are five: 1. The gradual failure of sight; 2. The shape of the scotoma; 3. The density; 4. The manner of receding; 5. The fact of seeing cases where fixation-point is free.

1. If the scotoma began at the fixation-point, the central vision would probably become at once so bad as to oblige the patient to seek medical advice, and we would then very often find a scotoma which had not yet reached the blind spot. But, as the scotoma sets in at the disc, it will at first not much interfere with sight, and the patient will only seek aid when the scotoma has extended to and embraced the macula. For this reason, we always find the scotoma so large, as to include both fixation-point and blind spot.

2. The scotoma was often of an irregular pear-shape; but, of whatever shape, the base or broad part was always at the blind spot, whilst the apex or narrow portion was at the fixation-point.

3. The scotoma was invariably denser at and towards the blind spot than at the fixation-point; in fact, the density increased from the fixation-point towards the blind spot.

4. It is a matter of fact that a scotoma may disappear, especially under judicious treatment, such as leaving off smoking, rest of the eyes, etc. I have myself had four cases, all well-marked scotomata, in which they completely disappeared. As regards the manner of receding or disappearing, I would direct attention to three cases where second and even third observations were made, and the changes—the decrease in size, position, shape, and density—are noted. These changes are, I think, very suggestive; so much so, that I am inclined to think that, if we could only examine a tobacco-case at an early stage, we should find a young scotoma growing from the blind spot—its base—and extending towards the fixation-point, but stopping short of it. The opportunity of examining such a case is, however, very unlikely to occur, inasmuch as the patient will not complain until the macula is reached, and sight interfered with.

5. One of the perimeter charts shows a scotoma of the usual shape and position, except that it does not reach the fixation-point. This was in a case of six months' failure, and was probably a receding scotoma; at any rate, it is a case where the fixation-point is free.

The density of the scotoma does not seem to hold any proportion to acuity of vision, for, in Case XIV, with dense scotoma embracing the

* Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association at Cambridge, August 1880.

ation-point, sight was reduced to only one-third; whilst, in Case IX, here scotoma was comparatively slight, sight was lowered to one-elfth of normal.* The density, however, appears to hold a proper-on to colour-perception; for, in Case IX, the smallest discs were rly recognised, whilst, in Cases XIV and XVI, and others, the colour-rception was markedly impaired. The ophthalmoscope showed, in ost cases, the discs hyperæmic, and their margin blurred. In some ses, the temporal quadrants of the discs had an indistinct paleness; nd were sometimes atrophic-like, with fewer of the small vessels. In few cases only did I observe white striæ along the vessels on the disc. ometimes, the ophthalmoscopic appearances were *nil*.

The foregoing are the symptoms, subjective and objective, by which obacco-amblyopia may be known. The first to describe this disease as Arlt, but then no perimeter was in use. The only symptoms which e could find were nyctalopia and ophthalmoscopic changes; the former, eing the more striking, he termed it accordingly; and, to distinguish it rom other forms of nyctalopia, he added the term retinitis (retinitis yctalopia), inasmuch as he observed a slight change round the disc. The only cases for which this disease might be mistaken without the id of the ophthalmoscope, and in which nyctalopia is present, are uclear and perinuclear cataract; but the fact of the latter dating from childhood would suffice to prevent such a mistake.

In the absence of the ophthalmoscope and perimeter, a general prac-titioner might be at a loss to distinguish this from other forms of ambly-opia, in which external examination shows nothing, or nothing sufficient to account for failure of sight; as, for instance, simple glaucoma, com-mencing senile cataract, atrophy of the disc, etc., ritinitis and choroid-itis; but, in all these cases, there is likely to be a very marked differ-ence in the degree of sight in each eye, and no nyctalopia present. As to this nyctalopia, or better sight by subdued light, it certainly would appear that, in some cases, the patients really do see better. In one case (a coachman), the man said, "By daylight, when driving my master, I cannot see the numbers on the houses; but, when the sun goes down, and towards evening, I can make out the numbers dis-tinctly". That acuity of vision is not really raised to any important degree, can be readily shown by Leber's experiment (*Gräfe und Samisch's Handbuch*, vol. v, part 2, p. 532). Now, holding that the acuity of vision is not materially raised, and at the same time owning that the patients see better by subdued light, needs explanation. It has been accounted for (Nettleship) by partial dilatation of the pupil, which takes place in subdued light, as observed in cases of nuclear cataract; but I cannot conceive how the cases are analogous. Dr. Fuchs of Vienna thinks it may be accounted for as follows. The patients say that, the brighter the light, the more clouded, veiled, and indistinct is the object they look at; whereas, by dull light, the object is less clouded and more distinct. May the explanation then be that, by subdued light, the cloud or veiling is less evident, the contrast less marked, and, therefore, the patient thinks he sees better?

Provided the patient gives up or reduces the use of tobacco, the pro-gress is very favourable, and recovery may follow without any system-atic treatment. This has been shown by Hutchinson and Nettleship, who wrote to a large number of such cases; and the replies showed that "a large majority had quite recovered, but scarcely any had got worse". A regular systematic treatment will, I believe, materially hasten recovery. With two exceptions, those cases which submitted to treatment made what I may be allowed to term "perfect recovery"; and in those who remained under observation for only a short time, the improvement in vision was very marked during the first few days; especially was this early and marked improvement observed in those patients who were treated with subcutaneous injections of strychnine. In those cases which were tested by Forster's photometer, the light-sense was found to be normal; in no case was it reduced. This fact, together with the complete absence of ophthalmoscopic changes in the retina, indicates that the affection does not lie there, nor is there any evidence which points to the brain as the origin.

That the disease is seated in the optic nerve may be inferred from the fact that in the beginning we find very slight ophthalmoscopic changes, and, later, the degree of atrophy which follows at the outer portion of the disc appears considerable compared with the slight degree of con-gestion which had been observed in the disc, but quite natural if we assume a stronger inflammation and atrophy behind and travelling for-wards.

Now, owing to want of anatomical investigation in such cases, one must lean upon observations; and, if the charts which the perimeter has given me in the foregoing cases be correct, and if I may be allowed to deduce therefrom the manner of growth and disappearance of the scotoma, the result should, I think, assist to support the theory of Leber—viz., that we have a retrobulbar neuritis, confined to certain fibres which lie superficial and close to the temporal side of the sheath, and which simply bend over into the retina (Michel) and run outwards in a horizontal direction towards the macula.

* Treitel found scotoma sometimes evident in normal vision. Gräfe's *Archiv*, vol. xxv, part II, p. 98.

THERAPEUTIC MEMORANDA.

TOLERATION OF OPIUM IN THE INFANT.

IN the JOURNAL of May 15th I recorded a case, showing such a tolera-tion of opium in an infant of four months as I had hitherto deemed incompatible with life at such an age, and would now communicate further particulars concerning the same.

The child at birth had been plump and healthy, but soon afterwards, from the use of improper food, he was seized with colicky pains and cos-tiveness. Besides laxatives, carminatives and then opiates were given and increased, until, at the age of four months, the infant was getting (in drachm-doses) from six to eight drachms of laudanum in the twenty-four hours. During that period, the child gradually lost flesh, and, when I first saw him, was so emaciated that his ribs were prominent and the abdomi-nal walls retracted. The face and limbs were shrunken correspondingly, and the legs were constantly flexed on the abdomen, save when the child was narcotised with not less than fifty drops of laudanum, which dose only afforded relief for a period varying from three to four hours. There was no vomiting, cough, or other sign of disease, and the infant took the breast with avidity. I advised the mother to reduce the dose of laudanum steadily by ten drops *per diem*. Thinking that a small quantity of cod-oil might assist the child to regain flesh, I ordered a teaspoonful to be given thrice daily, and a mixture containing bismuth and pepsin. This, with an occasional laxative at first, constituted all the treatment. Whereas, before that time, diminution of the opiate draught was followed by an access of pain, it was now possible gra-dually to withdraw the laudanum—so that, in less than a month, it was entirely stopped, and the child lost its painfully emaciated appearance. In two months, he had completely recovered his flesh and spirits; the treatment was discontinued, and the infant was fed with breast-milk alone. The bowels now move more regularly, without any artificial stimulus. The quondam patient sleeps soundly, *minus* his wonted nar-cotic; and, as far as I can see, there is no sign of mental infirmity or defect.

The foregoing case appears to me interesting in several respects: 1. The toleration of so large a quantity of opium by a child of four months old; 2. The persistence of appetite for a period of nearly three months, during which the sedative was employed; and 3. The entire recovery of the patient, as shown by his rapid increase in weight, his release from pain and costiveness, and the return of the buoyant spirits natural to healthy infancy.

J. MACKENZIE BOOTH, M.A., M.D., Aberdeen.

THE INUNCTION OF CASTOR-OIL AS A PURGATIVE.

I WAS much surprised on reading Dr. McNicoll's remarks concerning the purgative effects of castor-oil, when applied locally to the bowels.

During a long and extensive practice, I have frequently seen castor-oil applied topically to the chest, as a remedy for bronchial and other pulmonary affections, *minus* the inunction: but have, in no single instance, observed such cathartic effects which, on the hypothesis of capillary absorption, would, according to Dr. McNicoll, probably take place.

It is known to nearly every practitioner that the peristaltic action of the bowels practically ceases, in non-zymotic cases, during the period of confinement to bed, which is necessitated in most acute diseases. I assume, therefore, in this case, the same condition would exist, which would explain the cause of the constipation; and am inclined to think that the effects described were due more to the arousal of peristaltic activity by the friction or stimulus of "the warm hand over the abdo-men", than the agent employed in the process.

I have frequently taken advantage of the physiological fact alluded to, and have often been rewarded by results equally as success-ful as those of Dr. McNicoll, by the simple inunction of warm olive oil, or any other fixed oil which might be at hand, to lubricate the skin during the process; and I feel persuaded that, if Dr. McNicoll will pur-sue his investigation by substituting olive or other fixed oil, he will find himself equally as successful as if castor-oil had been the medium em-ployed.

JOHN KELLAS, F.R.C.S.E., L.R.C.P., etc.
Highlands, Royston, near Cheltenham.

IT is quite possible that the abdominal friction involved in the inunc-tion of castor-oil may have produced purgation in the case quoted by

Mr. McNicoll in the JOURNAL of October 16th. It is known that, in the course of a few hours, more or less, after steady abdominal friction has been persevered in, the action of the bowels, previously suspended, often follows—probably standing to the friction in the relation of effect to cause. As far as is known, it is not certain that castor-oil *per se* could act as a purgative when applied in this manner. Inunction therewith in the axillæ would, perhaps, eliminate this possible source of fallacy in the experiment.

H. DONKIN.

WINTER CLIMATES.

THE JOURNAL for October 2nd contains a number of articles respecting health-resorts, which cannot fail to interest those who have paid attention to the subject. There is, however, one point which is quite overlooked; and, inasmuch as it constantly comes under my observation at this season, I should be glad to ask attention to it. Probably the reason I am so often called upon to decide for those who are in doubt, or who have received contradictory counsels, is, that I have spent many complete winters in the leading resorts. Then, and ever since, I have noticed that patients have been sent to this or that place, more on account of the opinion formed of it than of the view taken of their case. And yet every patient differs from every other. The individuality of the person ought not to be lost sight of—still less any peculiarity in his case. The same diet is not suited to every consumptive. Why, then, should we expect the same climate to agree with all? Influenced by such ideas, I do not hesitate to give different advice to cases which, at first sight, seem similar; and am not uneasy if the result shows my patients scattered through the numerous resorts instead of aggregated in one or two. The great object is to procure the maximum of benefit for each, and this cannot be done by sending all to this or that resort. In the hope of fixing attention on the too-often neglected facts—those which relate to the individual—I will mention two or three cases now under observation.

A. A young medical man, with a history of phthisis in both parents, was, about four years ago, seized with hæmoptysis, etc. One suggested a warm climate, another a long sea-voyage. Both were excessively inconvenient; both had been tried by other members of the family. After full consideration, it was decided not to leave this country, and the result has justified the decision. He remains well enough to carry on his practice.

B. A lady, in advanced phthisis, was urgently advised to try Madeira or the Mediterranean—very contradictory advice, be it observed—but not to venture on a long journey. Of American extraction, she had friends in Colorado; and the question being referred for my decision, I advised her to follow out her strong desire, and venture on the journey. She went, and lived in comparative enjoyment much longer than anyone anticipated.

C. A gentleman, with incipient phthisis, was advised to go to Egypt. He had friends and most urgent business in Canada. He was allowed to go; and, feeling better, instead of going on to an American resort, as had been suggested, he remained nearly a year with great benefit.

D. A gentleman, with laryngeal phthisis, though advised to go to Davos by one, and to the Mediterranean by another, was extremely anxious to take a trip to India. It being felt better for the man, whatever might be said in favour of other places for the case, his wish was carried out to the satisfaction of every one.

E. A young married lady, with laryngeal phthisis, was anxious to remain at home shut up with her family, or else go to the Mediterranean, where she had near relatives. An eminent physician disapproved that special resort—and certainly I should have agreed that it was not the best for her case; but he strongly urged her going to our own south-coast—a plan by which, with her peculiarities, she was likely to be made miserable; and, therefore, in my judgment, to be regretted. It ended by her "moping herself to death", or rather undertaking to return northwards in the worst season, preferring all risks to remaining. But, the journey accomplished, she speedily sank from the results of the exposure.

These instances illustrate my position: that a resort may be good for a diseased condition, but not for the particular patient; and I trust those called upon to advise invalids will allow such circumstances a place in their memory.

PROSSER JAMES, M.D.,
3, Dean Street, Park Lane, W.

THE Metropolitan Board of Works has resolved to inform the Kyrle Society that at present it cannot apply for powers to take over the garden of Lincoln's-inn-fields for the use of the public. Mr. Lloyd, however, has stated, that he had great hopes that the board would, before long, be enabled to receive the care of the garden from the trustees, and to throw it open.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

NATIONAL HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

PECULIAR PHENOMENA AFTER EPILEPTIC SEIZURES.

(Under the care of Dr. HUGHLINGS JACKSON.)

THE following is an example of utterance of numbers after attacks of epilepsy—after every attack the patient had. To see the bearing of this, it is important to note, first of all, the circumstances of the patient's first fit; he was then a soldier. Five minutes before it, he had been "numbering off" in the ranks. Then, whilst marching past, he suddenly turned "right about face", and marched to the rear. For doing this, he was locked up as "drunk and incapable".

A soldier, aged 34, was admitted under Dr. Hughlings Jackson's care, December 6th, 1878. The notes of his case were taken by Mr. Broster, then resident medical officer. Seven years previously, the occipital portion of the patient's skull had been broken by a blow with a hammer; he was insensible for about twenty minutes, but had felt no further ill effects. He was discharged from the army for "sunstroke", eighteen months ago; this was when his first fit occurred.

On December 10th, Mr. Broster noted: "The patient has had one attack every day since admission. The attacks were alike in their main features. The following is an account of one, which will serve for all, so far as the great peculiarity of the case is in question. Whilst peeling potatoes, he suddenly left off, turned his head to the right, and held the knife up in the right hand; he remained so for about half a minute. He became very white; he sat back in the chair; his eyes were open, but he was certainly unconscious; the eyes turned to the right; the hand relaxed, and the knife fell from it." Here, breaking Mr. Broster's note, we remark that, according to Dr. Hughlings Jackson's views, the following would be post-epileptic doings during unconsciousness left by the seizure. "Then he began to suck his gums, stared about vacantly, and counted, beginning 10, 20, 30, to 90, followed by 1, 2, 3, 4, 5, 6, up to 30, and then 40, 50, 60, up to 90. Then he looked round, and seemed to become semiconscious. The duration was two minutes; there was no drowsiness afterwards.

"In another" (just after, Dr. Hughlings Jackson would think), "he made a rush for the door, and went downstairs to the lower ward; on being told, he returned to the upper ward without a word. In [after?] another, he seemed as if lost, sat down on the hearthrug, and began counting.

"On the 27th, he had an attack whilst playing dominoes; he suddenly bent his head forwards, with chin on chest; his face was slightly convulsed; a gurgling noise took place in the throat; the face was a little paler than usual. He then rose from the chair; put the bagatelle-balls in his pocket; and wanted to leave the room, dragging his chair with him. Before he rose from the chair, and pocketed the balls, he counted 1, 2, 3, 4, 5, 6, 6, 6, 6, then up to 10, and gradually up to 30."

REMARKS BY DR. HUGHLINGS JACKSON. His running away, his putting the billiard-balls in his pocket, and any such actions, are not relevant to the matter in hand; such things are common enough after slight epileptic seizures. It is the counting alone of which I wish to speak. For it is this alone which one can with any degree of certainty attribute to the effect of circumstances attending the first fit. In numbering off, the soldier has to give but one, his proper, number; but to give that, he must have repeated in his mind the previous numbers. I have been told that soldiers are seen to move their lips before their turn comes, as if saying the previous number. His counting after seizure was done under defect, or loss, of consciousness, and was thus erratic. Some patients have, at or near to the onset of their seizures, a sort of dream; often the feeling of reminiscence, a "remembrance" they may call it. Trousseau says that the "remembrance" is often what, on a former occasion caused, or at least accompanied, the fit. Falret says that many become epileptic after some strong emotion or profound terror; and at each fresh attack, see in their mind, or under their eyes, the painful circumstance, or the frightful scenes which produced the disease at the first time. It will be observed that Trousseau seems inclined to think that the disease was *caused* by some mental or emotional state, and Falret boldly uses the word *produced*. This hypothesis I do not adopt. Then in the case related there was no

dream; nothing was remembered at any rate. To say of any of these phenomena that some mental state was fixed at the time of the first seizure, is no explanation. We may refer to analogous cases in order to widen the basis of research for an explanation. Analogous phenomena have occurred in other kinds of cerebral disease. Thus, a woman who injured her head by a fall at the time when laying down oilcloth on a staircase, kept, in the hospital, manipulating the counterpane of her bed. I have suggested that some peculiar permanent recurring utterances of aphasics represent what they were saying, or about to say, when taken ill.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 9th, 1880.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

AMŒBOID MOVEMENTS OF THE COLOURLESS BLOOD-CORPUSCLES IN LEUKÆMIA. BY JOHN CAVAFY, M.D., F.R.C.P.

THE observations described in this paper were made on the blood of a patient suffering from leukæmia, who was in St. George's Hospital, under Dr. Whipham, from April 30th to July 18th, 1879. The patient, a man aged 26, stated that he had been well, with the exception of occasional sick-headaches, until a month before admission, when he began to feel extremely weak and languid. He got a cough a little later, and, a week before he came in, had hæmorrhages in the conjunctiva and skin, after severe retching. On admission, he was found to be very pale; mucous *râles* were heard over the lungs, and a soft systolic murmur at the base of the heart. There were enlarged lymphatic glands in the axillæ, over the right clavicle, and in the right groin. The blood contained a large excess of colourless corpuscles, the proportion to the coloured being as one to six. During his stay in the hospital, he became gradually worse, with occasional temporary improvement. He had epistaxis, and fresh hæmorrhages in the conjunctivæ and skin on several occasions. The spleen was not at first enlarged, but became so later, as also did the liver. The glands subsided a little at first, but again soon enlarged, and fresh ones appeared, especially in the neck and near the angles of the lower jaw. The pulse was always quick, and the temperature nearly always above normal. After leaving the hospital, he improved slightly at first, but soon became worse again; the glands became of enormous size, there were numerous cutaneous hæmorrhages, and he became gradually weaker, dying early in October 1879. There was no *post mortem* examination. The blood was examined, to determine whether the amœboid movements, which characterise healthy colourless corpuscles, were preserved. Twelve observations were made in all, at various intervals from May 16th to July 14th, the hot stage being used. The total number of colourless corpuscles in the field of the microscope was first counted, and the number of amœboid corpuscles noted about every ten minutes, usually for half an hour on each occasion. The mean of these was then taken, and the percentage calculated. In determining whether amœboid movements occurred, a very slight departure from the spheroidal shape was considered sufficient. It was found that the character of the movements was much changed, when they occurred at all, as they were very sluggish and ill-marked, although the observations were made at fever-temperatures. Only now and then, one or two corpuscles showed comparatively active motions. The blood contained the three kinds of colourless corpuscles which have been found in health: lymphoid cells, ordinary colourless corpuscles, and rarely one or two large granular cells. Amœboid specimens of each were found, but the first and the last kinds showed mere traces of movement. Coagulation took place much more rapidly in the latter than in the earlier specimens. Only a very small proportion of the corpuscles was amœboid, the highest formed being 24 per cent., and the lowest 4 per cent. The proportion also decreased with the advance of the disease; the mean of the first six observations being about 12 per cent., while that of the last six only gives 6 per cent. As the first observations were made in a comparatively late stage of the disease (after the occurrence of hæmorrhage), further investigation must decide whether loss of amœboid movement takes place at the earliest onset. The blood was also examined in two cases of chloro-anæmia, and one of anæmia with leucocytosis, from cancer of the stomach; and, in all three, amœboid movements were active at ordinary temperature. The earliest observations on the point brought forward in this paper, were made by Dr. Laking in 1873, but remained unpublished. The results were communicated by Dr. Pye-Smith to the Pathological Society in 1878, and, in the same year, to the *Lancet*, by the author of this paper. Neumann, also, in 1878, found amœboid movements wanting, or very sluggish, in a case of leukæmia, although they were active in the corpuscles of fluid from blisters, in the same individual. The following conclusions were drawn. 1. The colourless corpuscles in leukæmia are dead or dying, and hence incapable of development. 2. Amœboid movement being practically lost, emigration from the blood-vessels is impossible. 3. Coagulation and thrombosis are largely favoured. Secondary leukæmic nodules and infiltration must be produced, not by emigration, but by extravasation, and probably also by lymphatic accumulation, as large numbers of cells must be prevented from entering the blood by lymphatic thrombi. Whether lymphatic new growth also takes place, must be decided by careful examination as to the presence of a true adenoid reticulum, and must be rejected if we find only a network of fibrin. In conclusion, it was pointed out that the absence of amœboid movement might prove of great value in diagnosis, as serving to distinguish cases of true leukæmia from leucocytosis.

Mr. SAVORY asked if any observations had been made on the absolute or relative number of the red corpuscles. It would be interesting to know the effect of the state of the white corpuscles on the genesis of the red blood-cells.—Dr. SILVER said that very recently he had under his notice a case of true lymphatic anæmia, the symptoms being very like those in Dr. Cavafy's case, in which the corpuscles of medium size exhibited amœboid movements even at ordinary temperatures. This case, and another under Dr. Green, were examined with reference to certain appearances in the corpuscles described by Dr. Finny in the BRITISH MEDICAL JOURNAL. These appearances could not be found: but there was a great tendency of the red corpuscles to run together in irregular masses (not rouleaux). These facts showed that it was not safe to draw any conclusions from single cases. Dr. Silver's case was one of lymphatic anæmia; Dr. Green's, one of splenic anæmia.—Dr. PAYNE had seen a case in which there had been fracture of the femur, and in which death had occurred. On examination, a large mass of coagulum like that in leucocythæmia was found, and there was no attempt at repair.—Dr. CAVAFY said that no observations had been made on the number of the red corpuscles. Dr. Silver's cases were of great interest, and showed the necessity of extended observations. In a case of leukæmia at Addenbrooke's Hospital, observations similar to his own had been made. It would be interesting to know whether Dr. Silver's case was in an early stage. In Dr. Payne's case, there was probably a loss of vitality in the colourless corpuscles.

OBSERVATIONS ON THE NATURE AND TREATMENT OF GENU VALGUM. BY BERNARD E. BRODHURST, F.R.C.S.

IN this paper, genu valgum was regarded rather as a constitutional than as a local defect. It was stated to be accompanied by a relaxed condition of the ligamentous system, and it was preceded by flat-foot. Thus the tibia was inclined outwards, and the weight of the body was thrown unduly to the inner side of the limb. The internal lateral ligament of the knee-joint consequently yielded, and the inner condyle protruded. The condyles of the femur were thus placed in an oblique position from without inwards, and from above downwards. There was usually a difference in the length of the condyles, the inner being about three-tenths of an inch longer than the outer. Sometimes, however, it was five-tenths of an inch; and, again, not more than one-tenth of an inch. This was observed both in the rickety and in the healthy femur. Examples were to be seen also where the difference in length between the inner and the outer condyle was almost inappreciable; and, again, other rare specimens existed where the inner condyle was fully one inch longer than the outer, and was misshapen. Knock-knee in its early stage disappeared in the horizontal position, and could only be distinguished when the patient was erect. When, at length, it had become permanent, firm support was sufficient to remove it. But as the deformity increased and the femoral condyles became more oblique, the biceps femoris was rendered tense, the ilio-tibial band became tightly drawn, and the external lateral ligament was rigid. The question to be solved was, how was the limb to be restored, so that a right line, passing, as in the normal condition, through the long axis of the femur and of the tibia, might strike on the top of the arch of the foot. In the first place, it was necessary to restore the arch of the foot. Various modes had been adopted to restore the straight line of the limb; such as forcible straightening, osteotomy, and tenotomy. 1. Forcible straightening had been employed both in young children and in adults. It was effected with considerable injury both to the bony structures and to the soft parts; but, according to M. Delore, permanent injury was not produced, and his patients were again able to walk in the course of six months. 2. Osteotomy had lately been performed by some surgeons in every case, slight and severe, of genu valgum, even when the deformity was yet very slight, and the child only between three and four years of age. One operator alleged that he had performed osteotomy for genu

valgum on nearly four hundred limbs. Sometimes three, or even four sections were executed on the limb at a sitting. Notwithstanding these osteotomies on the condyle and on the shafts of the femur and the tibia, the deformity often remained almost as great as before the operation. And, when the limb appeared to have been straightened, the deformity recurred, and the malleoli were seen several inches apart. Further, genu varum might be substituted for genu valgum. Partial ankylosis was not unfrequently induced, and the motion at the joint was much impeded. The growth of the limb was interfered with, and a serious lameness was begotten where there was previously none. Fatal blood-poisoning, also, had resulted more than once. 3. In a case of valgous knee, a cast of which was taken when the patient was nearly eighteen years of age, the inner malleoli were ten inches and a half removed from the median line. In this case, the biceps tendon, the ilio-tibial band, and the external lateral ligament, were divided, and the knee and the foot were brought, in the course of seven weeks, into their normal positions. When splints were insufficient to redress the limb, division of the tendon of the biceps femoris usually enabled the limb to be straightened, until adult life was attained. But when, in addition to the biceps, the external lateral ligament and the ilio-tibial band were divided, the knee might be straightened, either immediately or gradually. In the adult, gradual straightening was to be preferred. Any abnormal motion after division of the ligament, was due to the lax condition of the internal lateral ligament; but this gradually lessened, and at length ceased. Unless the arch of the foot were raised, and the retraction of the biceps were overcome, the inclination outwards of the tibia and the fibula must remain, notwithstanding osteotomy. In conclusion, it was stated that forcible straightening of the limb (*redressement brusque*) was unjustifiable; that osteotomy was wrong in principle, and unnecessary, and that, in childhood especially, it was objectionable; but that division of tendons and fasciæ might be done without danger, and that tenotomy enabled the surgeon to reduce this deformity, and to restore the thigh- and leg-bones, and the bones of the arch of the foot, to their normal positions.

The PRESIDENT agreed with Mr. Brodhurst as to flat-foot being the cause of genu valgum.—Mr. WARRINGTON HAWARD said that cases of genu valgum differed much, as to the elongation of the condyle and other particulars. There were many factors in the production of the disorder Sometimes the ligaments, sometimes the bones, were at fault; sometimes it was connected with general debility. Hence the treatment must be adapted to each case. One set of cases occurred chiefly in young children, from three to five years old; another, in persons from twelve to fourteen years of age. The younger cases were almost universally rickety; and the knock-knee was only a part of the yielding of the bone-tissue. In such cases, the weight of the body should be taken off the limbs, and supports applied; and the constitutional treatment was of much importance. In the older cases, it was said that the deformity depended mostly on yielding of the ligaments and muscles. There was frequently a marked degree of flat-foot, often more on one side than on the other. In young children, he had seen many cases with elongation of the condyle, and little or no flat-foot. In these, it was reasonable to act on the bony deformity rather than on the ligaments and tendons. He did not think, however, that osteotomy was often called for in cases of knock-knee. He had successfully treated, by perseverance in the use of splints, a case in which operation had been refused. He had done an osteotomy a year and a half ago; although the leg was straight, there was still a tendency to return of the deformity when the support was removed. Osteotomy of the condyle was sometimes represented as extra-articular; but it was not possible to ensure the performance of the operation in such a way that the joint would escape.—Mr. R. W. PARKER regarded flat-foot as a result rather than a cause of knock-knee. Whether the lengthening of the internal condyle were primary or secondary, he did not see how the limb could be straightened while the condyle was left long. He had never seen a case of properly performed osteotomy in which the limb could not be made straight. If the operations were not always successful, this did not affect the procedure itself, but depended rather on the skill of the surgeon. He thought that children recovered well and quickly after operation. It was, of course, attended with some danger; and tenotomy itself was not free. In fact, osteotomy, as now performed, was not more dangerous than tenotomy when it was first introduced. The first incentive to the performance of osteotomy was the insufficiency of the other methods in a certain class and number of cases.—Dr. L. HAUGHTON said that Mr. Brodhurst had operated successfully on a patient of his, who had had genu valgum of both knees. Mr. A. BARKER asked what bad consequences had followed in the three hundred cases to which reference had been made. Having had a fatal case some time ago, he had collected the records of one hundred and eighty cases; and the only death among them was in his own case. He had met with cases in which Mr. Brodhurst's operation had been performed, and in which the patient had very inadequate use of the limb afterwards.—Mr. SAVORY said that two things must be looked at: 1. The use of the limb; 2. Its form or beauty. In many cases, there might be an improvement in form; but the use of the limb was impaired after the operation. This was an important consideration in the case of working men. He thought that osteotomy was a fashionable operation, and was too frequently done.—Mr. BARWELL agreed with Mr. Parker in regarding flat-foot as a result of genu valgum. As regarded the ligaments, he had made experiments on the condition of the limb in knock-knee. What was called lengthening of the inner condyle was really dependent on obliquity of the epiphysis with regard to the diaphysis; he had produced this condition artificially by inserting a wedge, and had found that, when the deviation was about eight inches, a separation on the outer side of the joint, to the extent of an inch and a half, was necessary to straighten the limb. In such a condition, a patient could scarcely be expected to walk. He did not see, considering the amount of separation of the knee-joint, that division of the ligaments was less dangerous than division of the bone.—Mr. BRODHURST replied to the several speakers.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL SECTION.

FRIDAY, OCTOBER 29TH, 1880.

BALTHAZAR FOSTER, M.D., in the Chair.

Fibroid Cancer of the Humerus.—Mr. FURNEAUX JORDAN exhibited a specimen obtained from a patient whose arm was amputated at the shoulder-joint for this disease. Under the microscope, the growth had the character of a round-celled sarcoma; though, to the naked eye, it appeared like nævus. The shaft of the bone, at some distance from the growth, showed reddening of its cancellous tissue; and Mr. Jordan insisted upon the necessity for removing the entire shaft in cases of osteo-sarcoma.

Kidneys from a Case of Anuria.—Dr. RICKARDS showed the kidneys removed from the body of a man who had been under his care a year ago, with complete anuria, lasting twenty days. One kidney was small, and very much atrophied, and its pelvis was filled with a large calculus. The other kidney had its pelvis dilated, the renal tissue was compressed and wasted, and a small calculus was lodged in the ureter, about eight inches from the pelvis. During the suppression of urine, there was profuse perspiration and frequent vomiting; towards the end, there was œdema of the lower extremities. The flow of urine was preceded by the passage of a small calculus.

Fibroid Uterus.—Mr. LAWSON TAIT presented a specimen, and showed a microscopical section of a cast of the inner surface of the uterus from a case of membranous dysmenorrhœa. He maintained the identity of the two processes, although the former occurred during congress of the sexes, and the latter in virgins. In the latter case, it was, in his opinion, an example of an attempt at parthenogenesis, the ovum developing to a certain degree, but being unable, without the aid of the male factor, to go farther.

Sarcomatous Growth in a Pig's Heart.—Dr. FOSTER showed a pig's heart with sarcomatous growths on the mitral valve, which caused mitral obstruction; the left auricle was dilated and hypertrophied. Dr. Joy said the pig had shown no symptoms of ill health till three weeks before its death, when it began to suffer from dyspnœa. Dr. Foster explained the absence of symptoms by the quiet life led by these animals.

Microscopical Case of Uræmia.—Dr. SAUNDBY exhibited a microscopical section of a kidney from a fatal case of uræmia. The kidney, to the naked eye, showed congestion, but no wasting; under the microscope, the changes in the blood-vessels, tubules, and Malpighian bodies were characteristic of commencing granular kidney; but, in addition, the intertubular stroma was infiltrated with lymphoid cells. While many previous observers have described this appearance, an equal number have decided it to be an essential part of the histology of granular kidney. The present case indicated that the infiltration takes place as an acute phenomenon; and if such attacks are of frequent occurrence, the new elements thus introduced into the stroma would take an important part in the new formation of connective tissue in the kidney.

A CLASS is to be formed at the Military Female Hospital, Chatham, under the superintendence of the principal medical officer of the district, for the instruction of soldiers' wives in midwifery and general nursing. This is a very desirable knowledge for soldiers' wives to possess, as many of them are often quartered at detached stations, where it is impossible to obtain the services of a doctor.

FORTY-EIGHTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in CAMBRIDGE, Aug. 10th, 11th, 12th, and 13th, 1880.

PROCEEDINGS OF SECTIONS.

SECTION H.—OPHTHALMOLOGY.

Thursday, August 12th, 1880.

THE Chair was taken by WILLIAM BOWMAN, Esq., F.R.S., President of the Section.

COLOUR-BLINDNESS.

The PRESIDENT said: As the great subjects of light and colour are about to engage our attention, I may remind the meeting that the theatre, in which it is our privilege to assemble, is that in which the Lucasian Professor is accustomed to unfold the discoveries of Newton and Young, and all the more recent advances in knowledge, so much of which the world owes to his own genius. I can assure Professor Stokes that we all highly appreciate the grace of his presence with us to-day. In Professor Donders, we are proud to recognise the colleague who has more profoundly studied the colour-sense, and those remarkable defective forms of it that we call colour-blindness, than any other living ophthalmologist. He has also, in his own country, been mainly instrumental in framing and causing to be adopted wise rules, generally applicable, for the detection of colour-blindness, in relation to the exigencies of daily life. He has been good enough to bring over from Utrecht, for our inspection, the instrument which is on the table, lately devised by him for the more ready testing of colour-blindness, as well as the other illustrations on the wall. It will not, I suppose, be easy for any of us to feel completely master at the moment of all that will be set before us. The nature of our colour-perception is a very large field, presenting many profound problems. The mind would fain embrace in one view its objective and subjective, its physical and physiological, aspects. Our knowledge of it, too, is doubtless still far from complete. I may allude to one special difficulty which meets us. Our very words seem to fail us; for those we employ to denote the various colour-sensations experienced in ordinary sight are the same which colour-blind persons both hear us use, without their being able to attach to them our meaning, and themselves employ in a sense which we, in turn, can only imperfectly realise. Hence confusions on one side and the other, perplexing the investigation and embarrassing the task of explanation. We are happy in having, in Professor Donders, an expositor of rare power—who well knows, moreover, how best to present the subject to us, as scientific men and practitioners. The *genius loci* should aid both himself and us to-day.

Professor DONDERS read an address on colour-blindness, which is published at page 767. At its conclusion, on the motion of Professor STOKES, the cordial thanks of the Section were accorded to Professor Donders for his interesting and highly suggestive address.

Mr. POWER (London), commenting on the great importance of testing colour-perception by several methods, mentioned a case he had met with, in which, whilst the various tints of colour transmitted through glass were immediately and accurately recognised and named, when Holmgren's wools were given, the patient confounded pink with pale green; and showed himself, on further testing by this method, to be incompletely red colour-blind. He pointed out that such a man might easily pass an examination in which signal-lights were alone used, though it was obvious that conditions of fog, especially in and about London, might so change the tint of a bright coloured signal-light as to lead to confusion, and, consequently, to risk. He wished to ask Professor Donders what, in his opinion, should be the standard in the examination of candidates for the railway and marine services, etc.?

Professor DONDERS replied that the apparatus on the table, to which he had referred, and had explained in his discourse, contained coloured lights just like the ordinary railway and marine signals, which could be viewed under different degrees of illumination, distance, etc. In this way, an accurate estimation of the degree of efficiency of colour-perception, incapacitating for the public services, could be arrived at.

At the conclusion of the discussion, the following resolutions were unanimously passed.

1. That it is most desirable to establish *International Standard Tests* of *Visual Acuteness* and of *Colour-Perception*, by means of an International Commission, to which the several Governments should be invited to send delegates.

2. That, in all countries, persons upon whom may devolve the charge of life, by sea or land, where signalling is employed, with or without the use of colour, should be required to submit themselves to such standard tests of their sight, both before being admitted to their several services, and also at stated subsequent intervals.

3. That an important part of the duty of such an International Commission should be to devise some *common system of signalling*, especially on sea-going ships and for all coast-service; and that the standard tests should be decided on with special reference to such common system of signalling.

Colour-Perception in Diseases of the Optic Nerve. By EDWARD NETTLESHIP, F.R.C.S. (London).—This paper contained a summary of observations in seventy-nine cases of uncomplicated disease of the optic nerves, including cases of tobacco-amblyopia and some cases of atrophy following neuritis. Cases of glaucoma and of retinitis pigmentosa, and certain cases of congenital amblyopia with colour-blindness and day-blindness, were not included. In fifty, the visual field was carefully measured on the perimeter; and the observations offered to the meeting bore chiefly on the various relations existing in these cases between the three factors colour-perception, acuteness of vision, and condition of the visual field. The following groups were then mentioned. 1. Colour-blindness of a high degree is always present when acuteness of sight is low, and the field of vision presents a high degree of sharply defined but irregular contraction. This group includes the common cases of progressive atrophy often associated with early locomotor ataxy, but also frequently occurring without spinal symptoms. The author had never seen atrophy of the optic nerves in locomotor ataxy without colour-blindness. 2. When the visual field shows an uniform contraction, moderate in degree, but not very sharply defined, and perhaps only relative, though acuteness of sight may be very low (as low as $\frac{1}{20}$), colour-perception is seldom much affected, and may be quite perfect. Such cases were considered rare. 3. If the alteration of the field take the form of a central defect (central relative scotoma), its circumference being of full size, though acuteness of sight may be as low as $\frac{1}{20}$, or even $\frac{1}{10}$, colour-perception *of large objects* is but little, and often not at all, damaged; but partial or complete colour-blindness for *small spots* of red and green exists; and such patients are, therefore, likely to mistake coloured signal-lights. Nearly all these cases of central amblyopia are caused by tobacco. 4. The visual field may show a high degree of sharply defined irregular contraction, but with perfect acuteness of vision. In such cases, (*a*) there may be marked colour-blindness (two cases were mentioned); (*b*) there may not be the slightest defect for colours, of which condition also two cases in men were mentioned, and two others in women, lately recorded from Hirschberg's *clinique*, referred to. The difference between the subgroups (*a*) and (*b*) in regard to colour-perception was most striking. 5. The field of vision may be perfect in size and free from any scotoma, with acuteness of vision as low as $\frac{1}{10}$, and (*a*) perfect colour-perception (as in a woman whose case was mentioned); or (*b*) colour-blindness, sometimes of considerable degree, may be present, two cases in young men being mentioned in confirmation.

Ophthalmic Anatomy. By JOSEPH NELSON, M.D. (This paper is published at page 773.)

Dr. LANDOLT wished to draw attention to certain sources of error in the determination of scotoma. For example, scotoma for certain colours had been often recorded, when they were in reality but relative scotoma for all luminous sensations; that is to say, in certain portions of the retina, where all the visual functions were diminished. Thus, if, instead of taking a piece of white paper, a piece of grey were used, a scotoma would be found for this as well as for coloured papers. On the contrary, in making use of a very intense colour, there was no scotoma.

The Relations between the Conformation of the Cranium and Seat of the Eye. By E. LANDOLT, M.D. (Paris).—The following is the summary of Dr. Landolt's paper. In asymmetry of the cranium, characterised especially by flatness of one half of the forehead and of the corresponding zygomatic arch, lateral curvature of the median line of the face, and inequality of the two halves of the chin, there is generally anisometropia. The eye of the side which is less developed presents lower refraction than the other.

Friday, August 13th, 1880.

The Chair was taken by WILLIAM BOWMAN, Esq., F.R.S., President of the Section.

On the Rapid Determination of the Degree of Hypermetropia by the Aid of the Ophthalmoscope. By T. PRIDGIN TEALE, M.A., F.R.C.S. (Leeds).—During the last ten years, Mr. Teale had employed a method

of ascertaining rapidly the degree of hypermetropia which, he believed, had not yet been accepted as a sound method by ophthalmologists, and, in fact, had been but little, if at all, employed by any one but himself and his pupils. Two methods were in general use for arriving at the degree of hypermetropia. In one, the hypermetropia was rendered "manifest", more or less, by suspending the power of accommodation by means of atropin; and the glass which rendered distant vision distinct was accepted as the measure of the hypermetropia. In the other, the surgeon, examining the "erect image" of the fundus by the ophthalmoscope held close to the eye, estimated the degree of hypermetropia either from the power of the lens fixed behind the mirror, or from the degree of his own accommodation, consciously exerted, that would restore the hypermetropic fundus to the normal appearance. To these two Mr. Teale added a third, which he had employed. In this method, the ophthalmoscope was held about fourteen inches from the eye, at the distance for observing the "inverted image"; and the observer ascertained what power of lens held close to the patient's eye would restore the hypermetropic fundus to the appearance of an emmetropic eye. For the third method, Mr. Teale claimed the following advantages. 1. It was rarely necessary to paralyse by atropin the accommodation of the patient in order to find out the full degree of simple hypermetropia. 2. It did not call upon the observer either to paralyse or to suspend his own accommodation. 3. In the majority of cases, the degree of hypermetropia could be accurately determined at one interview.

On the Employment of Atropin in Correcting Errors of Refraction. By ANDERSON CRITCHETT, M.A., M.R.C.S. (London).—The motives for bringing this subject before the notice of the Ophthalmic Section were two. First, reference was made to the existence of two distinct and diverse plans of procedure in working refraction, each method being advocated by distinguished ophthalmologists: some contending that mydriasis was altogether unnecessary, while others had recourse to it in a large majority of cases. Secondly, an endeavour was made to prove that, while neither of these extreme views was tenable, cases not unfrequently occurred, of which an illustration was given, where a correct diagnosis and successful result could only be obtained by complete paresis of the ciliary muscle through the agency of atropin.

The Use of the Actual Cautery in Ulceration of the Cornea. By Dr. FUCHS (Vienna).—The application of the actual cautery in cases of ulceration of the cornea was, so far as Dr. Fuchs knew, just adopted by Martinache of San Franciso, and Gayet of Lyons. At the meeting of the German Ophthalmolgical Society in 1879, Professor Sattler mentioned the success which had attended it; and Dr. Fuchs had since employed it in appropriate cases in Professor Arlt's clinic, with encouraging results. The instrument used by him consisted of a ball of the size of a large pea, with an arm like that used by dentists for the destruction of the dental pulp. It was easily heated red in any good gas flame, and was best applied when the iron was beginning to become black. He had used it in abscesses of the cornea, and in ulcus rodens. The abscesses were partly traumatic and partly spontaneous; some were the result of small-pox. The application was not followed by any serious reaction. He regarded the action of the cautery as that of a powerful caustic, destroying the suppurating parts and the infectious germs contained in them. Its great advantage consisted in its strict limitation to the affected part. Dr. Fuchs believed Paquelin's cautery, or the galvano-caustic apparatus, liable to become too hot; while the point of the latter was too large for application to the cornea.

On the Value of Gymnastic Visual Exercises in the Treatment of Functional Amblyopia. By M. MACDONALD MCHARDY, F.R.C.S.Eng. (London).—Mr. McHardy bore testimony to the great value, in certain forms of asthenopia, of the treatment by systematic gymnastic visual exercises, as recommended by Dr. E. Dyer of Pittsburg, Pennsylvania. The same plan of treatment had been applied, with the necessary modifications, to cases of functional amblyopia, with good results. The author read notes, furnishing particulars of the treatment by, and progress under, the use of gymnastic visual exercises; of two cases of amblyopia, associated with long-standing convergent strabismus, in one of which there was a restoration of binocular vision for all distances; whilst, in the other, during four weeks' treatment, the vision of the amblyopic eye improved from one-hundred-and-twentieth to one-fifth. The importance of strict attention to detail in every step of cases treated by gymnastic visual exercises, was pointed out; and Mr. McHardy expressed his belief that, by carefully carried out gymnastic visual exercises, purely functional amblyopia might, in most instances, be completely cured, and binocular vision restored, after the correction of long-standing convergent strabismus.

Sympathetic Ophthalmia. By E. ANDREW, M.D. (Shrewsbury).—Dr. Andrew said that sympathetic ophthalmic inflammation was so intractable to all known treatment, that the following successful case seemed worthy of record. A middle-aged woman attending the Shrewsbury Eye Hospital with left acute glaucoma, and right sympathetic irritation, refused to come in for treatment, until compelled by the agony and total loss of sight in her left eye and failing sight in the right, in which latter severe iridocyclitis had succeeded the sympathetic irritation. A large iridectomy was at once performed in the left eye, which produced suppuration of the whole eyeball, necessitating its immediate removal. Only slight relief to the other eye followed. This eye, which seemed going to destruction, the patient only reading with glasses, No. 20 Jager, with the greatest difficulty, was apparently restored chiefly by the continued use of eserin and dilatation at intervals by atropin, so as to be able to read No. 1 with freedom from all symptoms of irritation.

A Case of Sympathetic Ophthalmia. By G. E. WALKER, F.R.C.S. (Liverpool).—After about three weeks of treatment, during which three hundred and forty drachms of mercurial ointment were rubbed into the skin, the eye recovered with useful vision; but, after some weeks of quiescence, the disease returned, and the case was still under treatment.

Optic Neuritis in Chlorosis. By W. R. GOWERS, M.D., F.R.C.P. (London).—The occasional occurrence of optic neuritis in chlorosis—due, apparently, to the blood-state—is a fact of much interest to both the ophthalmic surgeon and the physician. A girl with anæmia and slight neuritis, whose case was published in the author's *Medical Ophthalmoscopy*, had lately suffered a relapse. The hæmoglobin had fallen to one-third of the normal; and distinct neuritis reappeared, but again cleared off when the blood-state was improved by iron. The second case narrated was in a sister of the last patient, aged 18, who came under treatment with great anæmia (hæmoglobin 38 per cent.) and optic neuritis of considerable intensity, the discs being obscured by a swelling two and a half times the diameter of the disc, and of considerable prominence. In one swollen papilla there was a small hæmorrhage. The appearance was exactly like that seen in cases of intracranial tumour. Nevertheless, when iron was given, the neuritis subsided with great rapidity, so that in a fortnight the edges of the discs were visible to the indirect method in their entire circumference. In three weeks from the commencement of treatment, the hæmoglobin had risen to 55 per cent., and the neuritis was practically gone. A fortnight later, the hæmoglobin was 66 per cent., and the discs perfectly clear. A case of still more intense neuritis, with involvement of the adjacent retina, described in *Medical Ophthalmoscopy*, was mentioned in connection with the last case, and reasons were given for believing that, in spite of its intensity, it was really due to chlorosis; the effect of iron having been well marked, although too late to save useful vision. In all the patients there was slight hypermetropia; and the question was asked, whether the accommodation-strain might not have acted as the excitant, the degree of neuritis having been the result of the blood-state. Of the relation to the latter, the effect of iron seemed to leave no doubt. The paper concluded with some remarks on the importance of general as well as ocular rest in the treatment of these cases.

New Treatment of Gonorrhœal Ophthalmia in Children. By C. BADER, F.R.C.S.Eng. (London).—Mr. Bader made a communication in which he stated that his treatment of gonorrhœal ophthalmia in adults had been attended by very favourable results. He had also tried it in children (aged three, four, six years) suffering from gonorrhœal ophthalmia, and in several bad cases of purulent ophthalmia in infants. The treatment consisted in the application to the entire surface of the conjunctiva of an ointment of one grain of red oxide of mercury (nitric oxide), one-fifth of a grain of sulphate of atropia, and of one drachm of vaseline. When applying the ointment, the patient should lie down, and, if restless, take an anæsthetic. The eye was well cleaned from discharge with tepid water; then, with a large soft camel-hair brush, the ointment was freely pushed beneath the upper and then the lower eyelid, so as to touch the entire conjunctival surface. This, as long as the eyelids were swollen, was repeated at nine, twelve, and four o'clock. When once the eyelids opened freely, one application daily sufficed until the discharge ceased. Previously to each fresh application of ointment, the discharge was washed away with tepid water. If only one eye were affected, then the non-affected eye must be kept bound up with lint thickly covered with ointment, to be changed every morning, and to be continued until the other eye was well. Experience had shown that a few days' treatment sufficed, if adopted at the very outset of the disease. The ointment should be applied by the medical man himself.

On Corneal Transplantation. By J. R. WOLFE, M.D. (Glasgow).—Dr. Wolfe exhibited a case of transplantation of the cornea from a freshly enucleated eye of a human subject, in which he succeeded in obtaining the vitality of the graft and its complete incorporation with the tissues, and an amount of transparency and vision beyond expec-

tation. The author maintained that corneal transplantation was not so hopeless as it would at first sight appear. It was useless to attempt transplantation of the whole of the cornea, for it must be done without damage to the subjacent structures; and as soon as the whole cornea was removed, the lens and the vitreous humour came out, bleeding ensued, and loss of vision was inevitable, even if corneal transparency were secured. The path most open to success, was the transplantation of a corneal oval from the centre, or a little below the horizontal meridian, along with a conjunctival flap on each side. The conjunctival flaps assisted in keeping it in position, and by their adhesion afforded it a chance of preserving its vitality, even if one did not get immediate union between the corneal edges. The patient exhibited had been operated on ten months ago for replacing a cornea which was burnt by an explosion and turned into cicatricial tissue with staphyloma of iris. Although, shortly after the operation last winter, he went to the streets to sell matches, yet the amount of corneal transparency and vision left enabled him to count fingers and see the difference between a shilling and a sovereign; and to point with precision at a ring upon the little finger. His colour-perception was also quite correct, he being able at once to distinguish between the different shades of red and green, also between blue and violet. The hopes which such cases held out of success in replacing complete corneal opacities were encouraging.

A New Form of Artificial Eye. By LITTON FORBES, M.D.—In the construction of this eye, an attempt had been made to combine some of the advantages of the schematic eye of Listing, as simplified and improved by Donders and Landolt, with those of the artificial eye of Perrin. It was intended mainly for purposes of demonstration and instruction, though it might also be utilised for physiological experiment. In its construction, simplicity of arrangement and cheapness in price had been aimed at. It consisted essentially of a chamber three *centimètres* in length, blackened within, in order to absorb light. The cornea was represented by a spherical glass with parallel surfaces, having a radius of curvature of five *millimètres*. The summit of the cornea was situated five *millimètres* in front of a lens, the focal length of which was fifteen *millimètres*. This lens was set in a solid frame of brass, which was movable on a pivot, and which also carried another lens of a shorter focal length. It was, besides, perforated with a hole two *millimètres* in diameter, which did not contain any lens. Either of the lenses or the vacant aperture could be brought into the axis of vision by a simple mechanical arrangement. The retina was represented by a disc of dimmed glass, divided, as in Landolt's artificial eye, into squares of half a *millimètre*. The retina was fixed into a cylinder, which, by means of a screw-motion, could be removed or approximated to the cornea. In emmetropia, it was exactly at twenty *millimètres'* distance from the summit of the cornea. One complete revolution of this cylinder round its own axis increased or diminished the total refraction of the eye by one dioptric. The number of dioptrics was read off by means of an index and graduated circle. The cylinder was further provided with two discs. No. 1 represented an exact photographic reproduction, as regards size, of the retinal image in an emmetropic eye, of Jäger's test-type No. 1, at the distance of thirty *centimètres*. No. 2 represented a glaucomatous cup having an excavation of one *millimètre* in depth. These discs might easily be increased in number so as to include the chief pathological conditions of the fundus. A horizontal bar, divided into *centimètres*, passed through the stand on which the eye was fixed, and carried a lens-holder adapted to the spherical or cylindrical glasses found in any ordinary trial case. By means of this eye, the various phenomena of hypermetropia, myopia, and astigmatism might be demonstrated. The estimation of refraction by means of the ophthalmoscope might be practised. The influence of glasses on the size of the retinal images in the various conditions of refraction, and the changes in refraction produced by a lengthening or shortening of the antero-posterior axis of the eye, might be shown. Accommodation could be produced, just as it was in the living eye, by an alteration in the curvature, and thereby in the refractive power of the crystalline lens. By illuminating the eye posteriorly, the phenomena of the projection of retinal images might be reproduced, and their sizes and forms demonstrated both objectively and by calculation. The phenomena of aphakia, with the effects of glasses upon the retinal images in that condition, spasm of the accommodation, ophthalmoscopic measurements of the direct and indirect images, and the value of various optometers and instruments of precision, might also be shown. This eye had been made for Dr. Forbes by Messrs. Pickard and Curry, 195, Great Portland Street, W.

MEDICAL MAGISTRATES.—Dr. William McEwen of Chester, was, on October 21st, sworn in as a magistrate of the county of Denbigh.—The name of Mr. Oliver Pemberton, F.R.C.S., of Birmingham, has been placed on the Commission of the Peace for the county of Warwick.

REVIEWS AND NOTICES.

SAN REMO AND THE WESTERN RIVIERA, CRITICALLY AND MEDICALLY CONSIDERED. By ARTHUR HILL HASSALL, M.D.Lond., M.R.C.P. London: Longmans and Co. 1880.

Dr. HASSALL strikes the key-note of his book in the quotation which he inscribes on its cover—"Knowest thou the land where the orange flower grows?" which, oddly enough, however, he quotes in French. The beauty of the scenery, the mildness of the climate, the semitropical vegetation, the sheltered situation of the Riviera, have long since attracted to it the invalids of all countries in search of a sunny and sheltered winter-resort. San Remo is one of the most favoured spots on the Riviera; and, moreover, it has, among other advantages of situation, that of considerable capability of extension. Placed in a beautiful bay of the Gulf of Genoa, about four miles in breadth, it faces south-west, and is protected from the east and from the north by sheltering barriers of hills, which describe a considerable segment of a circle, enclosing a large area of ground, which forms a noble and well-protected site, sufficiently extensive for the erection of a large town. To this site, to the sheltering groups of hills, and to its southern aspect, it owes its mildness of climate and its repute as a winter-resort. The winter temperature of San Remo is one of the warmest in Italy; frosts are of rare occurrence, and slight in character; while the summer is by no means hot, the mean temperature being 72.45°. The climate of San Remo and of Mentone has so many advantages over that of Cannes and of Nice, both of which are colder than San Remo and Mentone, and have a greater rainfall, that it is difficult to understand the great popularity which Cannes, an ill-drained and ill-kept town, has of late years attained. If San Remo be compared with three principal health-resorts, its figures appear to show a difference in the annual temperature in favour of San Remo; 10.56° in the case of Bournemouth, 9.99° in that of Torquay, 8.27° in that of Ventnor; the difference for the seasons being respectively 8.24°, 6.90°, and 4.97°. The annual temperature of San Remo is a little lower than that of the eastern bay of Mentone. Dr. Daubeny, Dr. Rose, Dr. Prosser James, Dr. Onetti, Dr. Pasquali, Dr. C. T. Williams, Dr. Walsh—all writers who have had considerable experience of the various health-resorts of the Mediterranean—concur in expressing a very high opinion of San Remo, which seems to combine all the advantages which have been anticipated in a Mediterranean health-resort, and to be free from the disadvantages from which many of them suffer. It appears to be a more sedative climate than that of Cannes, where the atmosphere is more stimulating, and where the action of the north wind, and especially the north-west wind or mistral, is more felt than at either Mentone or San Remo. Dr. Hassall is a careful observer and a lively writer; scientifically he is well equipped, and has the habit of observation. His book may claim a foremost rank among the numerous handbooks descriptive of the winter climate of the Western Riviera. It is adorned with some interesting sketches, and especially with a clever sketch of San Remo from the east from the artistic pencil of Mr. Goodchild of Bordighera, a sister health-resort much favoured by nature.

DES GANGRÈNES SPONTANÉES. Par le Dr. ÉDOUARD RONDOT. Paris: Baillière et fils. 1880.

WHAT is spontaneous gangrene? Probably most people would answer this question by saying that it is a form of disease sometimes affecting irregular patches of skin—sometimes affecting the ears, nose, and extremities—sometimes occurring in young people—sometimes in adult life—but in all cases unassociated with any recognisable disease of the viscera. The absence of any evidence of disease other than the gangrene has, indeed, constituted a halo of interest for spontaneous gangrene, because it left open a door for speculation as to the action of trophic nerves and centres upon disturbances of the vaso-motor system; upon the existence of local disease in tracts of the spinal cord, and various other recondite conditions which, till they are brought to light, will afford a valuable pabulum for work. From this point of view, the present monograph is in one sense disappointing; perhaps in another it is to be commended. If we could hope that of what we have called spontaneous gangrene the causes are now no longer hidden, then, indeed, the author has done us a service by calling attention to the fact; for, if many forms of gangrene are hardly satisfactorily explained, none are unclassified. Thus we find our starting point to be that spontaneous gangrene is that which arises from any cause other than injury, and we plunge into an enumeration of all sorts of diseases, in regions including gangrene of mucous surfaces, gangrene of the skin, gangrene of the lung, of the extremities; classified as to causes, we find embolism,

acute arteritis, syphilitic arteritis (under which we are surprised to see that no mention is made of Heubner, to whom the best article upon this subject is due) spontaneous thrombosis, spontaneous closure, etc.; and on page 36 we find allusions to diabetic gangrene, ergotism, and bacterial gangrene, of which noma is taken as an example.

As an example of gangrene due to nervous influence, we have the acute decubitus of spinal paralysis; and in the cases for which we should have reserved the term spontaneous gangrene, the hypothesis of spasm of the muscular coats of the arteries is adopted as an explanation. Later on, this particular form of gangrene is stated to occur in young people of impressionable nervous systems, with chlorosis, hysteria, or epilepsy; while cold is held to be the most important predisposing or exciting cause.

We need not pursue the author further, as we have sufficiently indicated the scope of his work. It is a fairly complete and concise summary of our knowledge of a very wide subject at the present day; and seems in all points reliable so far as it goes, if it adds nothing fresh of personal observation on the part of the writer.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FRY'S MALTED COCOA.

IMPROVEMENTS in cocoa keep pace with advancing science; and it is a matter of satisfaction that attention has been turned to an article of diet which has more to recommend it for general use than any other known beverage. It would be a most valuable dietetic reform, if cocoa could be brought into such extensive use as to supersede largely, as an article of diet, coffee and tea. The only objection which is commonly urged against cocoa is, that it is often found indigestible, as being either too rich in fats, or, when the fat has been largely removed and starch added, it is found that the starchy matter in solution is not well assimilated. The combination which has been made in the preparation before us, of Allen and Hanburys' Extract of Malt to J. S. Fry's Cocoa Extract,[1] meets the requisite indications of digestibility, nutritive quality and palatable character.

SYMINGTON'S ESSENCES OF COFFEE.

T. SYMINGTON of Edinburgh has submitted to our notice an essence of coffee, and a mixed essence of coffee with chicory, and coffee and milk, all of which have a standard reputation, and possess great merit. The essence of coffee is extremely well made, and is apparently prepared *in vacuo* at a low temperature, as the aroma of the coffee is well preserved; in its essential qualities, it does not differ in any way from a cup of coffee made in the ordinary way. The coffee and milk is an extremely convenient preparation for bachelors, or for yachting purposes, travellers, or wherever, from any reason, it may be convenient to have at hand a preparation which requires only the addition of a little boiling water to make a cup of good milk-coffee. It may be expected that the manufacturers will maintain the reputation of their brand. Their preparations, at present, appear to preserve the strength and aroma of the bean with unusual success.

LAWLEY'S SURGICAL POCKET-CASE.

MR. LAWLEY of the Strand, London, has submitted to our notice a surgical pocket-case, which is at the same time the most extensive, compact, and convenient arrangement of surgical instruments that we have yet seen. It resembles, in shape and arrangement, the ordinary surgical pocket-case of house-surgeons and practitioners; but, by ingenious arrangements for economising space, and especially by the employment of a variety of blades which fit a single handle, space is found in this very moderate compass for a whole armament of knives, forceps, and instruments of daily and occasional use, which would suffice to enable the surgeon who carried it to meet the emergencies of almost any ordinary surgical operation. Many-bladed knives are to be found here; saw, chisel, etc. To those who desire to have, in a compact and handy form, a complete little equipment of instruments which a surgeon most commonly requires, this case will prove very attractive.

THE appointment of Chief of the Statistical Branch of the Army Medical Department in Whitehall Yard is vacant by the sudden death of Deputy Surgeon-General B. Tydd. The deceased officer took up the duties of this appointment on May 31st, 1879.

SELECTIONS FROM JOURNALS.

SURGERY.

CONGENITAL FLAT-FOOT.—Dr. O. Küstner (*Archiv für Klin. Chir.*, Band xxv) examined, in the course of a year, the feet of one hundred and fifty healthy and otherwise well-formed newly born infants. He found flat feet in thirteen cases; on one side in eleven, on both sides in two cases. It was not possible to take the impression of the sole on a flat surface as a criterion of flat-foot, as the yielding nature of the infant's foot and the abundance of fat in the sole caused a deceptive appearance of flat-foot to be produced by even gentle pressure. Dr. Küstner recognised as flat-foot that condition in which the sole was convex and the dorsum of the foot concave (the folds of skin in the sole being thereby put on the stretch, while there was an abnormal formation of folds on the dorsum), if he found at the lower part of the leg, to the outside of the crest of the tibia, a deep impression in the soft parts; there was also a deep depression in the joint immediately in front of the outer ankle. In all cases of this kind, the foot, when in an unconstrained position (best observed in the bath), was strongly pronated, flexed dorsally, and somewhat abducted. The change of form in the skeleton was most distinctly marked in the living subject by a deep notch in the anterior process of the os calcis, produced by abnormal pressure of the astragalus. The anterior articular surface of the astragalus did not lie above, but on a horizontal level with, that of the os calcis; its long axis had an oblique direction outwards and upwards. This was ascertained by *post mortem* examination. The normal infant's foot can always be supinated from forty to seventy degrees, while the possible amount of pronation amounts to only twenty degrees. In flat-foot, on the other hand, the extent of supination is reduced to twenty or twenty-five degrees, while that of pronation may be increased to as much as forty or fifty degrees. This was ascertained by fastening to the sole of the foot a small piece of board in the manner of a sandal. The leg being laid on a sheet of paper, the posterior edge of the board was pressed on the paper in the positions of greatest pronation and supination, as well as in the medium position; and the angles formed by the different lines with each other were measured. The large folds of skin on the dorsum of the foot, three or four in number, ran across from one ankle to the other; they were most marked on the outer side, and had between them smaller folds running at right angles with them. All these folds were smoothed out by plantar flexion. With regard to the etiology, the author ascribes the faulty form of the foot to conditions of intra-uterine pressure. A relatively small quantity of liquor amnii favours the production of flat-foot. No special position of the fœtus appears to be of importance; but in all the cases of flat-foot observed, except one, the head was the presenting part. As the deformity is only increased by walking, Dr. Küstner recommends the adoption of orthopædic treatment during the first year of the child's life.

PATHOLOGY.

ACUTE ICTERUS FROM PRESSURE.—Litten reports in the *Charité-Annalen*, Band v, the history of the case of a woman thirty-seven years old, in whom repeated attacks of intense icterus were produced by the pressure on the gall-duct of a movable kidney.

TYROSIN IN THE SPUTUM. Kannenberg (*Reports of the Charité Hospital*, Band v, p. 287) confirms the observation of Leyden, that the presence of considerable quantities of tyrosin in the sputum affords ground for the assumption of a perforation of an old focus of pus in the lung. He has found this to be the case in three cases which he reports. Fresh pus contains no tyrosin; nor is it to be found in putrid matter.

MOLLUSCUM CONTAGIOSUM. In the third number of the second series of the *Annales de Dermatologie et de Syphiligraphie*, there is an interesting article on the pathological anatomy of *molluscum contagiosum* (*acné varioliforme* of French authors), by Professor J. Renaut. M. Renaut regards the tumours as of ectodermic growth. In each lobule (*bourgeon*) of the tumour, the cells of the rete Malpighii become globular, and the perinuclear protoplasma undergoes a peculiar modification, by which a special hyaline substance is formed, instead of the sebum which fills the cells of a normal sebaceous gland. The modified cells, however, undergo a further horny metamorphosis, identical with that which takes place in the normal cells of the rete. It is not quite clear, from the paper, what relation the author believes to exist between these growths and the sebaceous glands; but it is evident that he regards the connection as an intimate one.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 13TH, 1880.

UNCERTIFIED CAUSES OF DEATH.

AT last there seems a fair chance that public attention will be awakened to the social and moral dangers arising from the present state of the law of registration. Judging from letters recently published in our lay contemporaries, and from the reports of discussions on the subject at meetings of several of the local metropolitan sanitary authorities, it would appear that the public is at last learning that it is not only possible, but an every-day occurrence, for deaths to be registered and bodies buried without any medical certificate, or other satisfactory evidence of the cause of the death of the deceased person. The chances of reform, too, are increased by the matter having been placed before the public in its true light by the action of the several local medical officers of health of Wandsworth District, and by Mr. Shirley Murphy, the Medical Officer of Health of St. Pancras. The evil has too frequently, through the want of a thorough acquaintance with the state of the case, been attributed to, and made the ground of an attack upon, the Registrar-General and his army of local registrars. We are far from asserting that the late Registrar-General, during his nearly forty years' term of office, was entirely free from blame in the matter; and that he was not to some extent responsible for so long a continuance of the defective state of the law. With a view to the removal of the present scandal of our registration system, the outcome of which is the registration of more than twenty-five thousand uncertified deaths *per annum* in England and Wales, it cannot, however, be too distinctly understood that it is the law of registration that is at fault, and not the administration of the law by the Registrar-General and his local registrars.

We have frequently dealt with this subject from various points of view; but the present seems an opportune moment for reconsidering this matter of uncertified deaths from three aspects: first, the actual state of registration law and practice to which the evil is due; secondly, the extent and proportional distribution of uncertified deaths in England and Wales arising from this defective registration, and its effect from a public and professional standpoint; and, thirdly, the proposed means by which scientific and satisfactory evidence of the causes of those deaths which are now uncertified might be secured.

The Births and Deaths Registration Act of 1874 compulsorily enacted, in Section 20, that all registered medical practitioners shall furnish, for registration purposes, certificates setting forth, to the best of their knowledge and belief, the causes of the deaths of the patients they have attended during their last illness. Section 16 of the same Act provides that, in inquest cases, the coroner shall send to the registrar within five days a certificate containing the finding of the jury with regard to the cause of death, and all other particulars required to be registered respecting the death which is the subject of the inquest. Disregarding for a moment the unsatisfactory manner in which causes of death are frequently found by juries and certified by coroners, the law makes provision for the certification of the cause of death of every person who is attended in his or her last illness by a registered medical practitioner; and likewise in all inquest cases. In point of fact, however, about twenty-five thousand deaths occur annually in England and Wales, in cases in which no registered practitioner has been in attendance during the last illness, and no inquest is held. The law is completely silent with regard to the certification of the causes of these deaths, although it imposes, under penalty, alike upon registrars and upon the relatives of deceased persons, the duty of registering every death without exception. This omission of the law to secure satisfactory evidence of the cause of death in cases where the relatives or friends of the deceased have neglected to provide the attendance of a registered medical practitioner, constitutes the most tangible ground of grievance at the compulsion under which the registered practitioner furnishes gratuitously a certificate of the cause of death of his patient. The only manner in which the cause of death of a person who dies without registered medical attendance can be certified is by the holding of an inquest; but, inasmuch as the number of uncertified deaths is about equal to the number of inquests at present held, and as an inquest is both a cumbrous and an expensive process, few would be inclined to recommend that, under present conditions, an inquest should be held in every case in which the cause of death is uncertified.

The practice of registrars with regard to the registration of the causes of deaths, in accordance with their code of regulations drawn up by the Registrar-General on the basis of registration law, and approved by the President of the Local Government Board, is as follows. If a certificate of a registered medical practitioner be produced, its contents are entered in a column of the death-register, together with the name and qualifications of the certifying practitioner. If no such certificate be produced, and if assured that no medical practitioner was in attendance during the last illness of the deceased, the registrar, being under a penalty to effect the registration notwithstanding, is instructed to obtain the best available information as to the cause of death, for insertion in the register. If an unregistered or unqualified practitioner have been in attendance, the registrar is instructed to obtain, if possible, a written statement of the supposed cause of death, which is entered in the register, but without the name of the irregular practitioner. In other cases, in which there has been no kind of medical attendance, the supposed cause of death is furnished by the relative or other person who acts as the informant of the death. No inconsiderable proportion of uncertified deaths are of infants aged from a few minutes to a few days, whose mothers in childbirth have been alone attended by a midwife; in these cases, the midwife frequently furnishes a statement as to the cause of death of the infant, which the registrar accepts, in the alternative of noting the cause of its death as unknown. In all cases attended by any "suspicious circumstances", the registrar is, however, strictly enjoined to bring the matter under the notice of the coroner previously to registering the death. This attempt to make the registrar the judge of what constitute "suspicious circumstances" is at best, however, but a very unsatisfactory palliative of the defective legislation. This responsibility is, moreover, unacceptable to the conscientious registrar, especially as, although he may carry out his instructions by bringing a case under the notice of the coroner, through his officer, this subordinate may take upon himself to decide the question of inquest or no inquest, without the case being really referred to the coroner.

Let us now briefly consider the extent and present proportional distribution of uncertified causes of death in England and Wales. Mr. Shirley Murphy, the Medical Officer of Health of St. Pancras, in a recent letter to the *Times*, said: "I have the authority of the Registrar-General's returns for stating that last year 24,723 deaths occurred in England and Wales, in not one of which was any medical evidence adduced as to the way in which the person came by his death". This statement is in the main correct, and yet is not strictly accurate. It is quite true that this number of deaths was entered in the death-register without certificates being furnished either by registered medical practitioners or by coroners. It must not, however, be forgotten that, in a certain proportion of these cases, the causes of death were certified by duly qualified, but non-registered, medical practitioners. Moreover, when Mr. Murphy assumes that, with regard to these uncertified deaths, the deaths are simply registered without question, and "nothing more is

heard of the matter", he goes somewhat beyond the true facts of the case, for a very large proportion of these cases are referred to the coroner or his officer previously to registration. With these modifications, however, Mr. Murphy's statement holds good, and furnishes abundant plea for reform in the law of registration. It is a simple fact, that nearly five per cent. of the causes of death entered in the death-register are not certified, either by a registered medical practitioner or by a coroner. It is impossible to foretell the extent to which a system that would secure some inquiry, and some form of certification, in all cases otherwise uncertified, would tend to check the neglect to provide medical attendance, and to restrict the practice of quacks and unqualified assistants, which causes the large majority of uncertified deaths; it is, however, impossible to doubt that a change of the law would have a powerful effect in this direction.

The Registrar-General's last Quarterly Return, recently issued, gives some clue to the present proportional distribution of uncertified deaths in England and Wales. During the three months ending September last, we are told that the proportion of uncertified deaths showed a further decline from that which prevailed in recent quarters, but averaged 4.0 per cent. in England and Wales. In the metropolis, the proportion was scarcely one per cent., whereas in the provinces it averaged 4.7 per cent. The highest percentages of uncertified deaths were 7.6 in Durham, 8.0 in Herefordshire and Rutlandshire, 8.6 in Cornwall, 10.5 in North Wales, and 12.3 in South Wales, including Monmouthshire. In Wales, the large proportion of uncertified deaths is probably in great measure due to the difficulties in the way of getting medical attendance in the more sparsely populated districts; but the causes which operate in Durham and Cornwall, that is, the large practice of quacks and unqualified assistants, are doubtless also at work in the mining districts of North and South Wales. In the twenty large English towns, the proportion of uncertified deaths averaged 1.9 per cent., being 1.0 in London, and averaging 2.6 in the nineteen provincial towns. The varying proportions among these nineteen towns afford conclusive evidence that, under the same defective registration laws, the evil of uncertified deaths assumes very different proportions; the percentages last quarter ranged from 0.5 and 0.6 in Plymouth and Portsmouth, to 5.4 and 5.5 in Oldham and Hull. We shall have again to refer to these varying proportions in discussing, as we now propose to do, in conclusion, the remedy for this still large proportion of uncertified deaths.

In more than one of his invaluable letters to the Registrar-General, published in the Annual Reports of that official, Dr. William Farr, C.B., urged the advisability for the institution of a form of preliminary quasi-inquest, in cases of uncertified deaths, and other cases suggesting doubt or neglect, in order to secure either due certification or the full formality of an inquest. Dr. Farr further suggested, in view of such preliminary inquiries, that the local medical officer of health should be appointed medical assessor to the coroner. The suggestion, therefore, in the memorial to the Home Secretary, instigated by the Wandsworth medical officers of health, that the registration law may be so amended as to enjoin upon medical officers of health the duty of inquiry and certification in all cases of uncertified deaths, is in full accordance with the recommendations of so eminent an authority as Dr. Farr. We have never doubted that, theoretically, this suggestion embodies the true solution of the difficulty about uncertified causes of death. In order, however, that this suggestion should be effectual and satisfactory in practice, it would be necessary that all, instead of but a few, medical officers of health should be solely devoted to public hygiene, and not engaged in private practice. Until this is the case, and the most sanguine sanitary reformers scarcely venture to hope for the proximate achievement of such progress, we doubt the possibility of such an employment of medical officers of health as is contemplated by Dr. Farr's frequent suggestion and the Wandsworth memorial. If this obstacle were, however, overcome, there seems no reason why all other difficulties should not disappear before a determination to give the suggestion a fair trial. It has been urged that the system would be too expensive; but bearing in mind that its inevitable effect would be to decrease the necessary number of full and formal inquests, and that it would as inevitably reduce to a minimum both the neglect to provide medical attendance and unqualified practice, we are confident that the additional expense would be small. Indeed, if it were otherwise, the reduction of neglect of child-life and of facilities for worse forms of crime, would more than amply justify any probable necessary increase of expenditure. In answer to other supposed difficulties in the way of the proposed certification of causes of death in sparsely populated and mountainous districts, like Wales, we need only point to the last quarterly return from Switzerland, which shows that, during the three months ending September, only one or two deaths in all the towns having a population exceeding 7,000 were uncertified, the proportion of duly certified cases being nearer 100 than 99 per cent.

It is a decided gain to find it now very generally acknowledged that the evil of uncertified causes of death calls for a prompt remedy, and that that remedy can only be attained by further legislation. The sooner it is also recognised that the required reform is intimately connected with the long-promised reform of the laws affecting coroners and inquests, the sooner will the demands of the public and of the profession assume a practical shape, and be met by satisfactory legislation. In the meantime, and to this end, therefore, let us urge all medical officers of health to follow the example of those of Wandsworth and St. Pancras, in pressing upon their sanitary authorities the extent of this evil and its dangerous tendency in their respective districts. In the meantime, we may remind them, moreover, that, should they be fortunate enough to enlist the support of the local coroner, much may be done, even under existing legislation, in reducing the proportion of uncertified deaths. Nottingham and Bristol are notable instances of the successful efforts of medical officers of health, with the support of the coroners, to reduce the proportion of uncertified deaths. Real interest and tact in this matter will help other medical officers of health to render valuable assistance in the desired direction, pending the much-needed reform of the law of registration.

TWO NEW ANÆSTHETICS.

WITHIN the last nine weeks, there have been recorded in this JOURNAL seven deaths from chloroform administered under skilled supervision, six of these occurring in Britain, and one in America. Such a fact, to put the case in no way strongly, is not creditable to our therapeutics; and we, therefore, gladly welcome what promises to be an important addition to our list of anæsthetics by Dr. Edward Tauber, Privat-Docent in the University of Jena.

Like chloroform itself, when first used by Sir James Y. Simpson in 1847, the two substances experimented with by Dr. Tauber are not newly discovered, but have been known since their discovery and isolation by Regnault in 1838 and 1840. They are isomeric bodies: monochlor-ethylidenchloride, or methylchloroform (CH_3, CCl_3); and monochlor-ethylenchloride (CH_2 Cl, $CHCl_2$).

Methylchloroform is a fluid of 1.372 specific gravity, having an odour like that of chloroform, and boiling at 167° Fahr. It is the second product of the action of chlorine on chlorethyl, the first being ethylidenchloride. By alcoholic potash and great heat, it is decomposed with difficulty into potassic acetate and potassic chloride. This decomposition is parallel with that of chloral-hydrate into chloroform and potassic formiate; but since, in the case of methylchloroform, neither component has an anæsthetic action, there can here be no question of a "component action", such as Liebreich has supposed in the case of chloral-hydrate. With this substance, then, Dr. Tauber has experimented on various animals, and also on himself. His experiments on frogs and rabbits showed rapid and complete anæsthesia, with no noticeable influence on pulse or respiration. In a dog of 10 to 12 lbs. weight, a dose of 40 to 50 drops (4 to 5 *grammes*) produced complete anæsthesia of nineteen minutes' duration; and, during this time, the respirations in the deepest narcosis were more numerous, and the pulse showed but slight variations. On himself, the experiment was performed by Dr. von Langenbeck.

Complete anæsthesia was produced in 5½ minutes, and lasted 10 minutes. There was no stage of excitement; respiration was quiet; the pulse 84, regular, and of good tension. No reflex followed stimuli, such as pricking with a pin, pulling out hairs of the beard, etc. The dose used was about 20 *grammes*. Shortly after return of consciousness, he had vomiting, caused, no doubt, by his having breakfasted two hours before; but, beyond a feeling of *malaise* for about an hour, he had no other discomfort; and, at six o'clock, he took his dinner as usual.

Monochlor-ethylenchloride is a fluid of 1.422 specific gravity, having, also, an odour like that of chloroform, and boiling at 239° Fahr. It is formed either by the action of chlorine on ethylenchloride ($C_2 H_4 Cl_2$) or of chlorvinyl ($C_2 H_3 Cl$) on perchloride of antimony. With alcoholic potash, even in cold, it readily decomposes into potassic chloride and dichlorethylene ($C_2 H_2 Cl_2$), a fluid boiling at 98.6° Fahr. Dr. Tauber's experiments with this substance gave even more favourable results than with the last. In frogs, pigeons, guinea-pigs, and rabbits, a few drops produced rapid and complete anæsthesia, with, even in the deepest narcosis, only the slightest diminution of respiration and pulse frequency. In dogs of 10 to 14 lbs. weight, a dose of 30 to 50 drops (3 to 5 *grammes*) caused, in 3 to 7 minutes, complete anæsthesia, lasting from 11 to 19 minutes. The pulse rose considerably in one case, slightly in three others, but in no case was there a fall. The respirations were increased or very slightly diminished in frequency. In a dog of 50 lbs. weight, the kymographion showed no diminution in blood-pressure during anæsthesia with monochlor-ethylenchloride.

The high boiling-point and easy decomposition of monochlor-ethylenchloride by potash, combined with the speedily occurring and rapidly passing anæsthesia produced by it, lead Dr. Tauber to attribute the effects to its component dichlorethylene, which boils at blood-heat. That is, for this substance, he would grant the "component action", denied, on chemical and clinical grounds, to chloral-hydrate.

Dr. Tauber promises further experiments, and, more especially, with the latter substance, on man. We shall await with interest the results of these experiments; and with still more interest do we look forward to the results of the trial of these substances in actual practice. They will no doubt receive the attention of the Glasgow Committee on Anæsthetics of the British Medical Association. We may add that we propose in a very early number to publish the full text of the third report of this Committee to the Scientific Grants Committee of the Association, of which the abstract was read at the annual meeting at Cambridge, and which contains much valuable and original matter.

THE DENTISTS' REGISTER.

WHEN the Dentists' Bill passed from the Commons to the Lords, the registration clauses empowered the registrar to decline to register any person whose claim to registration did not appear to him satisfactory. The burden of proof rested with the claimant, and his redress on refusal lay in an appeal to the General Medical Council. The Government equired that these simple but effective clauses should be replaced by the more complex registration section of the Lord President's Medical Bill, on the ground that that section, which applied equally in his lordship's Bill to dental and to medical registration, had been approved by the Medical Council in full session. By the change, all discretionary power was assumed to have been removed from the registrar. He had, according to the ruling of the Executive Committee (Minute, October 19th, 1878), no choice but to register any person who made, in the prescribed form, a written and witnessed declaration, to the effect that he was, before July 22nd, 1878, "engaged in the *bonâ fide* practice of dentistry, separately or in conjunction with medicine, surgery, or pharmacy". In fact, the Council caused inquiry before registration to be abandoned in favour of inquiry after registration, thereby shifting the responsibility for correctness from the registrar to the registree. But Section 13 enacts that "the General Council shall cause to be erased from the *Dentists' Register* any entry which has been incorrectly or fraudulently made".

An opportunity is now afforded to the Council of testing its powers in the administration of laws of its own choice; and, it may be, of testing the wisdom of substituting complex for simple methods of legal procedure. The British Dental Association brought before the Medical Council, at its last session, the names of several hundred persons who had registered as engaged in the practice of dentistry with pharmacy; but who, their names not being in the *Chemists' and Druggists' Register*, could not legally practise pharmacy, and who, therefore, in the opinion of counsel (published in a late number of this JOURNAL), are liable to have their names erased from the *Dentists' Register*. The names were referred to the Dental Committee of the Council, the finding of which, as to the facts of the respective cases, is conclusive. It is said that, recently, a list of persons who have registered as engaged in the practice of dentistry, in conjunction with medicine or surgery, but who are not registered medical practitioners, has been brought before the Council. To ascertain whether the names are, or are not, in the *Chemists' and Druggists' Register* is but clerical work, and need not occupy much time or require the expenditure of great professional skill. The respective registers being legal evidence, it does not appear necessary to carry the inquiry further. For it cannot be urged that an illegal practice of pharmacy constitutes a legal claim to registration; and an incorrect or fraudulent declaration, witnessed, acted upon, and officially published, cannot be unmade—it is unalterable. The Act gives no power to change the substance of the declaration. Neither does it appear necessary to go into the question of extenuating circumstances; for it cannot be pretended that the pupils or unqualified assistants of registered chemists and druggists, or of medical men or others, are unacquainted with the provision in the Pharmacy Act which renders it penal for a person to practise pharmacy unless registered in the *Chemists' and Druggists' Register*. The expectation that the questions will be determined and the corrections made, before the issue of the *Register* for 1881, is quite reasonable.

If any miscarriage take place in the administration of this part of the Act, either from imperfect framing of the clauses, or from a want of administrative power on the part of the Council, clearly the fault will not lie at the door of the dentists, who were required to accept clauses drawn by the Government and approved by the Council. For, had the registration clauses, as they passed the Commons, been allowed to remain part of the Act, it is probable that few, if any, of the names now under consideration would have been entered in the *Dentists' Register*. In any case, one very useful end will be gained. It is likely that any future Medical Bill will be based upon the Government Bill of 1878-79; and if the registration clauses of the Dentists' Act (taken *verbatim* from the Medical Bill) fail from either of the above causes, the fault must be avoided in future legislation. The efficiency of that portion of the Medical Bill will have been tested at the cost of the dental fund.

THE Duke of Norfolk has sent a donation of one hundred pounds to the Charing Cross Hospital.

DRS. T. COLCOTT FOX, Drewitt, and Philpot are candidates for the post of Assistant-Physician at the Victoria Hospital for Children, vacant by the decease of Dr. Pearson Irvine.

THE churchyard of St. Botolph Without, Aldersgate, has been opened as a recreation ground for the use of the parishioners and the public in general. The ground is about an acre in extent.

PROFESSOR HYRTL will shortly celebrate his seventieth birthday; and a medal will be struck, with his portrait, and will be presented by his colleagues the professors in Vienna.

ON the seventieth birthday of Professor von Langenbeck, which occurred on the 9th inst., the Emperors William and Francis Joseph, and all the members of the German Court, sent their hearty congratulations to the aged professor. The Berlin students held a long torchlight procession in his honour. Amongst the numerous addresses received from foreign medical faculties were many from England.

ADVICES from Cuba state that about fifty cases of yellow fever were reported as existing at Havana on October 9th. In the week ended October 8th, there were fourteen deaths from the disease—six among citizens, and eight in the military hospitals.

THE Lord Mayor, having now satisfied himself that a committee of management has been duly elected at the All Saints' Convalescent Hospital, Eastbourne, has, in obedience to the resolution of the Council of the Hospital Sunday Fund, handed over a cheque for £519 16s. 4d. in payment of the award made by the Committee of Distribution.

THE quick sympathies of *Punch* have been enlisted in the efforts now being made by the joint committee of the National Health and Kyrle Societies to secure an abatement of the terrible smoke nuisance of the metropolis. This week's number of our witty contemporary contains a double-page cartoon, in Mr. Tenniel's best style, representing "Old King Coal and the Fog Demon"; the rugged-faced king seated majestically on a kitchen-grate, which belches forth clouds of smoke, and the Fog Demon veiled in a shroud of black mist which overspreads the mighty city, and brings in its train bronchitis, pneumonia, consumption, and other kindred scourges.

MUCH complaint is being made of the insanitary state of Ormesby (Yorkshire); and the apathy of its local board is so conspicuous, that an amalgamation of the district with the neighbouring borough of Middlesborough meets with great local favour. The vicar of the place has been attempting, with but poor success, to induce the local board to do something to improve "the drains and ashpits, and back streets; the stagnant pools of water, the manure-heaps on the road-side, and the neglect of disinfectants in houses where fever has existed". It seems, however, that nothing short of the threatened complaint of default to the central authorities will be of avail. Meanwhile, fever continues to be prevalent in the place, and the death-rate remains very high.

A MOST extraordinary and inexplicable piece of blundering came to light at the last meeting of the Kidderminster Town Council. Certain unpleasant rumours have of late been pervading the town as to the alleged percolation of sewage into the auxiliary well of the waterworks; and the borough engineer was, therefore, questioned on the subject. This official was very indignant at the idea that such percolation existed; "it was simply impossible and absurd to suppose that such could have been the case. The sewage-pipe passed through the well, but the pipe was well cased, so that it was impossible for any sewage to enter the well". The accuracy of this confident assertion may very well be questioned; but how so extraordinarily perverse a piece of ingenuity, as the passing of a sewer-pipe through a well, should have been dreamt of, much less carried out and defended, passes our comprehension.

DWELLINGS OF THE POOR.

A MEMORIAL to the Home Secretary on the subject of the Artisans' Dwellings Act was adopted at a conference of delegates from Metropolitan vestries and district boards held at St. Martin's Vestry, last week. The views expressed in the memorial were adverse to that Act, which, in the opinion of the Conference, should not be put in force until the provisions of Mr. M'Cullagh Torrens' Act had been exhausted by the local authorities throughout the metropolis. It was also urged that the cost of any operations under the Act should be borne by the parties interested and not by the ratepayers. A request is to be made to the Home Secretary to direct an exhaustive inquiry into the working of the Acts in question, and to give the delegates an interview.

MILK-TYPHOID.

CONSIDERABLE anxiety and alarm have been occasioned at Bridlington, a seaside resort in Yorkshire, by the recent prevalence of typhoid fever in the district, and once more the outbreak appears to be due to the neglect of sanitary precautions in a private dairy. During the month ended October 22nd, no fewer than eight deaths occurred there from this disease, and in the previous month a fatal case was also recorded. Suspicion having rested upon a particular milk-supply, it was found, on examination, that the water used in the operations of the implicated dairy was drawn from a well eighteen feet deep, sunk through a gravelly soil in a low-lying, and in wet weather swampy, under-drained field, where a downward percolation would readily take place. In the lane where the dairy is situated, the sewage of several houses flows into an open ditch at the bottom of the adjacent gardens, which ditch is full of stagnant dirty water and mud. At one of these houses, there was recently a case of enteric fever: an occurrence which, taken in connection with the subsequent outbreak, raises the suspicion that the poison from this case somehow got into the water used at the dairy. The eighty-three households supplied by the particular dealer were visited, with the result of finding that, exclusive of seven doubtful cases, forty-eight persons in those households were suffering from undoubted enteric fever. This large incidence of the disease upon the dairy-customers must be held to point very strongly to milk as the cause of the outbreak; and this is the view adopted by the medical officer of health. It is true that there have been "other cases of fever" (the number is not stated) where the particular milk was not supplied; but this hardly affects the main argument. From the descriptions given of it, Bridlington seems to be a likely place for epidemics of typhoid fever, from whatever cause arising, to occur. The health-officer tells his authority that "other influences have doubtless contributed to produce this epidemic, and, as such, I have repeatedly invoked your interposition respecting drainage, neglected ashpits and cesspools, and kindred elements for the propagation of disease." Clearly, if these things be so (and their accuracy is confirmed by independent testimony), the claims of Bridlington to be considered a "health-resort" will need to be very carefully investigated.

TYPHOID FEVER AT HAVERFORDWEST.

INFORMATION has reached us of a serious outbreak of typhoid fever at Haverfordwest. It is stated that upwards of a hundred cases have occurred, at least ten of which have already proved fatal. It is believed that the pollution of one of the reservoirs supplying the town with water—this reservoir being in close proximity to the cesspools of certain cottages—has been the cause of the outbreak; but the local authorities do not appear to have been sufficiently alive to the danger of the situation.

THE MEETING OF THE ASSOCIATION IN CAMBRIDGE.

THE following paragraph formed part of the Latin speech made by the Vice-Chancellor Dr. Perowne, in the Cambridge Senate House, on Wednesday last, at the termination of his year of office, in accordance with custom. In this speech, the Vice-Chancellor alludes to the most important events which have occurred during the past year; and among those events he regards the meeting of the Association in Cambridge as not the least important. The Vice-Chancellor took great interest in the meeting; and its success was not a little due to his warm sympathy and assistance. The following is the paragraph in the Vice-Chancellor's address which refers to the meeting:

"Porrò libet memorare conventum illum celeberrimum medicorum quos quatuor abhinc mensibus in hoc Senaculo, vos, Viri Academici, hospitio atque honore excepistis. Ingeniosus ille pictor, ut meministis, nymphæ effigiem expressit Æsculapium aggredientis ut pedi laboranti mederetur. Jam vero ipse Æsculapius ad Musas Cantabrigienses visit, non ut Musis sanationem adhiberet, sed ut ab iis gradum dignitatis acciperet."

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during October, that, taking the amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of impurity in an equal volume of water supplied by each of the other Companies and by the Tottenham Local Board was: Colne Valley 1.3, Kent 1.6, Tottenham 1.7, New River 4.6, Chelsea 5.3, East London 6.2, Grand Junction 6.6,

Lambeth 7.3, Southwark 7.9, and West Middlesex 8.4. The quality of the Thames water was inferior even to that supplied in September; the water supplied by the Grand Junction and Southwark Companies had alone been sufficiently filtered previous to delivery. The Lea water supplied by the East London Company was slightly turbid, and but little superior to the Thames waters; while that delivered from the same source by the New River Company was of superior quality. The deep-well waters supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were of their usual excellent quality; the Colne Valley Company's water had been previously softened.—Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town was turbid, and showed a considerable increase of organic matter.—The Loch Katrine water supplied to Glasgow is reported by Dr. Mills to have contained some suspended matter.

TYPHOID FEVER AT NEWLYN EAST.

ANOTHER death from typhoid occurred at Newlyn East on the 4th instant, but it is believed that the worst of the epidemic is over, although other deaths are anticipated. No new cases have been recognised for some days, and many of the patients are now convalescent. The temporary medical assistance to Mr. Vigurs, the resident practitioner of the place, who has worked indefatigably against great odds all through the outbreak, has now ceased; but three nurses and a dispenser still remain to attend to the cases. Two buildings have been rented by the local committee—one as a temporary hospital, the other as a wash-house for cleansing and disinfecting linen and bedding—and it is hoped that, with the measures now adopted, the outbreak will soon be at an end.

MEDICAL RIFLEMEN.

ON Wednesday, the 3rd instant, the first meeting of the United Hospital Rifle Association took place at Wormwood Scrubs. The Association was formed last July, for the purpose of uniting all volunteers, of whatever corps, at the different hospitals, and improving their shooting by offering a challenge cup, to be competed for annually by hospital teams. Three hospitals—Guy's, King's, and St. Bartholomew's—have already joined, and the treasurer has a large sum in hand towards the cup. It is hoped that, by next year, the Association may be in so flourishing a state as to warrant an application to the National Rifle Association for leave for the competition to be held at Wimbledon. The meeting on Wednesday attracted a large number of men, who were divided into three classes: marksmen, drilled members, and recruits.

PATHOLOGICAL DEMONSTRATIONS.

THE arrangements in the Metropolitan schools of medicine for pathological demonstrations, compare most unfavourably with those to be found in the German Universities, and urgently call for reform. It would seem as if the authorities at each school almost vied with each other in making the *post mortem* rooms as uncomfortable as possible. Undoubtedly, it is when a student is comfortably seated in a room, at a temperate heat, that he is best able to concentrate his attention on the particular object of his study. To derive benefit from demonstrations, it is also absolutely necessary that he be not too far removed from the specimen demonstrated; and, indeed, it is desirable that he should have an opportunity of handling it for himself. We are now speaking of demonstrations of the naked eye, appearances of viscera, etc., as seen in ordinary *post mortem* examinations. Of course, to learn the microscopic appearances, it is necessary that the student should prepare and examine the specimens himself. How far the conditions we have stated necessary to enable the student to gain most advantage from pathological demonstrations—and we do not think any one will contradict what we have said—are carried out in the metropolitan schools, we will refer to an account of the new *post mortem* room at Guy's Hospital, given at page 639 in the JOURNAL of October 16th. It might naturally be supposed that this room, belonging to one of the largest and richest hospitals in London, and being the newest, would be constructed on the most approved principles. How far this is the case will, we think, be best seen if we compare it with that of the Charité Hospital in Berlin. We quote the description referred to: "Guy's Hospital possesses now what is, without doubt, the best *post mortem* room in London. It contains a steep horse-shoe-shaped theatre, on the model of an operating theatre, so that, those *standing* (the italics are ours) four or five rows back can see perfectly well, while the demonstrator in the centre examines the organs. There is a spacious area behind, with room for two or three additional tables. At the back of the theatre, on a level with its summit, is a platform, on which is placed a table with arrangements for microscopical work." Here, in the best *post mortem* room in London, it is intended that the students are to stand during the demonstration; and we learn that the room is only imperfectly heated. We shall now describe the pathological demonstration class-room in the Charité Hospital. The room is a large square one, across one corner of which is a platform, about two feet high, with a large black-board upon it. On this platform, the demonstrator (Professor Virchow) stands, with the specimens arranged in order before him. Around him, arranged in rows, are long tables, about fourteen inches broad, into which are sunk small iron rails, like miniature tramway lines. The *post mortem* examinations are made by the assistants in a room below, and the organs only are taken into the demonstration room, on zinc-lined trays, with castors underneath, which fit into the grooved rails on the tables. The students are seated on comfortable stools at the tables. Each set of specimens is placed in turn before the Professor, who demonstrates shortly the pathological condition presented, using the black-board freely for diagrammatically illustrating his descriptions, and directs the attention of the students to the various points of interest in the specimens. The description being finished, an assistant removes the tray from before the Professor, and places it on the rails; the students then examine the specimen in turn, passing it along the rails from one to another. At the end of the first table there is an assistant, who receives the specimen and places it on the next table, and so on, till all the students have seen it. During the time the students are examining the specimens, Professor Virchow proceeds to give a more detailed explanation of the pathological conditions of the particular organ or set of organs—having, in the first instance, described only what is essential for the proper understanding of the specimens. The class-room is heated to a temperature of about 14° or 15° Cent. (nearly 60 Fahr.); and at one end it is fitted up with wash-hand basins, with hot and cold water, for the students. In comparison with Virchow's class-room, the new *post mortem* room at Guy's sinks into insignificance, although we do not mean to say that, in some particulars, the former might not still be improved. We believe that there are advantages in having the pathological class-room in the form of a theatre, and in having the necropsy made in presence of the students; but, why the latter should have to stand during the demonstration in a cold room, and only see the specimens at a distance, we cannot understand. Surely, the extra cost of seating and heating the class-room properly, and fixing tables with rails in front of the seats, would be amply covered by the increased facilities that would thereby be afforded to the demonstrator of teaching, and to the student of profiting by that teaching. The *post mortem* rooms at the other hospitals are frequently, if possible, more comfortless and worse arranged than the new one at Guy's. We trust that, before long, something will be done to remedy this sad state of affairs in the metropolis; and that the medical schools will not be above taking a hint from their neighbours on the continent, who, when a new institute is about to be built, not uncommonly commission the professor of the institute to inspect those of a similar kind in two or three countries, and to report as to which he considers the most perfect. We make no contrast between the position of the building at Guy's set apart for microscopical pathology, and which, in many of the London schools, does not exist at all, as it sinks into utter insignificance in comparison with the splendid rooms for that subject in Virchow's Institute, and in many other continental institutes.

SCARLATINA AND UNSANITARY CONDITIONS.

DR. PARSONS, of the Local Government Board, has recently investigated a considerable epidemic of scarlet fever in the Stourbridge registration district, which killed 51 persons in 1877, 290 in 1878, and 77 in 1879. As to the origin of the epidemic, nothing could be ascertained beyond the fact that scarlet fever was prevalent, in the latter part of 1876 and in 1877, in neighbouring districts in Staffordshire. It is not, however, necessary to suppose that it was imported from elsewhere, for the district is never entirely free from scarlet fever, and the late outbreak may be looked on as merely a more intense development of a disease chronically present therein. Such outbreaks are known to occur periodically in populous communities, the disease, dormant in the intervals, wakening into activity under certain conditions, of which one is the accumulation of susceptible individuals, while of others the nature is unknown, except that they are possibly atmospheric, and that they are especially present in the fall of the year. The tables given by Dr. Parsons seem to show that a relation existed between the degree of fatality of the epidemic, and those sanitary and social conditions upon which the amount of the general death-rate depends. Indeed, it can hardly be doubted, that the pollution with filth of the water which people drink, and of the air which they breathe, must tend to increase the virulence of an outbreak of scarlet fever, both by affording opportunities for the conveyance of the infective matter from person to person, and by placing those who are attacked under circumstances less favourable to recovery. One condition, especially, would seem to have been in the recent epidemics eminently favourable to the conveyance of the infection from case to case—viz., that in most parts of the district the liquid refuse of houses, so far as it is conveyed away at all, runs down open channels, often of very rough construction, very frequently for a considerable distance, passing in its way other houses, and trickling down the gutters, or stagnating upon the surface, of the public streets. It is known that the poison of scarlet fever is given off copiously from the patient's body in the scales thrown off from the skin and in the liquid excretions; it would therefore necessarily be largely present in the washing water and other foul liquids which find their way down these channels, giving off emanations which the passers by cannot avoid inhaling. Personal intercourse between the healthy and the sick is, however, no doubt the chief method by which scarlet fever is spread; and it appears that in the Stourbridge district, as in other places inhabited by a rough mining and manufacturing population, such intercourse is freely carried on. Another circumstance that undoubtedly assisted in the propagation of the disease was, the absence in all the districts of any means of isolating infectious cases. It is not of course, to be expected that a hospital, even if it existed, would be of much avail in dealing with an epidemic, such as that reported upon by Dr. Parsons, when once it has got hold of a community; but it may be reasonably supposed that if the cases forming the commencement of an outbreak, and such others as might be without proper facilities for isolation at home, could be removed to a place of safety, an epidemic might often be prevented, or be kept within smaller limits. Moreover, the existence of a hospital would teach a lesson of the duty of carefulness concerning the health of others, and be a warning against the common recklessness about infectious diseases.

ROYAL BOUNTY.

ON the recommendation of the Chief Secretary for Ireland, Mr. Forster, the Prime Minister has granted a sum of £250 from the Royal Bounty and Special Service Fund to the widow of the late Dr. Robinson; and a sum of £150 to the mother of the late Dr. O'Donovan, of Skibbereen. In making this gratifying announcement, we should not omit to mention that this recognition of the services of the deceased members of our profession is due to the action of the Dublin Mansion House Committee. Attention being called to the fact that three medical officers had already fallen victims to fever, and that two others were gravely affected, the Committee came to the following resolution, on the motion of Dr. Sigerson, seconded by Sir George Owens, namely: "That the Lord Mayor, as Chairman of this Committee, be requested to represent to the Government the services of those members of the medical profession who have fallen victims to epidemic fever, the result of exceptional distress and famine, in order that due recognition of their services be made, and an allowance be granted to their families." A letter was accordingly drawn up, signed by the Lord Mayor of Dublin, and forwarded by him to the Chief Secretary, in the latter part of June. The subject was again noticed, and the claims of the medical officers were pressed on public attention, in August, in the final report of the Medical Commission, drawn up by Dr. Sigerson, and accepted and forwarded to the Chief Secretary by the Committee. Dealing with "medical remedial measures", the author wrote: "The position of the medical officers needs to be improved, in order that the services of active and talented men should continue to be acquired, especially in remote districts. A compulsory superannuation allowance should be granted, when circumstances are shown to require it. It should also be ruled that, in civil as well as in military life, exceptional services rendered in times of extra risk to life should be duly considered and properly rewarded. The services of the medical officer who suffers or dies whilst defending the population from the ravages of an epidemic, should be regarded as having the same title to recognition as those of the surgeon who is wounded or falls whilst with an army in the field." When so influential a lay committee as that of the Dublin Mansion House pleads for justice to the medical profession, its action should be gratefully recognised.

SCHOOL PUNISHMENTS.

MORE than one case has lately been brought under public notice, in which serious consequences have resulted from schoolmasters and mistresses punishing children by severely "boxing the ears". The not unfrequent results of this form of discipline are rupture of the tympanum, deafness, and sometimes concussion of the brain, with lifelong injury. For a strong adult to assault a child by a succession of blows on the side of the head, is a practice which is really indefensible, and should be discountenanced by all school-managers. Caning on the hand is not open to so many objections; but the rather brutal and passionate forms of caning which are sometimes adopted have more than once led to consequences detrimental to the perfection of the hand as an instrument of delicate labour in after-life; and, if permitted at all, the punishment should be employed with caution, and a due sense of the responsibility which must attach to excess. Caning on the back and shoulders is the least objectionable form of physical punishment, where any is authorised.

EAU DE SELTZ.

THE French papers are much occupied just now in discussing a very important and startling report which has been presented to the Paris Academy of Sciences, on the subject of the impurity of the artificial aërated waters, so enormously consumed in Paris by the French residents, as well as by visitors, in syphon bottles. It is well known that the drinking-water of Paris is very unreliable. Some of the river-water, with which it is supplied, is tolerably pure; but in other quarters of Paris, it is very far from being so. A good deal of the water-supply is from wells, and the domestic arrangements for storage are liable to contamination from sewage-gases rising into the tanks. On the whole, Paris drinking-water is notoriously so bad that visitors do wisely to avoid it; and the Parisians, although having the advantage of acclimatisation, which is undoubtedly protective against many of the poisonous germs which are apt to be contained in such waters, are, nevertheless, justly suspicious of their drinking-water. There are forty million syphons manufactured *per annum* of what is popularly called "Eau de Seltz", viz., river-water or well-water impregnated with carbonic acid. There has been a sort of accepted tradition that the water contained in the syphons was pure and safe. This, however, appears, from a long series of analyses made by M. Boutmy, in the paper quoted, to be not only without foundation, but exactly the opposite of the fact. Not only does aerated water in these syphons often contain as much impurity as

the water of the Vanne, the Huys, and the Seine, but a much larger proportion of organic matter, sometimes three and four times as much. In fact, the analyses given by M. Boutmy show that a certain proportion of these syphons contain water which is little better than diluted sewage-water. Of the great disadvantage of such a state of things, it is needless to speak. We in England have long since arrived at the conviction that diarrhœal affections and typhoid fever are much more apt to be conveyed by drinking-water than by any other vehicle; and it seems, after this revelation, that the endemic frequency of typhoid in Paris is more probably due to its drinking-water, and to the impurity of its syphons, than to the *odeurs de Paris*, of which so much has lately been said and written. It has been shown that these unpleasant odours of the streets are many of them largely due to cresylic acid and other gas-products, which, however malodorous, are by no means productive of fever and disease. The labours of M. Boutmy appear, fortunately, to have attracted a good deal of attention in Paris; and the matter will, no doubt, not end here. The public health is largely interested in this state of things. The accuracy of M. Boutmy's conclusions has been disputed in a protest from the representatives of the artificial aërated waters of Paris. On the face of them, these analyses appear to have been carefully made, authentic, and reliable; and M. Wurtz, the great chemist of France, appears to have vouched for the skill and trustworthiness of the observations. However this may be, the Academy has already directed a further set of analyses to be made; and, meantime, with the results of M. Boutmy's investigations before them, it is probable that the police and analytical authorities of Paris will feel called upon to take energetic measures to test, on a large scale, existing stocks of these aërated waters in that city, and to make known the results. It is quite possible that very important results for the health of Paris may ultimately flow from this timely exposure by M. Boutmy of the impure and dangerous character of a large part of the table-waters of the Parisians. The conveyance of contagion by water is far too little insisted upon by foreign sanitarians, as a great number of English travellers abroad have found to the cost of their lives or health; and it cannot but be advantageous to the health of the French population, that attention should be drawn to the subject in a definite manner by M. Boutmy's analyses.

NEPHRO-LITHOTOMY.

SOME attention may profitably be given to the case brought before the recent meeting of the Clinical Society, and reported in our issue of October 30th, in which an oxalate of lime calculus, weighing thirty-one grains, was extracted from a healthy kidney by an operation in the loin. It is the first case, so far as can be ascertained, in which such an operation has been successfully completed, although Durham, Gunn, Annandale, and others, doubtless had the same object in view when they cut down upon the kidney for the relief of nephritic colic supposed to be caused by stone. Mr. Henry Morris has proposed the name nephro-lithotomy for the operation, to distinguish it from nephrotomy. By nephrotomy is meant the cutting into a disorganised or thoroughly sacculated kidney, whether as the result of renal calculus or some other cause. In several cases of nephrotomy, a calculus has been removed, either entire or, after having been broken up by the surgeon, in fragments, from the diseased kidney. Mr. Morris's case, however, differs from all of these in that the kidney, which was the seat of the stone, was healthy; and, though it had been constantly irritated to the degree of severe hæmaturia, there had never been any pus or other abnormal constituent than blood passed in the urine. It is this fact that gives the great importance to the case, because it proves that the normal excreting substance of the kidney can be safely cut into, and a stone of medium size pressed out through the incision, without causing any hæmorrhage of the least consequence, and without leaving a permanent urinary fistula. It was the fear of hæmorrhage which made the older surgeons regard the proposal to cut into a kidney, the substance of which was not already destroyed, as untenable and reprehensible. But the experience of modern surgeons as to accidental wounds of the kidney has, no doubt, led them to a somewhat different conclusion; and has prepared them to test, fairly and fully, the practice which, it is to be hoped, this case will but inaugurate. Until some medicine has been discovered with solvent power sufficiently certain and potent, cases will occur in which the patient must pass a life of suffering, terminated by an early and painful death, unless surgeons are able and willing to extract renal calculi from the seat of their formation. It is but right, therefore, that the practical surgeon should ask himself the question, "Am I justified in refusing the chance of recovery which an early operation affords; or in delaying interference until pyelitis, with all its attendant and destructive consequences, has supervened?" It may be questioned whether the danger of hæmorrhage ought to weigh for a moment against the relief which would follow the successful extraction of the stone. Probably no calculus larger than what might pass by the ureter could remain in the pelvis, or in one of the calyces of the kidney, and not be detected by a careful examination with the finger on the surface of the kidney. If the stone can be thus felt, the incision of the kidney-structure could be made directly down upon the stone; and so no injury would be inflicted upon any part of the kidney, excepting that immediately covering one aspect of the stone. Thus the branches of the renal vessels, as they pass through the hilus of the kidney, would be out of harm's way; while even without the evidence of Mr. Morris's case, it seems reasonable to suppose that the cortical or base of the pyramidal part of the kidney would bleed no more than a correspondingly small wound of muscular tissue. Nor need the difficulty of diagnosis be regarded as an argument against nephro-lithotomy. If the stone be found and removed, the difficulty is overcome, and the diagnosis triumphs. But if, on the other hand, the stone be not found after the kidney has been exposed, no harm will have been done. The wound in the loin will readily close; while the experience of past cases goes to show that relief from the nephralgia, at least for a time, almost invariably follows the lumbar incision. Such was markedly the result in two patients operated upon by Mr. Annandale of Edinburgh, who, in a very interesting communication to the *Edinburgh Medical Journal* for January 1875, explains the *modus operandi* of the incision by supposing it to act as a strong counter-irritant. There seems, then, to be no great or real objection to the operation, in spite of its having been strenuously condemned in times past; and we cannot but think that it needs only the uprooting of the traditional prejudice against it, to establish nephro-lithotomy as a safe and scientific surgical procedure.

THE SEAMEN'S HOSPITAL SOCIETY.

IT is a popular error that sailors reside, when on shore, either within or closely adjacent to each of the large docks. This is not, however, the case in reality; and the Sailors' Home is far away from the Victoria, the East and West India, and the Surrey and Commercial Docks. It is not surprising, therefore, that a writer in a medical contemporary has fallen into the popular error, and has been allowed to censure the committee of the Seamen's Hospital because they are conducting their work in the same locality where they have maintained a hospital for sixty years past. The reasons which have secured to Greenwich the honour of having the Seamen's Hospital within its boundaries are not far to seek. Near to Greenwich, and on the same bank of the river, are the Surrey and Commercial Docks, which are some of the largest in the port of London. As most of the vessels in these docks are foreign, the floating population comprises about 90 per cent. of the crews of these vessels; whereas, in the other docks, the floating population varies from 2 to 25 per cent. of the crews of vessels in these docks. The distance from London Bridge to the lower entrance of the Victoria and Albert Docks is about eleven and a half miles, and all the docks on the north side of the river are spread over this area. Greenwich Pier, which is passed by a large number of vessels entering the port of London, is within a stone's throw of the Hospital; it is within easy distance of the Milwall, East and West India, and Victoria Docks, and also of Poplar—a district much frequented by seamen. From the first establishment of the Hospital, passing vessels have been in the habit of leaving their sick at the Seamen's Hospital; and every week many such cases are landed at Greenwich Pier. Again, Greenwich is most conveniently situated

with regard to vessels lying in the river, as it is midway between London Bridge and Woolwich, which, practically, so far as the river itself is concerned, is the Port of London. The advantage of Greenwich as a centre for all engaged in river matters, and residing within the port, is proved by the facts, that the chief officer of the Thames Conservancy (the Harbour Master) has his office in East Greenwich, and that, before the Seamen's Hospital Committee had any idea of the present Government building, they had, after full inquiry, purchased a site for a new hospital on land at East Greenwich. Finally, the offices of the Port Medical Officer are at Deptford, in an adjacent district; but it has recently been decided, we believe, to move them to Greenwich as the most central and convenient situation to be found for the work. It will be evident, therefore, that this is a case which singularly proves the wisdom of the old saw: "Let every man stick to his own last". The leading shipowners of London are far more competent than an anonymous writer in a medical paper to select the most suitable and useful locality for the Seamen's Hospital. They have unanimously decided that Greenwich is the best site for the purpose, and the soundness of their judgment has been confirmed by the action of the Thames Conservancy, and by that of the Port Sanitary Authorities. Under these circumstances, the temerity of the writer who declares that a hospital at Greenwich "cannot be of the least value to the sick sailor", would only be surpassed if the shipowners, who he has ventured to attempt to teach their business, were to presume to criticise his mode of treating the patients who consult him.

CERTIFICATION OF CAUSES OF DEATH.

THE causes of 119,643, or 91.3 per cent. of the 131,030 deaths registered last quarter in England and Wales, were certified by registered medical practitioners; and 6,151, or 4.7 per cent., by coroners in inquest cases. The causes of the remaining 5,236, or 4.0 per cent. of the total deaths were uncertified, and were entered in the death-register from information supplied either by unregistered or unqualified medical practitioners, or by the ordinary informant of the death. The proportion of uncertified deaths showed, however, a further decline from that which has prevailed in recent quarters; in the metropolis the proportion did not exceed 1.0 per cent., whereas in the rest of England and Wales it was equal to 4.7 per cent. The percentage of uncertified deaths was equal to 7.6 in Durham, 8.0 in Herefordshire and Rutlandshire, 8.6 in Cornwall, 10.5 in North Wales, and 12.3 in South Wales, including Monmouthshire; in this county the proportion was so high as 16.3 per cent., in consequence of the colliery accident at Risca, which caused 118 deaths, most of which were registered previously to the certification of the cause of death by inquest. In the twenty large English towns the proportion of uncertified deaths averaged 1.9 per cent.; it did not exceed 1.0 in London, while it averaged 2.6 in the nineteen provincial towns. The percentages in these nineteen towns ranged from 0.5 and 0.6 in Plymouth and Portsmouth, to 5.4 and 5.5 in Oldham and Hull; the proportion showed a considerable decline from those prevailing in the preceding quarter in Liverpool, Salford, and Wolverhampton, while it had increased in Oldham. The non-certification of causes of death arises from the deceased persons not having been attended in their last illness by registered medical practitioners, and from no inquest having been held. These cases are due partly to the practice of the unqualified assistants of registered medical practitioners, partly to the practice of unqualified or unregistered medical practitioners on their own account, and partly to relatives and others having neglected to provide medical attendance for the deceased persons. A very large proportion of the uncertified causes of death are those of infants and young children.

ANTISEPTIC TREATMENT OF ABSCESS OF THE LIVER.

AT a recent meeting of the Académie de Médecine, M. Rochard communicated the operative method practised by Dr. Louis Stromeyer Little, physician of the Hospital of Shanghai, and by one of his assistants, a naval physician of the first class of the French Marine. This method consists in limiting, with as much precision as possible, the seat of the collection of pus, and verifying the diagnosis by the aid of puncture with the aspirator. The needle is then employed as a conductor to open very largely with the bistoury, and to empty the cavity of all its contents; consecutive accidents being avoided by the use of the Listerian method of operating and of dressing. Three successful cases were reported in support of this method; and Dr. Little does not hesitate to give the honour of his successes to Lister's method. Before having recourse to it, he lost all his operative patients, whatever his mode of opening.

SCOTLAND.

ALREADY about £5,000 has been subscribed towards the erection of the Ayr Fever Hospital; to this will be added the sum of £2,000, which, it is expected, the sale of the old building will realise.

THE managers of the Sick Children's Hospital in Edinburgh have appointed Mr. William Fligg, M.B., to be resident physician, in place of Mr. Arthur J. Brodie, whose term of office has expired.

ANOTHER outbreak of milk-scarlatina is reported from Dundee. For the last few weeks, scarlatina has been unduly prevalent in the town amongst families in good circumstances and with healthy surroundings. It has now been discovered that a female servant employed at a dairy visited a house in which was scarlatina, and was attacked by the disease, which was communicated to a person connected with another dairy. From these two sources, the disease spread to the customers supplied with milk from each dairy.

EDINBURGH UNIVERSITY.

THE rectorial contest in Edinburgh University terminated on Saturday in the return of the Earl of Rosebery as Lord Rector, by a majority of 39 votes; the respective numbers being, Lord Rosebery, 1,024; and Sir Robert Christison, 985. This is the largest number of students that has ever been polled in Edinburgh; the total constituency on Saturday being within a few of 2,500. The voting went on in the various class-rooms, each presided over by a professor and assessor, while representatives of the two candidates were also present, and lasted from 9 A.M. till 10.30 A.M. During this time, and after the declaration of the poll by Sir Alexander Grant, the students indulged in the usual boisterous manner observed at such times. This result does not show in any way a diminished respect for Sir Robert Christison as an ornament to, and former professor of, the university, but is the result of his having been brought forward by the Conservative students; and, coming after his warm support of the Conservative candidate for the parliamentary representation in April, it served to unite the Liberal students in a determination to return one of their own political faith.

GLASGOW UNIVERSITY.

THE winter session of the Glasgow University was formally opened on the 2nd instant, when Principal Caird intimated that, as on a former occasion, he would postpone the usual opening address till the Saturday after the Rectorial election. The nomination in connection with the Lord Rectorship was afterwards proceeded with: Mr. Bright being nominated by the Liberal Club, and Mr. Ruskin by the Conservative and the Independent Clubs. The election takes place on November 15th. At the last contest, Mr. Gladstone, it may be remembered, defeated Sir Stafford Northcote by more than five hundred votes.

PROFESSOR CHARTERIS'S INAUGURAL ADDRESS.

PROFESSOR CHARTERIS delivered his inaugural address on the 3rd inst., to the students attending the class of Therapeutics and Materia Medica in the University of Glasgow. A number of the professors of the Medical Faculty were present. In his remarks, Professor Charteris dwelt on the history of therapeutics from the earliest times, pointing out some of the most important results hitherto attained; and impressed on his hearers the value of studying carefully this branch of practical medicine. He also alluded to the unjust and odious trammels that had been placed in the way of advancing medicine by the recent legis-

lation on vivisection; but he expressed his belief that this sentimental action of our legislators could not throw back the rising tide of rational therapeutics. The address was well received by the large number of students who were present.

LORD RECTOR'S ADDRESS AT ABERDEEN.

THE Earl of Rosebery delivered his address, as Lord Rector of the University of Aberdeen, in the Music Hall, on November 5th. His lordship advocated the institution of a Chair, if not of Modern History, at least of Scottish History, in connection with the university, and in doing so touched upon some of the salient features of the national history and life of Scotland. He regarded it as a reproach upon all the Scottish universities that there was no provision for the teaching of the national history, and that they were guilty of "producing highly educated Scotsmen, who knew all about the Ephors and nothing about the Lords of the Articles." The address was attentively listened to throughout, the proceedings being unusually devoid of unseemly interruptions. In the evening Lord Rosebery was entertained to dinner by the Senatus of the university in the Palace Hotel—Principal Pirie presiding—and the students engaged in a torchlight procession.

ABERDEEN UNIVERSITY ASSESSORSHIP.

THE voting papers sent in by members of the University Council for the election of a representative to the University Court were counted on November 4th. The candidates were Mr. John F. White, merchant, and Dr. Bain, late Professor of Logic. The vote was declared in the evening as follows: Mr. John F. White, 997; Dr. Bain, 547—majority for White, 450. The total number of papers issued was 2,538, and several hundreds were returned through the dead letter office on account of the parties having changed their residence. The University Court met on Saturday, November 6th, and remitted to the Senators to report on certain objections of the Edinburgh Court anent proposed alterations of some of the Aberdeen ordinances for graduation in medicine.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

AT the October examinations for the double qualification of L.R.C.P. and S.E., twelve candidates passed the first professional examination; forty-two passed the final examination, and received diplomas to practise. One gentleman passed the first professional examination for the L.R.C.S., and six passed the final examination; while, in dental surgery, one candidate passed the first professional examination, and three passed the final, and were admitted as dental surgeons.

TEACHING OF GERMAN IN EDINBURGH MEDICAL SCHOOL.

THE Minto House School of Medicine, Edinburgh, has just added to its varied teaching powers one which cannot fail to be of great service to medical men and students. Recognising how necessary is a knowledge of German, the lecturers have appointed Mr. Adolph Schultz to be teacher of German language and literature to medical students. The course was opened last week by Mr. Schultz; Dr. Haldane, President of the Royal College of Physicians, occupied the chair.

THE REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending October 30th, it appears that the death-rate in the eight principal towns was 24.2 per 1000 of estimated population. This rate is 8.3 above that for the corresponding week of last year, and 4.6 above that for the previous week of the present year. The lowest mortality was recorded in Leith—viz., 14.2 per 1000; and the highest in Perth—viz., 44.8 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 6.0 per 1000, being 1.7 above that for the previous week. Scarlet fever continues prevalent in Glasgow, Edinburgh, and Leith. Acute diseases of the chest caused 121 deaths, being almost the same as the number for last week. The mean temperature was 39.0°, being 0.3° under that of the week immediately preceding, and 2.6° under that of the corresponding week of last year.

MORTALITY STATISTICS OF GLASGOW.

DR. J. B. RUSSELL, medical officer of health for Glasgow, has issued the mortality statistics of the city for the quarter ending June 30th last. The death-rate was 26 per 1000, the average for the last ten years being 28. Compared with other towns, this mortality was lower than that of the eight largest towns in Scotland for the period named, but it was greater than the average of twenty large English towns, with the exception of Liverpool. While the death-rate for the quarter was 26, the birth-rate was 39, per 1000. The deaths under one year were 159½ per 1000; one and under five years, 61; five years and upwards, 16 per 1000. Of the total deaths, 90 per cent. were certified, and 43 per cent. were in friendly societies. Of the births, 8 per cent. were illegitimate. There was no proof of medical attendance having been obtained for 23 per cent. of those who died under one year; for 11 per cent. of those who died above one, and under five, years; and for 5 per cent. of those who died above 5 years.

HEALTH OF GLASGOW.

FROM the report of the medical officer of health of Glasgow for the fortnight ending October 30th, it appears that the death-rate was 22 per 1000. The mean temperature during the fortnight was 37.5° Fahr., being 8.6° colder than the preceding fortnight. The comparative excess of mortality this year arises chiefly from the prevalence of scarlet fever, and an increase in fatal chest-diseases. The number of deaths from pulmonary diseases was 169, representing a death-rate of 7½ per 1000, and constituting 33 per cent. of the total deaths. The number of deaths from fever was 15: 13 from enteric, 1 from typhus, and 1 undefined; while, from infectious diseases of children, there were 66. Nearly half of the whole deaths from scarlet fever in the city occurred in the eastern district. The rise in the death-rate of the past fortnight would seem to be wholly accounted for by an increase of 53 per cent. in the number of deaths from scarlet fever, and of 28 per cent. in the number from diseases of the lungs. There are at present in the hospital, Belvidere, 287 cases of scarlet fever, 154 of enteric fever, 46 of typhus, and 15 of measles—in all, 502, as compared with 486 at the same day in the previous fortnight.

NATIONAL INSTITUTION FOR IMBECILES, LARBERT.

THERE are at present one hundred and thirty inmates in the National Scottish Institution for Imbeciles at Larbert. There is accommodation for eighty more; and this accommodation the directors will avail themselves of, as soon as their funds permit. Since the institution was opened, nearly five hundred children have passed under training; all have received some benefit, and some have been rendered useful members of society.

IRELAND.

DR. T. O'MEARA, jun., has been appointed resident medical superintendent of Carlow District Lunatic Asylum.

THE Countess Cowper, wife of the Lord Lieutenant of Ireland, visited St. Mark's Ophthalmic hospital last week. An amateur concert in aid of its funds will be given in December.

WE are requested to state that, owing to absence from town, in consequence of temporary indisposition, Dr. Lyons, M.P., was unable to be present with the deputation from the Council of the Irish Medical Association at its recent interview with the Chief Secretary for Ireland.

DR. RALPH W. HODGES, of Queenstown Hospital, has obtained the medal of the Royal Humane Society for having rescued a child named Ward on the 30th ultimo, by jumping off the Admiralty Pier at Queenstown, his shoulder having been dislocated at the time.

QUEEN'S COLLEGE, CORK.

DR. CHARLES delivered an introductory lecture to the classes of anatomy and physiology on the 1st instant. He commenced by referring

to the remarkable and unprecedented success of the students of the College during the past University year. At the October University Examination, lately held in Dublin, Dr. Jeremiah Colter obtained first honours and gold medal, with the degree of Doctor in Medicine, having taken first place in anatomy and physiology. The lecturer then mentioned the names of several students who had highly distinguished themselves at recent examinations, and proceeded to point out the extreme importance of a close and accurate acquaintance with both anatomy and physiology to all students of medical science; and indicated to the junior students the true and only way in which they should proceed with the study of the various subjects which came under their observation. After discussing several topics relating to medical education, he concluded by earnestly entreating all those present to encourage habits of independence, industry, and perseverance. Cork students, he remarked, were not wanting in talent; their conduct was excellent; but in perseverance they were, as a rule, sadly deficient.

CORK FEVER HOSPITAL.

A LARGE and influential meeting of the subscribers to the Cork Fever Hospital took place in the Royal Cork Institution last week, for the purpose of electing an apothecary to the institution, and of considering some alterations in the rules of the hospital. The mayor proposed Mr. Hillary as a candidate for the office of resident apothecary, but afterwards withdrew his name, and Mr. Atkins was declared duly elected. The report of the committee of management, which we recently published, was next read, and also the following protest from the medical staff to the committee.

"We, the undersigned members of the medical staff of the Cork Fever Hospital, have read with surprise, in the public press, the new rules proposed by the committee to be adopted for the 'internal management' of the hospital. We desire, respectfully, to draw attention to Rule 4, which defines the power of the committee to frame new rules, and which clearly lays down the condition that 'the assistance of the physicians' should be obtained before new rules are framed. This, as we submit, wise provision, has not been acted on; and hence we regret that an apparent conflict of opinion should arise between the physicians and the committee.

"With regard to Rule No. 11, we submit that the physician in charge of a case is the only judge of the necessity of holding a consultation; and, while we are not aware that there is any fever-hospital in the United Kingdom in which a rule of this kind exists, still we have no objection. On the contrary, we desire to meet in formal consultation in any case involving special difficulty in its management, and which presents unusual features. We therefore suggest, as a substitute for the rule of the committee, 'that the physicians, when they think it necessary in any exceptional case, where there is a difficulty, rarity, or doubt, shall hold formal consultations'.

"In reference to Rule No. 12, we, the medical staff, cannot consent to be bound by any pharmacopœia, nor by any collection of formulæ, inasmuch as such restriction would be opposed to the best interests of our patients, seriously affect their chance of recovery, and would greatly hamper the physicians in the discharge of their duty. This must be obvious to the committee, for the simple reason that there are, in daily use, numerous medicines not contained in any official list or pharmacopœia (the latest edition of the *British Pharmacopœia* was issued in 1867), which are, nevertheless, in common use and universally recognised by the highest medical authorities.

"We need hardly remind the committee that sometimes urgent cases may occur which demand immediate treatment; and how absurd would be a rule which would compel the medical staff to wait for a meeting of a committee, long prior to which the death of a patient might take place, where the rule states that the medicine prescribed must have the approval of the committee. At the same time, the medical staff have no objection to consult as to the propriety of using an extraordinary remedy which the occurrence of an exceptional case may demand the administration of, when ordinary remedies have failed.—WILLIAM BEAMISH, M.D.; H. MACNAUGHTON JONES, M.D.; W. T. BUDDS.—Cork, November 4th, 1880."

The mayor suggested that they should neither accept nor reject the recommendations of the committee that day, but that they should have time to consider the protest of the medical staff, which they then heard for the first time. He was disposed, he said, to sympathise a good deal with the medical staff, and he proposed that they should adjourn the whole matter for a fortnight, in order to give the subscribers an opportunity of considering it more fully. This proposal was adopted, and the proceedings terminated.

THE NATIONAL EYE AND EAR INFIRMARY.

THE managing committee of this hospital met last week in the premises in Molesworth Street they lately purchased, and to which it is intended to remove the hospital from its present house in St. Stephen's Green. For some time the premises in St. Stephen's Green have been inadequate; but the committee believe that those now purchased will fulfil their requirements, when some rather extensive alterations and additions to them have been made. The plans which the committee have adopted for these alterations are based, we understand, upon the model of some of the London hospitals and out-patient departments, and will provide accommodation for both in- and out-patients. The new hospital will contain twenty-six beds, with separate day-rooms for men and women, operating-room, board-room, matrons' apartments, and ample accommodation for nurses, and also, if desired, accommodation for a resident surgeon. The plans also include the important items of a good lift and arrangements for fire-hose, etc. The entrance to the out-patient department will be by a lane in rear of the house; and this part of the institution will be quite separate from the hospital proper. Separate waiting-rooms for men and women will be provided; an ample consulting-room for diseases of the eye, with a dark chamber for ophthalmoscopic examinations; and distinct waiting and consulting rooms for diseases of the ear. It is proposed to heat the entire hospital and dispensary with hot-water pipes. The approximate estimate for the proposed improvements is considerably above the sum which the committee have in hand for the porpose; and it was resolved that no works should be actually contracted for until the required money had been obtained, or prospect of obtaining it existed. The sum of £500 was considered to be still needed; and a strong belief was expressed (which it is to be hoped may be realised) that, if the public were appealed to, the money would be forthcoming in a comparatively short time.

DUBLIN HOSPITAL SUNDAY FUND.

THE seventh annual collection in aid of this fund will be made tomorrow, the 14th instant. The National Orthopædic and Children's Hospital has this year been admitted into participation in the fund; so that now sixteen hospitals will derive benefit from the award. The supporters of the fund have reason to be congratulated upon the continued prosperity of the charity, which has already benefited the sick poor of Dublin and the surrounding country to the extent of upwards of £23,000, and this without diminishing the income derived by the hospitals from annual subscriptions. The amount of the collections has steadily increased, being in 1874 £3,306, in 1875 £3,619, in 1876 £3,873, in 1877 £4,107, in 1878 £4,301, and in 1879 £4,329, thus proving the increased prosperity of the fund and the continued public confidence in its management.

PATHOLOGICAL SOCIETY OF DUBLIN.

AT the annual general meeting of this Society, held on Saturday last, the following officers were elected for the ensuing year. *President:* Arthur Wynne Foot. *Vice-Presidents:* J. T. Banks, Samuel Gordon, E. Hamilton, Thomas Hayden, George H. Kidd, T. Joliffe Tufnell. *Council:* John Kellock Barton, Anthony H. Corley, George F. Duffey, John Magee Finny, Reuben J. Harvey, James Little, Thomas Evelyn Little, Robert M'Donnell, William Moore, Christopher Nixon, John M. Purser, and William Stokes. *Secretary and Treasurer:* Edward H. Bennett. *Secretary for Foreign Correspondence:* John William Moore.

STIMULANTS IN WORKHOUSES.

THE medical officers of the Cork Workhouse have issued the following report, in reference to a memorial recently presented to the guardians as to the amount of stimulants consumed in the Cork Workhouse: "We, the undersigned, beg to inform the board that we have carefully perused

the memorial lately submitted to us by them with reference to the consumption of stimulants in the workhouse hospitals; and in reply thereto, we deem it but due to ourselves to reiterate the statement so frequently made by us on this subject, namely, that we have been always most careful in the use of the items above referred to, never prescribing them unless in those cases in which their medical effect appears to us to be absolutely required; and we trust, by constant vigilance on our part to prevent any undue consumption of these indispensable medical adjuncts, having, at the same time, due regard to the welfare of the patients confided to our care."

HEALTH OF DUBLIN: QUARTERLY REPORT.

In the Dublin registration district, the number of births registered during the quarter ended October 2nd amounted to 2,496, being equal to an annual ratio of 1 in 31.5, or 31.7 in every 1000 of the population. The deaths numbered 2,714, affording an annual ratio of 1 in 29.0, or 34.5 per 1000. Omitting the deaths (57) of persons admitted into public institutions from localities outside the district, the rate was 33.8 per 1000. Zymotic diseases caused 832 deaths, being 31 per cent. of the deaths from all causes, and equal to an annual rate of 10.6 per 1000 of the population. The average number of deaths from these diseases in the corresponding quarter of the last ten years was 423, or little more than one-half of the number for the quarter now ended. The increase is distributed over nearly all the diseases in this class, but is most marked in the mortality from diarrhœa, scarlatina, and whooping-cough. Small-pox proved fatal in 56 instances, being 79 fewer than those registered in the preceding quarter; measles, 72 deaths; scarlatina, 136, being 23 fewer than the number recorded during the second quarter, but more than double the average for the corresponding period of the last ten years. Whooping-cough caused 95 deaths; fever, 77; and diarrhœa 284, being considerably more than double the average for the third quarter of the past ten years. To convulsions, 282 deaths were ascribed; phthisis, 244; while diseases of the respiratory organs proved fatal in 329 cases, of which 236 were due to bronchitis, 56 to pneumonia, and 28 to lung-disease unspecified. Apoplexy caused 32 deaths; paralysis, 46; diseases of the heart and circulatory organs, 110; liver-disease unspecified, 33; and Bright's disease, 13. Hydrocephalus caused 70 deaths; mesenteric disease, 76; and cancer, 41. The mean of the mean weekly temperature for the quarter was 57.9°; and the rainfall measured 8.671 inches.

Bradford (Yorks).—Last year 6,358 births and 4,106 deaths were registered in Bradford, equal to rates of 32.7 and 21.1 per 1,000 respectively. The death-rate is the lowest for Bradford on record, and is 3.1 below the average of the six preceding years. Only three of the other nineteen large towns had a lower death-rate, and neither of these was a large manufacturing town like Bradford. The infant mortality shows a steady decrease. In 1873 the proportion per 1,000 births was 205; in 1879 it was 152. Whilst the percentage of deaths of legitimate children to legitimate births was 144 per 1,000, that of illegitimate children to illegitimate births was 244, the ten per cent. difference being ascribed principally to "wilful negligence". The number of inquests held in 1879 was 42 less than in 1878, and amounted to 3 per cent. of the total deaths. Uncertified deaths exceeded the number of last year by 13. If, as Mr. Butterfield remarks, it were the rule to hold an inquest on all cases uncertified by a legally qualified practitioner, the number of uncertified and therefore suspicious deaths would rapidly diminish. Zymotic diseases were responsible for 471 deaths, against 641 in 1878. Though no death from small-pox was recorded, several cases occurred, the majority of the patients having been employed at a rag factory. Measles showed a considerable increase in fatality, causing 85 deaths; and from scarlatina, which was more or less prevalent in all parts of the borough, there were 184 deaths. There were 21 fatal cases of diphtheria, the most noticeable circumstance in connection with the disease being an extension of it in Little Horton through the milk-supply. Fevers caused 45 deaths, the lowest number on record, even granting, which there seems reason for doubting, that all were really cases of fever. Whooping-cough, which caused 65 deaths, is now subsiding. Owing to the exceptionally cold and wet summer, the deaths from diarrhœa were less than in any previous year, numbering only 67, against an average of 201.7. The increasing popularity of the Fever Hospital is a gratifying feature.

THE INTERNATIONAL MEDICAL CONGRESS.

At the last meeting of the Executive Committee, a report was presented by Mr. Mac Cormac, Secretary-General, of the steps taken to make known the arrangements for the Congress, by circulars addressed to the principal countries of Europe and the States of America. Appreciative notices had, it was stated, appeared in many of the home and foreign medical journals concerning the intended Congress.

Among others, the following medical men have already announced their intention to attend: Professor Langenbeck of Berlin, Professor Billroth of Vienna, Professor Volkmann of Halle, Professor König of Göttingen, Professor Trendelenburg of Rostock, Professor Busch of Bonn, Professor Reyher of St. Petersburg, Professor Charcot of Paris, Baron Larrey of Paris, Professor Morache of Bordeaux, Dr. L. Labbé of Paris, Professor Theodore Schwann, Professor von Recklinghausen of Strassburg, Professor Spiegelberg of Breslau, Dr. Benedikt of Vienna, Dr. Brandes of Aix-la-Chapelle, Professor Bäumler of Freiburg, Dr. Wernich of Berlin, Dr. Fokker of Gröningen, Dr. Bidder of Mannheim, Dr. Mikulicz of Vienna, Dr. J. Peczely of Buda-Pesth, Dr. Waldeyer of Strassburg, Dr. Königsfeld of Aix-la-Chapelle, Dr. Goltz of Strassburg, Dr. Saudre of Oran, Dr. L. Martineau of Paris, Dr. A. Herbert of Paris, Dr. L. Jullien of Paris, Dr. Brachet of Aix-la-Bain, Dr. Lahuppe, Dr. Chervin, Dr. Demon, of Bordeaux; Dr. Barr of Geneva, Dr. Joel of Lausanne, Dr. C. Romano of Naples, Dr. D. Giordano of Canneto, Professor Albanese of Palermo, Professor Argento of Palermo, Dr. Keyes of New York, Dr. L. W. Yandell of Louisville, Kentucky, etc.

Meetings of the officers of the various Sections have been held; and, in several of them, a provisional list of subjects for papers and discussion has been drawn up, printed in the three official languages, and widely distributed at home and abroad. The following are the provisional lists prepared in the Sections of Surgery, Diseases of Children, Diseases of the Ear, and State Medicine.

Section V. Surgery (*Secretaries:* H. G. Howse, Esq., St. Thomas's Street; T. Smith, Esq., Stratford Place).—1. Recent Advances in Abdominal Surgery. 2. On the Surgical Treatment of certain diseased conditions of the Kidney. 3. On recent advances in the method of extracting Stone from the Bladder. 4. On the treatment of Operation-Wounds. 5. On the treatment of Aneurism by the Elastic Bandage. 6. On the comparative advantages of early and late Resection in Diseases of Joints.

Section VII. Diseases of Children (*Secretaries:* Dr. H. Donkin, Upper Berkeley Street; R. W. Parker, Esq., Old Cavendish Street). *Medical.*—1. The real position of the so-called Rubeola, Rötheln, or German Measles, and its relation to Scarlatina and Measles. 2. Syphilis as a cause of Rickets. 3. On the different kinds of Spinal Paralysis and Myelitis in children. 4. The conditions governing the occurrence of Albuminuria and of Paralysis as attendant on Diphtheria, or as Sequelæ. 5. The relationship of Chorea to Rheumatism, with especial reference to the nature of the heart-murmur which so frequently attends Chorea. 6. The forms of Acute Tuberculosis other than ordinary Tubercular Meningitis. *Surgical.*—1. The surgical treatment of Croup and Diphtheria. 2. The surgical aspect of Tapping for Empyema. 3. The pathology and treatment of Genu Valgum. 4. The treatment of Diseases of the Joints, especially with a view to the prevention of deformity. 5. Treatment of Spinal Curvature, with special reference to Sayre's method. 6. The nature of the so-called Surgical Scarlet Fever. Intending contributors, who may deem that some other subject or subjects might with advantage be substituted for any in this list, are requested to send their suggestions to the Secretaries of the Section before December 1st, 1880.

Section X. Otology (*Secretaries:* Dr. U. Pritchard, George Street, Hanover Square; Dr. W. L. Purves, Stratford Place).—1. On the value of operations in which the Tympanic Membrane is incised. 2. On Morbid Growths within the Ear, and their treatment. 3. On Loss of Hearing where the external and middle ears are healthy.

Section XIII. State Medicine (*Secretaries:* Professor Corfield, Bolton Row, Mayfair; Dr. Thorne Thorne, Inverness Terrace, Hyde Park).—*First day:* 1. Measures by which to prevent the diffusion of different communicable diseases from country to country, or within the limits of any single country, *e.g.*: *a.* Yellow Fever, Cholera, Plague; *b.* Enteric Fever, Scarlet Fever, Measles, Whooping-cough, Diphtheria; *c.* Syphilis; *d.* Glanders, Hydrophobia, Anthrax. *Second day:* 2. Influence of various articles of Food, (not including Water) in spreading Parasitic, Zymotic, Tubercular, and other Diseases. *Third day:* 3. Conditions to be imposed on the legally qualified Practitioners of one country who may seek authority to practise in another country. 4. Precautions to be taken in Medical Nomenclature and Classification to guard against False Statistical Conclusions.

GUY'S HOSPITAL.

At the termination of his last clinical lecture for the present session, on Wednesday, Mr. Cooper Forster informed his class that that would be the last occasion on which he would appear before them as a teacher; and we understand that his resignation of the post of surgeon and lecturer to the hospital will be forwarded to the President before the termination of the present week. It is also rumoured that Dr. Habershon will, after his last clinical lecture, which is to be given to-day (Saturday), tender to the President the resignation of his appointments in the hospital. Guy's men will now still more deeply regret the course of events which has thus led the two senior members of the acting staff to withdraw from the school, and will extend to Dr. Habershon and Mr. Forster their heartiest sympathy in the sorrow which this severance of their long and valued connection with Guy's Hospital must cause to both those gentlemen. Further comment upon the point will, we feel, be best left for next week, when the resignations will have been accomplished.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The ordinary monthly meeting of the Council of the College was held on the afternoon of Thursday, the 11th instant. The minutes of the quarterly Council meeting were confirmed. The report of the Board of Examiners in Dental Surgery on the examination recently held. Mr. Birkett was re-elected a member of the Board of Examiners in Dental Surgery. Sir James Paget's motion, that the preliminary examination of the College be discontinued, and, in accordance with the recommendation, handed over to the universities and other general educational bodies, was carried, and committed to a committee to be appointed at next meeting of Council. It was agreed that Mr. Luther Holden's motion, that the annual report of the President be discontinued, should stand over till the next monthly meeting.

THE ANTICIPATED NAVAL MEDICAL WARRANT.

We regret to say that the statement is premature, to which currency has been given this week, that the expected Naval Medical Warrant (of which our readers have heard so much) is settled, and shortly forthcoming. The settlement of such a warrant involves many financial considerations, and these must receive the acquiescence of the Treasury. The matter has, we are informed, not yet passed the stage of official consideration, in which it has lagged so long.

MEMORIAL TO THE HOME SECRETARY IN FAVOUR OF CREMATION.

The following address to Sir William Harcourt, agreed to at the Cambridge meeting in August, has been signed by the one hundred and twenty gentlemen whose names are given below. It will be presented as soon after the arrival in town of Sir William Harcourt as an interview can be arranged. We shall be happy to receive the names of any other gentlemen who may wish to add their signatures.

"We, the undersigned, members of the British Medical Association assembled at Cambridge (and others), disapprove of the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living and may render the remains absolutely innocuous. Until some better mode is devised, we desire to promote that usually known as cremation. As this process can now be carried out without anything approaching to a nuisance, and as it is not illegal, we trust the Government will not oppose the practice, when convinced that proper regulations are observed, and that ampler guarantees of death having occurred from natural causes are obtained than are now required for burial."

H. A. Allbutt, Leeds; C. H. Allfrey, St. Mary Cray; W. Armistead, Cambridge; R. Barker, New Cross Road; M. R. J. Behrendt, Birmingham; A. J. Bellmore, Pembroke; G. Birt, Stourbridge; A. G. Blomfield, Lynn Hospital; J. Bluett, Chesterfield; F. J. Bond, Gloucester; J. Brunton, Euston Road; J. J. Byrne, Preston; J. Campbell, Chigwell; J. Clelland, Poplar; F. W. Clark, Bury St. Edmund's; S. Clegg, Looe; J. T. Clover, Cavendish Place; C. P. Collins, Leamington; R. T. Daniell, Catheart Road; J. G. Davey, Bristol; S. Deakin, Allahabad; R. J. Dearden, Manchester; H. J. Domville, Greenwich; C. R. Drysdale, Woburn Place; C. Dukes, Rugby; W. Edmunds, Hereford; D. Everett, Worcester; P. S. Fentem, Bakewell; G. H. [illegible], Retford; P. Frank, Cannes; W. Frazer, Bournemouth; J. Gordon, New Cross; S. Haynes, Malvern; G. H. Higgins, Leeds; A. Higginson, London; B. Hill, London; C. N. Holmes, Newbury; R. Holt, Marchmont Street; W. B. G. Hogg, Chiswick; G. Hoggan, Rutland Gate; W. N. Heygate, Kibworth; G. E. Jeaffreson, Framlingham; J. Johnstone, Liverpool; A. T. Jones, Harlech; F. Jordan, Birmingham; B. Kendall, Clifton; G. Kerswill, Looe; A. H. Knight, Keswick; W. C. Laidlaw, Birkenhead; J. C. Leach, Blandford; E. H. Leadon, Addison Road; W. Lockhart, Blackheath; H. Love, Alresford; R. Neale, Boundary Road; C. Neill, Ryde; L. Newton, Huntingdon; F. P. Nichols, Norwich; A. H. Novelli, Hyde Park Square; A. Norton, Wimpole Street; H. M. Page, Redditch; C. Palmer, Burton-on-Trent; J. Parsons, Frome; S. Parsons, Notting Hill; T. F. Pearse, Liphook; H. Penfold, Brighton; G. H. Percival, Northampton; F. M. Pierce, Manchester; S. E. Piper, Darlington; H. P. Potter, St. Thomas's Hospital; R. E. Power, Portsea; J. Rand, Dulwich; J. J. Reynolds, Stoke-by-Clare; J. B. Richardson, Burton-on-Trent; A. Samelson, Manchester; W. J. Scofield, Hampstead; E. Shearin, Norwood; J. Stewart, Hartlepool; L. Tait, Birmingham; G. D. Thane, London; J. Thompson, Leamington; W. A. Thomson, Peterborough; M. Townsend, Kensington; G. W. Thursfield, Leamington; F. Vacher, Birkenhead; O. Vincent, Seymour Street; B. Waghorn, Gloucester; T. Wakefield, Nottingham Place; T. J. Walker, Peterborough; W. M. Watson, Montrose; H. T. Wharton, Kilburn; C. J. Wheelhouse, Leeds; C. V. Willett, Brandon; A. Wise, Sutherland Gardens; T. Woods, Gillingham; F. Wright, York; J. C. Young, East Sheen.

In addition to the above, Mr. Deakin sends from Allahabad the following list of gentlemen practising in India who approve of cremation, and who wish their names to be added to the memorial.

Army Medical Department: Surgeon-Major A. F. Bradshaw; Surgeon-Major G. C. Gribbon; Surgeon-Major E. Fairland; Surgeon-Major J. B. Hannah; Surgeon-Major J. H. Robotham; Brigade-Surgeon E. Lundy.—*Indian Medical Department:* Surgeon-Major R. Harvey; Surgeon-Major J. H. Lock; Surgeon C. W. S. Deakin; Surgeon L. E. Eades; Surgeon S. J. Goldsmith; Surgeon G. R. Harris; Surgeon H. J. Jervis; Surgeon W. T. Murray; Surgeon C. J. H. Warden.—*Non-Service Practitioners:* A. C. Banerji; G. S. Griffiths; H. Morelli; G. D. McReddie.—*Non-Medical:* Captain G. M. Abbott, 19th B. Cavalry; L. V. Frazer, Telegraph Department; H. G. Keene, C.S. Judge, Meerut; Lieut.-Colonel C. A. De Kuntzow, B.S. Corps; Major M. P. Moriarty, B.S.C.

HEALTH OF COLONIAL AND FOREIGN CITIES.

A summary of the weekly returns with which the Registrar-General is favoured by various authorities abroad, shows that the average annual death-rate during the third or summer quarter of 1880 in twenty-eight colonial and foreign cities, having an aggregate population of nearly thirteen millions of persons, was equal to 28.5 per 1,000, In the nineteen European cities the average rate was 29.6 per 1,000, against 23.2 in twenty of the largest English towns. Among the twenty-eight colonial and foreign cities the lowest death-rates were 19.8 in Philadelphia, 20.0 in Geneva, 20.4 in Baltimore, and 21.4 in Calcutta; the rate was, however, equal to 35.9 in Berlin, 39.2 in Buda-Pesth, 40.7 in St. Petersburg, and 46.7 in Alexandria. In Paris 486 deaths resulted from small-pox (against 831 and 691 in the two preceding quarters), 502 from diphtheria and croup, 410 from typhoid fever, and 323 from measles. Small-pox also showed decreased prevalence in Madras, Vienna, Buda-Pesth, and Alexandria. Diphtheria caused 257 deaths in Berlin, 310 in New York, and 193 in Brooklyn. The fatality of measles in Bombay and Berlin showed a marked decline from that which prevailed in the two preceding quarters. Diarrhœal diseases showed excessive fatality in many of the Continental cities; the annual death-rate from these diseases, which averaged 4.4 per 1,000 in the twenty large English towns, was equal to 9.0 in Buda-Pesth, 9.8 in St. Petersburg, 11.2 in Breslau, and 12.0 in Berlin.

Consett.—The statistics of this district for 1879 are so singular that doubts are engendered whether, as a matter of fact, the Medical Officer of Health has not over-estimated the population in calculating the death-rate. Mr. Kenton records a rate of 11.1 per 1,000, against 10.3, the mean of the last six years; but, seeing that the staple trades of the district have been lately considerably depressed, it may be doubted whether the population from which the rate of 11.1 per 1,000 is calculated is not considerably in advance of the actual number of people living in Consett last year. Of the 96 deaths, no fewer than 31 were in children under one year of age—exactly the same number occurring amongst persons dying at the age of sixty and upwards. The most prevalent diseases were pneumonia and bronchitis. Three cases of small-pox occurred; two of the cases that had never been vaccinated having the disease in a severe form, whereas the person that had been vaccinated had only a slight attack. Some parts of the district seem to be in a very unwholesome state, especially in the matter of refuse removal.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE first meeting of the present session will be held on Thursday evening, November 18th, at half-past eight o'clock, at the New Town Hall, Hackney; Dr. HABERSHON in the Chair.

The following papers will be read:

1. Dr. Stephen Mackenzie: On a Case of Hæmatochyluria.
2. Dr. Bate, Medical Officer of Health for Bethnal Green: On the Sanitary Arrangements of Dwelling-Houses.

FREDERICK WALLACE, *Hon. Sec.*

243, Hackney Road, E.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting will be held, in connection with the East Kent and Canterbury Medical Society, at the Library of the Kent and Canterbury Hospital, on Thursday, November 18th, at 3 P.M.; Mr. REID, F.R.C.S., of Canterbury, in the Chair.

The following communications are promised:

1. Three Cases of Tetanus. By Mr. Brian Rigden.
2. Three Cases of Stricture of Urethra. By Mr. Dring.
3. Case of Stricture of Intestine. By Mr. Schön.
4. Case of Excision of Os Calcis. By Mr. Whitehead Reid.

Dinner will be provided at the Fleur de Lis Hotel, at 5 P.M. precisely; charge, 6s. 6d. (exclusive of wine).

Members intending to dine are requested to signify the same to the Secretary on or before Tuesday, the 16th instant.

T. WHITEHEAD REID, M.R.C.P., *Hon. Sec.*

34, St. George's Place, Canterbury, November 1st, 1880.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

THE first meeting of the above District for the present season will be held on Wednesday, November 17th, at the Maiden's Head Inn, Uckfield, at 2.45 P.M.; W. J. TREUTLER, Esq., M.B., C.M., in the Chair.

Dinner will be provided at 4.45 P.M.; price, 6s. (exclusive of wine).

The following papers have been promised:

1. Dr. Joseph Ewart: On Hydrophobia.
2. Mr. W. Wallis: Fatal Case of Ileus caused by Congenital Malformation of the Intestine, with preparation.
3. Mr. G. F. Hodgson: Case of Mucous Polypus growing from Fundus Uteri, with preparation.
4. Dr. Treutler: Case of Hemiplegic Unilateral Anasarca consequent on Scarlatina.

Notice of intended communications is requested to be sent at once to the Secretary, in order that they may be inserted in the usual circular.

THOMAS TROLLOPE, M.D., *Hon. District Secretary.*

9, Maze Hill, St. Leonard's-on-Sea, November 2nd, 1880.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

THE next meeting of this District will be held at the house of Dr. Williamson, 44, Mildmay Park, on Thursday, the 25th instant, at 8.30 P.M., when the following subjects will be introduced for discussion:

1. Dr. Williamson: Scarlatina.
2. Dr. Dowse: Syphilitic Ataxy.

T. STRETCH DOWSE, *Hon. Sec.*

14, Welbeck Street, November 9th, 1880.

GLOUCESTERSHIRE BRANCH.

THE annual meeting will be held, under the presidency of T. S. ELLIS, Esq., of Gloucester, in the Board Room of the County Infirmary, Gloucester, on Tuesday, November 16th, at half-past six o'clock. The supper will be at the Bell Hotel at half-past eight.

Business of the Meeting:

1. To consider the resolutions of the Metropolitan Counties Branch on Medical Education.
2. Notes on some Conditions of the Cornea. By T. S. Ellis, Esq.
3. The Pathology of Cirrhosis of the Liver. By Dr. Robert Smith.
4. A Demonstration with the Hæmoglobinometer and the Hæmacytometer. By Dr. Robert Smith.
5. A Common Surgical Affection of the Knee-Joint frequently overlooked. By E. D. Bower, Esq.

RAYNER W. BATTEN, *Hon. Sec.*

BATH AND BRISTOL BRANCH.

THE next ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday, December 9th, at 7.30 P.M.; ALEX. WAUGH, Esq., President.

R. S. FOWLER, E. MARKHAM SKERRITT, } *Hon. Secs.*

Bath, November, 1880.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held on Friday, the 3rd December next, at twelve o'clock, in the Belfast Royal Hospital.

Members intending to read papers are requested to communicate with JOHN MOORE, *Hon. Sec.*

2, Carlisle Terrace, Belfast, November 8th, 1880.

SOUTH OF IRELAND BRANCH.

THE annual meeting of the Branch will be held in the Royal Cork Institution, on Wednesday next, the 17th instant, at 4 P.M.

The dinner will take place at Lloyd's Hotel, George Street, at seven o'clock; dinner-ticket, five shillings (exclusive of wine).

P. J. CREMEN, M.D., T. GELSTON ATKINS, M.D., } *Hon. Secs.*

Cork, November 8th, 1880.

STAFFORDSHIRE BRANCH.

THE first ordinary meeting of the present session will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, November 25th, at 4 P.M.

VINCENT JACKSON, Wolverhampton, J. G. U. WEST, Stoke-upon-Trent, } *Honorary Secretaries.*

Wolverhampton, November 6th, 1880.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: ORDINARY MEETING.

A MEETING of this Branch was held at the Infirmary, Hereford, on October 11th, 1880; present, D. Everett, Esq., President, in the Chair, and sixteen members.

Dr. STRANGE (Worcester) proposed, and Mr. VEVERS (Hereford) seconded, "That a copy of rules and a list of members be sent to each member of the Branch". Carried unanimously.

Annual Meeting of the Association in 1882.—Dr. STRANGE proposed, and Mr. VEVERS seconded, "That this meeting resolves to invite the British Medical Association to hold its meeting of 1882 in Worcester, to celebrate the fiftieth anniversary of its existence in the place of its birth". This was carried unanimously.

It was also resolved, "That a committee be appointed to act in concert with the Council of the Branch, to take such steps as may be necessary to give effect to the foregoing resolution".

The Hastings Memorial Fund.—Mr. EVERETT proposed, and Mr. BATTEN seconded, "That the Council of this Branch is desirous of conferring with the Committee of Council as to the best mode of disposing of the Hastings Memorial Fund. Having regard to the meeting of the Association in Worcester in 1882, it appears to this meeting that a fitting occasion would then present itself for inaugurating some memorial of the services to the Association of the late Sir Charles Hastings."

Next meeting.—It was decided that the next meeting of the Branch be held in Worcester, in January 1881.

STAFF-SURGEON THOMAS SMITH BURNETT (1870) has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of the 29th October.

DR. ROBERT GREENHALGH, one of the consulting physicians of the Samaritan Free Hospital, has just presented to that institution a portion of his medical library, consisting of six hundred volumes, together with his surgical instruments. The books are given with the view of forming the nucleus of a permanent library for the use of the staff. We think that Dr. Greenhalgh has done a good work by thus bestowing his books in order that his colleagues may have the opportunity of using such a valuable collection. We need scarcely add that the committee of the Samaritan Hospital have most cheerfully accepted Dr. Greenhalgh's gift, and are making suitable arrangements for the proper care of the books and instruments.

CORRESPONDENCE.

GUY'S HOSPITAL.

SIR,—I have read with pleasure, in your impression of to-day, the letter of Dr. Coley on the present state of things at Guy's Hospital; and I desire most heartily to second his proposition, that the British Medical Association should use its powerful influence in making that state the subject of Imperial legislative action. The interests of the public, no less than the honour of the profession, demand that such an anomalous condition of affairs should be remedied. As an old Guy's man, and looking back with reverence and affection on my Alma Mater, I feel indignant at the contumely which has been heaped on those who have, of late years, so well kept alight the torch of medical science, which Guy's has so long borne aloft. As the fellow-student also, and friend, of most of the senior members of the staff, I personally sympathise most sincerely with them. I am, however, only one; but my sentiments must be echoed by thousands of Guy's *alumni* over the breadth of the civilised world.—I am, sir, your obedient servant,

T. MORLEY ROOKE, M.D.Lond.

7, Bays Hill Villas, Cheltenham, November 6th, 1880.

SIR,—My letter of last week contained an assumption, which was almost equivalent to a statement, that the physicians and surgeons of Guy's Hospital were individually in receipt of an income of about £300 *per annum* for their services to the charity. I hasten to correct this supposition, as I am informed, on the best authority, that the sum actually received is £40 *per annum*. It would be interesting to know what provision is contained in the will of Mr. Guy for the very important item of medical and surgical skill and service in the conduct of the charity. It certainly would not be likely that an Act of Parliament would interfere with the freedom of the governors and treasurer to make contracts so advantageous as this to the interests of the institution.

I trust that my error will have done no harm, by dispelling the very general idea that the staff of Guy's were "passing rich on forty pounds a year". Yours, etc., ROBERT LEE.

November, 1880.

DEATHS FROM ANÆSTHETICS.

SIR,—I entirely agree with some of your correspondents that a systematic attempt should be made to estimate the number of deaths *per annum* from various anæsthetics, and the proportion between the number of administrations and the fatal results. Such an attempt can only be by voluntary effort; and I do not know any agency so likely to accomplish it as the British Medical Association. It might be done by appointing an Anæsthetic Committee, with power to employ a clerk, and issue schedules, to be sent to every member of the profession, with a request that he would return it. Only by such a plan could the information be reliable. Many deaths occur in private practice, without even reaching the public or the general profession. The sources of error are numerous. A general practitioner requests a surgeon to undertake a case involving a surgical operation or examination under an anæsthetic. Suppose death from the anæsthetic to occur: the surgeon reports the case as one occurring in a patient whom he was examining or about to operate on; the general practitioner reports the case as having occurred in the person of one of his patients. Thus the anæsthetic gets the credit of two deaths instead of one. But, on the other hand, the surgeon might declare that he had never had a death from an anæsthetic in his practice, because the patient was not properly his, but the general practitioner's; or that, though he had the operation committed to him, he was not administering the anæsthetic with his own hands, but through the medium of an assistant or colleague; and that the latter, and not the surgeon, was the medical man who had the fatal case; while the latter, not being the chief, but for the time the surgeon's assistant, does not put it down as a case of his. In this way, some cases escape notice altogether; but with a systematic scheme, such as I suggest, few could either be omitted or put into the record twice. The funds of the Association could not be better spent than by being applied to such an investigation. I am, etc., GEORGE BUCHANAN.

Glasgow, November 6th, 1880.

*** We are preparing recent tables, such as those which we have previously published, with the view of fixing attention on the great number of chloroform deaths. We have lost no opportunity for several years of enforcing the duty of publication of every death under chloroform. We hope there will not be many who seek to evade it.

ETHER v. CHLOROFORM.

SIR,—It is greatly owing to your unwearying exertions in recording the deaths from anæsthetics, that the greater safety of ether over chloroform is now established in the minds of all men who are capable of being impressed by facts; and it only remains to be shown that, in the hands of those who are accustomed to use it, ether is not so much more objectionable to the patient, nor so much less perfect in its action for the operator, as to warrant a moment's hesitation in preferring it, except under exceptional circumstances. For the last six years, I have been constantly in the habit of administering ether. During this time, I have, of course, given it to almost every variety of patient, for every kind of operation, using several different kinds of inhalers, and different samples of ether; and, by proper attention to these points, ether becomes almost as easy to use, and as satisfactory in its action, as chloroform. As Mr. Hutchinson says, chloroform is best for infants, but certainly not for children over one year. In old people, I have never observed any objection to ether, but have occasionally resorted to chloroform in some middle-aged men who have drunk hard, and in whom there is a good deal of stertor and congestion, and great difficulty in producing complete anæsthesia. In certain operations, I think the deeper anæsthesia of chloroform is as necessary as to counterbalance its greater risks; so that, in extensive operations about the mouth, or in lithotomy, it must still be considered the best anæsthetic.

Of all the inhalers, I prefer that which has an India-rubber mask equally open at both ends, and contains in the middle a wire cage, upon which a quantity of list bandage is wound; and I prefer Duncan and Flockhart's ether to any other. But perhaps there is nothing more important in the administration of ether than to avoid frightening the patient, and exciting a great secretion of mucus in the mouth and throat by forcing it at first. I always put the inhaler on empty, and then pour on the ether at the opposite open end, little by little, until they get accustomed to it. If the ether be pungent and very volatile, as some samples are, or if it be given too freely at first, the administration is likely to be a failure; because the patient is terrified, he is choked with mucus, and the resulting anæsthesia is owing more to asphyxia than etherisation. I cannot join too strongly with Mr. Hutchinson in condemning those inhalers in which the patient respires the same air over and over again, and I am sure that he would equally oppose the mixture of ether and chloroform. There are certain difficulties in the use of ether which may be, in a great measure, overcome by patience and experience, but which are at once converted into dangers, when met, by complicating the inhalation in what seems to me to be a most irrational manner.—I am, sir, yours, etc.,

Liverpool, November 7th, 1880. FRANK T. PAUL, F.R.C.S.

SIR,—I have read with interest Mr. Jonathan Hutchinson's letter which appeared in your issue of November 8th, in which he supports your condemnation of the use of chloroform as an anæsthetic. I think the profession would be glad to know if another exception, besides the extremes of age, might not be made in favour of chloroform; viz., in cases of women in labour. I have always found, and understood from others, that there was a special toleration of chloroform in such cases.—Yours faithfully, JOHN S. E. COTMAN.

London, November 8th, 1880.

SIR,—I have read with great interest the letter of Mr. Jonathan Hutchinson in last week's JOURNAL; and, having had considerable experience, during the last five years, in the administration of ether, I am glad to be able to say that I thoroughly endorse his very practical remarks with regard to the superiority of ether over chloroform, in all ordinary cases. Surely, a heavy responsibility rests upon those who still persist in the use of chloroform, when they have, in ether, an agent which seems to possess almost all its virtues with scarcely any of its dangers. As Mr. Hutchinson very justly remarks, I think it impossible for any one, whether he be the administrator or the operator, to feel comfortable while a patient is under chloroform. Probably no agent, sufficiently powerful to produce the required amount of anæsthesia, can be said to be absolutely free from danger; but, in the case of ether, one's anxiety may at least be said to be reduced to a minimum. It is true, ether has its drawbacks; but these, when confronted with the question of safety, become quite insignificant. Some of the objections to it are, I believe, unreal, and will, I am convinced, vanish as soon as the mode of administering it is better understood. I have entirely discarded all complicated inhalers, and consider a conical, hollow sponge superior to anything yet invented. It has probably the sole disadvantage of consuming a little more of the anæsthetic.

Having had, on several occasions, personal experience in taking

ether, I am satisfied that the main fault of those who administer it is *to push it too much at first*. This has the effect of producing an intolerable choking sensation, with the inevitable result of struggling. If, on the other hand, ether is slowly given, the sponge momentarily removed on the slightest sign of struggling, and as quickly reapplied, the patient becomes gradually accustomed to the irritation produced in the larynx, and, as a rule, quietly falls asleep. I have no doubt, however, that ether is unsuitable in certain comparatively rare cases, more especially in ophthalmic practice, where perfect stillness is of great importance. In these cases, I have generally finished off with chloroform, which, no doubt, is the more powerful of the two. These cases are, I believe, rare; and, if chloroform were only used in them, the mortality from anæsthetics would, I am convinced, be so diminished as to be a matter of no very great concern.—I am, sir, yours, etc.,

RICHARD WILLIAMS, Surgeon to the Liverpool
November 9th, 1880. Eye and Ear Infirmary.

SIR,—The many deaths from chloroform lead me to bring before you the compound anæsthetic which, for nearly five years, has been used in the Chesterfield and North Derbyshire Hospital with safety. It is a mixture of absolute alcohol, chloroform, and ether, and is made as follows. One ounce of alcohol is added to two ounces of chloroform, and these are shaken together: three ounces of ether are then added, and, after shaking again, it is ready for use. For administration, a leather cylinder, closed at one end—where it is freely perforated with holes, and shaped at the other end to fit over the nose—answers perfectly well. This is lined with a loose flannel bag, in which a sponge is placed to hold the anæsthetic, and we usually commence with from two to four drachms.

This morning, a boy aged 15 was placed on the table for operation, and an examination of the chest revealed aortic and mitral disease of a well-marked character. It was deemed better to use ether alone in this case, under which the pulse at the wrist failed rather rapidly. We agreed to fall back on the compound anæsthetic, when the pulse immediately improved, and the operation was satisfactorily completed.

Quite recently, a powerful man of fifty years was brought in with dislocation of the humerus into the axilla, which had happened five days previously. He had only applied for assistance on the previous day, to a surgeon who had had considerable experience in administering chloroform in a hospital where he had been house-surgeon. This gentleman wrote me a note stating he had twice tried chloroform on the patient, but that it produced such alarming symptoms he dared not continue it, and expressed a wish for me to use the compound anæsthetic. I accordingly used it without the least approach to dangerous symptoms, and easily reduced the dislocation.

I have never seen a death from chloroform, but I can readily recal to my mind several cases in which it seemed imminent, and when the patients have only been restored with the greatest difficulty; but I have not once witnessed this under the compound anæsthetic.—I am, sir, yours obediently, SAMUEL FOULDS,

House-Surgeon Chesterfield and North Derbyshire Hospital.
Chesterfield, November 4th, 1880.

SPECIAL CORRESPONDENCE.

ABERDEEN.

Opening of the Medical Classes.—Growth of the School of Medicine.—Mesmerism.—Professor Pirrie.

THE medical classes at the University of Aberdeen were opened on Wednesday, October 27th, with introductory addresses by the professors. The attendance of students was unusually large, being considerably above the average; so that most of the class-rooms were filled, and some even crowded. Professor Struthers alluded to medical education in Scotland, and pointed out the superiority of the Scottish system, arising from the devotion of the teachers to their departments, and the greater attention given to teaching. The system pursued in Aberdeen is more or less a parental one. Every student is carefully looked after, and his work superintended: a matter of no small importance. Every student is known personally to the professors, so that there is a closer tie between professors and students than can possibly exist in larger schools. Dr. Struthers specially alluded to the success of Aberdeen graduates, whether in competitive examinations for the public services, or in the life-long competition of private practice.

The growth of the Aberdeen School of Medicine has been so steady and rapid, that class-rooms have to be turned into laboratories, to meet the demands of practical teaching; and in this respect Aberdeen is second to none. The requirements of the anatomical department have long outgrown the accommodation, so that it has been found absolutely necessary to erect a new dissecting-room. The new room is to be large and spacious, and is being rapidly proceeded with; so that, when it is finished, Aberdeen University will be able to congratulate itself on possessing an anatomical establishment which will be unsurpassed in completeness and convenience. Professor Stephenson urged that a ward ought to be set aside in the infirmary for the treatment of diseases peculiar to women; and undoubtedly this would be a desirable improvement.

Professor Stirling gave a lecture on Mesmerism, and specially alluded to the too much neglected works of the late Mr. Braid of Manchester. Many of Mr. Braid's facts have been rediscovered recently in Germany, by Weinhold and Heidenhain. The subject is one which must shortly occupy the attention of the physician and physiologist, as well as of the psychologist.

Professor Pirrie gave a most glowing and eloquent address on Surgery; so much so, that the audience seemed to become almost as enthusiastic as the veteran professor himself.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

COMBINED SANITARY DISTRICTS.

THE indications are rapidly becoming more numerous that, either of their own accord, or by pressure from without, the Local Government Board will soon have seriously to take up the whole question of combinations for the appointment of officers of health. So many combinations have been broken up, and the efficiency of so many others has been impaired, through the intense jealousy and feeble co-operation of local authorities, or the masterly inaction of the Local Government Board, that the whole principle of combinations for health-officering is becoming rapidly discredited. It is now only necessary to draw attention to the latest of the attempts of certain authorities to wreck another combination. Early in this year, Dr. Elgar Buck resigned the charge of a combined district in Leicestershire and Rutland, comprising the Billesden, Bealy, Hinckley, Lutterworth, Market Bosworth, and Oakham Rural Districts, and the Melton Mowbray Urban. His remuneration for the charge of this district was at the rate of £560 *per annum*—no large sum, when the 220,194 acres (344 square miles) and the 62,065 people in the district are taken into consideration. The local authorities, however, seem to have regarded this amount as unduly extravagant: for they have made repeated attempts to get the salary reduced, and have now decided that they will only offer £350 *per annum* to Dr. Buck's successor. The Local Government Board, on the other hand, are equally persistent in requiring that the whole time of the new officer shall be devoted to the discharge of his duties; and, holding this view, they cannot, in justice, assent to the miserable salary proposed. Looking to the area and population of the district, we must confess that it would require all the time of an energetic officer adequately to supervise it; and we trust, therefore, that the Local Government Board will maintain firmly their former position, and insist upon a proper salary being assigned for the performance of the duties which the new officer will be called upon to perform. There has already been by far too much filching from the salaries of health-officers, for the process to be allowed to continue indefinitely without strong and earnest protest.

THE SANITARY MEDICAL SERVICE.

WE regret to hear that another victim has been sacrificed to the selfishness and cowardice of local authorities, in the person of Mr. H. A. Lawton, the health-officer of Poole. Mr. Lawton has done his duty energetically and fearlessly during the three years of his tenure of office; but when he applied recently for re-election, a certain section of the Town Council, choosing to interpret a letter from the Local Government Board in a fashion antagonistic to him, succeeded in getting him superseded. The supporters of this course openly based their opposition to Mr. Lawton on the ground that he did his duty "too well". Although the imputation was indignantly repelled, yet it must be confessed that there seems some justification for the observation of one of the councillors that the new officer was appointed to "do nothing". Certainly, as in the case of Mr. Page of Redditch, on whose unjust supersession we recently commented, Mr. Lawton's successor will find it very difficult to reconcile his duty with the expectations of his employers.

POOR-LAW MEDICAL APPOINTMENTS.

MASTER, Henry H., appointed Medical Officer to the First District of the Thingoe Union, also Medical Officer to the Sapiston District of the Thetford Union, *vice* G. F. Masterman, L.K.Q.C.P.I.

MOORE, Walter, M.R.C.S.Eng., appointed Medical Officer to the Lower Milton District of the Kidderminster Union, *vice* J. Ormsby, L.R.C.P.Ed., resigned.

PINCK, Wm., M.B., appointed Medical Officer to the Rochdale Workhouse and Wardleworth District of the Rochdale Union, *vice* T. Collingwood, M.R.C.S.Eng., resigned.

THORNBY, Joseph, L.R.C.P.Ed., appointed Medical Officer to the Sharples District of the Bolton Union, *vice* J. T. Redmayne, L.R.C.P.Ed., deceased.

WALL, E., M.D., appointed Medical Officer to the Courcy's Dispensary District of the Kinsale Union, *vice* E. Magner, M.D., resigned.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

EXAMINATIONS FOR THE DEGREES OF M.B. AND M.C.—These examinations for the Michaelmas term, will begin on Monday, December 13th. Candidates are requested to send their names to the Prælectors of their several Colleges on or before Saturday the 27th instant. The certificates of candidates for the first examination are to be sent to Dr. Anningson, Barton Road, Cambridge; of those for the second and third examinations to the Regius Professor of Physic, Dr. Paget, St. Peter's Terrace, Cambridge; on or before December 6th.

UNIVERSITY OF OXFORD.

EXAMINATIONS FOR THE DEGREE OF M.B.—Candidates are informed that the examinations for the degree of Bachelor of Medicine will commence in the medical department of the museum as follows:—The first (or scientific) examination, November 29th; the second (or final) examination, December 6th. Candidates for either of these examinations, and candidates for the certificates in subjects bearing on preventive medicine and public health, are requested to send in their names, on or before November 15th, to the Regius Professor of Medicine, Medical Department, Museum.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a meeting of the Fellows on October 28th, 1880, the following gentlemen, having passed the required examination, were admitted as members.

Davy, Henry, M.B.London, Lancaster House, Savoy Street.
Heron, George Allen, M.D.Glasgow, Margaret Street.
Mann, John Dixon, M.D.St.Andrew's, Manchester.
Smith, Robert, M.D.Aberdeen, Charing Cross Hospital.

Licences to practise Medicine and Surgery were granted to

Bulteel, Marcus Henry, Stonehouse, Plymouth.
Corbould, Henry Francis, Thornton Heath.
Cotterell, Edward, University College Hospital.
Henry, Joseph, Camden Square.
Hubbard, Henry William, Ford Park, Plymouth.
Jennings, Edward, George Street, Manchester Square.
Sidey, Richard, Park Row.
Smith, George Munro, Clifton.
Swale, Harold, Leicester Place.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology, at a meeting of the Board of Examiners on the 10th instant, and when eligible will be admitted to the pass examination.

Herbert Owen, Stephen T. Salter, and Robert L. Knaggs, students of the Cambridge School; Francis R. S. Corser, Manley M. Fitzpatrick, and Edwin W. Reddie, of the Edinburgh School; Owen H. Evans and John S. Collins, of the Dublin School; John W. McVittie and Rowland Owen, of the Liverpool School; Edwin E. Hatton, of the Toronto School; Henry Mason, of the Glasgow School; Archibald Watson, of the Paris School; Charles D. Nuttall, of St. Bartholomew's Hospital; Frank Harrison, of the Sheffield School; and William P. O'Connor, of University College.

Eight candidates were rejected.

The following gentlemen passed on the 10th instant.

George W. B. Shrader, Alfred P. H. Griffiths, James A. Marsden, Henry C. E. Cooper, Ralph H. Brown, and William W. Fleet, of Guy's Hospital; David N. Eadie, Charles B. Mellor, John E. Tuplin-Lee, Henry W. Dodd, and Christopher R. Bateson, of St. Bartholomew's Hospital; Charles J. Power and Lewis Coughtrie, of St. Thomas's Hospital; John Mayo, of the London Hospital; and Gurney S. Hindley, of the Middlesex Hospital.

Nine candidates were rejected.

The following gentlemen passed on the 11th instant.

John H. Jones, Howard L. Smith, and Henry Corbett, of St. Bartholomew's Hospital; Edward N. Shrader, of University College; William F. Webster, of St. Mary's Hospital; George B. Hicks, of the London Hospital; James Moore, of the Bengal School; and Charles A. Morris, of the Cambridge School.

Five candidates were rejected.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: DOCTRINE OF MEDICATION. The following gentlemen passed their first professional examination during the October sitting of the examiners.

Gordon Fitzherbert Nicholls, Cheltenham; Joseph Corrie, Carlisle; George Thomas Weble, Poona; John Davies, Llanwinffraid; James McGregor, Portsmouth; Michael John O'Brien, County Kerry; Timothy Warren Irwin, County Cork; Charles Hawkins Copley Woodhead, Thirsk; Robert Aloysius Hamilton Williams, Dungarvan; Andrew Thomas Todd, County Antrim; James Nicol, Fifeshire; John Lusk Torrens, County Derry.

The following gentlemen passed their final examination in October and November, and were admitted L.R.C.P.Edin., and L.R.C.S.Edin.

Charn Chandra Rose, Calcutta; Henry John Ryder, Cork; Philip Edward Muskett, Melbourne; Charles Beamish Duigan, Melbourne; Morgan O'Brien Neville, Cork; Francis William Watson Morton, Melbourne; John Edward Shaw, Chatham, Ontario; William Joseph Cross, Barrie, Ontario; James Allun Todd, Barrie, Ontario; Eyre Mortimer Thuresson, Ancaster, Ontario; James Simson Blackwood, Kinross; Thomas George Beckett, Plaistow, Essex; William Longbottom, Leeds; John Cornelius Garman, Shipdham, Norfolk; Henry James Peard, County Cork; Gordon Fitzherbert Nicholls, Cheltenham; John Williams Sellers, Rochdale; Henry Hyslop Aitchison, Wallsend; Henry James Gordon, Newbattle; Robert James William Oswald, Weymouth; Edwardo Ronaldo Da Costa, Darjeeling; James Laughlin Nevin, County Antrim; Richard Bowman, London; John William Carter Holding, Cape Town; Henry Murray Wylde Macdonald, Madras; James Hickman, Edinburgh; Edmund King Houchin, Colchester; Hugh Hopper, Gateshead-on-Tyne; Edward Cudmore McCarthy, County Cork; Josiah Charles Castor, Cochin, India; John Connal Wilson, Berwick-on-Tweed; William Albert Morris, Monmouthshire; James Craig Balfour, Cramond; John Denis Mahony, Cork; Edward Magennis, County Down; Francis Joseph Hennessy, Madras; Robert Love, Portadown; Arthur George Edward Newland, India; Hugh Davies Jones, Menai Bridge; Adam Gillies Campbell, Dornoch; Samuel Stumbels Philips, Kilmallock; Joseph Corrie, Carlisle.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentleman passed his first professional examination during the October sittings of the examiners.

David Hugo Daniell, Newport, Monmouthshire.

The following gentlemen passed their final examination, and were admitted Licentiates of the College.

James Maxwell Ross, Edinburgh; Richard John Legge, Clonmel; John Frederick Breach, Aston, Wallingford; William Watt, Kirriemuir; Thomas Jackson, Penrith; John Harry Hamilton, Westminster.

The following gentleman passed his first professional examination for the Licence in Dental Surgery.

George John Spiers Bennison, Southsea.

The following gentlemen passed their final examination, and were admitted Licentiates in Dental Surgery.

Edwin Alfred Cormack, Edinburgh; Humphrey Wingfield Tracey, Ipswich; George John Spiers Bennison, Southsea.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 4th, 1880.

Bird, Ashley, Clifton, Bristol.
Burton, Charles Frederick, New John Street, Birmingham.
Clatworthy, Herbert, Chatham, Kent.
Jenkins, Thomas Griffith, Colomencly, Ruthin, North Wales.
Lewis, Henry Octavius, Nether Stowey, Somerset.
Wyllie, John, Cloughton, Scarborough.

The following gentlemen also on the same day passed their Primary Professional Examination.

Patel, Edalji Dorabji, Bombay.
Webster, Charles Watts, St. Thomas's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

BAWNBOY UNION.—Medical Officer for Newtowngore Dispensary District. Salary, £— per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 15th November.

BELGRAVE HOSPITAL FOR CHILDREN.—House Surgeon. Salary, £— per annum, with board and lodging. Applications, with testimonials, to the Honorary Secretary on or before November —th.

BOROUGH OF PORTSMOUTH.—Medical Officer of Health. Salary, £150 per annum, and £— per annum as Analyst. Applications, with testimonials, on or before November —th.

CAMBERWELL.—Lady Dispenser to the Infirmary. Salary, £— per annum, with rations, at the Infirmary. Applications, with testimonials, on or before November —th.

CHARING CROSS HOSPITAL.—Assistant Physician. Applications, with testimonials, on or before November —th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN.—Physician. Salary, £— per annum, with board, lodging, and washing. Applications to the Resident Clinical Assistants, with testimonials, and washing. Applications to the Secretary on or before November 15th.

ENNISCORTHY UNION.—Medical Officer for Killan Dispensary District. Salary, £— per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 23rd instant.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Salary, £— per annum, with board and lodging. Applications, with testimonials, on or before November 18th.

*FRENCH HOSPITAL AND DISPENSARY, Leicester Square, W.—Resident Medical Officer. Salary, £60 per annum, with board, furnished apartments, and attendance. Applications as early as possible, with testimonials to the Assistant Secretary.

GLENNAMADDY UNION—Medical Officer for Glennamaddy Dispensary District. Salary £1 per annum, with £8 as Medical Officer of Health, registration and vaccination fees. Election on the 16th November.

GLENNAMADDY UNION—Medical Officer for Workhouse, at a salary of £50 per annum, and £1 as Consulting Medical Officer of Health. Election on the 16th November.

LEAMINGTON FRIENDLY MEDICAL SOCIETIES—Medical Officer. Salary, £200 per annum. Applications to the Secretary not later than November 20th.

*LEICESTER INFIRMARY—Honorary Physician. Applications, with testimonials, to the Secretary, not later than November 20th.

LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY—Resident Medical Officer. Salary to commence at £100 per annum, with house, etc. Applications, with testimonials, to the Secretary on or before November 12th.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY—Resident Surgeon and Apothecary. Salary £100 per annum, with lighting, fire, and attendance. Applications not later than November 15th.

METROPOLITAN FEVER HOSPITAL, Homerton—Assistant Medical Officer. Salary, £15 per month, with board, attendance, and furnished apartments. Applications, with testimonials, to the Medical Superintendent.

NORFOLK AND NORWICH HOSPITAL—House-Surgeon. Salary, £100 per annum, with board, lodging, washing, coals, gas etc. Applications, with testimonials, on or before November 15th.

NORTH-WEST LONDON HOSPITAL—Physician. Applications, with testimonials, not later than November 23rd.

*NOTTINGHAM DISPENSARY—Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 31st; election January 3rd, 1881.

OMAGH DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent. Applications to Under Secretary, Dublin Castle, up to November 15th.

PONTEFRACT GENERAL DISPENSARY—Resident Medical Officer. Salary, £150 per annum, with apartments, coal, and gas. Applications on or before November 20th.

ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon. Salary, £75 per annum, with board, lodging, and washing. Applications, with testimonials, on or before December 6th.

ROYAL COLLEGE OF SURGEONS—Examiner in Anatomy and Physiology. Applications, with testimonials, on or before November 13th.

*ST. BARTHOLOMEW'S HOSPITAL, Chatham—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, etc. Applications, with testimonials, on or before December 15th.

ST. MICHAEL'S HOSPITAL, Kingstown, Dublin—Resident Surgeon. Salary £80 per annum, apartments, light, and fuel. Applications before the 17th inst. Election on the 20th inst.

*ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Berners Street—House-Surgeon. An honorarium of twenty-five guineas for a term of six months. Applications, with testimonials, on or before Nov. 22nd.

*SURREY COUNTY LUNATIC ASYLUM—Junior Assistant Medical Officer. Salary, £170 per annum, with washing, attendance, and furnished apartments. Applications to the Superintendent before November 25th.

WESTBOURNE UNION—Medical Officer to the First District and Workhouse. Salary, £74 per annum. Applications, with testimonials, not later than November 25th.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

FOX.—On November 5th, at Lawkland House, Giggleswick, Yorkshire, the wife of George E. Fox, Esq., M.R.C.S., M.S.A., of a daughter.

HOLLAND.—On November 7th, at 52 Rodney Street, Liverpool, the wife of Fredk. Holland, M.D., Lond., of a son.

MARRIAGE.

*FOTHERGILL—HAMMERSLEY.—At St. Thomas's, Marylebone, on the 4th instant, J. Milner Fothergill, M.D., to Adelaide Beatrice, younger daughter of William H. Hammersley, Esq., of Bridge House, Staffordshire.

DEATHS.

HYDE.—On November 6th, at his residence, The Cottage, Bloxham, after thirty-eight years of practice as a surgeon, William Wennington Hyde, aged 68, third son of the late Rev. John Hyde, of Witney.

ROBINSON, Alexander H., L.R.C.P.E., at Woodview, Fintona, age 65, on Nov. 1st.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

LOVE, Robert J., L.R.C.P., appointed Assistant Medical Officer to the Cambridge, Isle of Ely, and Cambridge County Asylum.

SQUIRE, W. Allen, M.D., appointed Physician to the Royal Free Hospital, vice W. O'Connor, M.D., deceased.

TOTAL DEGENERATION OF THE PANCREAS.—Litten reports, in the *Charité-Annalen*, Band v, p. 181, three cases of total degeneration of the pancreas, in which none of the usually accepted symptoms of atrophy of the pancreas were present during life.

PUBLIC HEALTH.—During last week, being the forty-fourth week of this year, 6,068 births and 3,860 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 23 deaths annually in every 1,000 persons living. The annual death-rate was 24 in Edinburgh, 25 in Glasgow, and 34 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth, 16; Sheffield, 18; Plymouth, 19; Birmingham, 20; Newcastle-upon-Tyne, 21; London, 22; Leeds, 22; Nottingham, 22; Bradford, 22; Brighton, 22; Sunderland, 23; Bristol, 24; Norwich, 25; Hull, 25; Oldham, 25; Wolverhampton, 25; Manchester, 26; Leicester, 26; and the highest rate, 30, both in Salford and Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.0 per 1,000 in the twenty towns, and ranged from 0.7 and 1.9 in Plymouth and Sheffield, to 5.8 and 6.5 in Sunderland and Salford. Scarlet fever showed the largest proportional fatality in Norwich, Sunderland, Oldham, and Manchester; measles in Salford; and whooping-cough in Portsmouth. The highest death-rate from enteric fever occurred in Bradford, Leicester, and Salford. Diphtheria caused 15 deaths in London, 2 in Bristol, and 2 in Birmingham. In London, 1,513 deaths were registered, which were 36 below the average, and gave an annual death-rate of 21.6. The 1,513 deaths included 7 from small-pox, 27 from measles, 70 from scarlet fever, 15 from diphtheria, 10 from whooping-cough, 22 from different forms of fever, and 35 from diarrhœa—being altogether 186 zymotic deaths, which were 46 below the average, and were equal to an annual rate of 2.7 per 1,000. The fatal cases of scarlet fever, which had been 58 and 88 in the two preceding weeks, declined to 70 last week, and were 7 below the corrected average weekly number; 4 occurred in Kensington, 6 in Islington, 4 in Hackney, 4 in Bethnal Green, 7 in Bromley and Poplar, 6 in Lambeth, and 7 in Greenwich and Deptford. The fatal cases both of measles and whooping-cough also showed a decline, and were 12 and 22 below the respective corrected weekly averages. The 15 deaths referred to diphtheria showed an increase of 5 upon those in the previous week, and exceeded the corrected average by 6; 2 occurred in Chelsea, 2 in Pancras, 4 in Lambeth, and one in the Children's Hospital, Great Ormond Street. The fatal cases of fever, which had been 24 and 21 in the two preceding weeks, were 22 last week, and were 15 below the corrected weekly average; one was certified as typhus, and 21 as enteric or typhoid. The fatal case of typhus was of an adult female, at 30, Thirza Street, Stepney. The 21 deaths from enteric fever included 3 in Pancras, 2 in Lambeth, 3 in Camberwell, and 3 in Deptford and Greenwich. The 35 deaths referred to diarrhœa exceeded the corrected weekly average by 11, and included 23 of infants under one year of age. The deaths referred to diseases of the respiratory organs, which had steadily increased in the eight preceding weeks from 124 to 333, further rose to 355 last week, which, however, corresponded with the corrected weekly average; 220 were attributed to bronchitis, and 92 to pneumonia. Different forms of violence caused 48 deaths; 40 were the result of negligence or accident, including 17 from fractures and contusions, 5 from burns and scalds, 3 from drowning, and 12 of infants under one year of age from suffocation. Five cases of suicide and three of murder or manslaughter were registered during the week. At Greenwich, the mean temperature of the air was 39.3°, and 7.0° below the average. The direction of the wind was variable, and the horizontal movement of the air averaged 10.1 miles per hour, which was 1.5 below the average. No rain was measured during the week. The duration of registered bright sunshine in the week was equal to 36 per cent. of its possible duration. Scarcely any ozone was recorded during the week, except on Saturday.

HANLEY.—The death-rate for this district was last year enormously high (25.97 per 1,000 of the estimated population), and was 2.58 above the average rate for the last ten years. The chief cause of the increase was an epidemic of measles, which occurred in the first half of the year, and caused 78 deaths. Of the total number of 1,194 deaths, 193 were under three months, 428 under one year, and 664 (or considerably more than half) under five years of age. The child-mortality of the district is always enormously high, the average being 54.47 per cent. of the total deaths, and we should have been glad to see some comments on the subject in Dr. Swift Walker's report. The seven principal zymotic diseases caused 154 deaths, a considerable decrease from the average. Diseases of the respiratory organs were fatal in 325 cases, or 37 more than the average. The deaths from phthisis (71) were also above the average. Forty-eight deaths were recorded as from old age. With the exception of a table showing the work of the inspector of nuisances, nothing whatever is said as to the sanitary circumstances of the district, or as to the measures taken to improve them.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. W. Spencer Watson, "A Case of Recurrent Leptothrix, successfully treated by the Injection of Perchloride of Iron"; Dr. R. J. Lee, "The Diagnosis and Treatment of Whooping-Cough"; Dr. Robert Boyd, "The Lunacy Acts and Medical Relief".

TUESDAY.—Pathological Society of London, 8.30 P.M. Discussion on "Rickets", to be opened by Dr. Hilton Fagge; Dr. Crisp, Dr. Barlow, Dr. Lees, Mr. Warrington Haward, Dr. Norman Moore, Mr. Shattock, and others, are expected to take part in the discussion. Mr. Pearce Gould will show a child with Congenital Malformation of Leg and Foot (living specimen). Statistical Society, 7.30 P.M. Inaugural Address, by the President; Dr. F. J. Mouat, "Note on the Tenth Census of the United States of America".

WEDNESDAY.—Association of Surgeons practising Dental Surgery. 7.30 P.M., Council. 8.30 P.M., Mr. Augustus Winterbottom, "Cases of Neuralgia dependent upon Non-corrupted Teeth".

THURSDAY.—Harveian Society of London, 8.30 P.M. Mr. Henry Power, "Cases of Injury to the Eye, with remarks on the appropriate treatment"; Dr. Ferrier, "A Case of Cerebellar Tumour, with remarks".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

PARTNERSHIP.

SIR,—I shall be very much obliged for advice on the following. Two years since, I engaged myself as a qualified assistant to a medical gentleman, "with a view to partnership". It is now time for the partnership to begin. The salary I have received has been £60 and £70 a year respectively; the practice realises rather over £1,200. Now what I want to know is: "What would be a fair share for me to have for the first year of partnership, and in what ratio to increase?" Before being qualified, I was five years with the same gentlemen.—I am, sir, yours faithfully,

November 3rd, 1880. ENQUIRER.

THE TREATMENT OF RINGWORM.

SIR,—The difficulty experienced in the treatment of ringworm is known to every one who has seen much of this disease. I therefore think your readers will be glad to hear of a remedy which I have lately used with complete success. Struck with the similarity that exists between the disease known in the East Indies as dobi-itch and ringworm, and knowing how rapidly the former yields to the application of goa powder, I was induced to try the active principal of this substance, chrysophanic acid, in the proportion of one drachm to one ounce of vaseline. The result has been the rapid destruction of the fungus, and consequently a complete cure. Chrysophanic acid has been recommended in the treatment of psoriasis; but I am not aware of it having been used hitherto for ringworm.—I am, etc.,

FLEET-SURGEON.

LOCAL CALOMEL FUMIGATION.

SIR,—In your issue of October 23rd you ask, Is Kane's calomel fumigator known in this country? I have used it constantly, both in Dublin and in London, and was satisfied, in many cases, with the result of the treatment. I wrote a paper on the subject, which the *Lancet* published last year.—I remain, sir, yours truly,

Central London Ophthalmic Hospital, WILLIAM S. BYRNE, M.B.
Gray's Inn Road, W.C., October 30th, 1880.

H. J. H.—Lymph from the calf for vaccination can be obtained from Dr. Wilson, Yoxall, Staffordshire; and from Dr. Warlomont's Agency for Calf-vaccine, in points, 3, Hemming's Cross, Charing Cross, London.

THE UNIVERSITY OF ABERDEEN.

SIR,—As a graduate and member of the general council of the Aberdeen University, I should be glad to be afforded the opportunity of offering some remarks on your leading article on the Aberdeen University Assessorship in your issue of October 30th. I think that it is inconsistent and misleading, while the somewhat irrelevant complimentary personal allusion to Dr. Bain, at its conclusion, deprives it of a judicial tone. You very aptly, however, express the question at issue, when you indicate, as the chief of the conditions implied in the changes advocated by men like Dr. Bain, "that the Scotch universities are to hold in the future a totally different position from that they have held in the past: becoming practically large schools for specialists, not educational institutions in which a broad general education is given". And the question, so put, is one that may well startle those who, unheedingly, in the excess of their "liberalism", may find themselves on the verge of supporting such an iconoclast as the candidate whom you extol.

You state that, "at present, many a Scotch student enters the Church simply because, on reaching the end of his four years' curriculum, he knows not what better to do with the Greek and Latin he has acquired". Having lived almost all my boyhood and early youth in Aberdeen at school and college, and having gone through the curriculum with the very intimate personal acquaintance of a large number of my fellow-students, I may fairly claim to speak from knowledge. Except in a very minute percentage of the students, the future career of each has been fully determined before the end of the second winter session of the curriculum; and in the greater number it has been settled before they came to the university. It is not the case that students arrive at the end of their arts curriculum to find themselves laden with Greek and Latin, with no market to which to carry their acquirements, except the Church. And it is a misleading bias to the question, to imply that Greek and Latin are the chief subjects or main part of these acquirements.

You say, also, that "the present stereotyped arts curriculum of the Scotch universities is undoubtedly and avowedly better suited for the clerical than for any other profession, but for the medical profession it is utterly unsuited". That a "stereotyped" curriculum (whatever meaning that epithet may convey) should be suited to the clerical profession, is an inauspicious statement. That the arts curriculum of the Aberdeen University is "utterly unsuited" for the medical profession I totally deny. You say that "much to their loss, comparatively few students of medicine have had an arts university training. They come up ignorant, frequently, of the commonest principles of logical reasoning and the most elementary facts of physical and mental science". If this, then, be much to their loss, and you consider it a fact to be deplored, why is that curriculum said to be utterly unsuited for them, which can and does supply the very basis of a liberal education which you instance? That it does supply it most readily at a less expense of money and of time, than can procure them almost anywhere else, I attest, for the verification of which I can appeal to many fellow-graduates, in every part of the medical profession, who will testify both that it is so, and that they have not unfrequently been compelled to contrast, and be thankful for, the cultivated knowledge and skill that they possess in subjects, which are

often beyond the range of men, their fellows, and in all other respects their equals, who have not had such an arts curriculum.

Apart, however, from the special wants of any one profession whatever, the arts curriculum of the Aberdeen University is capable of giving—and has, in the past, very successfully given, to men who have afterwards reflected honour on their Alma Mater—a very thorough, solid, yet broad, education; both imparting knowledge and cultivating the powers of the intellect, in those branches of learning the available knowledge of which has been held to constitute a good "liberal education". And why Greek, the most truly *litteræ humaniores* of all, should be sought to be eliminated, or why a loose system of "options" should be introduced, under which it will be competent for a student to be invested with the title of Master of Arts for proficiency in a limited number of special subjects selected by himself, not necessarily approaching the old "breadth" of a "liberal education", I cannot find any good or presentable reason.

Forgive my trespassing so on your space, but the question is one of lively interest to me and to very many fellow-graduates who bear a lasting gratitude to our Alma Mater.—I am, sir, your obedient servant,

R. LINDSAY, A.M., M.B.(Aberdeen), F.R.C.S.E.

Tisbury, November 1st, 1880.

GLOVES FOR WET WEATHER.

SIR,—I would be pleased to know if any reader of the BRITISH MEDICAL JOURNAL could kindly inform me what kind of glove is the best for cold and wet weather.—Yours truly,

J. T. K.

IMBECILES IN PRISON.

SIR—In an article in the *Daily Telegraph* of October 27th, 1880, on the subject of the Third Report of Her Majesty's Commissioners of Prisons, to which publicity has just been given, the following passages occur.

"In their report, the Commissioners refrain from enlarging at any length on the question, whether 'criminal tendencies' are not, in many cases, so closely connected with weakness of mind or other forms of mental incapacity, that it may be assumed that the 'criminal tendency' is likely to continue, so long as such condition exists, and is, therefore, not likely to be eradicated by punishment or imprisonment."

Nevertheless, "the fact remains, that in the twelve months preceding the last return, no fewer than 541 'imbecile' or weak-minded prisoners were received, and that there were then in confinement 125 of the deplorable class in question". "While, in one of the appendices to the report before us, furnished by various governors of gaols, cases of 'imbecility' and weak-mindedness, not amounting to absolute insanity, are not unfrequent among those who are termed 'habitual criminals'."

On perusing these paragraphs, the inquiry first arises—What is a "criminal tendency"? May it be defined as a constant inclination to commit crime, as opportunity offers?—an inclination such, for instance, as the pickpocket feels when, having satisfactorily "filched" twenty purses, he sees another temptingly within reach in a lady's conveniently placed back pocket; an inclination such as the burglar doubtless feels, when, having spent the proceeds of three or four satisfactory operations, he lays his plans for another promising "hit"? Does it not involve a mental operation, on the part of one individual, impossible of discovery on the part of another individual, unless such first person should show to such second person, by his words or outward actions, the inward workings of his mind in the direction of crime? Again, would not the repeated execution of criminal projects, planned in the mind of an individual, and carried out by himself, constitute that individual an "habitual criminal"? And would not such an "habitual criminal", by such operations, demonstrate a "criminal tendency"? Now, if an "habitual criminal" must have a "criminal tendency", and if "criminal tendencies are in many cases connected with weakness of mind and other forms of mental incapacity", it follows that many "habitual criminals" are weak-minded. This, indeed, is stated to be a fact in the last of the paragraphs I have quoted; but the second paragraph goes further still, and speaks of "541 imbeciles" having been received into prison, and of 125 then in confinement. The third paragraph, moreover, states that "cases of imbecility" are not unfrequent among those who are termed "habitual criminals". Now, "imbecility" being, according to the definition in the official *Nomenclature of Diseases*, published under the auspices of the Royal College of Physicians, a "congenital" condition, described by Drs. Bucknill and Tuke, in their standard work on *Psychology*, page 54, as one "of undeveloped intellectual power", it seems strange how the experienced and practical criminal, weak though he may be in his mind, can possibly attain to so void and absent a state of understanding. And stranger still does it appear, that being, as it is stated, so afflicted, it should have been deemed worth while to punish 541 of such mere irresponsible existences. For, how is the "criminal tendency" of the "habitual criminal", afflicted with this "congenital" imperfection of "imbecility", likely to be eradicated by any appeal made to his "undeveloped intellectual powers" through the medium of the jailer's key?—I have the honour to be, sir, your obedient servant,

F. H. SPENCER, M.D.

Bath, October 28th, 1880.

PORTABLE STOVES.

SIR,—In reply to the inquiries of "A Member" as to the above, I beg to say that I have lately seen one of "Bateman's Patent Metal Fires", which, I believe, will thoroughly answer his purpose. They are small, easily managed, and quickly give out a good heat, without any smoke or smell. Further particulars can be obtained from the maker and patentee of these stoves by application at 104, Strand, W.C., or at 29, Cheapside, E.C.—I am, sir, your obedient servant,

Reading, November 6th, 1880. FRANCIS W. SUTTON.

SUMMER DIARRHŒA.

SALICYLATES of calcium and bismuth in the treatment of cholera infantum were first suggested by Mr. Walter Kilner, M.B., in the *St. Thomas's Hospital Reports*. His theory is that the diarrhœa is an effort of nature to reduce the temperature of the body when this cannot be effected by the sweat-glands. A paper is published in the *Proceedings of the Medical Society of the County of Kings*, New York, by Dr. Alexander Hutchins, who reports the employment of calcium salicylate in twenty-seven cases, in all of which he was successful in controlling the disease. The patients ranged in age from two months to two and a half years. In no case was any modification of the previous diet called for, save in the matter of quantity. In all cases, the dose was three to five grains every two to four hours. The total quantity consumed by each patient varied between six and eighteen powders. In a few cases minute doses of aconite and veratrum were given during the continuance of the high temperature, and in a few others small doses of quinine were followed up after the subsidence of the disease. The calcium salicylate used was extemporaneously prepared, and was thus prescribed: Salicylic acid, 22 grains; prepared chalk, 8 grains. Mix, and divide into sixteen powders; one every two to four hours. The powders are mixed in water, and taken after the effervescence has subsided.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

PINE-WOOL CLOTHING.

SIR,—In your note on "Pine-Wool Clothing" in the JOURNAL for September 4th, p. 403, you remark: "We are not aware of any English experience" of similar fabrics. Allow me to observe that Mr. Beaver of Manchester has for years supplied me with such under-garments as you refer to, and they have always given me the highest possible satisfaction. His manufactures of Lairitz's fir-wool deserve the widest recognition on the score of comfort and of usefulness alike. I enclose you one of his handbills; and remain, sir, your obedient servant,

M.A.OXON.

DR. JAGO.—The communication shall have immediate attention, and has been submitted to a physiologist.

THE PATHOLOGY OF SEA-SICKNESS.

SIR,—The objections raised by Dr. Wise and Mr. Turton against my views on Sea-Sickness are not, as they would seem to assume, new to me. On the contrary, I weighed them carefully before "framing my theory", and I think it is easy to show that they do not shake its validity in the slightest degree. Dr. Wise says that I candidly mention two objections to my theory, but he does not show in what way my answers to these two objections are unsatisfactory. His additional objections are as follows.

A. The jumbling and oscillation of vehicles do not produce sickness.

B. "Pitching" causes more sickness than "rolling".

C. If my theory were correct, the recumbent posture would not relieve the symptoms.

D. The symptoms would cease after the rejection of the stomach's contents.

E. Other foreign bodies in the stomach, such as fruit-stones, coins, and pocket-knives, rarely produce actual vomiting.

To these I reply thus.

A. The stomach of a landsman is accustomed to accomodate itself to all sorts of motions, such as running, jumping, riding, driving, or going up a height; but the motion of the sea differs in a peculiar manner from any of the movements met with ashore, and the stomach cannot all at once adapt itself to the tumultuous roll of the ocean.

B. A ship often "rolls" much with scarcely any "pitching", but hardly ever "pitches" without a certain degree of "rolling". "Pitching" is also associatedr with a rise-and-fall action of the ship, as a whole. In "pitching", therefore, there is, if not a more violent, at least a more complex, motion for the muscular elements of the stomach to contend against.

C. This objection I am surprised to find emanating from a wise physician. I respectfully explain that the recumbent posture benefits almost all acute diseases in the same manner—namely, by calming the heart's action, and thus assisting nature to effect a cure.

D. When the first attack of vomiting completely empties the stomach (which in most cases it does not do) there is a feeling of relief. This does not necessarily apply to subsequent attacks, for sea sickness sets up an irritable condition of the organ, which complicates the malady, and requires time to heal. This also explains why the sickness sometimes continues after landing.

E. The symptoms produced by foreign bodies in any organ vary with the nature of those bodies. There is no analogy, whatever, between the foreign body described by me (which consists of the whole contents of the stomach in a perverted state) and the totally extraneous bodies mentioned by Dr. Wise.

Mr. Turton says:

We know (*sic*) that an empty stomach does not prevent sea sickness.

2. Is not the main factor in the disease the disturbing effect of the ship's motion upon the central nervous system in general, and the medulla oblongata in particular.

To these objections I answer:

1. We know nothing of the sort. Physiologically, the stomach is rarely quite empty, and it is impossible to say that, at the commencement of any given case of sea sickness, the stomach was absolutely and entirely empty.

2. Urgent nausea and severe stomachic distress (between the acts of sickness) do not generally accompany the vomiting that is due to disease of the brain. Moreover, our pathological knowledge of the nervous system tends to prove that severe vomiting, depending on disease of the brain, can only exist, when the patient is in a critical condition attended with alarming symptoms.

In conclusion I beg to thank Mr. Turton for his lesson in physiology, but no one acquainted with the rudiments of science would interpret my statement to mean that muscular tissue could contract independently of nervous influence.—I am, etc.,

GLYNN WHITTLE, M.D.

October 30th, 1880.

SURGEON-GENERAL GORDON.—We really think it is too late in the day to sneer at scientific sanitation in India or elsewhere; and we cannot consent to devote so much space to so little good purpose.

GENERAL PRACTITIONERS AND PREVENTIVE MEDICINE.

SIR,—The prominence to which "Preventive Medicine" has, in recent years, been growing, together with the spread of medical clubs and provident dispensaries, suggested to my mind, some years ago, that the time seemed rapidly approaching when it would not only be desirable, but possible and necessary, to alter the old relation between the general practitioner and his *clientèle*, by modifying his function, and, at the same time, establishing his remuneration on a different basis from that which has so long obtained.

In order to introduce this subject to the thoughts of those who have never given it consideration, I cannot choose a better text than the case which was cited by Dr. Cornelius B. Fox at the recent meeting of the British Medical Association, "of a medical officer of health with the usual nominal salary, who expressed his opinion that the public could not expect him, for such a paltry sum, to do his best to prevent the spread of so remunerative a disease as small-pox, every case of which, taking the average of rich and poor patients, was worth a five-pound note to him". What this candid medical officer so bluntly spoke is, doubtless, the silent thought of many, which, half unconsciously, perhaps, restrains their efforts to kill the goose that lays the golden eggs.

The moral drawn by Dr. Fox, that "a man should never be placed in such a position that his own private interests must inevitably clash with the public interests", is obvious and undeniable; but what has been the position of medical practitioners generally in relation to the public from time immemorial till now? Has it not been such, and is it not such even now, that the greater the amount of illness, the better it is for the doctors?

But times are changing. In the appointment of medical officers of health, we see some members of the profession employed to prevent the disease by which the others gain their living. The causes of disease are being closely investigated and generally understood, and steps are being taken in various ways to give instruction to the laity on the means of preserving health. And no one seems to see that all this is surely cutting the ground from under the feet of the extensively educated and greatly underpaid practitioner. How long will he stand passive while the bread is being taken from his mouth? Is it not high time to consider how he can best adapt himself to the altered circumstances of the times, and maintain together the usefulness and the emoluments of his profession?

But we cannot hope to do so unless the prevention of disease be henceforth recognised as one of the functions—and, in course of time, the principal one—of the ordinary medical practitioner. Every medical man in general practice would then be a medical officer of health, and all would work in harmony. In this way, his usefulness would be perpetuated, and he would be as indispensable as ever. But obviously he cannot afford to work in this way, so long as he is paid according to the usual custom. There is private hygiene as well as public hygiene. In preserving the health of the individual, there is plenty of scope for the private practitioner; but, before he can be expected to direct his energies into this channel, he must be paid to keep his clients well. The advice and instruction which enable a man to avoid disease are worth far more than the advice which is intended to cure him, and so often necessarily fails; and it is for us to teach the public that important truth.

How, then, can the doctor exercise this function? By making an agreement with his clients for a definite sum *per annum*, varying in amount, within certain limits, according to their pecuniary resources, and the more or less onerous nature of the duties undertaken by him. Let this fee cover a certain number of visits or consultations in a year, irrespective of the client's condition as to health; it being understood that, should more attendance be required by actual illness or otherwise, it will be covered by the fee agreed upon. Midwifery, the treatment of fractures and dislocations, and serious injuries resulting from accident, and all surgical operations involving much trouble, or requiring special skill, would be considered extras, to be paid for as the patient pleases, or thinks he can afford.

Let me suppose a case. The father of a family, for himself, his wife, and two children, agrees to pay two guineas a year for four quarterly visits. The medical history of each individual of the family having first been ascertained and noted, the attendant will, from time to time, inquire into the sanitary condition of the house and its surroundings, and the state of health of the inmates, not only at the time of his visit, but as it has been in the interval. While talking on these matters, he will not only learn much that will guide and help him in future possible illnesses, but he will detect unwholesome habits and circumstances before they can have done much harm. At the same time, he will answer any questions that may be put to him on those vital affairs which it concerns every one to be acquainted with, and on which every well educated medical man is able to give information. Thus, by "line upon line, precept upon precept, here a little and there a little", he will be able, far more completely and efficiently than is at present possible, to instruct and enlighten, warn and direct, to the preservation of health and the saving of life. And in another way these visits will be useful. It is a familiar fact in medical experience that many ailments that seem unimportant are neglected because they are thought too trifling to require the doctor's aid; or, from motives of economy, the patients are unwilling to apply for skilled advice. Many of these cases are, no doubt, really trifling; but many, on the contrary, are of serious import, and, if neglected or improperly treated, may be followed by the gravest consequences. According to the present custom, these ailments do not, but by the merest accident, come under medical observation till the golden opportunity is lost, and an intractable disease has been established. Under the system I am advocating, this result could hardly happen. The system of medical clubs, which have long been in existence, is obviously an approximation to the plan I now propose; but, in these, the understanding between the doctor and the members is that the latter only pay for and receive attendance and advice in actual sickness. Now, judging from the usual routine of club practice, the profession generally hardly seems to be aware that it is both the duty and the interest of the doctor to dispel this crude idea of his work and usefulness. Here, and here alone, the doctor is virtually paid for keeping his clients well; and it is not a little curious that, although club members do not belong to the most thoughtful and intelligent section of the community, they have managed to hit upon the one sound principle of the relation of the public to the medical profession. But as yet they do not seem to realise the fact that they pay for the prevention of disease as far as the efforts of the doctor can promote that end. These efforts may be, for the most part, summed up in the word—instruction; and it would, probably, be found that this could be given with the minimum of trouble in the form of lectures. I have long held that this instruction should begin in schools; and who is fit to give it as the doctor? Do for means teacher: and, if the general practitioner were to become less a druggist and more a teacher, his status would be raised, his usefulness and influence increased; while, under the system I propose, his pay would certainly not be diminished. But the practitioner who is fortunate enough to have a club connection need not wait for the coming developments to exercise this function of prevention. So far as his clients are concerned, it is, as I have said, his interest to do it; and I can say, from some experience, that it will well repay him for his trouble; and he will find that the more instruction he gives on the causes of disease, and the means of avoiding them, the less will be the need for the administration of drugs. It is true that, in order to be able to give this instruction with much effect, he must pay far more attention to the subject of causation than the curriculum of the schools and the routine of general practice has hitherto required; but, if he continually keep before him in his dealings with the sick the question of the causation of their illness, he will, at the end of a few months, be able to give preventive advice to an extent which he had never supposed to be possible.

The employment of the doctor in systematic efforts to prevent disease would be of benefit in various ways not yet referred to, but notably in this. Our knowledge of the causes of disease and their modes of operation is, though certainly improving, far from perfect; and the only wonder is that, under such a régime as the present, we have come to know so much. When the doctor has no professional interest in the prevention of disease, he cannot be expected to devote much time and trouble to the solution of the complicated problems of causation. No wonder, therefore, that, as Dr. H. Bennet recently deplored (although he strangely failed to see the remedy), physiology is still so much neglected in the medical profession. But to employ him in the manner I have indicated, would stimulate him to original investigation; much in this department would be discovered and much that now escapes detection; every practitioner would be encouraged to contribute facts, and all this were done under an organised system, which would then exist, but which at present although those generalisations that are now wanting in the science of causation would be arrived at with more certainty and speed, and the art of prevention would undergo a correspondingly rapid development.

Space forbids my entering more fully into this important subject here. Elsewhere I hope to do so soon. But I think I have said enough to show that it is worthy of immediate and serious attention. If disease be really preventable to anything like the extent which sanitarians believe, the present limitation in the work of the medical practitioner is nothing better than a relic of primitive barbarism.—I am, etc.,

W. F. PHILLIPS.

PHOSPHORUS AS A PREVENTIVE OF CONGENITAL MALFORMATION.

SIR,—The following case seems worthy of notice. A young married lady applied to me to attend her in her confinement. The child, when born, was puny, feeble, never breathed properly, or took proper nourishment. It died in a few days. A second pregnancy ensued; the child of this delivery had terrible convulsive attacks from a few days after birth until its death, at the age of over a year. Its feet were clubbed, its hands twisted, and its spinal column hopelessly curved. A third pregnancy and delivery took place; this third child had hare-lip, cleft palate, club-feet, twists of the hands on to the forearm, in addition to spinal curvature. It lived, if I remember rightly, over a year. The poor mother came to tell me the dread news of her fourth pregnancy. Happening at the time to be much exercised in my mind, on account of an annoying failure I had had in selection or in luck in the breed of horses, I had been reading every available treatise thereupon, and was greedy for every scrap of information. In an American veterinary note, I saw that a farmer down West had used phosphorus, with marked success, as a medicine given throughout pregnancy to mares who threw malformed foals. I immediately put my patient on a combination of phosphorus and quinine, made by Messrs. Kirby and Co. of Newman Street. She took the pills regularly thrice daily, and a healthy girl was born, when the pills were discontinued. Soon after the confinement, my patient told me she "missed the phosphorus dreadfully"; and, there being no sign of milk, I sanctioned the resuming of it, and lactation speedily supervened. This child throve well until it caught whooping-cough, when it nearly died from the most severe attack of that malady which I have seen in a child so young; but that it possessed stamina sufficient to withstand the disease (and, perhaps, the treatment, for we left no stone unturned), speaks volumes for its vital power. And, yesterday, a healthy child was again born to her (a son), after nine continuous months of phosphorus, which, rightly or wrongly, I accredit with having prevailed upon Nature to change the type in this instance. These are the bare facts which seem to me worthy of this much record. To many, no doubt, they will be trite enough, and all may have expected such a result. I was one of those sceptics who "expected nothing", and was anything but disappointed.—Your obedient servant,

A COUNTRY DOCTOR.

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REMARKS
ON A
CASE OF RARE IMPOSITION OF THE VISCERA.

By ALFRED BAKER, F.R.C.S.,
Senior Surgeon to the General Hospital, Birmingham.

THE following case is worth recording, as an instance of a very rare malposition of internal viscera, unrecognisable by any known sign or mode of examination, defying detection, and disappointing reasonable surgical efforts and anticipations.

On July 12th, 1880, I saw Mr. K., aged 67. He had suffered for some time under occasional constipation from cancerous stricture of the rectum. Complete obstruction had been established on the previous evening—*i.e.*, the 11th; and Dr. Russell and Mr. Taylor agreed that, unless the bowel was opened, the patient must sink. A small tube had been gently insinuated through the stricture, and a little water injected, without any perceptible result. During the night, however, the bowels had partially unloaded themselves by frequent spurts of liquid fæces, and by the expulsion of large volumes of air. The abdomen had diminished in size, and was softer; vomiting had ceased, and the stomach had retained liquid food. The necessity for immediate surgical interference had therefore disappeared.

For several days, this improved condition lasted, but complete obstruction recurred; and, on the afternoon of July 22nd, I found great and uniform abdominal distension, tympanites slight but equal, fulness of both loins, incessant sickness, weak and quick pulse, and a large, hard, cancerous mass occluding the rectum within easy reach of the finger. I at once opened the colon in the left loin by Amussat's method. The only peculiarity noticeable in the operation was that the bowel was deeper than usual, and overlapped by renal fat, some of which was removed. The colon was fixed by sutures to the wound and incised, giving exit to a large quantity of air and a small quantity of solid stool. Examination by the finger through the wound did not yield evidence of any large accumulation.

On the following morning, July 23rd, the symptoms of obstruction were unrelieved: a very small quantity of stool had escaped by the wound, and the vital power was failing. By the injection of warm water through the artificial opening, some small fæcal lumps were washed out of the lower part of the colon, but the upper segment of the bowel was empty. During the day, no further escape occurred; and, in the evening, the patient died.

On opening the abdomen after death, the whole intestines were found much injected, and a small quantity of blood-stained fluid lay in the peritoneal cavity. The large intestine was greatly distended; the small bowel almost empty. Commencing at the rectum, which was closed by a mass of cancerous deposit surrounding its lower part, and tracing the intestine upwards, the sigmoid flexure—forming a very large curve—was found, in the *right* iliac fossa. From this region, the gut passed upwards on the right side to the liver, then crossed transversely to the spleen, and thence downwards to the left iliac fossa, where the cæcum was found with its appendix and a long meso-cæcum. The whole tract of the large bowel, from the rectum to the transverse colon, was greatly distended with putty-like fæcal matter. In the left lumbar region, the upper part of the cæcum was seen to be opened, empty, and fixed to the wound by the sutures. The small intestines occupied their proper position, except that the lower part of the ileum ran transversely from right to left, to terminate in the cæcum. No other malposition existed, and no other disease was discovered.

The failure of colotomy in this case was due entirely to the transposition or lateral reversal of the large intestine, so that the bowel was opened above the fæcal accumulation, and the operation thus rendered ineffective.

THE USE OF NITRO-GLYCERINE IN ACUTE AND CHRONIC BRIGHT'S DISEASE, AND IN THE VASCULAR TENSION OF THE AGED.*

By A. W. MAYO ROBSON, F.R.C.S.Eng.,
Demonstrator of Anatomy at the Leeds School of Medicine.

IN April of the present year, I wrote an article in the BRITISH MEDICAL JOURNAL on the Use of Nitro-Glycerine in certain diseases; but in that paper were not included the observations which I purpose making here; for, at that time, my cases were too few from which to draw definite conclusions.

During the last year, I have tried the above remedy, with great benefit, in a number of cases of chronic Bright's disease; and of others accompanied by that condition of the vessels which was described by Sir W. Gull and Dr. Sutton. From the relief obtained in these instances of vascular tension, I was led to try it in acute nephritis, and, as the sequel will show, with very beneficial results.

The following condensed jottings will, perhaps, serve to illustrate the pith of my remarks.

CASE I.—A. M., aged 56, had been suffering from chronic renal disease for two years. When I saw him, twelve months ago, he had a pale pasty appearance: his eyelids were puffy, and his legs œdematous: his pulse was tense and corded, the walls of the vessels being much thickened; the heart was greatly hypertrophied, and his breathing was at times most laboured and difficult, but at others comparatively tranquil. The urine, of which only a pint and a half was passed in the twenty-four hours, had a specific gravity of 1008, and contained much albumen.

A one per cent. solution of nitro-glycerine was at first given in one-minim doses every half-hour, till its physiological effects were produced, in order to relieve the asthmatic symptoms, which it did so effectually that my patient would never be without it. After taking his medicine, in three-minim doses, thrice daily for a week, he drew my attention to his urine, which, he said, came remarkably freely. I had it passed into one vessel for twenty-four hours, and found the specific gravity to be 1012, and the quantity three pints; moreover, it contained very little albumen. He took the remedy regularly for some months; after which time, the pulse had become softer and more regular, the hypertrophied heart seemed to be much quieted, and a mitral regurgitant murmur, "evidently due to dilatation", had disappeared; the breathing was quite easy and normal, except during exertion. The urine was examined from time to time, and continued abundant and of fair specific gravity, with an absence of albumen and casts. After some weeks, he felt so well, that he discontinued his medicine; but, finding his old symptoms returning, he had again to resort to the remedy, with the same good results.

CASE II.—Mrs. E., aged 45, a pale pasty-looking woman, consulted me for dizziness, shortness of breath, palpitation of heart, sickness, œdema of legs, puffiness of face, and general ill health. She said her mother and grandmother had died of kidney-disease, and that she was evidently suffering from the same affection.

I found that she was only passing 150 grains of nitrogen by the urine in twenty-four hours, and that there was considerable vascular tension. I ordered milk-diet, diaphoretics, diuretics, aperients, iron, etc., at various intervals, but without much improvement, so that she began to despair, and consider herself doomed. On taking the solution in minim doses every four hours, she began at once to pass more urine, and the nitrogen increased to 230 grains in twenty-four hours. Her other symptoms also improved. After a few days of this treatment, I ordered 20 minims of tincture of sesquichloride of iron, and one minim of nitro-glycerine solution, thrice daily; in a fortnight, the change was really wonderful; the vascular tension had subsided, the œdema had disappeared; and, all her symptoms being relieved, she felt able to go to the sea-side for change of air.

The following case is interesting, because my patient had one attack of apoplexy, and apparently staved off another by resorting to nitro-glycerine.

CASE III.—Mrs. F., aged 52, consulted me in June, saying she had lately been suffering from attacks of dizziness; and that, two days before seeing me, she had had an unusually severe seizure, which had left her right side weak, and had rendered her speech indistinct. I found the right side of the face and right arm slightly paralysed, and the right leg numb and decidedly weak; her speech was also rather indistinct. Her pulse was hard and corded, and all her vessels indicated increase of tension. The urine was normal in quantity, but had a specific gravity of 1006, and showed a trace of albumen.

* Read before the Leeds and West Riding Medico-Chirurgical Society.

I ordered milk-diet and aperient medicine, and advised rest; the paralysis gradually passed off, but the vascular tension remained.

In August, she began to take the nitro-glycerine solution in minim doses, thrice daily, as the attacks of dizziness were returning; the vascular tension was at once reduced, and the pulse became softer and apparently fuller; the urine, which just before the treatment had a specific gravity of 1008, increased afterwards to 1012, and became slightly more abundant. Her dizziness was relieved; but, when an attack threatened, a dose of the remedy always prevented it.

Thus, I hope that, by careful dieting, taking an occasional aperient, and keeping down excessive vascular tension by nitro-glycerine, we may be able to postpone in this patient what, perhaps, may be inevitable in the long run, viz., another attack of apoplexy.

May it not be advisable, when one is called to a case of apoplexy, to at once give a dose of this potent remedy, and, by lessening the pressure in the vessels, to prevent further effusion? Would this not be better than trusting to aperients or depletion by other methods, which occupy a much longer time before they act, and then are not always certain in their action?

CASE IV.—Mrs. C., aged 50, consulted me for severe anginiform attacks and asthma, from which she had suffered for two years. I found that there was no valvular disease of the heart, but some hypertrophy; the pulse, however, was hard and tense, feeling like a piece of whipcord; and, when emptied, the walls were found to be greatly thickened. The urine, being normal, had not attracted the patient's notice; but, on examination, I found the specific gravity to be 1005, there being no albumen.

I ordered the glonoine solution, in minim-doses, thrice daily; and two minims when the pain threatened. She saw me in a week, and expressed herself as feeling much better; and, a fortnight afterwards, said she felt quite well, being entirely relieved from the pain, and quite cured of the asthma. I found the pulse softer and more compressible; and the urine, which was still abundant, had a specific gravity of 1012. I advised her to continue the remedy for some time, so as to keep up the happy state of affairs. Two months subsequently, she still remained well, having only occasionally to resort to the nitro-glycerine.

In the following cases of acute nephritis, the action of the drug in question seems to have been really very remarkable.

CASE V.—Mr. C., aged 30, a strong healthy man, consulted me on account of sciatica, for which I prescribed. A few days afterwards, as he was not much better, a friend advised him to try a hot alkaline bath, which he did in the morning. He went out afterwards, and stood for some time in a cold and draughty place of business. At night, he shivered, and was seized with a dull aching in the loins; his urine became scanty and thick, and he had to get up very frequently to micturate.

The next day I was sent for, and found him suffering from acute nephritis. He was only passing one pint of urine in the twenty-four hours, which was thick and smoky, and had a specific gravity of 1020. Under the microscope, the sediment was found to be composed of blood-casts, renal epithelium, blood-corpuscles, and lithates: on boiling, it almost became solid.

I ordered milk-diet, free diluent drinks, diaphoretics, alkalies, etc., and kept him in bed; but, on the twentieth day, there being no improvement, I began with a minim of the glycerine solution every four hours, which soon produced great throbbing in the head. This treatment was begun on Saturday night. The urine passed during the previous twenty-four hours was one pint, which had a specific gravity of 1020, and was loaded with blood. On the Sunday, the amount of urine for twenty-four hours was a pint and three-quarters; it had a specific gravity of 1020, and contained much less blood and far less albumen. On Monday, there were two pints and a half passed in the twenty-four hours; the blood had quite disappeared, and there was only a cloud of albumen on heating; the specific gravity was 1025. On the Saturday following—*i. e.*, one week after beginning the new treatment—the urine was normal in quantity and quality, and the patient was feeling well, but weak. No relapse has occurred, and my patient is now perfectly well, six months after his attack.

CASE VI.—Mr. R., aged 39, had been suffering from dyspepsia for some weeks; but a fortnight at the seaside restored him completely. The day after returning home, he had to hurry to catch a train, and got into a violent perspiration, when he had to wait some time in a draughty station, and felt a chill come over him. The next day I was summoned, and found him complaining of an aching in the loins and frequent micturition. He was slightly feverish, and had puffy eyelids; but what alarmed him most was the condition of his urine, which was scanty, and of the colour of coffee. I ordered rest in bed, milk-diet, diluent drinks, poultices to loins, diaphoretics, etc., for three days, without any improvement; the urine then being loaded with blood, and only a pint and a quarter being passed in twenty-four hours. I ordered one minim of one per cent. solution of nitro-glycerine every four hours. In twenty-four hours, the blood entirely disappeared from the urine; and during the following twenty-four hours the urine was passed into one utensil, and found to measure three pints; it then had a specific gravity of 1019.

On the sixth day, he felt well; and, as he had some pressing business on hand, he went out, and left off his medicine. He said he caught more cold, and found the urine dark again; but he resorted to his old remedy, and it soon cleared up. He went into the country a week afterwards, and returned to business in good health after a fortnight's rest.

The following case has been kindly furnished to me by Mr. William Hall.

CASE VII.—Mrs. C., aged 65, was attended in January, 1879, when she was suffering from bronchitis and albuminous urine. In April, 1880, she complained of sickness, had a furred tongue, and temperature 101°. The urine was smoky, and contained blood-corpuscles, much renal epithelium, and small casts; the pulse was tense, but not frequent. She was ordered steam blankets, and liquor ammoniæ acetatis, and was kept on milk-diet; after a fortnight, there being no improvement, a minim of glonoine solution was ordered to be taken every three hours, and was increased in twenty-four hours to a minim and a half. In two days, the urine became much more abundant, and paler; contained fewer blood-discs and casts, with very little albumen.

At the end of six days, the nitro-glycerine was omitted by mistake, and liquor ammoniæ acetatis given. The urine, next day, contained blood and casts, and assumed a smoky appearance. After three days' interval, the glonoine was resumed, and an improvement in the character of the urine at once resulting. This improvement continued, under the use of the remedy, until the blood and casts had disappeared, only a trace of albumen remaining.

I have not had a chance of trying nitro-glycerine in the acute nephritis of scarlet fever, or in suppression of urine, but intend giving it a trial. I hope, on a future occasion, to relate cases in which the anomalous symptoms of old age, neuralgia, etc., accompanied by arterial tension, have been benefited by the remedy in question.

I must leave my cases to speak for themselves: I report them, in order that I may elicit the opinion of others, and perhaps induce someone to try this remedy in acute nephritis, or in the numerous and often distressing symptoms which apparently have their origin in that state known as vascular tension. Whether it be due to chronic kidney mischief, or to arterial fibrosis, this condition is unquestionably relieved by nitro-glycerine; and, with the diminution of pressure, in my experience, improvement inevitably follows, though, in some cases, it may only be temporary.

CASES OF TUMOUR OF THE BRAIN IN THE INSANE.

BY THOMAS LYLE, M.D.,
Borough Asylum, Birmingham.

TUMOURS of the brain among the insane are so very rare that I think any clinical record of such cases cannot be without interest, not only to the medico-psychologist, but also to the general practitioner. I desire therefore to bring under notice two cases of tumour of the brain, one of which came under my care in June 1879.

T. H. was admitted June 30th, 1879, from his own home; age 40; married; occupation, a boatman on the canal. First attack. His wife stated that he had always been a very steady respectable man. About six months ago, one day, while at work, he fell off the boat into the canal, and was nearly drowned before assistance could be rendered him. After he was taken home, it was found he had lost the use of his left arm and leg. He remained at home from that time until he came to the asylum. When admitted into the asylum, he had regained the full use of his paralysed side. There was no history or symptoms of syphilis. His wife also stated that, during the last six months, he had been quite changed in his habits; that he was now irritable, and became very excited at times, occasionally destructive.

June 30th, 1879. When admitted, he was in a very restless condition; had general incoherency and rambling in his conversation; and neither knew where he came from nor where he was.

July 1st. The patient had rested and slept well during the night; he seemed very confused when any simple question was put to him, and was some time before he could give an answer. The muscles of his face and lips were tremulous; and when asked to put out his tongue, it was done with a jerk, and quivered while protruded. His memory was very defective; when asked how long he had been here, he said "a

month", when in reality he had only been one night. The pupils were slightly unequal, but both active. Examination of his chest showed his heart and lungs to be healthy. He complained of pain in his head.

July 20th. He had a convulsive attack to-day, after which it was found that his left side was paralysed, and the pupils were markedly unequal. He complained of pain in his head.

August 24th. He had been rather helpless since the last note was made, and been confined to bed; yet he remained in the very best of spirits. When asked how he was, he said he felt "Very well", repeating the words "very well". He sang occasionally, and talked a good deal of the fine boats he possessed, and addressed strangers by some familiar name, such as "Joe". He laboured under the delusion of mistaken identity, and held out his hand to shake hands with strangers, believing he had known them all his life. He took his food well and enjoyed it.

November 20th. Very little change had occurred since the last note was taken, unless it was that his voice was not so strong, and was very tremulous when he spoke; he took his food well, but it had ceased to do him the same amount of good as at first, as he had lately lost flesh, showing that nutrition was becoming impaired.

January 8th, 1880. He was generally very happy and content, although he was quite helpless, and had to be lifted out and into bed. A bed-sore was forming over the sacrum. Pulse 86. The urine, being examined, was found to be healthy.

February 3rd. He sank and died.

February 4th. NECROPSY.—The body was thin and emaciated; there was a large bedsore over the sacrum. The calvarium was normal in thickness: the dura mater very firmly adhered to the skull-cap, was considerably thickened, and had a leathery feel; the arachnoid was slightly opaque, with some subarachnoid effusion. The brain-substance was highly vascular, and presented a pinkish aspect. On taking a slice off the right cerebral hemisphere of the brain, a tumour was found, of a greyish colour, occupying the greater part of the right anterior lobe, and extending backwards about three inches; the tumour was of the size of a medium orange, irregular in shape, and somewhat uneven on the surface, with two or three small cysts attached to it; it was supplied with small vessels from around it; the brain-substance in the immediate neighbourhood was very soft and pulpy, and had a cream-like appearance. The corpus striatum and optic thalamus of that side were much softened and broken up. Softening had just commenced on the left side; the floor of the lateral and fourth ventricles were rough, with small granulations, as seen in an ordinary case of general paralysis. The other organs were healthy. The weight of the brain was forty-four ounces; the blood-vessels of the brain were thickened.

The microscopical appearances of the tumour were thus described by Dr. Saundby, who kindly undertook to examine the tumour for me. Portions of the tumour were prepared by soaking in bichromate of potash solution, syrup, and gum. The sections were stained with logwood (Dr. Cook's formula). The tumour was composed of two portions—a hard and a soft portion; the former was made up of homogeneous material, staining only slightly and diffusely, containing many capillary vessels with enormously thick walls, and presenting the appearance of lowly organised newly formed tissue, which had undergone caseation. The latter was the growing portion, consisting of groups of round and spindle cells, and a number of capillary blood-vessels. The appearances were suggestive of the growth being an old gumma.

CASE II.—In the Obituary Record of this Asylum I can only find one case of tumour of the brain, which my colleague (Mr. Green) met with some years ago; and, so far as he can remember, it is the only case which has come under his observation.

The case was that of a man (E. B.), aged 40, an upholsterer, married, subject to epilepsy. He is recorded to have been a man of average height and bilious temperament, and had been gay and dissipated. When admitted, he was unable to stand, and was nearly unconscious. The pupils were sluggish, but of equal size. He could be roused, but not easily; his countenance was pale; he could not be made fully to comprehend what was said to him; to every question he answered "Yes" or "Not at all"; and spoke slowly, as if he had a difficulty in articulating. This patient lived only fourteen days, during which time he is stated to have had delusions as to his great wealth; his memory remained very defective, and his circulation languid. He is only stated to have had one fit, and that was the day before he died. His wife said his mind was more or less affected for seven years before he was sent to the asylum, and that he was almost blind for a year during that time. It was also stated that his right side was weaker than the left, as he used to assist to dress himself with the left hand, but not at all with the right, although he could move it.

NECROPSY.—In the upper part of the left hemisphere of the brain, close to the longitudinal fissure, and just under the coronal suture, was a large fibrous tumour, weighing five and a half ounces, resting upon but not reaching the lateral ventricle; it was irregular in shape and nodulated on its surface, and the brain around it was softened; the veins proceeding from the tumour and the lateral sinus, in which they terminated, were filled with a firm dense fibrinous coagulum, whilst the whole brain was highly vascular.

REMARKS.—Tumours amongst the insane are rare; but the experience of different authors has varied, as may be seen from the following. Fischer found not one case in 318 necropsies. Dr. Batty Tuke, out of 400 necropsies of the insane, found himself in the same position; but he says that, on three occasions, he met with gliomata in the sane. Dr. Hack Tuke found one tumour in 400 cases. The French statistics show 22 out of 8,289 cases. In the Somerset County Asylum, tumours were found at the rate of 16 per 1,000. Dr. Sutherland mentions that he found four in 200 cases. Dr. Clouston was more fortunate in this respect, as he found, at the Carlisle Asylum, six cases out of 214; while this is the first case I have met with out of 400 necropsies.

Dr. Clouston, in a very interesting paper on this subject in the *Journal of Mental Science* (July 1872), says that Arnold quotes Morgagni and Bonetus, that tumours are one of the forty-seven pathological changes in the brains of the insane. Certain authors have expressed doubt as to whether tumours of the brain are really productive of insanity—their objection being founded on the fact that, in certain cases, tumours have existed which have not been accompanied by abnormal psychial symptoms. I agree with Dr. Batty Tuke, that there is very little doubt that tumours of various descriptions are productive of insanity, producing mental weakness, and, in some cases, even dementia in its deepest colour.

I think the symptoms generally to be met with are excitement, followed by some kind of seizure—it may be apoplectic; then defective memory and obtuseness of the intellect. In both the cases I have related, there were allied symptoms—such as those of an apoplectic character—at or near the beginning, followed by delusions of grandeur and wealth, as seen in general paralysis of the insane; then defective memory. I cannot say, however, that in my case the patient was free from delusion, as laid down by some; headache was complained of throughout my case, and in four out of Dr. Clouston's six cases. Then, in the two cases which I have brought forward, paralysis was present in the form of hemiplegia; this agrees with a case related by Dr. Bacon. Paralysis was present in some form or other in four out of Dr. Clouston's six cases; but paralysis does not follow as a matter of course, because a tumour is present in the brain. Calmeil found that three-eighths of those affected with organic disease of the brain were free from paralysis, and, of the other five-eighths paralysed, he found four-eighths hemiplegic.

Dr. Boyd has compared the frequency of tumour in the sane and in the insane; and finds that, out of 38 cases, 17 showed symptoms of insanity, which agrees with Calmeil; but I cannot help thinking that this is much too high a percentage, and that a very great number of cases are treated at home, and we hear nothing about them; it may be only looked upon as ordinary softening of the brain. In conclusion, the two cases I have related strongly corroborate the excellent paper by Dr. Clouston on this subject, as regards the pathological influences exercised by tumours growing in the brain. He says they have three distinct effects on the brain-structure. 1. They create irritation, tending to *ramollissement* in the nerve-substance with which they are in contact. 2. They cause pressure on distant parts, which, in its turn, causes an alteration of the structure and nutrition. 3. They set up progressive disease, resulting in an increase of the connective tissue and thickening of the coats of the blood-vessels.

MOUNTAIN-FEVER.

By ALFRED WISE, M.D.,

Visiting Physician to the Infirmary for Consumption, Margaret Street, Cavendish Square.

THE increasing confidence in the high altitude treatment calls for publicity of all the drawbacks as well as the advantages of this modern practice in dealing with patients affected with phthisis. This may be some excuse for a description of my own case of what may be termed "mountain-fever", on the occasion of my second visit to Davos Platz.

I arrived at Davos (5,105 feet) on October 11th, after a stay of thirty-six hours at Chur (1,936 feet). I felt no ill effects from the rise, and made a good dinner. I slept well till 4 A.M., when I was awoke by pains in the epigastrium, caused by spasmodic contractions of the stomach, occurring every two or three minutes, and lasting a minute or so. I had no sleep after 4 A.M. On dressing at 8, the tongue was slightly furred; the bowels open. The pain was relieved by coffee at breakfast. There were no interscapular pains. The appetite was good.

October 12th. I was about the same; had pains occasionally throughout the day.

October 13th. I slept badly. The temperature varied during the day from 99.2° to 100.3°. Pulse 122. I abstained from solid food. Appetite was good.

October 14th. The tongue was slightly furred. I perspired profusely towards morning, and had occasional feelings of mild vertigo. Temperature 100°; appetite fair. There was no pain on deep inspiration. The urine was a little high-coloured. Temperature 100.2°.

October 15th. I slept a little better. There was no perspiration. Temperature 99.2°; pulse 100. I felt quite well after a cold bath, and hungry. I was obliged to eat plentifully at breakfast. The temperature at noon was 99.6°. I made a good lunch. The temperature in the afternoon was 100.4°; pulse 88. I had pains in the epigastrium, relieved by sal volatile. Temperature at 5 P.M., 100°; pulse 92. I felt well after dinner. The urine was loaded with lithates.

October 16th. Temperature 99.6°; pulse 84; tongue clean. Noon: temperature 99.6°; pulse 84. 3 P.M.: temperature 101°; pulse 100. 9 P.M.: temperature 100°; pulse 92.

October 17th. Temperature 99.2°; pulse 88. At noon: temperature 99.4°: pulse 104. 3 P.M.: temperature 100.4°; pulse 92. 4 P.M.: temperature 100.8°; pulse 88. 8 P.M.: temperature 99.4°.

October 18th. 7 A.M.: temperature 99.2°; pulse 88. 9 A.M.: temperature 98.4°; pulse 92. Noon: temperature 97.8°; pulse 80. 3 P.M.: temperature 100°; pulse 80. 8 P.M.: temperature 100°.

October 19th. The temperature varied in the same manner from 99° to 100.2°. The pulse in the sitting posture was 76; when standing, 96. After going slowly down stairs and up again (about twenty-four stairs), the pulse was 132. I had occasional shivers. The heart's action was feeble and irritable. The hands and feet were cold; the tongue clean.

October 20th. Pulse in sitting posture, 84; standing, 100. Temperature from 98.8° to 100°.

October 21st. Temperature from 99° to 99.8°; pulse 76 to 116, according to movement.

October 22nd. Temperature 98.8° to 99.2°; pulse 84 to 108.

October 23rd. Temperature 98.4° to 98.6°; pulse 80 to 94.

November 1st. Temperature 98.4°; pulse 84 to 108.

The chief feature in this attack of high temperature was the irritable heart's action; the beats of the pulse, on the slightest movement, being increased out of all proportion to the exertion taken. The respirations were increased from 16 to 24, and depended entirely on movement. The appetite was good throughout; and there was always a feeling of relief after dinner, although the temperature did not fall until morning. Some loss of flesh was noticeable after a few days.

The temperatures partook of a periodic character; but quinine in six-grain doses had little or no effect in reducing them, tending only to increase the irritability of the heart's action. For this reason, and wishing to observe the course of the fever, I abstained from that drug after thirty grains had been taken.

Previously to October 11th, I had had the best of health for some years; and, on my former visit to Davos in 1879, I experienced no disagreeable effects whatever from the change in altitude; but on that occasion I broke the journey at Chur for four or five days. I should recommend this plan of dividing the journey to be adopted in the case of invalids sent to high altitudes, as the result of such fever on a delicate person might be more lasting and of greater consequence than to one in the enjoyment of good health.

It is true that the majority of fresh arrivals here find themselves exhilarated and benefited by the rise; but there are not a few who suffer from high temperatures and irritable heart's action, etc., during the first fortnight. This, if possible, it is very necessary to avoid.

The pains in the epigastrium I attributed to an excessive secretion of gastric juice. They occurred on an empty stomach, were increased by the thought of food, and were immediately relieved by compound spirits of ammonia.

CASE OF SEVERE BURNING OF THE HEAD AND SHOULDER: RECOVERY.

By JOHN COCHRANE, L.R.C.P.&L.R.C.S.Ed., Edinburgh.

THE following case, the details of which I desire to record, is of considerable interest in several respects, mainly in regard to the magnitude of the surfaces of injury, the peculiar position of the parts involved, and the extremely intemperate habits of the patient.

On February 21st, 1879, I was requested to visit Mrs. B., who, I was informed, had been severely burned about the head and left shoulder by falling into the fireplace of her bedroom. On seeing her, I found that the hair, skin, and deeper structures over the top of the head were entirely charred, and large sloughs were coming away. Linseed-meal poultices had been applied for a day or two before I was asked to see her. On the left shoulder and back of the forearm, I found a large sloughing sore, which had also been poulticed.

As to the cause of the accident, it appears that the lady, who is well up in years, had been for a lengthened period given to the abuse of intoxicating liquids, and, whilst under their influence, had fallen and rolled over into the fireplace. Being stupefied with drink, she lay with her head close to the bars of the grate. The result was that her hair was consumed, and in this condition she was discovered by a member of the family.

As soon as the sloughs separated, I dressed the ulcers daily with carbolic acid lotion, and occasionally varied this with zinc ointment.

On March 8th, seeing that my patient was losing strength, I prescribed some quinine powders, which benefited her much. In order to quiet the nervous system, which was sadly out of sorts, owing to her previous drinking habits, I prescribed, on the 10th, bromide of potassium; and, on the 18th, cough required treatment. She still, however, continued to indulge in stimulants, in spite of the remonstrances of her friends; and she gave her family the greatest possible annoyance. I found it an extremely difficult affair to get her to submit to my counsels; and I was often disheartened, during my daily visits, to find that she had returned to her old habits.

Being anxious to use a dressing which, whilst proving beneficial to the wounds, would at the same time remove the very disagreeable smell, I resolved to try terebene mixed with olive-oil. This was applied daily on lint with oiled silk above, with the use also of gauze bandages for the shoulder and forearm. I commenced to use this dressing on April 16th; but my patient complained that the bandages "cut her skin", as she expressed herself. However, I persisted with their use, and after a time she became accustomed to them.

On May 9th, she had a pretty sharp attack of erysipelas of the head and face—due, no doubt, to an extra fit of drinking. She suffered from extreme depression, and for a time I was very anxious about her condition. I had, indeed, little hopes now that she would rally; but, fortunately, through careful nursing and diaphoretics, etc., she gradually gained strength; and, after a few days, I had the satisfaction of seeing the disease abating.

On June 13th, I commenced to use boracic lint for the first time as a dressing to the head and arm. Zinc ointment was also occasionally ordered for the arm.

On July 19th, a lotion of tannic acid and glycerine was used for hardening the cicatricial tissue of the arm and shoulder.

On September 3rd, I used a lotion of boracic acid for applying to the head and arm at each dressing, previously to the application of the carbolic oil and lint.

By October 25th, the ulcer on the shoulder and arm had entirely cicatrised, without much contraction or dragging; and the patient could use the arm with the utmost freedom. As, however, there were some scales on the cicatrix of a psoriasic nature, which were a source of pain and annoyance to the patient, simple ointment was ordered to be applied; and also olive-oil, in order to soften them and allow their easy removal. She was also carefully bandaged; and this seemed to have a good effect in the prevention of too much contraction.

On December 3rd, a portion of the occipital bone, measuring four inches in length and two inches and a half across at its broadest part, separated as a sequestrum. This portion of bone weighs six drachms and one scruple, and is of considerable thickness. The surface from which it came has almost entirely healed, with the exception of a very small bit in the centre.

On March 15th, I measured the extent of the injured surface on the head, and found it to be seven inches in length, and across, at its broadest portion, four inches. The cicatrix on the shoulder and forearm measured eight inches in length, by four and a half in breadth at its broadest portion.

REMARKS. I must acknowledge that, when I took this case in hand, I was not at all sanguine as to the result, considering all the circumstances connected with it; and it has been a puzzle to me how the healing process could go on as well as it did, seeing that Nature had to contend against so much. Terebene I found to be most advantageous in its healing powers; and its complete efficacy in removing the extremely disagreeable smell from the discharges of the ulcer was sufficiently established, and its agreeable odour tended to sweeten the air of the bedchamber, which made the work of dressing the sores less disagreeable to me. Dr. Patrick Heron Watson also kindly saw the patient along with me, and expressed his opinion that the result had been very satisfactory.

SURGICAL MEMORANDA.

EXTENSIVE CARBUNCLE.

In the JOURNAL of October 23rd, Mr. W. H. Walter relates a case of extensive carbuncle, and asks if any of the readers of the JOURNAL have met with a case so extensive. Some years ago, I met with a very large carbuncle in a very stout old lady. She must have weighed, when in health, before this her last illness, about fifteen or sixteen stone; enjoying, with the exception of occasional stomach-derangement, remarkably good health—being active, in spite of her stoutness and her age, which was nearly eighty.

In April 1876, she asked me to look at her neck. I found the whole of the nape of the neck hard and brawny. Still, it was some days before I could induce her to keep in bed. By degrees, with nitrate of silver externally, and potassa fusa placed in the little apertures, sloughing gradually went on; and, when at last the slough had all separated, the ulceration extended from ear to ear, some distance up the posterior part of the scalp, and down the upper portion of the back—indeed, the quantity of fat in the hole was so great that it seemed as if one's hand could be easiiy buried in the wound; and the lower edge was loose, and hung outwards when in the erect position. This flap was supported by a broad belt of adhesive plaister, and, after some time, united—still leaving a large open surface. Owing to her size, the difficulties of dressing the neck were extreme; she could not sit up in bed unless supported, and then only for a short time; whilst she could only lie on her back, and the pressure on the sore appeared to retard healing. Everything that could support strength was given, and gallantly the old lady fought her last fight. Slowly the wound filled up; but, at one period of the long illness, the constant pressure laid bare the skull, but subsequently this was covered by granulations, and there was no exfoliation of bone. It was not till December 11th that the fatal termination arrived, although the case became complicated by a very large abscess on the outer part of the right gluteal region—into which a drainage-tube was passed, and which healed thoroughly. Twice during the illness she had retention of urine, and then I discovered that there was also, in the uterus, a fibrous tumour.

No persuasions of her relatives or friends, aided by my entreaties, could induce her to have a trained-nurse. A delicate grandchild was her head-nurse, and right well did she perform her part; but it was utterly impossible to place a bed-pan under the patient—cloths were used and removed. Daily, at my visit, she was lifted, and a yard of waterproof (covered by six layers of blanket and the same of sheeting, stitched together) passed under her; and yet, during the nine months' illness, no bed-sore appeared. Placed on a water-bed (the combined efforts of four strong men lifting her), the weight of water, added to the patient, made the sacking of an antique bedstead give way; and this was remedied by a strong board, supported on a box; then, after a few weeks, the bed sprung a leak, and ultimately had to be changed—not before, however, the moistened wood of the bedstead had thrown out a fungus, which, in its growth, was an object of much interest to the young nurse.

When the fatal termination arrived, there was still a small sore at the back of the head, about three inches by one.

JOSEPH HINTON, Warminster.

THE TREATMENT OF DESTRUCTIVE INFLAMMATION OF THE KNEE-JOINT.

A POORLY nourished child, aged 14, was admitted last June, under my care, into the wards of the Stamford Infirmary, suffering, for the past six months, from acute necrosis of the right tibia, and secondary implication of the knee-joint. The necrosed bone was removed within a few days; but the condition of the knee-joint, and the child's general state, were so unsatisfactory, that, after consultation of the staff, the parents were advised that amputation through the lower third of the thigh offered the best chance of saving the child's life. To this proposal, a direct negative was returned.

On July 9th, therefore, I removed some loose fragments of dead bone from the head of the tibia, and, with the gouge, made from below a fair sized opening quite into the joint. The relief was immediate; the high evening temperature fell at once, and all tension about the joint subsided. Six weeks later, the same procedure was repeated along two spontaneous channels—one outside, one inside; also through the tibial head. Now, there is good evidence of a progressive osseous ankylosis between the femur and tibia, and the child's general condition has much improved.

I commend the procedure to the notice of the profession, as one which may be worthy of trial in similar cases. A large dependent opening can thus be obtained, the channels through bone do not readily close, and the free drainage of the joint so secured may sometimes avert the recourse to an amputation. At a later period, I hope to put on record the notes of the case, with the ultimate result.

WILLIAM NEWMAN, M.D.Lond., F.R.C.S.Eng., Stamford.

CLINICAL MEMORANDA.

TYPHOID FEVER.

THE following is a pendant to Case 11 in Dr. Bruce Low's paper on the Origin of Typhoid Fever in Isolated Rural Districts. In 1871, a young lady and her brother exposed themselves to emanations from a dead animal. They were then on the Nile, and about to return home. On the voyage from Alexandria to Brindisi, the brother sickened. On his arrival at Naples, I attended him for well-marked typhoid fever. About ten days afterwards (writing from memory, the date may not be quite accurate), the sister was suddenly taken ill. She, too, had well-marked typhoid with severe head-symptoms. Both recovered. A maid who helped to nurse them was attacked still later, and succumbed. Careful inquiry showed that there was no case of typhoid fever anywhere near where they had been. The animal was not diseased; it had been shot. The mother described the stench as being most abominable. Another case of which I have heard may be instructive. One of the young children of a former patient—they had been hunted and thoroughly starved in the Indian mutiny, and also starved during a protracted voyage from India—seized and "bolted" a piece of cat's meat, which was said to be very offensive. Typhoid fever followed. This may, perhaps, account for typhoid fever in cats.

J. A. MENZIES, M.D., Brighton.

BACTERIUM FŒTIDUM AND SWEATING OF THE FEET.

THE interesting note by Mr. Lewis Willcox in the JOURNAL of October 23rd, on the fœtid smell sometimes associated with profuse sweating of the feet, suggests to me that a few supplementary remarks on the subject may be useful. Hebra's recommendation of diachylon ointment naturally induced me to try the treatment which has been so successful in Mr. Willcox's hands—strapping with adhesive plaster; and I can confirm much of what he says regarding its efficacy. In my hands, however, it sometimes failed. In the case, for example, which I have described in my article in the JOURNAL of September 18th—a typical and severe case—the plaster not only failed to do good, but produced pain and distress. This was the result at two different periods when the strapping was tried. But, when the treatment was directed to destroying the bacteria in the stocking and boot, the fœtor immediately ceased. The eczema rapidly disappeared under the boracic acid lotion; and the cure of both fœtor and eczema was complete and permanent. It must be borne in mind, as I have previously explained, that in these cases the sweat, as it is exuded, is not fœtid. The fœtidity is in the alkaline mixture of serum and sweat with which the stocking is saturated. This fermentating mixture irritates the inflamed skin, and keeps up the serous discharge; the supply of the pabulum on which the *Bacterium fœtidum* grows and multiplies being thus constantly maintained. So long as this cardinal point is kept in mind, satisfactory curative treatment may be much varied in its details. The plan which I recommended and have described gave little trouble, and was satisfactory.

Bacteria, or at least any bacterium producing effects similar to those produced by the *Bacterium fœtidum*, will not thrive in the sweat of the axilla or perinæum, so long as the sweat is unmixed; but, if the skin of the perinæum or scrotum become chafed, and a serous discharge be mixed with the sweat and sebaceous secretion, a strong and peculiar odour results, the nature and cause of which invite to further research. I have had experience of cases of eczema of the scrotum produced by this fluid, in which only the strictest attention to cleanliness several times daily checked a disagreeable smell, which was painfully perceptible both to the patient and to his friends. But this odour was not so penetrating, nor of the same "flavour", if I may use the term, as that produced in the stockings by the *Bacterium fœtidum*.

G. THIN, M.D.

I HAVE read the communication of Mr. Willcox in the JOURNAL of October 23rd; I have seen many cases of this distressing malady, chiefly in domestic servants. I have found the treatment recommended by M. Gaffard (*vide* Ranking's *Abstract of Medical Sciences*, vol. 33, page 212) most successful. I transcribe it: "The treatment consists in pouring between the toes a few drops of liquid, composed of one

gramme (fifteen grains) of red oxide of lead, and twenty-nine *grammes* (about an ounce) of the solution of subacetate of lead (of the French *Pharmacopœia*). The sesquioxide of lead is pounded in a mortar of porcelain till it is finely divided; the subacetate is added gradually; and the whole put in a bottle, which is shaken each time it is used. This application, made every eight days, is sufficient, in most cases, according to M. Gaffard, to cure the affection and prevent its return," etc.

I usually direct a foot-bath to be used every day, to which about an ounce of powdered alum is added, and the red patches on the feet to be painted with the solution; also, its application between the toes three times in the week. The cure is generally completed in a fortnight or three weeks. CLEMENT HAWKINS, F.R.C.S., Cheltenham.

THERAPEUTIC MEMORANDA.

BELLADONNA IN SALIVARY FISTULA.

IN two cases of salivary fistula, from injury to the Stenonian duct—one after incision, the other due to a stab—the application of belladonna extract, with glycerine, over the parotid gland of the affected side, was followed by arrest of glandular secretion. The fistulæ then speedily healed without interference. JAMES ALLAN, New Wandsworth.

CHLORATE OF POTASH.

TO Dr. Harkin's commendation of this drug, in the JOURNAL for October 30th, I should like to add the remark that I have found it act "like a charm" in cases of infantile marasmus. Two or three grains, four times daily, may be given to a child a few weeks old.
HERBERT L. SNOW, M.D.Lond., Bayswater.

THE TREATMENT OF ASTHMA.

I WISH to draw attention to a method of treatment of asthma, described by Dr. R. B. Faulkner, in the *New York Medical Record* for September 25th. His plan is to paint a strip of iodine over the course of the pneumo-gastric nerves in the neck. He gives three cases of pure spasmodic asthma, which were relieved of their attacks by this means, after having resisted every other remedy of which he could think.

I have tried it in several cases; but all, except one, were not pure spasmodic asthma, and in this case the benefit was most marked. R. S., aged 67, had asthmatic attacks at 2 A.M. every morning; he had had them for the last nine days; never had them before. He had lived in the same house for the last thirty years; had never had gout. There were no physical signs of disease in the thorax; no albumen in the urine. I ordered iodine pigment, as above. He returned in a week, expressing the liveliest sense of the relief he had received. In the other cases, some seemed relieved: but the benefit was not so decided.
ROBERT SAUNDBY, M.D., M.R.C.P., Birmingham.

KELOID OF THE EXTREMITY OF THE EAR.—The case is described by Santesson and Axel Key in the *Hygiea* for 1879 (*Nordiskt Medicin. Arkiv*, Band xii). The new growths had arisen from the scars of perforations made for the introduction of ear-rings. Since 1859 they had been several times extirpated, but had as often returned—in all, eight times within twenty years. The tumour in the right ear was now extirpated; and its structure is described. It was of a roundish oval form, 3.6 *centimètres* (1.4 inch) in breadth, 4 *centimètres* (1.56 inch) in length, and nearly one *centimètre* in thickness. It projected in a round form from above the surrounding skin, from which it was sharply defined. It was everywhere hard, firm, and elastic, and presented on section the appearance of firm connective tissue, with a grey-white surface, traversed by a network of whitish fibres. The edges of the tumour passed beneath the apparently healthy surrounding skin. On microscopic examination, the surface was found to be covered with a thick layer of epithelium; and the tumour itself was formed throughout of connective tissue arranged in the same manner as in normal skin. Nowhere were there any embryonic connective tissue, nor any indication of a sarcomatous structure. On the ground of its structure, therefore, the tumour must be regarded as a fibromatous growth; but, as it presented, with certain modifications, a cutaneous type, Dr. Key terms it "fibroma cutis dermoides", in order to distinguish it from other fibromata of the skin; and he considers the swelling as having arisen from a peculiar traumatic hypertrophy or hyperplasia of the normal skin. That the tumour, notwithstanding its numerous relapses, continuously presented so purely a cutaneous structure, without degeneration in any direction, seems to Dr. Key to be of special interest.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 16TH, 1880.

THOMAS W. NUNN, F.R.C.S., Vice-President, in the Chair.

The Pathology of Rickets.—The discussion on this subject was opened by Dr. HILTON FAGGE, who began by saying that, in connection with rickets, there was too great a tendency to base our definition of the disease upon local rather than on general symptoms. He had lately seen a child that had died of bronchopneumonia, and who had a well-marked pigeon-breast. The practitioner attending the case had thought the pigeon-breast was entirely due to the condition of the lung, whereas, after death, abundant evidence of the existence of rickets was found. He himself doubted whether pigeon-breast ever occurred in non-rickety children; but, on the other hand, he questions whether it would occur in rickety children without pulmonary affection. It was difficult to settle questions of this kind positively, because of the impossibility of denying the existence of rickets, even in children with no outward manifestations of the disease. Many children, apparently healthy, are found after death to have rickety changes; though, in this connection, it must be borne in mind that, in very thin children, the rib-cartilages may be enlarged without any pathological condition being present. As regarded the relationship of syphilis and rickets, Parrot seemed to ignore true rickets altogether, this disease being for him a late stage of hereditary syphilis. He seemed to be unacquainted with the change in the epiphyses, which enabled rickets to be traced from its very commencement, and which showed that rickets was a true morbid process of its own. Dr. Barlow and Dr. Lees were more alive than M. Parrot to the distinction between the two diseases; but even they were not sufficiently so, for they did not pay enough attention to the changes at the epiphysal line in rickets. Until proper attention had been paid to this point, it would be impossible to ascertain the true significance of cranio-tabes. There was a strong probability that syphilis and rickets might stand to one another in the relation of cause and effect, just as syphilis in the adult might occur as a cause of lardaceous disease, tubercle, etc.; but, as in the case of these latter diseases, rickets might be due to many other causes besides syphilis. Rickets was certainly a general disease, for, although the non-bony symptoms might separately be thought to be trivial, yet taken together they were very significant. As regarded the occurrence of albuminoid change in the organs in rickety children, he was inclined to agree with Dr. Gee, that this change was due to the same cause that produced the rickets, rather than to the rickety condition itself. He thought the same thing applied to the prodromata of the disease: the chronic diarrhœa, the tumid abdomen, sickness, drowsiness, etc. The enlargement of the spleen often spoken about was, he thought, less common than was generally thought; he had himself generally found the spleen small, dry, and shrivelled. The really important general symptoms which might be looked upon as part of the disease were: 1. Sweating at night; 2. Restlessness at night; 3. The general tenderness of the body. It was commonly stated that the skulls of rickety children were larger than they should be, but this had been proved not to be true; the skull was about the same size as in other children, but the face was small, and hence the appearance of a large head. Trousseau believed that the brain grew faster than it should do, in consequence of the slighter resistance offered by the softened skull; and that this would account for the precocity of these children. Gee, however, asserted that the brain, like the other tissues of the body, was stunted, and that serous fluid was poured out to take its place. He (Dr. Fagge) did not think that hydrocephalus was a condition confined to rickety children, as was often stated; in one rickety child, in whom the head was so large that hydrocephalus was diagnosed, the skull was found to be entirely filled by the brain. On the other hand, he thought that laryngismus stridulus was an essentially rickety symptom; in one case in which a child had attacks of laryngismus stridulus, without any symptom of rickets, a subsequent attack of bronchopneumonia had caused a falling in of the ribs, proving that rickets was really present. Tetany, also, is almost entirely confined to rickety children. As regarded the chemistry of the disease, he referred to the analyses of Friedleben, in which it was stated that the earthy matter in rickety bones did not amount to more than from 32 to 57 per cent. He thought these analyses must be accepted with caution, as it was especially difficult, in connection with rickety bones, to ascertain the real proportion of earthy constituents; he himself believed that there was no very marked change in this respect in rickety bones. If there really were much diminution of the salts, the process would have to begin during the process of ossification in the fœtus. It did no doubt begin earlier in

life than was commonly thought, but there was no evidence that the child *in utero* was really rickety. One such case had been recorded; but there was no doubt that, in this case, the cause of the bone-softening had been quite different. In opposition to the view that the rickety condition of bone was due to a general change in the bone itself, was the fact, that the striking change was not in the main body of the bone, but in the surface of the bone, just beneath the periosteum. He thought the loose texture of the bones, which led to their bending, was due rather to an exaggeration of the process of absorption than to deficient deposition. As regarded the changes found at the epiphysal line, these were chiefly confined to the soft cartilaginous parts of the epiphysis; and, in reference to this fact, Rindfleisch had said, that the essential change in the bones in rickets was an exaggeration in the activity of the processes leading to the formation of bone, without bone being really formed. He (Dr. Fagge) thought it more likely that the condition was one of irregular and perverted nutrition, than one of excessive growth. A peculiarity of this rickety cartilage was, that it tended to become calcified without becoming ossified. As regarded the origin of rickets, there had recently been a revival of the lactic acid theory. It had been found that feeding young animals with phosphorus, and at the same time depriving them of their lime-salts, led to the occurrence of a condition closely resembling rickets, and the same result had been obtained by injecting lactic acid into their blood; hence Senator had come to the conclusion that the disease was caused by the formation of lactic acid in the child's stomach, from imperfectly digested milk. As regarded the other causes, Vogel assigned by far the most prominent place to defective ventilation in its causation, and said nothing about food; other authorities thought that improper food was the chief conditlon leading to it, especially the taking of farinaceous food too early in life. Vogel believed that he had proved the hereditary nature of rickets; but this was a proposition exceedingly difficult of proof, because the causes which produced it in the parents were generally present in the case of the children. Sir William Jenner thought that the father's health had little or nothing to do with its occurrence; but Rittersheim had shown that the influence of a tubercular father was the same as that of a tubercular mother. Another point mentioned by Sir William Jenner was, that the first two or three children of a family were often free from rickets, but the later children were rickety. This might be due, either to progressive impoverishment of the mother's blood by childbearing and family cares, or to the fact that, as the family increased, the conditions under which they were living grew worse, the rooms more crowded, etc. As a matter of fact, the conditions in our large towns were too multiple and mixed up to enable us to assign its proper weight to each one of them. One point of importance to note was, that if rickets were due to antihygienic conditions solely, we had no right to call it a diathesis like scrofula or tubercle. The relation between rickets and tubercle was one of great interest. Dr. Eustace Smith said that rickets never occurred in children in whom the tubercular tendency was well marked. This might be due to the fact that the tubercular disposition, as generally described, was the exact opposite of the condition termed rickety. He believed, himself, that tubercle might arise from anything which lowered the bodily health. Hence rickety children ought sometimes to become tubercular, and he believed that they did so. It was another question how far a tendency to tubercle might modify rickets. In conclusion, Dr. Fagge gave a historical sketch of the disease, stating that it was known on the continent as the "English disease", and that this should give a great incentive to its study in this country.—Dr. DAVID LEES read a paper, drawn up by Dr. Barlow and himself, on the subject of cranio-tabes in its relation to syphilis and to rickets. He mentioned that cranio-tabes was first described by Elsässer, of Neuenstadt, who looked upon it as one of the earliest signs of rickets. Gerhardt pointed out that it occurred sometimes in quite healthy new-born infants, and that in them it bore no relation to rickets; but the rickety nature of the symptoms, in the large majority of cases, had been largely accepted as proved. Parrot had, however, made us familiar with the syphilitic affection of the skull leading to thickening of the bones. In examining these cases, the authors had been struck with the association of soft spots in some parts of the skull with thickenings at other parts; and further investigation proved that this cranio-tabes was quite a common symptom in the out-patient room in children under one year of age. They had tabulated a hundred such cases, in which they had inquired carefully into the parental history, the history of the other children in the family, and into the children's own history, both as regarded syphilis and causes of rickets; and they had carefully examined the children for any syphilitic or rickety symptoms. Of these hundred cases, seventy showed a marked degree of cranio-tabes, and thirty only a slight degree. In forty-seven instances, there were satisfactory proofs of the presence of syphilis, thirty-five of these cases being amongst the well-marked cases of cranio-tabes. In many of the other cases, there were facts pointing with more or less probability to the presence of syphilis; and, even where no such facts could be elicited, it was by no means certain that syphilis was not present, for, in one or two instances in which syphilis in the parents was certain, the child showed no signs of it, unless marasmus and cranio-tabes were accepted as such. Occasionally, cranio-tabes appeared to be the latest relic of the vanishing syphilitic dyscrasia, as shown by certain cases which had come under the authors' notice. Thus, one family history was as follows: first child, still-born; next, a miscarriage at fourteen weeks; next child, snuffled, and had "thrush" in the mouth and a rash about the genitals before she was a month old, the rash lasting three months; the third child did not snuffle, but had "thrush" and a rash lasting two months. The fourth child had neither snuffles nor rash: he was a well-nourished healthy-looking child, but, on examination, was found to have extensive cranio-tabes in both parietal bones; there were no signs of rickets beyond very slight bending of the ribs, which seemed in some cases to be physiological, and not morbid. Among the cases of well-marked cranio-tabes were seven in which the child was thoroughly well nourished, most of them having been brought up at the breast; proving that marasmus was not a necessary factor in these cases. On the other hand, a list of cases was read in which great marasmus existed in non-syphilitic children, and in none of which was cranio-tabes present. Furthermore, children whom the authors believed to be suffering from syphilis, but in whom no cranio-tabes could be detected, were for the most part below three months, or above ten months, of age; that is to say, they were outside the usual cranio-tabetic age. From these facts the authors conclude that cranio-tabes was not simply a fact of a general marasmus. Elsässer himself observed the symptom in firm-fleshed, breast-fed children, and was much puzzled to reconcile this fact with the marasmic theory of origin. With respect to the symptoms accompanying cranio-tabes, the authors had failed to discover the restlessness, rolling about of the head, or profuse sweating about the head, described by Elsässer. Head-sweating was sometimes present, but never to a large extent. Convulsions had been rare. In conclusion, the authors stated their belief that syphilis was by far the largest factor in the production of cranio-tabes; whether it was or was not related to rickets must depend upon the relationship between syphilis and rickets. As an aid to the elucidation of the question, the authors presented a table of fifty-three cases, in which rickets were more or less obviously present, which tended to show that rickety manifestations bore a definite relation to diet. Even if it could be proved that cranio-tabes was the first sign of rickets, that would in no way invalidate the proof that cranio-tabes was itself the result of syphilis; the only conclusion would be that syphilitic children were specially apt to become rickety; although on this point the authors thought that, as yet, there was no certain proof that syphilis *per se* was the cause of rickets.—Dr. CRISP thought the causation of rickets was not so obscure as it was often made out to be. He attached chief importance to the antihygienic condition of the surroundings; and narrated a case in point, in which all the members of a family of children of well-to-do parents, but living in an unhealthy house, broke down—one dying of tubercular peritonitis, a second having alarming hydrocephalus, and a third being extremely rickety. The latter child recovered as soon as it was removed into the country. He then spoke of rickets in the lower animals, stating that it was rarely mentioned in the books on veterinary surgery, whereas there were very few animals which might not be affected by rickets. Dr. Harvey had described it as occurring in the horse; Dr. Dick had seen it in the Italian greyhound; he himself had seen it in pheasants confined in a small space, and which were not given their natural food. A young ostrich died at the Zoological Gardens from collapse of the lungs, resulting from a rickety chest. Most of the young lions born at the Gardens had bones softer than natural. Young dogs and lambs were not unfrequently rickety, and it was no uncommon thing to find evidences of rickets in London poultry. As regarded the production of rickets by the injection of lactic acid, he thought that the injection of any poison into an animal's blood would produce rickets by lowering the state of the general health.

On the motion of Dr. DOUGLAS POWELL, seconded by Mr. NOBLE SMITH, the debate was adjourned till the next meeting of the society on December 7th.

Living Specimen of Absence of the Fibula.—Mr. GOULD showed a boy, aged three years, who presented this rare form of malformation. His mother, when three months pregnant, fell, shaking herself very severely. The fibula was quite absent; the tibia was shortened, and bent forwards at the junction of the upper and middle thirds; over this bend, the skin was grooved. There were an os calcis, scaphoid, and part of an astragalus, but no cuboid, and three metacarpal bones only. There were three toes, and there was a web between the second and third toes. The interosseous membrane of the leg was greatly thickened, and apparently took the place of the fibula. There were four-

teen cases of congenital absence of the fibula on record.—Mr. Wm. Adams remarked that partial absence of the fibula was not rare; and, in such cases, the tibia was generally bent forward, with dimpling of the skin. The leg, in these cases, became several inches shorter than the healthy leg as the child grew up.

Congenital Malformation of the Heart.—Dr. Peacock showed this specimen. There was stenosis of the pulmonary artery; an aperture in the septum ventriculorum; the aorta arose from both ventricles; the foramen ovale and ductus arteriosus were closed.

CLINICAL SOCIETY OF LONDON.

Friday, November 12th, 1880.

E. Headlam Greenhow, M.D., F.R.S., President, in the Chair.

Cross-legged Progression. Mr. Heath read a brief report drawn up by the committee appointed to examine Mr. Clement Lucas's cases described at the previous meeting. The report recommended forcible breaking down of the adhesions.

Stretching the Facial Nerve for the Relief of Spasm of the Facial Muscles.—Dr. Allen Sturge and Mr. Godlee presented a paper on this subject. The patient, a lady, aged 72, had been sent to Dr. Sturge by Mrs. Garrett-Anderson. She had enjoyed good health until the death of her husband, six years previously. After this, her nervous system suffered much; she had fits of depression and debility; and, before long, twitching began round the right eye, extending subsequently to all the muscles supplied by the right facial nerve. She had gone through various courses of treatment without result; and she finally consented to have the facial nerve stretched. This operation was performed by Mr. Godlee on July 20th, by means of an incision behind the ear, from the external meatus nearly to the angle of the jaw. The sterno-mastoid and the parotid gland were pulled in opposite directions, exposing the upper border of the digastric, close to which the nerve was found as it emerged from the stylo-mastoid foramen. The nerve was raised on a hook, and pulled with moderate force. After a few such pulls, the right side of the face was completely paralysed. The wound was dressed antiseptically, and healed without the appearance of a drop of pus, or the slightest constitutional disturbance. The face remained paralysed for two months; and for some days after the operation there was a good deal of pain on the right side, and also in different parts of the head, which returned at intervals during these two months. When seen on October 19th, three months after the operation, the face at rest was nearly symmetrical on the two sides; but there was still a good deal of deficiency of movement in the muscles on the right side. She was, however, rapidly improving, every week making a considerable difference. The operation had now been performed five times—three times in Germany by Baum, Schessler, and Eulenberg; once in America by Dr. James J. Putnam; the present case being the first operation of the kind in England. In all these cases there was temporary paralysis after the operation, varying from two weeks in Baum's case to five months in Eulenberg's. It was remarkable that in every case in which the facial nerve had been stretched for spasmodic tic, the operation had been successful; whilst in several cases of spasmodic affection of other parts, as of the arm, etc., the stretching of the nerves of the part had produced no good effect. In these latter cases, the spasm had usually been of an elaborate character, allied rather to chorea; whereas the former was a simple unco-ordinated spasm of all the muscles supplied by a single nerve. This latter character would indicate a lesion in the centre from which the facial nerve took its immediate origin, *i. e.*, the medullary centre; whereas the former would point rather to a lesion of the co-ordinating centre higher up in the cerebro-spinal axis. The stretching of the nerve certainly produced an immediate effect upon the nerve-trunk itself, and it probably also produced a remote effect upon the nerve-centres, which effect would be greater upon the lower centres, such as that for the facial nerve in the medulla, than in those further removed, which were supposed to have to do with co-ordination. In all cases where nerve-stretching was employed for spasms, it would be very important to note whether the spasm was of the simple or of the co-ordinated variety, with a view to ascertain its relative value in the two varieties. The operation was rendered difficult on the living subject by the depth of the nerve and the constant trickling of blood into the wound. The operator should, therefore, secure a good light and efficient assistance. The posterior or auricular vein might very likely be cut in the first incision, and the posterior auricular artery at any period during the dissection. No vessel of any consequence was, however, likely to be injured if the wound was not carried more deeply than the digastric muscle; should this level be passed, the surgeon would find himself in dangerous proximity to the internal jugular vein.—Dr. Buzzard compared the effects of pressure on different parts of the face had been tried. This treatment had been found to stop chronic spasm, as in a case under his own care some years ago. In another case, an accumulation of cerumen in the external meatus set up, by irritation, neuralgic pains, which ceased on removal of the wax and frequent application of a constant current. Dr. Buzzard said he had, at the present time, a man in hospital who was still under treatment, and in whom the supraorbital nerve had been stretched for neuralgia.—Mr. Walsham said that early in the year he had stretched the infra-orbital nerve for severe neuralgia; there was no pain after the operation. He believed the nutrition of the nerve to be that chiefly affected in the operation; this would not influence the intracranial centres, and the separation of the supplying minute vessels from the trunk of the nerve might sufficiently account for the effects produced.—Dr. Sturge said pressure had been made on different parts of the face without effect, and the final operation was had recourse to when all other treatment failed.—Mr. Godlee observed that the stretching must affect both the sheath of the nerve and the vessels. He had another case in which the nerve was stretched the preceding Wednesday, and was succeeded by twitching on both sides of the face.—Mr. Croft related his experience of a case to which he was called by Leibreich in 1877, and in which he cut down to the infra-orbital nerve of a patient, aged 65, who had suffered from severe convulsive neuralgia, the pain radiating along the branches of the infra-orbital nerve. He removed about five-eighths of an inch of this, and stretched it well, until a sense of "giving" was felt in the canal. The operation was performed on Wednesday. On the following Monday, the patient left for Adelaide, whence a letter was dispatched saying that, for a time, pain and muscular spasm persisted, and then subsided. Six months later, an attack of gout was followed by convulsive neuralgia, which also subsided. After another six months, however, the pain once more returned, and to it succeeded permanent relief. Mr. Croft felt at a loss to define the correct treatment for such cases, some recommending a sensory, and others a motor, nerve to be operated on. He did not believe the centre of disease to be intracranial. He remembered a case where, following amputation below the knee, the exposed nerve-ends were irritated, and became bulbous. The nerve was cut down on and resected, the ends being well stretched until they "gave" above. The patient, who was a lunatic, and under constant observation in an asylum, had suffered no return of the pain.

Two Cases of Myxœdema.—Dr. Dyce Duckworth read notes of these cases, and exhibited the patients. The first was that of E. M., aged 47, who was admitted into St. Bartholomew's Hospital under his care in August of this year. She was a stout woman, 5 feet 4 inches in height, and weighed 13 stone and 2 pounds. She had lived in London for twenty-five years, but was a native of Birmingham. She had had nine children and several miscarriages. There was no syphilitic history. Her complexion was fair, and there was abundant light red hair. The skin of the face was puffy, pallid, and waxy-looking, with the exception of patches of vascularity over the malar bones. The eyelids and lips were especially puffy. The mucous membranes were rather anæmic, and the blood somewhat of damask rose-tint. Several moles were present on the face, scalp, and left shoulder; and attention was directed to these, because Dr. Duckworth had observed their presence in four out of about eight or nine cases of the disease which he had witnessed. They were acquired, and not congenital. The thyroid body was small. The integuments of the trunk and limbs were all swollen and puffy. The hands were large and clumsy. The several organs in the chest and abdomen were seemingly natural, but the action of the heart was feeble, and the pulse varied from 48 to 84 beats in the minute; being commonly under 60. The appetite was capricious; and sometimes nausea, with retching, occurred. This patient suffered from constipation. The catamenia had ceased for six months. There was slight dysuria; the urine was of specific gravity—1015 to 1022—and always found free both from albumen and glucose. Many of the morbid physiognomical features suggested, as is usual in these cases, the idea that there was chronic nephritis present. The speech was slow, the voice harsh and snuffling. The patient observed that she was now very slow in expressing her ideas. Her walk was deliberate and shuffling; gait waddling. She felt as if she were on stilts, and could be easily thrown off her balance. Sometimes she fell down, and she never ventured to cross the street. Every movement was slowly executed. It took her an hour and a half to dress each day. In warm weather, her moving power was more brisk, and her ideas flowed more freely. The least chill was acutely felt, and very slowly was the circulation restored. Even in the warmest days of August, she sometimes felt chilly. Thermometric observations showed that there was commonly a difference of a degree between the two sides of the body, the temperature on the left side being the lower of the two. The temperature was taken twice a-day for eighteen successive

days, and the variations were from 93.43° to 97.8° on the left side, and from 95.4° to 99.4° on the right. A chart of these was exhibited. Except on one occasion, the temperature was subnormal throughout. The history showed that general swelling began about three or four years ago, when she had to procure larger boots and gloves than she formerly used. She had led an unhappy life with a brutal husband, and had been much exposed to blows and ill-usage. Seven years since, she was in Guy's Hospital, suffering from paresis of the right leg, with anæsthesia about the ankle. She improved under electrical treatment and tonics. These troubles she attributed to injuries. The family history was of no special interest in relation to the case. The father had died after rupture of some blood-vessel, and the mother of heart-disease. The patient had suffered much from cold, and was always dull and morose during her stay in hospital. Stimulants readily stupefied her. She took various tonics and arsenic, and as much good food as possible. No improvement resulted, although the dyspepsia was relieved, and she enjoyed the rest and freedom from home cares. The amount of ordinary œdema in the eyelids and lower limbs varied occasionally. No albumen was found at any time in the urine. The woman still remained under observation as an out-patient.—The second case was that of M. S., a married woman, aged 46, a milliner. She was born at Retford, but had lived for twenty years in Clerkenwell. She was well-grown, with dark hair, dirty sallow complexion, and vascular patches over the malar bones, and was puffy about the eyelids. The facial aspect denoted chronic nephritis. There was one mole on the left cheek. The expression was dull and languid. The thyroid body seemed natural. The hands were "spade-like", and the skin on the backs was harsh and dry. The various organs were natural, but there was bronchial catarrh. The belly was flatulent; the bowels were constipated. Pulse 80, while standing. The legs were œdematous, the right pitting more than the left. The urine was of specific gravity, 1005, acid, and void of albumen on every occasion when examined. The catamenia had become irregular this year. The history was, that she had noticed herself becoming stouter eight years ago, and her friends thought her failing in health. Two or three years since, she found that she could not ply her needle so freely as formerly. Her speech and general movements became gradually slower. She could walk fairly well if not hurried, but was very timid in the street. Lately, she had accomplished two or three miles. Sometimes she fell down, and had difficulty in preserving her balance. She took a long time to dress herself. There was marked susceptibility to cold and changes of weather. The temperature in the right axilla was 97.4°, and in the left 97.2°. She complained that her food did not taste properly. She had good health till eight years ago. Her father died when she was quite young. Her mother was alive and well at the age of seventy-three. She had one brother and two sisters younger, all in good health. She had one child, who died of small-pox at six months of age. This case presented many of the well-recognised features of the disorder, and seemed to be progressing slowly. No treatment appeared to control or modify the cachexia in any noteworthy degree.—Dr. SIMON had brought for exhibition another example of the disease. He described features not previously mentioned, as falling away of the hair from the head, pubes, etc., and the breaking off of teeth without pain, accompanied by bleeding from the gums. His own patient suffered from loss of memory, and was constrained to acts of self-injury. There was with her a history of fourteen years of pain in the head, in localised spots, but extending. Points under the eyes and on the tip of the nose became readily flushed and painful. She had had many deliveries and miscarriages. There was marked dysphagia; no loss of reflex irritability in the mucous membrane of the mouth.—Dr. THEODORE WILLIAMS inquired what thermometer had been employed in taking the temperature.—Dr. HADDEN remarked on the diminished quantity of urea excreted by these patients. The nails, too, were brittle; and he had seen them fall off from two or three digits. He had lately seen an instance of the disease in an adult male, thus proving it not to be peculiar to women.—Dr. DUCKWORTH said the details already collected of the disease pointed to its being of trophic neurotic origin. The thermometer used was the ordinary ward instrument, and the temperatures were taken, as a rule, in the axilla.—The PRESIDENT suggested that Drs. Simon and Hadden should collect their cases, and favour the Society with the record.

Erythema Gyratum.—Dr. T. COLCOTT FOX read a description, and exhibited water-colour drawings and a living specimen, of an unique eruption, which he called *erythema gyratum*, affecting in precisely similar manner the two elder children of a family. There was no family or personal history of importance that afforded any clue to the causation. Dr. Fox said the eruption began as little isolated scattered erythematous papules, of the size of millet-seeds, which spread in a rapid manner centrifugally, and as quickly cleared up in the centre, so as to form rings which became fused together, where they met and ultimately covered large tracts with gyrate and festooned figures, as in tropical ringworm and some other diseases. Each individual eruption lasted from a week to ten days, and left considerable pigmentation. Each ring also rapidly desquamated, leaving a very conspicuous ragged fringe adherent to the inner edge of each extending erythematous circle. The great peculiarity in the case was its extreme persistence, for neither brother nor sister had been entirely free since they were from three to four years of age, and they were now both nearly twenty. The eruption was kept up by the constant evolution of one or more papules about the shoulders, upper arms, chest, or buttock and thighs; but three or four times a year, or oftener, far more extensive outbreaks occurred, lasting from ten days to six weeks, and accompanied by intolerable itching. None had ever appeared on the palms, soles, or head. Dr. Fox remarked that this curious phase of eruption evidently belonged to the class erythemata, for no causation by a fungus could be proved. There was no evidence of hereditary syphilis, and psoriasis was out of the question. Chronic erythema multiforme had of late years been described, and the eruption had all the character of an annular erythema, except as regarded the sites attacked, and its extreme persistence. As regarded treatment, Dr. Fox, knowing that arsenic had been largely administered, had recourse to tonics simply; and within the two years during which he had observed the cases, they had certainly improved in a most marked manner.—Dr. CARRINGTON recognised the case as being an old out-patient at Guy's Hospital. Under treatment by arsenic, it had improved, and Dr. Pye-Smith had regarded it as one of psoriasis.—Dr. F. TAYLOR also remembered the patient as having been under his care at Guy's. The eruption was then of a higher colour than in the drawings shown. He did not recognise the disease.—Dr. CAVAFY thought it not right to attribute the improvement described to the effect produced by the arsenical mixture. There were probably many forms of chronic erythema not described in text-books, and the example cited might be one of such.—Dr. FOX said he had been guided in his conclusions concerning the effect of the remedies employed by the patient's own statements.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 3RD, 1880.

Sir JOSEPH FAYRER, K.C.S.I., M.D., President, in the Chair.

President's Address.—After congratulating the members of the Society on its marked prosperity, Sir JOSEPH FAYRER alluded to the losses sustained by the deaths of Dr. E. C. Seaton, Mr. Harry Leach, and Dr. E. Goodeve. Referring to the important work performed by the Society during the last session, Sir Joseph Fayrer noticed the series of papers on Indian Fevers, and the discussion which followed them; and he expressed the hope that they might have the effect of drawing attention to the question. The subject of plague had been amply dealt with by three papers. One was by Dr. Payne, one of the Commissioners appointed by the Government, in 1879, to investigate the plague which had been prevailing in the province of Astrakhan in 1878-79. Another communication was a summary of the report of the German Medical Commissioner (Dr. Hirsch of Berlin), which was read by Mr. L. Hamilton. A communication on Plague in India was made by Surgeon-General Dr. Francis. Dr. Longstaff had read a paper on the relationship existing between certain of the zymotic diseases. One object of the paper was to suggest the probability that the poisons of erysipelas and puerperal fever were identical; while diphtheria and croup were also due to one poison only. Cholera had not attracted so much attention as in former sessions; but a paper was contributed by the late President (Dr. Murray). The epidemic diseases of men and animals, in the colony of Natal, were brought under the notice of the Society by Surgeon-General Ross, C.I.E., who had recently acted as Chief Commissioner of the Stafford House Committee for the relief of the sick and wounded in the Zulu war. The subject that had most engaged the attention of the Society had been that of certain forms of fever in India, and tropical and subtropical climates; and several important communications had been made by Dr. Chevers on relapsing fever; by Dr. Ewart, on enteric fever; by Dr. Don, on the continued fevers of subtropical climates; and by Dr. Gordon, on the continued fevers of India. The chief interest of the proceedings of the year might be said to have centred in the discussion arising out of the communications on enteric fever. It was only recently that this disease had been recognised as a cause of mortality in India, and now it appeared, from official reports, that the death-rate from this disease among our European soldiers was very high; the question, therefore, which had been so earnestly discussed was, viz.: Were all the cases returned as enteric fever, in which the symptoms and the *post mortem* appearances were

similar to those of enteric fever in this county, due to the same causes? As to the existence of a form of fever, characterised by certain phenomena and pathological changes very closely, if not exactly, resembling those that characterised the enteric fever of Stewart, Budd, Jenner, and Murchison, there was a pretty general consensus of opinion. But, on the question of causation, a considerable divergence of opinion existed. It was a growing belief that the cause of some of the cases of the so-called enteric fever was to be sought in high temperature, malaria, miasmata, water contaminated by organic matter, not only fæcal, rather than in a specific poison generated in the intestines, or in the alvine discharges after extrusion from the bowel; and perhaps in some state of body, especially in the young, induced by exposure to one or all of these. It could not be disputed that the poison of the enteric contagion must be equally effective in producing fever wherever it occurred; and certainly not less so in India, or the tropics, than elsewhere. Few questioned its potency here, though it was possible that, twenty years hence, even here this view might be somewhat modified. Some believed that the specific contagion theory would neither explain the facts in all cases abroad, nor did they think that a certain train of symptoms and phenomena during life, and lesions observed after death, must necessarily be *invariably* due to *one* single cause; but rather that the ulceration of the bowel, diarrhœa, spots, and a certain range of febrile disturbance in the temperature, might be brought about also by other conditions, such as those already referred to, and which made up what was known as climatic influence. It was difficult to resist the impression that, whilst enteric fever in India might originate as it did here, other causes might be at work; and that cases of fever, which, in India, were not only called enteric, but presented the phenomena in life and the changes after death characteristic of the disease in England, did occur, and not unfrequently, where it was probable that climatic and other local conditions were the cause, rather than fæcal contagion.

BATH AND BRISTOL BRANCH.

THURSDAY, OCTOBER 28TH, 1880.

ALEXANDER WAUGH, L.R.C.P., in the Chair.

The Treatment of Laceration of the Cervix Uteri.—Dr. J. G. SWAYNE read a paper on this subject. Dr. Pallen of New York, had communicated a paper on this subject to the Annual Meeting of the Association at Cambridge, attributing grave results to the lacerations of the cervix occurring during labour; and advising the stitching up of all such lacerations. Dr. Swayne thought that the importance of these lacerations had been much over-rated. As a rule, they were slight, caused no special symptoms, and very seldom had any pathological significance. If larger rents occurred, more severe inflammatory symptoms might result. The chief immediate symptom was hæmorrhage, which was best treated by vaginal injections of cold water and vinegar, or of perchloride of iron; plugging the cervix was dangerous, as it favoured bleeding into the uterus. Secondary results in the slighter cases were wanting; in the more severe, there might remain an indolent sore, with hyperplasia of the cervix. In the treatment of such lacerations, it was very seldom desirable to sew up the rent; rest in bed, and antiseptic vaginal injections alone were necessary. If an indolent sore remained, with hyperplasia of the cervix, rest, tonics, vaginal injections, and the application of caustic, would effect a cure. In this country, any such treatment as that recommended by Dr. Pallen would at least be very seldom necessary.—Dr. AUST LAWRENCE said that, out of 1,275 cases of uterine disease, he had met with only 60 instances of lacerated cervix which required treatment; and of these, in only 8 would Dr. Pallen's operation have been of use; but in these, cure would have been hastened by it. Severe lacerations, with much hæmorrhage, were rare; he had met with only one example, and here the bleeding was checked by the direct application of perchloride of iron.

Inversion of the Uterus after Delivery.—Mr. CROSSMAN read notes on this subject, and exhibited a recent specimen. Inversion was a very rare accident; formerly it was always attributed to traction on the cord, but now it was allowed that it might occur spontaneously. It might happen, not only at delivery, but also from the presence of polypous, hydatid, and other tumours of the uterus. In the treatment, if the placenta still adhered, it was best to peel it off before attempting reduction of the uterus, as its bulk was thus lessened. The specimen exhibited was from a case attended by a midwife; death occurred from hæmorrhage and shock before the author arrived, the uterus remaining unreduced. Viewed from above, the inverted fundus of the uterus formed a pit, about four inches deep, into which the broad ligaments were drawn. The midwife denied traction on the cord; and the patient had a large pelvis, was of lax fibre, and had had many children. —Dr. SWAYNE thought that traction was the chief cause of inversion; and also that an incautious use of "expression" might produce it.—Dr. SKELTON thought he could throw some light upon Mr. Crossman's case. He was called to a case where the same midwife was attending, and found the glenoid cavity presenting; and on his inquiring for the arm, the midwife produced it out of her pocket.—Dr. AUST LAWRENCE said that, in this case, inversion was probably due to traction on the cord. A passive inversion might occur from abdominal compression; in cows and sheep, uterine inversion was not uncommon, mainly induced by the constant "bearing down" of the abdominal muscles.—Mr. WAUGH had seen one case of inversion in a weak woman of lax fibre, produced apparently spontaneously. He confirmed Dr. Lawrence's statement as to sheep and cows, and said that it was not uncommon for the uterus to shoot out again and again after reduction; the animals generally died.—Mr. G. E. LAWRENCE had witnessed one case of inversion, which was readily reduced; but the patient died suddenly half an hour afterwards.

Prevention of Post Partum Hæmorrhage.—Dr. AUST LAWRENCE read a paper on this subject. Nature's way of preventing *post partum* hæmorrhage was by (1) contraction of the uterus; (2) formation of thrombi. That the second condition might be fulfilled, the woman must be in good health; and this must be seen to before the confinement. To promote the first condition, uterine inertia must be prevented by timely delivery—by forceps, if necessary—and if the pains were not normal, small doses of ergot might be given. When chloroform had been given, or when the pains were not typical, ergotin should be injected subcutaneously before completion of delivery; the injection was best made into the cellular tissue over the external oblique muscle, rather than into the gluteus, as the pain was less, and the author had never seen abscess follow. Great stress was laid upon the necessity for following the uterus down with the hand as the child was born, and keeping up pressure for some time after its birth and the expulsion of the placenta. It was most important not to remove the hand from the uterus until this organ had remained firmly contracted for at least a quarter of an hour after the placenta had been expelled. The author always made the nurse tie the cord under his supervision.

REVIEWS AND NOTICES.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1878. Vol. xx, pp. 332. London: Printed for Her Majesty's Stationery Office. 1880.

[FIRST NOTICE.]

THE contents of the Blue-Book bearing the above title, which has been this year presented to Parliament, have a similar arrangement with those of its predecessors for several years past. The statistical reports on the health of the troops serving in the United Kingdom and at foreign stations are first given; the sanitary reports on these various stations follow; and the volume concludes with a series of papers by army medical officers on special professional subjects. This last-named section of its contents occupies nearly half the Blue-Book, and contains several articles of particular interest, especially one on the Recent Progress of Hygiene, by Professor de Chaumont of Netley, with which the series commences.

The average number of white troops, exclusive of commissioned officers, who were serving in Great Britain and on foreign stations during the year 1878, is shown in the general summary printed on the first page of the statistical report to have been 185,006, or more than ten thousand above the number of the previous year, 1877. The various corps to which these troops belonged were all recruited in Great Britain; the troops of local corps serving and recruited on foreign stations, as the soldiers of the West India regiments, of the Malta Fencible Artillery, and the Gun Lascars at Ceylon and Hong Kong, are not included in the general total above given. The 185,006 non-commissioned officers and privates tabulated in the report furnished 198,074 admissions into hospital, or a proportion of 1070.6 per 1,000; 2,299 men died, being a ratio of 12.17 per 1,000 of the average annual number of troops; while 5,243 were discharged from the army as invalids, or 28.09 per 1,000. There is a want of uniformity, however, in these returns, the object of which is not explained in the Blue-Book. It appears that, in addition to the 185,006 men stated to be the "average annual strength" of the troops at home and abroad, there were 3,877 "detached men", so that, these being included, the strength becomes 188,883 men. It is on this latter "strength" that the ratios of deaths and men discharged as invalids are calculated; while it is on the former strength (the 3,877 detached men not being included) that the number and ratio of admissions into hospital are calculated. The men detached from their corps were all on the roll of the strength of troops serving in the United Kingdom. The circumstances under which the men were detached from their regi-

ments are not mentioned; but it seems probable that part of them were away on leave of absence for ill health, for the report states that 72 deaths occurred among the 3,877 detached men, and this gives a far higher rate of mortality than the general average—viz., 18.5 deaths per 1,000 as compared with 12.17 per 1,000.

The proportionate number of deaths among the total number of troops was considerably larger in 1878 than in the previous year, but was very nearly the same as the ratio during the ten years ending in 1877. In 1878, the proportion of deaths, as before mentioned, was 12.17 per 1,000; in 1877, it was 9.55 per 1,000. As the death-rate of the non-commissioned officers and men serving in the United Kingdom was only 6.53 per 1,000 of the strength, it is evident that the increase must have been due to an increased death-rate among the troops serving on foreign stations. No comments are made in the Army Medical Report itself on the figures shown in the general summary of the state of health of the troops in 1878; but, on referring to the statistics of the foreign stations, a marked increase in the unhealthiness and death-rates of some of them becomes apparent. Thus, in India, the ratio of mortality in 1878 was 22.3 per 1,000, while in 1877 it was 13.75; at the Cape of Good Hope it was 19.72 in 1878, while it was only 8.56 in the previous year; and, in addition, there was the high death-rate of 40.27 per 1,000 of strength at Cyprus in 1878, which station was not occupied by British troops in 1877. But it was not only in the number of deaths that there was an increase in 1878; the proportionate numbers of men discharged from the army, and therefore added to the civil population, as invalids, was also greatly augmented. In 1877, the ratio of soldiers discharged from service as invalids was 22.71 per 1,000; in 1878, the number rose, as already shown, to 28.09 per 1,000. The progressive increase that has taken place for several years past in the number of military invalids sent into civil life is a subject deserving grave attention. In 1875, of every thousand men in the army, 19.80 were discharged as invalids; in 1876, 21.63; in 1877, the number per 1,000 was 22.71; while the present Report for 1878 shows the number discharged in that year was 28.09 per 1,000 of the total strength of troops. Remarks were made at some length on the subject of military invaliding, as it is called, in our review of the volume of Army Medical Reports for the year 1877, as well as on the fact of no information being given in them respecting the ages of the men serving in the army. This latter subject is one of undoubted importance as regards the vital statistics of the men serving in the ranks of the army; and having been one on which there had been frequent discussions with reference to army organisation, maintenance of health and efficiency, and other matters, a hope was expressed that it might be found convenient to give the required information in future. It is not furnished, however, although the ratios of the ages of the men who died during the year in the United Kingdom are shown in a special table on the subject. In former volumes of these reports, tables were regularly given, showing the ages of all the men serving in the United Kingdom and on foreign stations, as well as the deaths at each age, but this information is now suppressed; as is also the information, which used to be furnished in the statistical tables, showing the particular diseases for which men were admitted into hospital for treatment, under which they died, or for which they were discharged from the army as invalids. The statistical tables are now limited to twenty-two groups of diseases; distributed under five classes of disease—viz.: under general diseases, local diseases, conditions, etc. (whatever these may mean); poisons; injuries; and surgical operations. Two other groups are added in the tables, which, of course, do not appear under either of the above-named classes—viz.: "no appreciable disease" and "cause unknown". Brief remarks are made with reference to most of the groups of diseases; and if we give one or two samples of them, the reader will be able to form his own opinion of their scientific value. Thus, among the troops serving in the United Kingdom in 1878, the statistical table on page 4 shows us that, under Class II, *Local Diseases*, group "circulatory system", there were 1,716 men admitted into hospitals for treatment, and that 90 died; and that, under the same Class, group "respiratory system", 7,779 men were admitted into hospital, while the deaths amounted to 115. On turning to the remarks upon these two groups of diseases, and the large number of patients treated under them, with more than 200 resulting deaths, we find the following: "*Diseases of the Circulatory System.*—For all districts together the rate is 2.8 per 1,000 of the strength higher than that for the preceding year. It is higher than that for the last year for the Northern, the Eastern, the Western, the Southern, the Chatham, the South-Eastern, the Home, the Woolwich, the North British, the Channel Islands, and the Cork Districts; and lower for Aldershot, Belfast, and Dublin." "*Diseases of the Respiratory System.*—The rate of admissions for the United Kingdom is, in the aggregate, 10.1 per 1,000 men lower than that for the preceding year. The rates range from 124.7 for the Channel Islands, which is the highest, to 46 for the Belfast District, which is the lowest. They are higher for the Eastern, Southern, Chatham, and Channel Islands Districts than in 1877, and lower for all others." This, as far as we can discover, is the whole of the information given in the Army Medical Report for 1878 regarding the 9,495 cases of disease which occurred that year, and are included in the two categories above-named. In former days, we should have found, in the corresponding remarks, some observations on the prevailing forms of disease in the two groups, on the chief causes of mortality, and on other such points of professional interest; while the abstract tables, appended to the Blue Book, would have supplied us with exact information as to the number of admissions, from all the principal arms of the service, under each particular disease comprehended under the general headings—"Diseases of the Circulatory and Respiratory Systems". We should have been able to see, at a glance, how many cases there were of aneurism, valvular disease of the heart, pericarditis, and other special diseases of the circulatory system, and where, among them, the deaths occurred; and so with all the other groups under which all kinds of disease are now indiscriminately collected. The information thus furnished was often capable of being turned to valuable practical account. The prevalence of a particular disease, and the mortality arising from it, could be compared in different parts of the army, or in different localities, in the United Kingdom; these facts, again, or at any rate the mortality, could be compared with that of the male civil population at the soldiers' ages; or the observations made on the prevalence and mortality of a given disease among the troops in the United Kingdom, could be studied in relation to corresponding observations among troops on foreign stations, or in other European armies; and, from such investigations, causes might be traced, remedies suggested, and, in the end, an improved state of things effected. The statistical tables of particular diseases that used to be published were available also for other purposes. A short time since, we had occasion to ascertain the number of cases and deaths from small-pox amongst the troops serving in the United Kingdom. We were able to get the information from the year 1859 to the year 1873; but were unable to ascertain the numbers of small-pox deaths, if any occurred, during the years 1874, 1875, and 1876. No statement was to be found in the Army Report for 1877 as to whether there were any cases or deaths from small-pox during that year. The same thing happens again as regards the year 1878. If there were any cases of small-pox, they are included in the group of "eruptive fevers"; but are nowhere separately shown or referred to. The former reports of the Army Medical Department at once showed whether there were any cases of small-pox among the troops or not during the year; if any, what was the number of cases; in what arms of the service they occurred; and whether any were followed by fatal results or all recovered.

There is, however, one disease occurring among troops serving in the United Kingdom on which more statistical information is supplied. This is syphilis. The agitation which has been carried on regarding the Contagious Diseases Acts, and the returns having reference to the subject which have been called for by Parliament from time to time, have doubtless led to greater space being afforded to a consideration of this disease than to any other observed in the army during the year under notice. Several statistical tables are furnished, compiled from quarterly venereal returns sent in by medical officers, to show the number of admissions for primary venereal sores at the stations where the Contagious Diseases Act is in force, and, for purposes of comparison, at other stations where the Act has not been applied. In some of the tables, the admissions for gonorrhœa are also shown. An examination of these tables shows that there was a general increase in the number of cases of venereal disease, gonorrhœa as well as syphilis, during the year 1878, both in the stations under the Act and those not under the Act. This is attributed in the report to the fact of the reserve forces being called out during part of the year. The tables show, however, a very marked difference in the proportionate increase in the stations under the Contagious Diseases Act, and in others not under the Act, where troops were quartered. Looking at the fourteen stations under the Act, where the average annual strength of troops was 55,813, the increase in the number of admissions into hospital for primary venereal sores was only 5 per 1,000 above the corresponding rate of the preceding year, 1877; while, on comparing this with fourteen of the principal stations not under the Act, in which the average annual strength was 20,749 men, the increase in the number of admissions for the same disease is seen to be 40 per 1,000 men. In the fourteen stations under the influence of the Contagious Diseases Act, the ratio per 1,000 men admitted for primary venereal sores was 40; in the fourteen principal stations not under the Act, the ratio per 1,000 men admitted for primary venereal sores was 131. A more striking contrast could hardly be expected. In thirty-one small stations, where altogether the annual strength of troops only amounted in the aggregate to an average of

2,141 men, no admission for syphilis appeared in the hospital returns. Including these, and all other stations not under the Act, the ratio per 1,000 [illegible] admissions for primary venereal sores was 86; while, as before mentioned, the corresponding ratio during 1878 in the fourteen stations under the Act was 40. In London, in 1878, the number of admissions into hospital for primary venereal sores amounted to 250 per 1,000 of the mean strength of the troops; in Manchester, to 205 per 1,000; in Dublin, to 154 per 1,000. In London, Manchester, and Dublin, it need hardly be mentioned, the Contagious Diseases Act is not applied. The highest number of admissions into hospital in any station under the Act was 54 per 1,000 at the Curragh Camp; the next highest was 53 per 1,000 at Aldershot; the next 49 per 1,000 at Chatham. An indication of the loss of service arising from the occurrence of primary venereal sores is given in a special table on the subject. In the fourteen stations under the Contagious Diseases Act, the proportionate number of men always under treatment in hospital for this disease was 3.47 per 1,000 of the strength; in the contrasted stations not under the Act, the proportionate number was more than double, viz., 7.99 per 1,000.

We notice with pleasure that, among the 101,129 troops serving in the United Kingdom, there were only six instances of flogging as a cause of admission into hospital; and, as we are informed that, in all cases of soldiers being flogged by sentence of court-martial, they are afterwards sent to hospital for treatment, we conclude that the number mentioned represents the full extent of this kind of punishment during the year 1878. The report states that the six admissions all resulted from the punishment of men in the Military Prison at Cork.

A few statistics are furnished regarding the Reserved Forces who were called out for duty during 1878. It is stated that 17,907 men belonging to the Army Reserve, and 18,812 men of the Militia Reserve, responded to the call in the various districts of the United Kingdom. All these men had to present themselves for medical examination before they were sent to their appointed stations; and, on inspection, 652 men of the Army Reserve, or 36.41 per 1,000, were rejected as unfit for duty; and 760, or 40.40 per 1,000, of the Militia Reserve. The total number of rejections, therefore, was 1,412 out of the 36,719 reserve men who presented themselves for medical examination previous to joining, or 38.45 per 1,000 of the whole number examined. The causes of rejection are shown in a tabular form by classes of disease arranged on the same plan as the tables showing the causes of [illegible] among the troops on regular service. This table shows that, among the 1,412 reserve men found unfit for duty, the leading causes of rejection were: "constitutional diseases", on account of which 185 were rejected; diseases of the eye, leading to 109 rejections; diseases of the circulatory system, causing 330 rejections; of the digestive system, 183 rejections; debility, 180 rejections; injuries, or the effects of accidents of various kinds, 108 rejections. The results of the medical examination on this occasion sufficiently indicate the need of inquiries being instituted at intervals into the state of health and efficiency of the men enrolled in the lists of the Reserve Forces of the kingdom.

We [illegible] remarks on the health of the troops serving on foreign stations to a future occasion.

NOTES ON BOOKS.

Le Cerveau et ses Fonctions. Étude Anatomique. Par le Dr. C. Mirkil, Professeur d'Histologie à la Faculté de Nancy. J. B. Baillière and Co. Paris: 1880. This volume contains a series of topographical views of the brain, its convolutions, sulci, and ascertained centres of [illegible], numbered, and lettered, so as to facilitate pathological study. The views are taken from photographs of brains and brain-sections hardened in a solution of saltpetre (one to five) for ten or twelve days, and then dried by the air. The brain is thus shrunken to about three-fourths of its original size; but the convolutions become more distinct; and, the sulci being somewhat opened out in shrinking, the outlines are seen only the more distinctly, and the relations of the parts more easily defined. The lettering is placed *in situ*. Views are given of the superficies of the brain; and the various lobes and convolutions are differently coloured, so that the eye at once follows the nomenclature and anatomical relations which it is the object to display. Ferrier's [illegible] for the upper and lower extremities, of the head, neck, lips, and eyes, are well shown in Plate 16. The whole of the plates are well executed, accurately defined, and [illegible]. The atlas is published at a moderate price, and will be found a really useful aid to the study of the pathology of the brain.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE AEROCONISCOPE.

VARIOUS means for collecting minute particles from atmospheric air have been employed at different times, for the purpose of exhibiting them either directly under the microscope, or when cultivated in sterilised media. Amongst such forms of apparatus, I made one, differing I believe from any others, in that it was made as a hollow vane, so that when set up in the air it responded to the direction of the wind; which, blowing through it, left its particles upon a circle or square of thin microscope cover glass, smeared with a cultivating glutinous material. This apparatus was described and figured in the *Monthly Microscopical Journal*, No. xviii, for June 1870, and the result given later on, in the same journal, of its employment during 153 days; the covers having been placed on some form of cultivating slide, set in a moist chamber, for repeated observation.

Based upon the same form of apparatus, I venture at the present time, as attention is being largely given to the subject of atmospheric germs and bacteroid diseases, to bring before the members of the profession a simple and portable form, which may tend to help in the study of this most interesting, yet difficult branch of science, as bearing especially upon disease. It has been shown to several leading members of the profession; and both Mr. Hawksley of 300, Oxford Street, and Mr. Ch. Baker, 244, High Holborn, have offered to undertake its construction, when desired.

Fig. 1.

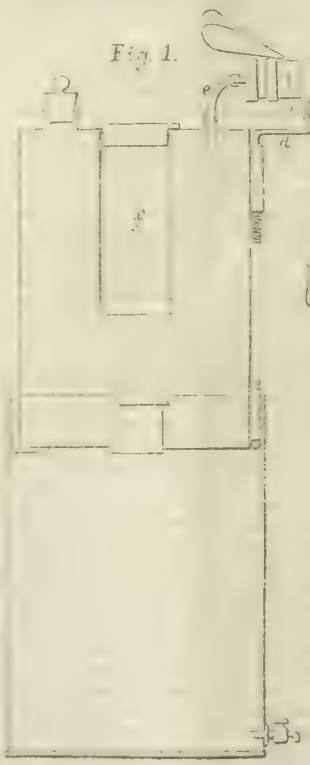
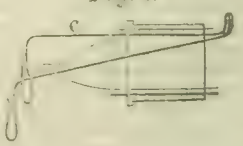


Fig. 2.



It consists of a glass funnel, *a*, the stem of which fits into a tube projecting a quarter of an inch outside and three quarters of an inch inside; a brass cap, which fits on to one end of a glass tube, *b*, three and a half inches long by one inch, internal bore, the ring of the brass cap being split, or sprung, to clasp the tube tightly. On the small tube inside, rests a stout platinum wire support, *c*, which is bent like the letter V, but turned up at the ends farthest from the point of the funnel, so as to hold vertically a square or circle of thin microscope cover

glass. The wire is kept in place by a movable collar that fits over the inside projecting tube, and can be adjusted to suitable distance from the delivery nozzle of the funnel, which is drawn out so as to give an aperture of about the $\frac{1}{25}$ of an inch, and very slightly turned up, so as to deliver the particles rather above the centre of the thin cover glass. (See Fig. 2.) The other end of the glass tube is fitted with a similar brass cap, but the small tube in its centre projects internally only a quarter of an inch and externally three quarters of an inch. The apparatus is supported by a split ring, with a fixed tube turned conically inside, to fit over a conical steel pin, *d*, which slips into a socket on the side of the upper vessel of the aspirator, or into a reversible iron or wooden clamp screw, for fixing on a horizontal or vertical surface, or on an ordinary tripod stand, thus admitting of revolution according to the direction of the current of air. Another split ring fits on the glass tube, and carries a pair of thin brass wings when used as a vane. These wings in my apparatus are fixed, but for portability might be made movable. The split rings are slid on the glass tube to such positions as to give the true balance or centre of gravity, when the apparatus is placed on the steel pin. If used in the open air, it only requires to be set up true, so as to turn with the wind, which blows through it. If used in a room or ward of an hospital, the brass tube at the opposite end to the funnel is attached to the upper chamber of the aspirator by a connecting piece of India-rubber tube, *e*.

The apparatus can be made of thin brass nickel-plated tubes, to screw together in the middle, or of ebonite, or entirely of glass, or enamelled copper. The aspirator may consist of a single chambered vessel of any capacity, provided with a doubly pierced air-tight fitting cork or India-rubber cap, to one opening of which is attached the outer tube of the apparatus, a syphon-tube being passed through the other, and the vessel filled with water. If this tube be flexible it can be filled with water when held vertically, and, when turned down, regulated in flow by a tap or spring slip. For portability, and for being always ready to hand, it may be made of two vessels of zinc, either cylindric or of rectangular shape, as in the figure; the upper one, of known capacity, having a closed central chamber or space, *f*, to hold the aëroconiscope when packed for carriage, fits completely into the lower vessel, but rests, when in use, upon three loose flanges bent at reversed angles, fitting on the rim of the lower vessel and projecting inside it, as in the figure. The top vessel has an opening for filling it with water, closed by an India-rubber plug, and has also a small tube on the top, for attaching one end of the India-rubber connecting tube, or if the apparatus be used vertically, to receive the end of the brass tube in the cap air-tight. At the side of the top vessel, near the bottom, is fixed an efflux tap; or for convenience of placing one chamber within the other, a hole should be made, and over it a tube soldered with a corresponding hole on one side. This tube tap is opened, or closed, partly or entirely, by a solid India-rubber plug. This would allow the water to run into the lower chamber and avoid a lip underneath the tap. The bottom chamber needs a (screw) tap to let off the water, and by which to refill the top chamber, but is not itself a necessity, as the water may be allowed, when the upper one stands on a table or chair, to run into any vessel beneath it. A strip of prepared iodised paper, or thallous hydrate, as proposed by Schöne, can be placed inside the glass tube, to test the ozonic state of the air. If required to do away with the water aspirator, the plan tried and adapted to my original form for setting up a current of air by heat, can be applied also to this apparatus. The air can be driven by elastic bags, as in the spray instrument, but particles left in the bag at one place, may be introduced at another, unless the air beforehand be well driven through the bags. If it be needed to draw the air over a sterilised fluid, it can be easily done, or the thin covers can be removed by forceps, after entrapping the particles, and dropped into a sterilised medium. The liquid with which to slightly smear the centre of the thin glass cover, opposite the end of the funnel, for about a quarter of an inch in diameter, may be glycerine, if the object be the direct examination by the microscope; but if intended for cultivation, this should not be used. There may be a difficulty in selecting the best medium, as some bacilli or germs will grow in one medium, and not in another which is suitable for other forms, or spores of mucors, etc. This must be arrived at by experiment, and belongs to one of the difficulties inherent in dealing with a diversity of objects in ordinary air. The material can be checked by microscopical examination, or by placing some of it in a recently thoroughly sterilised fluid.

In very careful researches, as the apparatus is not made absolutely air-tight, a little softened wax should be employed at the junctions of the brass caps and tubes, or be covered by wide elastic bands. The apparatus may be regarded as an adjunct to the examination of the air, chemically, for free ammonia, or albuminoid ammonia, in the manner proposed by Professor Remsen, United States, National Board of Health, or any other method. To be more complete, it may be fixed over a compass vane, provided with means to register the direction of the wind and its velocity.

R. L. MADDOX, M.D.

Petersham Lodge, Gunnersbury, Oct. 30th, 1880.

PARAFFIN SPLINTS.

AT the meeting of the Royal Medical and Chirurgical Society on the 9th instant, I exhibited a specimen of a paraffin splint which had been used in a fracture of both bones of the forearm in the latter part of the cure; and also a piece of the paraffin wax, which had been used in its preparation. The advantages of this material, when melted, and the bandages used soaked in it, as in using liquid starch, are many and great, as I will endeavour to explain. 1. It is cheap. 2. It is durable. 3. It is cleanly. 4. It is elastic, and can be removed at night, and replaced after the morning ablutions are over. 5. It occupies very little space, as it makes a perfect mould of the arm, and fits underneath the sleeve. 6. It is impervious to moisture and to the heat of animal tissues, its melting point being between 100° and 130° Fahr., as may be ordered, according to the stiffness or elasticity needed in the individual case. 7. It is the best material to use in spinal cases, in the application of the principle associated with Dr. Sayre's name. In such cases, it must be slit up just before it sets, and holes punched along the cut margins for lacing it up when reapplied, so as to admit of taking it off occasionally.

With persons of refinement, of whichever sex, I need hardly say that an immovable jacket, which forms an obstruction to personal cleanliness, is in the highest degree offensive, not to say a loathsome infliction. It is, therefore, especially for such cases that I recommend the paraffin wax, as its properties are such as obviously to give it a superiority over plaster-of-Paris or the poroplastic substitute, which is now commonly used.

EDWARD HAUGHTON, M.D.

Spring Grove, Upper Norwood, S.E.

FLETCHER'S GAS-HEATING BURNER.

FOR a great number of purposes—chemical and pharmacological, in hospital or sick-room— the new gas-heating burner of Mr. Fletcher of Warrington is a great and welcome improvement. It can be worked easily from any ordinary gas-burner, without even removing the nipple, by slipping an India-rubber tube over it. It has from three to four times the power of any burner similar in appearance. The flame is solid, intensely hot, and perfectly free from smell. It gives a duty higher than the calculated theoretical maximum for the gas consumed. It cannot be damaged by the dirtiest work. In case the perforated copper dome becomes choked with dirt, it can, when the burner is warm, be lifted off and washed or brushed clean. Any liquid spilt, so as to get inside the burner, flows out by the side-tube without the possibility of damaging the burner. The casting of the body of the burner is in one piece without a joint, thus doing away with one great fault, causing liability to leakage in most of the burners at present in use.

We consider this burner to be one of the greatest advances yet made in the practice of heating by gas. It costs only a very few shillings, and will boil a pint of water in six minutes.

BELLADONNA JUJUBES.

THE influence of belladonna on the mucous membranes is well known, and hence its value in some forms of irritable bladder, and especially in the "nocturnal incontinence" of children, has long been fully recognised. Now, children do not like medicine, but they do like sweetmeats. Dr. J. Hickinbotham, Physician to the Birmingham and Midland Hospital for Women, informs us that he has therefore suggested to Messrs. Southall that they should make a belladonna jujube of definite strength. They have, upon this suggestion, made some jujubes of most agreeable flavour, each containing two minims of the pharmacopœial tincture of belladonna. The use of the jujubes will, of course, not be limited to the cases above described. Dr. Hickinbotham has already found them useful in an obstinate "tickling" cough.

PRESENTATION.—On October 30th, the Rev. E. St. John, Frampton-on-Severn, on behalf of the subscribers, presented to Dr. Burges a purse of fifty guineas and the following address: "It is with sincere regret that the inhabitants of Frampton and of the surrounding parishes hear that you are compelled, from ill-health, to leave the neighbourhood; and we desire to present you with this testimonial, to mark the esteem and regard we entertain for you, and our appreciation of the skilful and kind manner in which you have so assiduously laboured amongst the poor and others for the last five years as the assistant of Mr. Watts."

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 20TH, 1880.

THE LAW OF SLANDER AS APPLICABLE TO PHYSICIANS.

A VERY full and accurate paper on this interesting subject appears in the August number of the *American Law Register*, of Philadelphia. It is from the pen of Mr. W. H. Whittaker, attorney-at-law, and it contains matter which will make it useful as a text, and for reference.

There is, perhaps, no class of professional men more subject to abuse, and, it is believed, more powerless to obtain redress, than physicians. About clergymen, the law has thrown its protecting arm; and public opinion has been wont to overlook, if not to pardon their shortcomings. The clergyman is a sort of privileged person, whose character is tried before, and whose conduct is regulated by, ecclesiastical tribunals, to which the courts of law have relegated it. Lawyers can take care of themselves.

For alleged professional misconduct, incapacity, or ignorance, for rumoured unskilful treatment of diseases, physicians who choose may have recourse to legal proceedings. But to cowhide the editor, or sue the newspaper, for the circulation of a libel, may be said in either case to be social suicide. The physician must grin and bear it. But if he braves public opinion and asserts his rights, if he endeavours to obtain satisfaction at law, the chances are, to say the least, uncertain. It is doubtful, as the law now stands, what charges of misconduct in a physician in a single instance are actionable. One court (*Camp* v. *Martin*, 23 Conn. 86) has held that words spoken of a physician, charging him *merely* with ignorance or misconduct in the treatment of a particular case were not actionable, *per se*. The words were, "If Dr. C. had continued to treat her, she would have been in her grave before this time. His treatment of her was rascally".

Another court (*Secor* v. *Harris* 18 Barb. 425) has adopted a contrary view in a similar case, where the words were: "Dr. S. killed my children. He gave them teaspoon doses of calomel; it killed them; they died right off, the same day. This last is no doubt a more aggravated case, but it is difficult to understand the grounds upon which the principle was distinguished in the two cases. The court said in the last instance that in the rendition of its judgment it was borne out by the authorities; while in the first case, the court was equally confident, after having examined the authorities, that none could be found, analogous to the case at bar, to justify an action for damages *per se*. Both however united on one case (*Sumner* v. *Utley*, 7 Conn. 257), as being in point, and it is amusing to observe what different constructions the two opposing tribunals gave to a case which must certainly have decided one way or the other. The Connecticut court said it thought that the case referred to, so far from varying the rule as they had given it, intended to sanction it, and quoted at length from Chief Justice Hosmer, as follows: "I readily admit that falsehood may be spoken of a physician's practice in a particular case, ascribing to him only such want of information and good management as is compatible with general knowledge and skill in his profession; and that, when such a case arises, unless some special damage exist, his character will be considered as unhurt, and no damage will be presumed. But, on the other hand, it is indisputable that a calumnious report, in a particular case, may imply gross ignorance and unskilfulness, and do him irreparable damage. A physician may mistake the symptoms of a patient, or may misjudge as to the nature of his disease, and even as to the power of the medicine, and yet his error may be of that pardonable kind that will do him no essential prejudice, because it is rather a proof of human imperfection than of culpable ignorance or unskilfulness. On the contrary, a single act of his may evidence gross ignorance, and such a deficiency of skill, as will not fail to injure his reputation and deprive him of general confidence".

Now the New York court, on the other hand, said that the doctrine laid down in the cases of *Poe* v. *Mondford*, Cro. Eliz. 620, and *Foot* v. *Brown*, 8 Johns. 64, both of which were adopted as authorities by the Connecticut court, had been repudiated. In the former, defendant charged plaintiff with having killed a patient with physic, and it was held, that the words were not actionable *per se;* and that the law only gave an action for words affecting a man's credit in his profession, as charging him with ignorance or want of skill in general. In the latter the words were spoken of an attorney: "F. knows nothing about the suit; he will lead you on until he has undone you"; and it was held, on authority of the former, that, no special damage being shown, the action would not lie. Rejecting these two cases as unauthoritative, the New York court also quoted from the case of *Sumner* v. *Utley*, *supra*, as follows: "As a general principle, it can never be admitted that the practice of a physician in a particular case may be caluminiated with impunity, unless special damage is shown. By confining the slander to particulars, a man may be thus ruined in detail. A calumniator might follow the track of the plaintiff, and begin by falsely ascribing to the physician the killing of three persons by mismanagement, and then the mistaking of an artery for a vein, and thus might proceed to misrepresent every single case of his practice until his reputation should be blasted beyond remedy. Instead of murdering character by one stroke, the victim would be successively cut in pieces, and the only difference would be in the manner of effecting the same result".

"It is good to beat your adversary with his own weapons; and, while the case of *Sumner* v. *Utley* decided, in effect, that slanderous words spoken of a physician were actionable *per se*, the court in *Camp* v. *Martin*, *supra*, notwithstanding, drew a favourable conclusion for holding that in its case slanderous words were not actionable *per se*. It is true that the case of *Sumner* v. *Utley* was somewhat stronger than either of the other two, and may have furnished grounds for the distinction that was drawn between gross ignorance in a single instance, and gross ignorance generally in the treatment of diseases; but there seems to us to be little, if any, difference between a case where the words were that a doctor killed his patient, and one where they alleged that if he had continued to treat the patient she would have been dead by this time, so far as the presumption of incapacity is concerned. In *Sumner* v. *Utley* the words imputed gross ignorance generally and particularly. The defendant said of the physician: "He has killed three, and ought to be hung—damn him. They all died through his mismanagement. I have understood that he left an after-birth, and the man that would do that ought to be hung"; and on another occasion, addressing himself to Mrs. H., who had employed plaintiff as her physician, said: "He was the means of her sickness by cutting an artery in her head—damn him; you ought not to pay him a cent.; if Mr. H. had taken him up for it, it would have cost him 400 dollars. It ought to be put in the newspapers". The rule may be said to be, as Chief Justice Hosmer put it, though it does not appear to be very clear: "This then is the correct principle, that the misrepresentations of a physician's practice in a particular case, if it does not warrant the presumption of damage, is not actionable, unless special damages are averred and proved; but if from the nature of the calumny damages are inferable, the words are actionable".

The question still remains: When do the misrepresentations of a physician's practice in a particular case warrant the presumption of damage? It is allowed that slanderous words alleging gross ignorance generally, or such ignorance or thorough incapacity as unfits him for the proper exercise of his profession, are actionable *per se*. To say of a physician: "He is a quack" (*Pickford* v. *Gutch*, Dorchester Assizes, 1787); or, "He is an empiric and a mountebank" (Vin. Abr. Act. for

Words S. a. 12); or, "He is a quack; if he shows you a diploma it is a forgery" (*Moises* v. *Thornton*, 8 Term Rep 303); or, "He is no doctor; he bought his diploma for 50 dollars" (*Bergold* v. *Puchta*, 2 Thomp. and C. (N.Y.) 522); or, "He is a drunken fool and an ass, and never was a scholar" (*Cawdrey* v. *Tetley*, Godb. 441); or, "He has killed six children in one year" (*Carrol* v. *White*, 33 Barb. 615); or "It is a world of blood he has to answer for in this town through his ignorance. He was the death of J. P. He killed his patient with physic" (*Tutty* v. *Alewin* 11 Mod. 221); or, "I wonder you had him to attend him. Do you know him? He is not an apothecary; he has not passed any examination. He is a bad character; none of the medical men here will meet him. Several have died that he has attended to, and there have been inquests held upon them" (*Southee* v. *Denny*, 1 Ex. 196)—in all these cases it has been held that damages are inferable without proof; but to say of a physician, "He is so steady drunk that he cannot get business any more" (1 Ohio 83 n.); or, "He is a two-penny bleeder" (*Foster* v. *Small*, 3 Whart. 138); or to charge an allopathic physician with having met homœopathists in consultation, and that in the opinion of the profession it was improper to do so and against etiquette; and further, that in the opinion of the profession it was disgraceful to meet a homœopathic in consultation (*Clay* v. *Roberts*, 8 L. T. N. S. 397); or to charge him with adultery, not necessarily touching him in his profession, without showing that it was connected with his profession (*Ayre* v. *Craven*, 2 Ad. and E. 2), have been held not actionable *per se*.

While the authorities are generally agreed as to charges of gross ignorance or incapacity in the exercise of the duties of the physician, it is not easy to determine what words are actionable in themselves in special instances. In analogous, and even in precisely similar cases, the courts are divided. Where the words were: "He killed my child; it was the saline injection that did it" (*Edsall* v. *Russell*, 4 M. and G. 1090); or, "He has killed my child by giving it too much calomel" (*Johnson* v. *Robertson*, 8 Porter 486), they have been held actionable *per se*. And, on the contrary, the words, "He has killed his patient with physic' (*Poe* v. *Mondford*, *supra*); or, "In my opinion, the bitters A fixed for B were the cause of his death" (*Jones* v. *Diver*, 22 Ind. 184); or, "He gave my child too much mercury, or made the medicines wrong through jealousy, because I would not allow him to use his own judgment" (*Edsall* v. *Russell supra*), have been held not actionable in themselves.

In the examination of these cases, it will be found that, where the physician is charged with killing his patient, the words have been held actionable on account of the imputation of crime which they import; and the only case in which such language has been held not actionable, is that of *Poe* v. *Mondford*, of an early origin. The case was rejected by the court in *Secor* v. *Harris*, on the ground that it was decided at a time when the doctrine of *mitior sensus* prevailed. And as for the case of *Jones* v. *Diver*, the court held that the words were not actionable, because they did not import a charge of murder; that if the defendant had said that "the bitters Dr. D. gave John Smith, caused his death; there was enough poison in them to kill ten men", he would have been held guilty of the charge, and the words have then been held actionable.

How such words necessarily import the crime of murder or manslaughter, in the absence of any expression of intention, is not quite clear. This was not the ground of the decision in a case of a non-professional, charged with having destroyed the life of a patient by mistaken, but well meant, efforts to save his life [*March* v. *Davison*, 9 Paige (N.Y.) 580). But even if the words do not import the charge of crime, or of gross incapacity generally, there seems to be reason for holding that they should be actionable. It is true, as was said in a former case, that a physician might make a mistake in his treatment of a disease, because it was rather a proof of human imperfection than of culpable ignorance, but the consequences are often as fatal to him as though the charge was a general one. His mistake might be of "that pardonable kind", which would do him no injury in his profession, but the public might not pardon it. And what, if he is not guilty of the charge? What, if he has done his duty towards his patient, and has adopted every means in his power, and such as were recognised in the profession as suitable for the case, to restore him to health? The consequences, so far as the public are concerned, are the same, with the additional mental suffering which every man must undergo whose conduct and whose actions are grossly misrepresented before the community at large. True, the law does not deny him remedy, if he chooses to take it. Perhaps it would be more fatal to resort to legal proceedings in any case. If he do, he is compelled to show special damages, for none will be inferred. This alone would cause many to hesitate before bringing an action. The difficulty attendant upon proving damages, the length of time intervening between the publication and consequences of a slander, would deter many from the prosecution of the slander.

As the cases now stand, one may bring almost any charge of misconduct against a physician in a particular case, without subjecting himself to an action for damages *per se*, provided it does not come within the category of a statutory crime, or impute to him general incapacity.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

NUMEROUS complaints have repeatedly reached us within the last few months, both from teachers and from candidates, regarding the mode in which the *vivâ voce* examinations for the Membership and Fellowship of the College are conducted, especially regarding the examinations in anatomy and physiology.

It is hardly necessary for us to repeat the long since accepted truism, that the duty of an examiner is not to find out what a candidate does not know, but what he does know. An examination, especially a *vivâ voce*, should be as extensive as possible, and not confined to one particular organ or one particular part. For example, in physiology, it is not sufficient to test a candidate's knowledge of the structure and function of bone or cartilage only; but he should also be examined on digestion, circulation, respiration, innervation, and the like. In a word, what is required at an examination like that for the membership of the College of Surgeons is a general examination over as much ground as possible, so as to ascertain whether the candidate possesses such an intelligent knowledge of his subjects as will fit him for the successful practice of his profession. This examination, it must be kept in mind, is not one for honours or for a prize, where the examiner requires to ascertain which candidate has the most thorough and perfect knowledge of his subject.

The chief complaints regarding the College examinations are: firstly, that a candidate is not unfrequently examined during the greater portion of the time allotted to the *vivâ voce* on a single specimen or subject, and, therefore, practically, he is marked according to his knowledge of that specimen or subject; and, secondly, that frequently, in cases where the candidate shows, from the first, that he is almost entirely ignorant, or, at best, has only hazy ideas regarding the specimen fixed upon by the examiner, the latter continues questioning and cross-questioning him upon it, in order, as it were, to draw out the proper answers, instead of passing on to some other subject with which the candidate may be better acquainted.

Such defects, occurring in any examination, are very serious; and that they exist in those of the College of Surgeons, we would be slow to believe, were it not that we have been assured of it by distinguished Fellows of the College, who are frequently present during the examinations. The College of Surgeons being the largest qualifying body in the United Kingdom, it is of the utmost importance that its examinations should be conducted as perfectly as possible. In the interests, therefore, of teachers, students, and of the profession generally, we feel it our duty to take notice of any well grounded complaints that may be made regarding them.

Before considering the defects complained of, we desire to express our sympathy with the examiners in the arduous—we might almost add thankless—task which they have to perform. It is no uncommon occur-

rence for from one hundred and fifty to two hundred candidates to appear at some of the primary examinations for the membership during the course of the year. The labour of examining such a number of papers within a limited space of time is very great; as, since anatomy and physiology were separated, each examiner must read half as many papers as there are candidates. A still greater weariness to the flesh is it to have to examine *vivâ voce* for between three and four hours every day for a fortnight, as is sometimes the case, especially when it is remembered that there are always a number of candidates up for each examination who are indifferently prepared for it, and in some cases utterly unprepared. We do not wonder, therefore, that occasionally an examiner indulges in examining an undue length of time on some favourite portion of anatomy or physiology. The evil effect of examining a candidate on only a single dissection, or upon the structure and function of a single organ, is so apparent, that it does not require much comment from us. Evidently, the examiner only ascertains the state of the candidate's knowledge of a very limited portion of anatomy or physiology, and entirely neglects to ascertain what the candidate knows of the whole subject generally. The result of this is, that if, by a stroke of good luck, an indifferently prepared candidate be taken on a part which he happens to have learned and knows well—and there are few men who appear for examination who do not know some part of their work fairly well—he makes a good examination; whereas, had his knowledge of the whole subject been tested, he must inevitably have come to grief. The converse is also true. A man who is very fairly up all round, may be rejected because he does not happen to be able to answer an exhaustive examination on, perhaps, the only portion of anatomy or physiology which he has, it may be only temporarily, forgotten. More especially is this unfortunate result likely to occur if he be of a nervous temperament. Besides, it is more than can be expected that students of eighteen or nineteen, who have been only engaged for two winter sessions studying subjects quite new to them, can acquire such an intimate acquaintance with such wide subjects as anatomy and physiology as will enable them to pass a searching examination on particular portions of both. The results of examinations conducted with this defect are sure to be uncertain in their issue—good men sometimes being rejected, while candidates who should have been rejected pass. According to the testimony of several teachers, such is what unfortunately not unfrequently occurs at the College examinations. The second cause of complaint, namely, that the examiner not unfrequently continues examining the candidate on a dissection, or on the physiology of an organ of which the latter is practically ignorant, instead of passing on to something else with which the candidate is acquainted, is a fault no less serious than the one to which we have just alluded. It is true that sometimes a candidate does, under the excitement of an examination, become flurried and nervous, and forgets, for a moment, the anatomy or physiology of a part with which he is perfectly acquainted. One or two leading questions from the examiner may very soon bring to his recollection what, for the time being, he has forgotten. But an examiner with any experience can very soon see whether a candidate stumbles from temporary forgetfulness or absolute ignorance. Whenever it is apparent that it is due to ignorance, or when, after having asked two or three questions, he does not receive satisfactory answers, the examiner should at once leave the subject, and proceed to some other; as persisting in questioning the candidate upon what he is ignorant of only confuses him and wastes time. The injurious effect which such a mode of examining has upon the candidate does not cease at the examination table where it began; but the treatment he has received at the first table upsets his confidence in himself, and his thoughts are no longer collected when the time comes for him to pass to the next set of examiners; so that the probability is that he will do a bad examination at the second table also, and consequently fail in the examination altogether.

To superintend the examinations, the Council, very judiciously, has appointed a Chairman of the Board of Examiners, who superintends the examinations. Surely it is the duty of that gentleman to look more strictly after the examiners who err in their mode of examining. We believe, also, that it would be an improvement if a record was made of each question asked the candidate, and of the length of time he is examined on each preparation. This should not be by any means impossible, as there is always an assessor present with each examiner, who could note those particulars.

A few teachers complain of the mode of marking adopted at the College. In the primary examinations, we understand that ten marks is the maximum for each subject, both in the written and *vivâ voce* examinations; while, at the latter, in the pass examinations, five is the maximum. We believe that considerable advantage would be gained by increasing the maximum to one hundred marks, both in the written and the *vivâ voce*. Were this the case, the examiner would be able to gauge the candidate's knowledge more accurately than he can do when there are only a few marks at his disposal. In the Government examinations, it has been found that even a higher maximum is required to do justice to the candidates, one thousand being the maximum for some subjects.

We trust that the examiners, recognising the causes of complaint, will, at the examinations which have begun, and in future, prevent all further cause for dissatisfaction by voluntarily remedying the evil complained of; otherwise, it will be the duty of the Council of the College to take the matter into consideration.

A NUMBER of cases of typhoid fever (notably at St. Erth) were reported at the last meeting of the Penzance rural sanitary authority, though the medical officer of health was not prepared with any explanation of the cause of the outbreak.

THE *United Service Gazette* understands that the appointment of Head of the Statistical Branch of the Army Medical Department has been offered to Surgeon-General W. A. Mackinnon, C.B., now principal medical officer at Malta.

IT is notified by Sir W. M. Muir, K.C.B., Director-General of the Army Medical Department, that the next examination of candidates for commissions in the Medical Department of the Army will be held at the London University, Burlington Gardens, on February 14th next, and two following days.

THE death-rate of Hastings for the third quarter of this year was at the satisfactorily low rate of 14.37 per 1000. The most noticeable feature in the returns is the large mortality from diarrhœa, 28 deaths being registered from this cause, no less than 26 of which were of children under five years.

PROPOSITIONS for a convalescent home for persons recovering from scarlet fever have recently been brought forward by Miss Wandell, 12, Stanley Gardens, London, and have received influential support. Convalescents of this class are necessarily excluded from ordinary institutions; and it will undoubtedly be a public benefit if such an institution as is proposed can be brought into working order.

WE deeply regret to have to announce the death of Dr. E. Seguin of New York, a physician much esteemed here for his scientific acquirements, as well as for his most amiable character and public spirit. Dr. Seguin was a lifelong friend of the imbecile, and a great benefactor to that class of afflicted persons by his writings and studies, no less than by his personal work. He was an excellent authority on nervous diseases, and the indefatigable advocate of the metric system in medicine.

AT the meeting of the Statistical Society on Tuesday evening, Mr. H. P. Potter, of St. Thomas's Hospital, was presented with the Howard medal for his essay on "The Oriental Plague in its social, economical, political, and international relations"; special reference being made to the labours of Howard on the subject. The council has decided to grant the sum of £20 to the writer who may gain the Howard medal in November, 1881; the title of the essay to be "On the Gaol Fever, from the earliest Black Assize to the last recorded outbreak in modern times".

THE Library of the Royal College of Surgeons will be closed on Friday next, the 26th of this month, on account of its being required for the clinical portion of the Pass Fellowship Examination, which will be held that day.

TYPHOID FEVER AT NEWLYN EAST.

ALTHOUGH, at the last meeting of the St. Columb rural sanitary authority, it was stated that "no new cases of typhoid fever had been reported at Newlyn East within the last ten days", a letter from the vicar of the parish in the *Western Morning News* dispels this illusion. Writing on the 12th instant, he says that within the last ten days six fresh cases, at the least, had appeared—three within the last three days—and had been reported to the local medical man and himself. That none of them should have been reported officially to the sanitary authority is to him, and to us, incomprehensible. Meanwhile, it is so far satisfactory to record that a hospital has been fitted up for the reception of the cases; and the sinking of a well, and other works ordered by the local committee, have been pushed forward. A thorough reform of the present vicious system of disposal of excrement seems, however, to be urgently called for; and it is to be hoped that the decline of the epidemic will not be allowed to form an excuse for the radical improvement of the village being any longer delayed.

CREMATION.

THE following gentlemen have written requesting that their names may be added to the petition to the Home Secretary in favour of cremation, of which a copy last week appeared in our columns: E. McKellar, M.D., Deputy Surgeon-General, Preston Road, Brighton; W. Chessall, Horley, Surrey; E. R. Tenison, M.D., 9, Keith Terrace, Shepherd's Bush; Albert May, Hampstead; J. B. Lyth, L.R.C.P., M.R.C.S., L.S.A., Rotherham; John Kershaw, Royton; Charles Oakes, M.B., Leamington; R. Harrison, 55, Coningham Road, Shepherd's Bush; E. MacDowel Cosgrave, M.D., 73, Eccles Street, Dublin; W. F. Brooks, M.R.C.S., L.S.A., Fareham; F. Rawle, Titchfield, Hants; Thomas Collins, M.D., Bervie, Kincardineshire; Grenville E. Moffat, Bervie; H. Mallins, M.B., Walton, Thetford; F. H. Worswick, M.D., Manchester; W. Hood, M.R.C.S., York; H. B. Noble, Tasman Road, North Stockwell.

THE SOCIETY OF APOTHECARIES.

THE *City Press* gives the following details of a change in the constitution of the Society of Apothecaries. "An important movement has been made by this society. Hitherto, the capital for the sale of drugs at the hall has been provided by members of the society. Henceforth, however, the trading will be carried on by the Court of Assistants on behalf of the society generally, the rights of the former proprietors having been purchased by the Court. This change has been made at the instigation of important bodies who had dealt with the society. The reputation which Apothecaries' Hall has always had for the purity of the drugs to be obtained there will not be diminished one iota by the change, but will, if that be possible, be added to. The Society of Apothecaries is one of the City companies which have retained to the present day their ancient functions, to the advantage of the community; and the society has devoted the funds at its disposal by giving prizes for competition in botany for registered medical students; prizes in botany also for young women; prizes in pharmaceutical chemistry, etc. The Society has also a fund for widows, and one for distressed members, etc."

SMALL-POX IN LONDON.

THE deaths from small-pox in London, which had been 2 and 7 in the two preceding weeks, further rose to 17 last week, and exceeded any weekly number since the end of April last; 10 were recorded in the Metropolitan Asylum Hospitals at Homerton, Stockwell, Fulham, and Deptford, and 7 in private dwelling-houses. Five of the fatal cases were certified as vaccinated, 5 as unvaccinated, while in the remaining 7 the medical certificates contained no statement as to vaccination. Nine of the deceased small-pox patients had resided in East London, including 5 in Bethnal Green, and 2 in Shoreditch; of the others, 5 had resided in Hackney. The number of patients in the Metropolitan Small-pox Hospitals, which had increased in the two previous weeks from 77 to 114, further increased to 118 on Saturday last; 31 new cases were admitted to these hospitals during the week, against 38 and 24 in the two preceding weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

THE STRENGTH OF UNITED ACTION.

THE physicians and medical chemists who are appointed as assessors to the criminal courts of Paris, have just afforded a striking example of equanimity in action, and its good effects. Some phrases in the statement of the Procureur-Général at the opening of the assizes, in which he criticised in an unacceptable form their mode of performing their duties, led immediately to a meeting of the whole of the body, and an unanimous resolution that the words of the Procureur-Général were an attack upon their professional dignity; and they decided that, until retaliation was made, the medical legists concerned, while completing the cases already in their hands, would refuse to undertake any new duties of the kind. This decision was officially notified to the Guardian of the Seals, and led to prompt complete retaliation by the Procureur-Général, and a withdrawal of the expressions complained of. Thus, by a proper firmness and dignified equanimity, this medical body in Paris has known how to meet the Procureur-Général with greater success than the Guy's Hospital Staff upon encountering Lord Coleridge and his colleagues in London; and then, unfortunately, the Guy's staff were not unanimous, and they will probably hardly consider it harsh if we add that their course was not dignified.

HAVERFORDWEST.

WE have various communications from Haverfordwest, from the mayor and others, denying the accuracy of the numbers which we last week gave, in referring to the outbreak of enteric fever in that town. Mr. E. P. Phillips informs us that about sixty cases have occurred, and six deaths from typhoid fever, which he considers fairly attributable to the bad water-supply.

FATAL ACCIDENT TO A MEDICAL STUDENT.

WE regret to state that a fatal accident last week occurred to a medical student at King's College. As the Lord Mayor's Show was passing along the Strand in front of the College gates, a ladder which had been placed against the wall of the archway for the accommodation of some of the students broke down under their weight; and one of them, Mr. Sidney Browse, fell from the top, a distance of eighteen feet, to the stone pavement below. He was taken to the hospital, where it was found that his skull was fractured. He lingered until Saturday, when he expired without pain, having only been conscious at intervals since the accident. He entered King's College in May last, was eighteen years of age, and was educated at the Park Grammar School, Plymouth. He was the third son of Mr. G. Browse, of Park Hill, Mannamead, Plymouth. Canon Barry made a feeling allusion to the sad event, in his sermon in King's College Chapel on Sunday morning.

SCARLATINA AT CHESHAM.

SCARLATINA has of late been extremely prevalent at Chesham, in the Amersham rural sanitary district—a place that will be remembered for the terrible outbreak of typhus fever which occurred there in 1871. Under the pressure of the typhus epidemic, an iron isolation hospital was provided, which speedily stamped out the disease; but, though there have been numerous occasions subsequently when the hospital would have been of use, it has been left lying idle while infectious disease has been raging in the neighbourhood. Last year, for example, there was a serious epidemic of scarlatina in the place, which, according to the Registrar-General's returns, killed twenty-four persons. No effort was, however, made to secure the isolation of any of the sufferers; and the same state of affairs was observed by Dr. Thorne Thorne when, in July of this year, he went down to the village, and

found scarlatina again extensively prevailing. At the urgent instance of Dr. Thorne, the local authority opened its hospital for the reception of the cases, with the result that the diseases, which at one time threatened to be fiercely epidemic, and which, in fact, killed sixteen persons last quarter, was speedily reduced to manageable proportions. The outbreak is not yet extinguished; but, in consequence of the cold weather, the authority have resolved to close the hospital, because "the place could not be kept thoroughly warm". There seemed to be a general consensus of opinion that much good had arisen from the hospital; and one member added that the proportion of deaths there had been less than in the homes of the people—the significance of which important observation does not seem to have been adequately understood. The decision, however, to close a hospital whilst scarlatina still exists in the district, because "it cannot be kept warm", without apparently any endeavour being made to improve the building so that it can afford adequate warmth, is greatly to be deplored.

SITES FOR HOSPITALS AND CONVALESCENT HOMES.

IT is becoming increasingly difficult to find sites for hospitals, or even for convalescent homes. In the Rolls Court this week, a motion was heard in which the plaintiff, Mr. Watson, sought to restrain the defendants, the governing body of the Leamington College, from using a certain villa, the lease of which had been purchased by the defendants, as a sanatorium for the sick children of the College. It appeared that the lease under which the defendants held the premises contained a covenant that they would not carry on any business or trade in the house, and that they would not do anything which should be a nuisance or annoyance to their neighbours. The house was a mile and a half from the College. It was contended that a sanatorium, in which children suffering from fevers and other diseases were kept, was, at any rate, an annoyance, if it were not a nuisance, to the neighbours; and that the case came within the covenant in the lease. Mr. Crossley, Q.C., and Mr. Nalder, for the College, read affidavits by medical men and others, to show that there was no probability of infection arising from the proximity of the sanatorium; and that the house could not be considered a nuisance or annoyance to anyone. The Master of the Rolls said there was no doubt in his mind that the fact of children being kept in this sanatorium, who were suffering from any fever or infectious disease, was likely to be an annoyance to the neighbours; and he thought the case was within the covenant in the lease. The injunction must, therefore, be granted. In the same way, the Home Hospitals Association was restrained from using, as a surgical home, Berkeley House, Manchester Square, although no infectious cases would, under any circumstances, have been admitted; and the Metropolitan Asylums Board are restrained from using their Hampstead Hospital, for which the site was selected by Dr. Sibson and Dr. Markham, and approved by the Local Government Board.

THE NEXT ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

A MEETING of the members of the Association resident in the Isle of Wight was held on November 5th, at the Pier Hotel, Sandown; Mr. Barrow of Ryde being in the chair. The following resolutions were passed unanimously: "1. That the members of the Association resident in the Isle of Wight do form themselves into a separate district of the Southern Branch of the British Medical Association. 2. That Mr. W. E. Green be elected Honorary Secretary of the district. 3. That Dr. Sinclair Coghill of Ventnor be elected President of the Branch District for the ensuing year." After the meeting, a meeting of the general practitioners of the island met to elect officers and a committee of management in connection with the forthcoming annual meeting at Ryde.

REMITTENT FEVER OF RICE-FIELDS.

A VARIETY of remittent fever has prevailed, to a great extent, on the borders of the lower Mississippi during the past autumn. It has been seen especially in and around the plantations of rice which have of late years been very much extended in that region, and has consequently received, locally, the name of the "rice fever". The season was remarkable, in its early part, for a very heavy rainfall; and, later on, at the harvest time of the rice, for very hot and dry weather. This malarial fever differs widely from yellow fever in its symptoms, is of low mortality, and very amenable to treatment by quinine. A diurnal remission occurred usually in the morning, and the highest temperature actually taken was 103°. No evidence existed of its contagiousness.

MILK-TYPHOID AT SOUTHPORT.

WE have recently had to chronicle a quite unusual number of epidemics due to infected milk. In addition to outbreaks of milk-scarlatina at Paddington and Dundee, there have been occurrences of milk-typhoid at Rochdale, Bridlington, and now at Southport. At the meeting of the Southport Town Council, on the 9th instant, the chairman of the Health Committee reported a serious outbreak of typhoid fever in the town. On the 22nd ultimo, nine cases of that disease were reported to the sanitary officer; on the 23rd, three more; on the 25th and 26th, single cases; on the 27th, four; and so on till, on the 6th November, a total of twenty-eight cases had been reached. The houses invaded, and their surroundings, were subjected to careful examination; but in only two cases were any sanitary defects discovered, and these were exceedingly slight, and altogether insufficient to account for the outbreak. Every case, however, had been served with milk from a particular dairy some miles out of the borough; and inquiry by the Southport officials revealed a well on the dairy-premises greatly polluted by privy soakage. Chemical analysis of the water showed that, in the words of the chairman, it was "nothing but liquid sewage, and calculated to spread disease wherever its influence extended". When the milk-supply was stopped, the epidemic ceased at once; but, unfortunately, not before two deaths—one of a young man twenty-one years old, and the other of a young woman aged twenty-two—had occurred. All the rest of the cases are reported as progressing favourably, and none of them are serious enough for a fatal termination to be feared. At the same time, these oft-recurring epidemics caused by infected milk cannot be regarded with equanimity. In the Southport, as in the Paddington, Glasgow, and innumerable other outbreaks, the poison of the disease has been brought from a rural district outside the jurisdiction of the local authority who have control of the outbreak when it occurs. Nothing could better show the mockery of legislation exhibited by Section 34 of the Contagious Diseases (Animals) Act, than the numerous milk-epidemics which we have recently had to record in these columns.

MUSIC IN HOSPITALS.

THE Secretary of the Kyrle Society is anxious to make it known to all who are interested in hospitals and workhouses, that an attempt is now being made to provide music as a means of recreation for the inmates; and that the Kyrle Society is prepared to receive applications from the authorities of these institutions, for small bodies of volunteers to go and sing in such wards as are suitable. The plan, Miss Lyall mentions, has been tried in the Leeds Infirmary, and has given great delight to the patients there. It is now being tried in one or two workhouses near London. Lady Brabazon has placed £100 with the Kyrle Society as a special donation to defray the expenses of such performances, and it invites the co-operation of volunteer singers to carry out the plan.

LANGENBECK'S SEVENTIETH BIRTH-DAY.

IN Germany, it is more a custom than with us to keep birth-days with some ceremony; and, on November 9th, a highly interesting occasion of this sort was celebrated. As we mentioned last week, Professor von Langenbeck, the distinguished German surgeon, on that day reached his seventieth year; and, both from the military and the civil authorities, and from friends both near and far, he received an ovation which falls to the lot of few. The day began by a *reveille*, played before his door by the band of the Third Regiment of the Imperial Guard. Soon afterwards, arrived private letters of most affectionate greeting from the Emperor of Germany and the Empress. The Crown Prince sent a telegram of congratulation from Wiesbaden, in his own

name and that of his wife. The Emperor of Austria sent the Grand Cross of the Order of Francis Joseph; the King of Saxony, that of the Order of Albert. The Medical Faculty of the University of Berlin appeared as a body, and addressed Langenbeck through their Dean. A deputation also waited on him from the Frederick-William Military Medical School, whose Director-Surgeon-General (Schubert), in presenting a laurel wreath, addressed to Langenbeck the following words: "Ever since your arrival as Professor, in Berlin, our institution has rejoiced in your instruction, and we have all sat at your feet. In peace time, as in war, you have been our guiding star; and there is scarce a single doctor, either in our army or our marine, who is not personally indebted to you for surgical knowledge and power." A number of his former pupils, now professors in the universities of Germany, presented an elaborate address. Amongst those present were Professor Esmarch of Kiel, Billroth of Vienna, Schönborn of Königsberg, Lücke of Strasburg, Trendelenburg of Rostock, Hueter of Griefswald, and others. Count Moltke paid personally his respects, as well as a host of other distinguished persons. We are glad, further, to learn that a few of his English colleagues, on the grounds of their personal acquaintanceship, sent Langenbeck their good wishes. A few cordial and appreciative words, written as Sir James Paget well knows how, were handsomely engrossed on vellum; and signed, as they were, by the President of the Royal College of Surgeons, in the name of English surgery, and by other distinguished English, Irish, and Scotch surgeons, would remind Langenbeck how highly his valuable work is appreciated amongst us.

HEALTH OF CUSTOMS OFFICERS IN THE PORT OF LONDON.

THE annual report of the Commissioners of Customs to the Lords of the Treasury includes the medical report by Dr. Walter Dickson for the year 1879, and gives some interesting statistical details of the sanitary condition of the revenue officers, about one thousand in number, in his professional charge. A large proportion of these officers are men well advanced in life; and the amount of chronic and senile disease is, therefore, considerable when compared with those branches of the public service whose members leave at an earlier age. Taking this into consideration, the numerical results are very satisfactory. The mean number incapacitated by illness or accident has been 37 *per diem*, or 4 per cent. on strength. The mean duration of each case has been 20 days, and the time lost to the service, including Sundays, 14 days per man. The deaths were 13 in number, or at the rate of 13.5 per 1,000 in the year; and the cases of premature superannuation, or retirement by reason of physical incapacity, have been only 2 per 1,000. The mean age of those who died was 49 years, of those invalided, 57 years. These two rates should always be taken together, in order to fairly estimate the health-condition of any body of men; for in most services, the number of persons invalided or dismissed for disease is very considerable. The actual number of deaths while actually serving may be comparatively few; but of those retired on account of phthisis and other serious diseases, many succumb in no long time afterwards, and swell the general mortality. It is true that many men are invalided, especially from the army and navy, for comparatively trivial ailments, if these incapacitate them for active exertion, or are likely to involve edious treatment or long absence from duty. But, in addition, there are numerous cases in those services, as well as the police, Post Office, etc., where men suffering from chronic incurable disease, and soon about to die, are classed among the invalided, who in less exigent services would remain on the sick-list, to number in time among the fatal cases. Dr. Dickson has devoted much attention to determining the ratio of incidence of the various groups of disease, and has found a remarkable uniformity to exist, unless when modified by some epidemic, or, as in 1879, by very unusual atmospheric conditions affecting the public health. The year was memorable for the coldest winter months and the coldest summer ever known; while the rainfall in the first three quarters was eleven inches in excess of the average. The Customs officers are much exposed to the weather, and there was an increased proportion of pulmonary and rheumatic disease. Phthisis claimed 9 per cent. of the whole amount of sickness, and 33 per cent. of the whole mortality; and this, it seems, is the normal ratio in the Customs force of this disease. Other pulmonary disorders occurred in the large proportion of 28 per cent. of the total sickness, and 17 per cent. of the mortality; and rheumatism and gout yielded 18 per cent. of the whole, and prevailed much more in the milder than the very cold months. But the unwontedly cold summer, so fatal to vegetable life, was propitious to health; diseases of the digestive organs occurred during the year in the ratio of only 6 per cent., less than half the usual average. Diseases of the nervous system were in the normal proportion and variety, including six cases of mental aberration, two of which terminated fatally, one by suicide. Affections of the skin and cellular tissue, as well as accidental injuries, are found to occur in more uniform proportion than any group of internal disease. Together they constitute about 21 per cent. of the whole. In the Customs force, composed of men from twenty-five to seventy years of age, and, for the most part, in favourable sanitary conditions, zymotic diseases are comparatively rare and unimportant. The normal ratio on the whole amount of sickness is 5 per cent.; but, last year, it did not exceed 4 per cent., and included no fatal or, indeed, serious cases. Febricula, ague, a few cases of erysipelas and mild enteric fever, were the only entries in this class of disease.

GUY'S HOSPITAL.

THE resignation of Dr. Habershon and Mr. Cooper Forster, which has been announced officially this week, is, we hear, not likely to cause any vacancies in the staff, or to lead to any fresh appointments. The number of beds available at Guy's has, unfortunately, been greatly reduced during the last year or two, in consequence of losses and financial deficits in the revenue of the hospital. So many beds have been closed, indeed, that it is not likely that it will be considered necessary to appoint any medical officers to fill the places vacated. Dr. Habershon and Mr. Cooper Forster were not far from attaining their natural term of office, at the close of which they would have ceased, by lapse of time, to hold their present offices in the hospital. It is understood that their present act is a personal one, and taken without any concerted action with their colleagues.

THE SANITARY COMMISSIONER OF CYPRUS.

WE are glad to be able to state that Dr. Frederick W. Barry, the medical officer of health for the Craven combined sanitary district, has been appointed permanently to the office of Sanitary Commissioner for Cyprus, the duties of which he assumed temporarily in the early part of the present year. Dr. Barry, although quite a young man, has already earned for himself a considerable reputation for earnest sanitary work. His reports, especially, have been models of their kind; and his loss will be greatly felt in the Craven district, where he succeeded, by tact and management, in getting much good work, and a promise of more, done during his tenure of office. Dr. Barry's duties in Cyprus comprise the supervision and organisation of registration, vaccination, quarantine, medical relief, general health matters, and forensic medicine. He is also charged with the inspection of civil hospitals (including police and pioneer hospitals), dispensaries, etc.; the control of requisitions for medicines, and the superintendence of meteorological observations. Having begun so well, we shall expect much benefit to the island from the new Sanitary Commissioner's labours. Dr. Barry, who sailed on the 18th instant, is succeeded in the Craven district by Mr. F. E. Atkinson, who took charge of his duties during his former absence in Cyprus.

DR. THOMAS DAVIDS OF AMSTERDAM.

THE *Amsterdam Courant* of the 5th instant says: "Our esteemed fellow-citizen, Dr. Thomas Davids, enjoys to-morrow (Saturday, November 6th) the privilege of celebrating the fiftieth anniversary of his doctorate. Born at Rotterdam in 1808, he took his degree at Leyden on the 6th November, 1830, on the publication of a treatise *De Neurosibus nervinis non curandis*. The father was the celebrated physician Leonard Davids, who introduced into Holland Jenner's discovery of vaccination, and who founded the still existing institution for the promotion of vaccination under the title of 'Ne pestis intret vigila'. He died at Rotterdam in

1820. In proof of appreciation of the merits of his father, the son received, by special decree of King William I, in the year 1826, a subsidy to enable him to devote his studies to medicine instead of law, which change of profession had become desirable through the death of one of his brothers, who was a doctor. This enabled Dr. T. Davids to follow in the footsteps of his father and grandfather. When, in 1831, cholera showed itself for the first time in Europe, Dr. Davids made himself a name by publishing a translation of the work of Dr. Horn of Berlin on the nature and treatment of the disease. In 1832, the disease having broken out in Holland, he was appointed first physician to the Cholera Hospital; in 1842, he became president of the Vaccination Society; and in 1844, member of the Society for the Promotion of Medical and Surgical Knowledge, of which he was made an honorary member in 1871. Besides his professional duties, he devoted himself with great zeal to science and art, which led to his being nominated as a member of the School-Board, and a director of the Dutch Philharmonic Society. In April, 1864, the king conferred upon him the order of the 'Eikenkroon', and in 1869 the order of the 'Netherland Lion'; thus repeatedly acknowledging his great services, which have always received their full appreciation from his fellow-citizens, among whom he has carried on his noble profession for the last fifty years." We beg to add our English congratulations to those which Dr. Davids has received from his fellow-countrymen, and to express our lively hopes that he may still be long spared to continue his honourable career of laborious usefulness.

PYGOPAGI.

TWIN female children of the Two-headed Nightingale type have arrived in London for exhibition. Dr. Augustus Breisky, Professor of the University of Prague has written the following description of them. "The rare deformity of the twin-sisters, Rosalie and Josepha Blazet, of Skrejchow (district Mühlhausen) in Bohemia, consists in a junction of the posterior walls of the pelvis, similar to that of the well-known Hungarian sisters, Helena and Judith, and probably to that of the so-called Two-headed Nightingale. They may be defined as Pygopagi. Their development corresponds to their age, and they were well fed at the time of my examination. The distinctly separate formation of each child is manifest; sometimes one sleeps whilst the other is awake, and the voluntary movements, and also the reflex movements, on mechanical irritation of the skin of the lower extremities, are separate in each individual. In accordance with the junction of the two pelves the labia pudendi majora are united, as well as the genital and anal apertures. The seemingly single urethral orifice is situated beneath a small elevation or fold, originating from a junction of the rudimentary labia minora, and corresponding to a median præputium clitoridis, from which on both sides short labia minora proceed. I have not sounded the urethral orifice, but I have seen urine flowing out of it. Beneath it are situated the vaginal orifices, lying close together, and separated by a longitudinal septum. These again are separated by a narrow perinæum from a single anus. Remarkable, besides, in these girls is a singular asymmetry of the skulls, which strikes one both in viewing the cranial ovals from above, and in viewing both heads, held upright, from behind. Viewed from above, the ovals appear flattened on their apponent sides in the anterior circumference of the skull, and strikingly prominent behind. Seen from behind in a vertical direction, the flattening of the apponent parts of the skulls is most striking. The children were born, with the assistance of a country midwife, on the 20th of January, 1878, of a mother twenty-two years old, who, two years previously, had given birth to a healthy girl. Rosalie was born first, with the head foremost. After the expulsion of the upper part of her body, an impediment occurred in the process of parturition. The midwife now by strong traction delivered the four feet of the children, and the pelvis. After this, the upper part of Josepha's body followed, and finally her head. When the medical man who was [illegible] arrived, the birth had been completed. The after-birth came spontaneously, and was not examined. The child-bed of the mother took a normal course."

SIMULATED ASSAULTS ON YOUNG CHILDREN.

AT a recent meeting of the Academy of Medicine of Paris (October 26th), M. Fournier read a paper on the subject of certain false charges of criminal assault on young children which had come under his observation. The victim was usually a middle-aged man of good reputation; and the object, in nearly all instances, was to extort money. The author, however, had met with two cases where the motive was revenge on the part of women against their unfaithful lovers. The following case was related. A girl, eight years old, who was stated to have been the victim of a criminal assault a few days previously, was admitted into hospital under the care of M. Fournier. The accused was a gentleman of excellent reputation, and had already been arrested. On examination, the child was found to be suffering from violent inflammation of the vulva. The labia were greatly swollen, and showed numerous erosions. The nymphæ, also, were congested and œdematous, and all the parts were intensely inflamed and bathed with thick greenish pus. The hymen was intact. There were several enlarged glands in each groin. There was no fever, and the general health was good. The child was perfectly cured in a fortnight by rest, baths, and soothing lotions. M. Fournier remarked that the unusual severity of the symptoms present arrested his attention at once, as he had never before seen such intense inflammation in any case of the kind. Besides, according to the child's own statement, she had only been alone with the accused person for a few moments. This exaggeration of all the symptoms, even supposing an assault to have been committed, led M. Fournier to question the child closely; and, finally, after much coaxing, and a present, among other things, of a doll with movable eyes, the child ended by confessing that her previous story was totally false, and that her disorder had been caused by her mother, who had, on three occasions, rubbed the parts with a blacking-brush. The mother was sent for, and told of the discovery that had been made; the charge was, of course, abandoned. Thus, said the author, the woman had betrayed herself by doing too much. Had the effects produced been less severe, she would probably have gained her end; for, in his opinion, it could not be too strongly affirmed that, between an inflammation of the vulva due to a criminal attempt, and an inflammation caused by violence of any other kind, there is no sign which can be relied upon for making a differential diagnosis. Another case was mentioned where a vulvitis of moderate severity was produced by repeated friction of the genital organs with a rough and dirty cloth; and masturbation was stated to be quite capable of exciting, in a young child, an inflammation in every respect similar to that caused by an unlawful assault. The important part played by the physician in cases of this kind, and the fact of medical men not being sufficiently aware of the manœuvres resorted to by the unscrupulous persons who made such charges, were the reasons which had induced M. Fournier to bring forward the subject.

THE INTERESTS OF THE IMBECILE.

THE first number of a journal devoted to the study of idiocy and the interests of the imbecile has recently appeared in Dresden. It is entitled *Zeitschrift für die Behandlung Idiotischer*, and is edited by Herr Schroeter and Herr Reichel, respectively directors of idiot-asylums in Dresden and in Hubertusberg. It is the organ of the Triennial Conference for the Treatment of Imbecility which is held in Germany. It proposes to deal with the pathological, statistical, and pedagogic order of the subject, as well as with scientific studies of the origin and conditions of imbecility. Popular treatment likely to interest lay friends of the imbecile will not be excluded. The first number includes reports of the above mentioned institutions and conference, and reviews, essays, and papers on school-work; on the conformation of imbeciles; statistical reports from Würtemburg, etc. It is a pity that the review is not published simultaneously in English; as the contributions of British and American physicians and philanthropists would form a very important contribution to such a review. It is in England and America that the greatest progress has been made, and that the model institutions exist.

SCOTLAND.

UNIVERSITY OF ABERDEEN.

THE late Mr. William Milne of Edinburgh, who died in April last, has left a sum of money for the foundation of a medical bursary in this University. The clause of the will of the deceased, relative to the proposed bursary, is as follows. "I appoint the free residue of my estate to be devoted to endowing a medical bursary in the University of Aberdeen; and, for that purpose, to be vested perpetually in the Principal of said University, and his successors in office, by a deed calculated effectually to attain that object; and this out of my deep gratitude to that university for the education I received at Marischal College, to which the chief pleasures of my life are traceable; the said bursary to be called 'Milne's Bursary'." The agent for the executors of Mr. William Milne, in the communication to the Senatus, intimated that the residue would probably amount to about £1,000. The Medical Faculty, in their report to the Senatus, expressed their great gratification at being made aware of Mr. Milne's munificent bequest to the students of medicine; and recommended that the bursary should be divided into two equal parts of £20 each, and should be open to competition to all students about to commence the second winter session of their medical studies. The report of the Medical Faculty was agreed to by the Senatus, and it was resolved to communicate with the executors to the founder on the subject.

EDINBURGH DENTAL SCHOOL.

THE second session of the Edinburgh Dental School was opened by an address from Mr. W. B. Macleod, in the Dental Hospital, Chambers Street, in which he treated of the principles and practice of dental mechanics, and referred to the success which has attended the infancy of the School.

THE GLASGOW UNIVERSITY RECTORIAL ELECTION.

THE polling for the election of a Lord Rector for Glasgow University took place on the 15th instant, when Mr. John Bright was returned by a majority of all the "nations" of the University, and by a total majority of 314 over Mr. Ruskin. The number of enrolments on the matriculation album was 2,157, against 1,904 at the last rectorial election. The students voted in four nations: *Natio Glottiana*, including students born in the county of Lanark; *Natio Transforthiana*, those born north of the Forth; *Natio Rothseiana*, those born in the counties of Bute, Renfrew, and Ayr; and *Natio Ludoniana*, consisting of students not included in any of the other nations. It was necessary for the successful candidate to have a majority in three at least of these nations, and the result did not depend on mass voting. Mr. Bright had a majority in all the nations, and, consequently, a total majority of all the students. There was considerable interest shown in the election, and the vote was the largest ever taken at a rectorial contest, no fewer than 1,942 of the 2,157 matriculated students having gone to the poll.

ROYAL MEDICAL SOCIETY OF EDINBURGH.

THE inaugural address at the opening meeting of the Royal Medical Society was this year delivered by Dr. John Duncan, Lecturer on Surgery and Surgeon to the Royal Infirmary. Mr. E. Hyla Greves, M.B., one of the Presidents of the Society, occupied the chair; and there was a large audience of students. In his address, Dr. Duncan alluded to the many eminent men in medical science whom the Society had counted as members, and pointed out that the greatly improved teaching of the present day gave students at this time much greater advantages than their predecessors had possessed in the way of acquiring a full knowledge and training for the exercise of their profession. In many respects, students had shown themselves worthy of these greater advantages; and he hoped that they would take up the progress which their predecessors had succeeded in attaining, and carry it to yet further lengths. To this end, however, he would like to see students showing a greater appreciation of the advantages which that Society held out to them. Speaking afterwards on the subject of the great advances which had been made by modern surgery, he said that the three great points which the present medical generation had made clear were: that the healing of wounds was hindered by friction, pressure, and putrefaction; and that these conditions were to be met with rest, drainage, and antiseptics. He hoped those whom he was addressing would contribute to the early arrival of the day when surgery would be in reality painless, bloodless, and aseptic. The meeting cordially thanked Dr. Duncan for his address.

OLD ROYAL INFIRMARY BUILDINGS, EDINBURGH.

WHAT is to be the ultimate use of the Old Edinburgh Infirmary Buildings is still a matter of conjecture. Lately, the Town Council have been entertaining the idea of acquiring a considerable portion of them as a City Fever Hospital; while, last week, the plan was mooted of utilising a considerable portion as the home of a Free Library, which is talked of for the city. The latest information, however, is that the Committee, to whom was remitted the proposal for the fever hospital, have resolved to recommend the Town Council to take no further steps in the matter. Considering the central position of the buildings, this is not to be regretted; and the absolute proximity of a fever hospital in one part of the buildings to the other occupied part, might lead to great difficulty in getting it put to any use whatever.

SCARLET FEVER IN EDINBURGH.

THERE were twenty-six deaths from scarlet fever last week in Edinburgh, of which nine occurred in the New Town, sixteen in the Old Town, and one in the southern suburbs; there was only one other death from zymotic disease, a case of whooping-cough. The mortality was 23 per 1000.

ST. JOHN'S AMBULANCE ASSOCIATION.

THE above Society has resumed its courses of instruction in Glasgow. The present series of lectures is delivered by Dr. Renton, and forms part of the advanced course of instruction, being devoted to the subject of "Nursing and Domestic Hygiene".

OUTBREAK OF SCURVY ON BOARD SHIP.

A VESSEL, recently arrived at Greenock, landed several of the crew suffering from symptoms of scurvy. They were sent to the Infirmary for treatment. The voyage was rather a protracted one. The matter has been reported to the Board of Trade; and Dr. Charteris has been instructed to inquire into the circumstances connected with the outbreak.

CONVICTION UNDER THE PUBLIC HEALTH ACT IN GLASGOW.

AT Glasgow, on the 1st inst., a conviction was obtained, at the instance of the Sanitary Department, against a woman, for having contravened the Public Health (Scotland) Act, 1867, by sending clothing, which had been used by a patient suffering from scarlet fever, to be washed at the Prison Gate Laundry. The sheriff commented severely on the conduct of the defender in sending the clothing to a large public washhouse, where there were no disinfecting appliances, and where the infection therefrom might spread to innocent people; and, seeing that she had been warned by the medical man in attendance that the patient was suffering from scarlet fever, he inflicted a heavy fine.

ABDOMINAL SURGERY.

THE advance that has been made of late years in abdominal surgery was illustrated by two operations recently performed at the Glasgow Western Infirmary. The first case was one in which Dr. George Buchanan performed gastrostomy on a patient aged 60, who was dying of starvation from a stricture of the œsophagus, situated low down. The stomach was opened at the time of the operation, and a tube inserted. The patient lived a fortnight, and died apparently of exhaustion, as no unfavourable symptoms followed the operation. A *post mortem* examination verified the diagnosis in the case. The second case was one of internal strangulation of the bowels in a medical student. There

was a history of a previous attack of peritonitis some years ago; and Dr. Paterson, under whose care he was, considering that the symptoms were due to the presence of some band constricting the intestines, opened the abdomen under antiseptic precautions. The constricting band was found and divided, with complete relief of the symptoms. The operation was done a fortnight ago, and the patient is still living, though recovery is slow. No doubt, the above cases of interest will be put fully on record.

OVERWORK AS A CAUSE OF RAILWAY ACCIDENTS.

FROM time to time, the public are made aware, by the occurrence of some serious accident on our railways, of the severe labour imposed on some of the servants of the railway companies. Another case of this kind has just been made public by the report of Major Marindin on a recent severe collision at Pennilee junction, when several people were killed. After stating that there can be no doubt that the accident was due to the signalman at Pennilee making a mistake, the inspector adds the following significant paragraph. "But, in casting the blame upon this man, there is one thing which should be remembered, and which ought to receive the careful consideration of the company employing him; and that is the fact that he had already been for over ten hours on duty without intermission, his whole term of duty being for twelve hours. I have no hesitation in saying that it is overtaxing a man's strength, both of mind and body, to expect him to work in a busy cabin for twelve consecutive hours without any assistance; and I do trust that shorter continuous hours of work will be adopted upon the Glasgow and Paisley Joint Lines, and will become more general." We hope no time will be lost in giving effect to this recommendation.

THE REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General for the week ending November 6th, it appears that the death-rate in the eight principal towns was 24.2 per 1000 of estimated population. This rate is 6.8 above that for the corresponding week of last year, and exactly the same as for the previous week of the present year. The lowest mortality was recorded in Perth—viz., 17.5 per 1000; and the highest in Leith—viz., 28.4 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 4.6 per 1000, being 1.4 below that for last week. A reduction occurred in the number of deaths from whooping-cough, but scarlet fever still continues prevalent in Glasgow and Edinburgh. Acute diseases of the chest caused 127 deaths, being an increase of 6 on the number for last week. In Glasgow and Edinburgh, a slight increase occurred in the number of deaths from these causes. The mean temperature was 39.6°, being 0.6° above that of the week immediately preceding, but 5.2° below that for the corresponding week of last year.

ABERDEEN DISPENSARY.

A MEETING of the directors of, and subscribers to, the Aberdeen Dispensary was held last week. The principal business was the election of a medical officer in place of Dr. Garden, resigned. There were three candidates. As the result of the voting, Dr. George Watt, was declared elected.

WESTERN DISPENSARY, FOUNTAINBRIDGE, EDINBURGH.

THE annual meeting of the subscribers to the Western Dispensary, Fountainbridge, Edinburgh, was held on the new premises, 90, Fountainbridge, on Thursday, November 11th. The treasurer's report showed the finances to be in a satisfactory condition, notwithstanding the increased expenditure in the new premises. The Secretary's report stated that, during the year, four thousand new cases had been seen, many of them several times, and a considerable number attended at their own homes; the Sick Aid Society, of St. John's Church, have placed their medical and surgical comforts and appliances within the power of the medical officers, for the benefit of their patients; thus, by the payment of a nominal sum, the use of everything conducive to the comfort, cleanliness, and treatment of a case can be secured. The sick kitchen has not yet been opened for the season, but will be shortly, when beef-tea, etc., can be ordered for the patients, free of charge. The new premises are found most suitable, and comprise consulting-room, with dressing-room; specialists' room, for eye, ear, and larynx; vaccination-room, waiting-room, and drug-dispensary.

IRELAND.

SCARLATINA of a very virulent type is at present very prevalent in Wexford.

DR. JOHN T. BANKS, representative of the Queen's University in Ireland on the General Medical Council, Physician to the House of Industry Hospitals, and late King's Professor of Practice of Medicine in the School of Physic, has been appointed Regius Professor of Physic in the University of Dublin.

HOME FOR PROTESTANT INCURABLES, CORK.

DR. MCCLINTOCK, President of the Royal College of Surgeons in Ireland, recently paid a visit to this institution, and made an entry in the visitors' book recording his unqualified admiration of the construction, ward furniture, and general arrangements of this excellent institution, which reflected the highest credit on its proprietors and managers.

GLENAMADDY UNION.

AT a recent meeting of the guardians of this union, Dr. Bodkin, medical officer of the district, tendered his resignation, having been appointed medical officer of Tuam dispensary district. The chairman, in accepting the resignation, said they could not let the opportunity pass without expressing the board's entire approbation of the marked kindness and affability that always characterised their medical officer's conduct in his professional career; and how they all regretted the severance of his connection with them, which had existed for so long a time. They therefore earnestly desired that he might succeed in his future undertakings, and that he might attain in an eminent degree to the highest sphere of his professional capacity.

NURSES FOR THE ARMY.

SIR EDWARD B. SINCLAIR, King's Professor of Midwifery in the School of Physic, has, as is well known, been most energetic and successful in his plan of training soldiers' wives as midwives for the army. From the maternity connected with Sir Patrick Dun's Hospital, he has, since 1869, sent no fewer than four hundred trained midwives to the service. In his opening address last week for the current session, Sir E. Sinclair, in referring to the success of this scheme, said it had become apparent that there ought to be an extension of it for the purpose of providing the soldier on service with a well-trained hospital nurse, for, as they all knew, that was a function which could not be performed by the midwife. General nurses who attended cases of zymotic diseases and erysipelas, could not approach the bedside of the woman in confinement. This idea had been lately taken up by the Viscountess Strangford, who had published a pamphlet pointing out the expediency and practicability of training up the wife of the soldier as his hospital nurse. She pointed out that nursing the sick or wounded soldier was a task that could be best done by a woman; that she alone could make the best of his surroundings, and prevent the supplies or comforts sent to him from being wasted. There was no reason why Lady Strangford should not succeed in her project, and the military authorities stamp it with their approval, as they had done the maternity of Sir Patrick Dun's Hospital. In the course of his address, the lecturer bore testimony to the good conduct of the soldiers' wives who had come under his notice while receiving instruction in the hospital.

ZYMOTIC DISEASES IN PROVINCIAL TOWN DISTRICTS.

TWO deaths from small-pox were registered in Belfast in the September quarter, and one in Newry, which were the only fatal cases from this disease recorded in any of the fifteen districts during that period.

Measles caused twelve deaths in Queenstown, fifteen in Belfast, and three in Newry; while to diphtheria only eight deaths were ascribed, viz., seven in Belfast and one in Cork. Twenty-three deaths took place from scarlatina in Drogheda, six in Belfast, twenty in Cork, sixteen in Waterford, and seven in Limerick. In Belfast, where whooping-cough has been prevalent since the close of the year 1878, there were sixty-four deaths registered from it last quarter; in Newry, twenty-one deaths; Londonderry, seventeen; and Dundalk, sixteen. Fever caused thirty-seven deaths in Belfast, twenty-seven in Cork, and six in Limerick; while diarrhœa was fatal in one hundred and sixty-seven instances in Belfast, ninety-six in Waterford, twenty-eight in Cork, eighteen in Limerick, and nine in Dundalk.

THE NOTIFICATION OF INFECTIOUS DISEASES.

AN important deputation, representing the Dublin Branch of the Association, waited on the Right Hon. the Lord Mayor of Dublin, M.P., at the Mansion House, on Wednesday last, to request his lordship to use his influence in procuring a local Act for the compulsory notification of infectious diseases in Dublin. The deputation, in addition to the President (Dr. R. McDonnell, F.R.S.) and nearly all the members of the Council, included the following representative members of the Branch: the President, Vice-President, and Registrar of the King and Queen's College of Physicians; the President of the Royal College of Surgeons in Ireland; the Regius Professor of Physic; the President of the Irish Medical Association; the Registrar-General; the Rev. Professor Haughton, M.D., F.R.S.; the Consulting Medical Officer of Health for Dublin; the Superintendent Medical Officer of Health and City Analyst; Dr. Lombe Atthill, Master of the Rotunda Hospital; Dr. Bennett, Professor of Surgery T.C.D.; Mr. Stokes, Professor of Surgery R.C.S.I.; Dr. Quinlan; and Dr. George F. Duffey, Honorary Secretary of the Branch. The members of the deputation having been introduced, Dr. McDonnell, as President of the Branch, informed the Lord Mayor of the steps that had been taken by the Branch to bring the compulsory notification of infectious diseases under the notice of the King and Queen's College of Physicians, the Royal College of Surgeons, the Irish Medical Association, and the Public Health Committee of the Corporation. All these bodies, he said, had expressed their entire approval of the measure. He showed how excellently it had worked in the eighteen towns in England and Scotland in which it was in force, and the undeniable effect it exerted in checking the spread of zymotic diseases, which were so rife in Dublin; the deaths from diseases of this class last month being 230, the total deaths from all causes being 857. Having urged many other cogent reasons in favour of the adoption of a similar system in Dublin, the President concluded by requesting his lordship to use his very powerful influence, not only as chief magistrate of the city, but also as chairman of the Public Health Committee of the Corporation, and as a member of Parliament, in procuring a local Act for the compulsory notification of infectious diseases in Dublin. The President of the King and Queen's College of Physicians (Dr. Johnston), and the President of the Royal College of Surgeons (Dr. McClintock), both assured his lordship that the Colleges over which they respectively presided were altogether in favour of the principle of the notification of infectious diseases; and that they believed such a measure would be most desirable. The President of the Irish Medical Association (Dr. Chapman) made a similar statement; and further observations in favour of the principle were made by the Rev. Dr. Haughton, Drs. Hayden, Quinlan, J. W. Moore, and Cameron. Several of the speakers spoke of the channel through which the notification of the existence of infectious disease in a house should come to the sanitary authority; and the opinion was strongly expressed in favour of the intimation being made by the occupier or householder, in preference to the medical attendant. The Lord Mayor said that he was flattered at such a deputation waiting upon him. It would be difficult to form a more influential or representative one. He highly approved of the principle of the notification of infectious diseases, and agreed in the unanimous opinion that had been expressed as to its necessity. Anything that he could do to promote the object of the deputation and of the Branch, would be done with the greatest possible pleasure. He had looked carefully into the reports of the Parliamentary Bills Committee of the British Medical Association, and other papers on the subject which Dr. Duffey had placed in his hands. Objecting, as he did, to piecemeal legislation, he thought that, instead of applying for a local Act for Dublin or any other large town in Ireland, it would be better to approach the Chief Secretary with a view of asking him to introduce a general Bill for Ireland, giving authority to the sanitary authorities of towns to apply to the Local Government Board for power to declare certain additional clauses to the Public Health Act—*e.g.*, the notification of infectious diseases, etc.—to be in force in their districts; or, if the Chief Secretary declined to bring in a Government Bill on the subject, he would support a private Bill on the same lines. If the latter plan were approved of by the Branch, he (the Lord Mayor) would be most happy, with their assistance, to introduce such a Bill; and he had no doubt that Dr. Lyons, one of the city members, and probably other members, would aid him in doing so. There would be but little difficulty in framing such a Bill, as they had before them the admirable model clause drawn up for and adopted by the Parliamentary Bills Committee of the British Medical Association. In any case, he would bring the subject before the Corporation. Dr. McDonnell, as President of the Branch, in thanking the Lord Mayor for his reception of the deputation, said that they were gratified to find his lordship had such an accurate knowledge of the subject. To the admirable proposition his lordship had made, the Branch would give him every assistance in its power.

BELFAST ROYAL HOSPITAL.

THE annual meeting of the friends and subscribers to the Royal Hospital was held on last Monday, presided over by the Mayor of Belfast. The report of the Board of Management stated that, through the exertions of Mr. C. W. Shaw, a sum of £1,000 was raised, to assist in removing the debt on the institution at the end of August 1879; and that bequests and donations had been received, since the last annual meeting, which included £2,588 from the late Surgeon-Major Allan Bryson, £100 from the late James Wilson, and £1,570 from the late Miss Hutton. Collection-boxes have been placed in hotels, banks, and other places of public resort; and the Committee trust that these simple and inexpensive means will help to assist the funds of the hospital. The last Sunday in the year having proved to be not the most suitable day for the Hospital Sunday collection, after mature consideration, it has been altered to the last Sunday in November. The Board acknowledged with much pleasure the services of the attending physicians and surgeons, their untiring zeal, and the care with which they had discharged their onerous and responsible duties. During the year, Dr. J. W. T. Smith and Dr. John Moore retired by rotation, but were re-elected. The drainage of the hospital has received a thorough overhauling, under the superintendence of Dr. Browne, J.P., Medical Superintendent Officer of Health for the borough; ventilating shafts have been erected; and the entire sewerage of the institution placed in as perfect order as the existing drains and levels will permit. With great regret, the Board of Management had to apply for authority to expend a large proportion of the donations and bequests, to meet the current expenditure and clear off outstanding debts. No other course, however, was left to them, if the work of the hospital was to be carried on in full efficiency, as, notwithstanding every effort on their part to increase the permanent income and diminish the expenditure, a deficiency still remained. The fixed annual income of the charity does not suffice to carry on the institution as at present working; and recourse must either be had to capital sums, which the Board would gladly invest, or the usefulness of the hospital must be materially reduced. As regards the Convalescent Home and Throne Children's Hospital, which are in connection with the Belfast Royal Hospital, we learn that, during the year, 130 patients were admitted to the Convalescent Home, and 41 children to the other institution. The general subscriptions for the year amounted to £1,466 18s. 6d., being £37 12s. less than that received the previous

year; and, in donations and bequests, there was a decrease of £95, as compared with the previous year. The artisan class have, however, increased their subscriptions by nearly £189, and there was an increase of £65 3s. 9d. in the collections from places of worship. The receipts from all sources amounted to £6,386 15s. 6d., which includes £1,371 15s. 1d. taken out of bequests and donations, an arrangement which caused considerable discussion, but, ultimately, the report was adopted. From the Medical and Surgical Report, it appears that, during the year ending 31st August last, 1,535 new cases were admitted to the wards; these, with 74 cases remaining from the previous year, made a total of 1,609 persons treated as internal patients, of which 597 were medical and 1,012 surgical cases. Eighty-two patients died during the year, of whom 13 were moribund on admission. There were 179 surgical operations performed, with a mortality of 13—equal to 7.2 per cent. Chloroform was administered one hundred times, but no mention is made of ether as an anæsthetic. The mortality in the medical cases admitted was 5.53 per cent., in surgical cases 4.84 per cent., while the average mortality was 5.09 per cent. In the extern department, 14,867 persons were under treatment, necessitating 5,084 minor operations. Clinical instruction was given in the wards to 230 students during the winter session, and 152 during the summer session. The Lord Bishop of Down moved a vote of thanks to the medical and surgical staff for their services during the year, which was adopted, and the proceedings shortly afterwards terminated.

GUY'S HOSPITAL.

SUBJOINED are copies of the letters of resignation of Dr. Habershon and Mr. Cooper Forster.

"*To the President, Treasurer, and Governors of Guy's Hospital.*

"My Lords and Gentlemen,—After a connection of nearly forty years with Guy's Hospital, twenty-seven of which have been passed on the medical staff, I now feel compelled to resign into your hands the appointment of physician. My resignation has been postponed until I had discharged my obligation to the senior students, by giving the course of clinical lectures which I have this day completed. Had I studied my own feelings, I should have retired some months ago, but I felt reluctant to sever my connection with my colleagues, and with a hospital which has hitherto been held in the highest honour throughout the world. I may state that the restoration of the patients placed under my care has been my constant aim. The experience of so many years has given me knowledge of their requirements, and my regard for their interests has led me to continue my protest against the nursing arrangements of the last twelve months.

"My opinion as to the mischievous character of the system introduced remains unchanged; and, under the present circumstances, I can no longer retain my office of physician to Guy's Hospital, especially after the course pursued by the governors towards their medical staff.—I am, my lords and gentlemen, your obedient servant,

"S. O. HABERSHON, M.D.

"70, Brook Street, W., November 13th."

"*To the President, Treasurer, and Governors of Guy's Hospital.*

"My Lords and Gentlemen,—For some time past, it has appeared to me impossible that I could continue to hold the office of surgeon to Guy's Hospital; but the great pleasure and pride I have formerly found in all my work there, long-cherished associations, the natural desire not to separate myself from my colleagues during a period of difficulty and disaster, and the hope of a speedy issue to the present miserable strife, have made me loth to sever an attachment of more than forty years; but the more recent events in this struggle have convinced me that the chances for our hospital of wise or enlightened government are still very remote; that the desire of party triumph and personal aggrandisement will yet prevail over any adequate sense of the obligation and responsibility involved in a public trust.

"I cannot, therefore, consent to work any longer under such conditions, even at Guy's Hospital; and, however much I have endeavoured to avoid it, the conclusion is now forced on me, that I am bound alike in honour and duty to resign my appointment. I remain, my lords and gentlemen, your obedient servant,

J. COOPER FORSTER.

"29, Upper Grosvenor Street, W., November 13th."

THE NAVAL MEDICAL SERVICE.

WE are glad to have it in our position to announce that the issue of the new regulations for improving the pay, etc., of medical officers of the Royal Navy may very shortly be expected; and that the usual examination of candidates for the Naval Medical Service will, in all probability, take place in February next.

AMERICAN NEUROLOGICAL ASSOCIATION.

THE sixth annual meeting of the American Neurological Association was held in New York, on the 16th, 17th, and 18th of June, presided over by Dr. F. T. Miles of Baltimore. About thirteen members were present.

Dr. W. A. HAMMOND read two papers. The first was on a case of Myxœdema, accompanied with an account of all that was published on this disease, except Savage's description of its occurrence on the adult male. The second communication claimed independent recognition for Thalamic Epilepsy, as illustrated by two detailed observations, which did not differ essentially from ordinary examples of epilepsy. One was a clear instance of epilepsia mitior preceding convulsive and maniacal fits; while the other dealt with the report of symptoms by the patient himself and his wife, which, of course, was deficient in clinical completeness. Moreover, the views on the pathology of the optic thalamus held by Dr. Hammond are not altogether in accordance with our classical observations; for which reason, the nosological existence of thalamic epilepsy, as he presents it, stands on speculative clinical and pathological grounds.

Dr. ROBERTS BARTHOLOW'S researches on the Transfer of Sensations were among the most important subjects brought before the Association. They set forth that secondary pain, by irritation of a nerve, is always referred to the corresponding position on the upper member of the same side, and never on the other side; whereas the fall of temperature by the refrigeration of a member affects symmetrical points of the same and opposite sides.

Dr. J. J. MASON read a paper on the Central Nervous System of Reptiles and Batrachians, and on Diameters of the Nuclei of the Nerve-Cells in the Spinal Cord.

Dr. S. G. WEBBER of Boston presented specimens of Swollen Axis-Cylinder, with history of a case of Acute Parenchymatous Myelitis. During the general discussion originated by this case, Dr. J. S. Jewell made some curious remarks on the treatment of acute myelitis—when the fever had abated, and the temperature was not above normal—by absolute rest and the administration of strychnia, rapidly increased to one-tenth of a grain three or four times a day. No diagnostic distinction was, however, established of the exact kind of spinal disorder in which this bold method proves useful; wherefore doubts were almost unanimously expressed by members of the Association as to the cases in question being of real acute myelitis.

Other papers on the Medicinal Use of Water, on the Use of Quinine in combination with Sedatives, and on the Bromide of Ethyl as an Anæsthetic, were respectively read by Drs. WEBBER, L. C. GRAY, and OTT, and followed by discussion.

Dr. V. P. GIBNEY reported three cases of Meningitis Spinalis, and Dr. J. J. PUTNAM, of Boston, the history of a case where the facial nerve was stretched for spasm, and three days after the operation showed loss of reaction from the electric current.

Dr. BEARD related at length his experiments with the "Jumpers" or "Jumping Frenchmen of Maine". Like others who have written on this subject, he looks upon their disease, "analogous to the mental or psychical hysteria" (is there any other kind of hysteria?) as a "trancoidal condition", "a temporary trance, induced by reflex irritation and the emotion of fear". Probably, "the disease was an evolution of tickling: the habitual tickling each other in the woods".

During the last day's meeting, papers were read and discussed—on Jacksonian Epilepsy, by Dr. Grahame M. Hammond; on Acute Muscular Atrophy without Lesion of the Cord; and also on Numbness, by Dr. Putnam; on a Hysterical Case, by Dr. Spitzka; on the Diagnostic Significance of a Dilated and Mobile Pupil in Epilepsy, by Dr. L. C. Gray; and on a remarkable Tumour of the Encephalon, by Dr. W. R. Birdsall, of New York. We should simply notice that the phenomenon which Dr. Gray has described as new has been pointed out, some time ago, by Dr. Gibson, as the *Ophthalmic Sign in Hysteria*, and subsequently fully described by Dr. Beard, in its relation to the diagnosis of fits, and as a valuable sign to detect simulated paroxysms of epilepsy. Dr. Birdsall's case is highly instructive, and refers to three fibro-sarcomas, respectively located in the right fronto-parietal region, the oblong medulla, and attached to the left auditory and facial nerves. The patient, a young female, suffered since infancy from atrophy of the left side of the tongue, and her paralytic symptoms were complicated with double optic neuritis and atrophy of the optic nerve, and tinnitus aurium. There was no ascending or descending degeneration. The microscopic appearance of the tissue surrounding the tumours exhibited

remarkable preservation; but the motor cells in the left hypoglossal nucleus were atrophied and few in number.

Some other papers were read by title: on the Homologies of the Mesencephalon in the Vertebrate Series, with the description of a new Mesencephalic Ganglion, by Dr. Spitzka; on the Structure of the Sympathetic Ganglionic System, by Dr. H. D. Schmidt; on the Temperature of the Head, by Dr. J. J. Lombard, etc.

At the last meeting, the Secretary communicated a letter from Dr. Hammond to the Association, offering a prize of five hundred dollars, to be awarded by a Committee of the Association, at the annual meeting of 1882, to the author of the best essay that may be written on the Functions of the Optic Thalami. Drs. Miles, Seguin, and Jewell were appointed a Committee to decide in regard to the merits of the papers presented for this prize.

Resolutions were also adopted by the Association in reference to the care of the insane in America.

INTRODUCTORY ADDRESSES AT THE MEDICAL SCHOOLS IN DUBLIN.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

THE first of the inaugural addresses for the ensuing session in the Dublin medical schools and hospitals was delivered in the School of the Royal College of Surgeons in Ireland on the 25th ult., by Mr. H. R. Swanzy, Professor of Ophthalmic and Aural Surgery in the College. The main portion of Mr. Swanzy's address consisted, naturally enough, of a discourse on the acknowledged importance to the medical man of an acquaintance with ophthalmic medicine and surgery. Coming to the question of medical education, Mr. Swanzy said he recognised the fact that the student was over-lectured. But the tendency at present was, as it ought to be, to teach practically. He referred to the grievances of the Indian Medical Service; and took credit for the College for the efforts it had made in endeavouring to maintain the dignity of the profession. In alluding to the conjoint scheme, Mr. Swanzy said that the College was worthy of the esteem it had enjoyed, and was worthy, too, of the pride of its licentiates; and it would be so to the end of time if preserved from the calamity of a conjoint scheme. If such a scheme were adopted, the College would become little more than an ornamental board, a result which, he hoped, would never come to pass.

ST. VINCENT'S HOSPITAL.

DR. QUINLAN, physician to the hospital, gave the introductory address here on the 28th ult. He first spoke of the improvements in the hospital, and the facilities for teaching it now possessed. The death of Mr. O'Leary, M.P., who was one of its surgeons, was referred to with expressions of regret; and the subsequent changes in the staff were noticed. After a brief consideration of some of the various aids to scientific medicine, such as the ophthalmoscope, spectrum-analysis, polarised light, the laryngoscope, microscope, endoscope, and sphygmograph, the lecturer, while insisting upon the necessity of the careful study of these methods of investigation, warned the student against the grievous error of relying unduly upon them, and neglecting the clinical observation of disease. Speaking of the importance of medical chemistry, Dr. Quinlan expressed the wish that chemistry, botany, and physics could be learned and disposed of at the preliminary examination, before the student entered upon his four years' regular medical curriculum. There was too much forced into the present four years' curriculum; and, while something was constantly being added on, nothing was being taken off. The tension was becoming too great; and the obvious remedy was the diminution of the lectures to one course in each department, except anatomy and dissections, in which there ought to be two separate courses—a junior and a senior. The lectures ought to be changed from mere professorial discourses to half of demonstration and a remainder of catechetical examination; and no student should get a certificate who had not attended a proper proportion of the lectures, and at each satisfied his teacher as to his knowledge of the previous one. Dr. Quinlan did not believe that any examination solely depended upon, and open to all comers, could be a proper test of a thorough professional education. But when a medical corporation required a candidate to produce evidence of having received a proper medical training, and had then, by practical examination, partly clinical, done its best to ascertain that he had taken advantage of it, it would then have done all that could be done. The education should be a progressive, practical, and systematic one, and not mere cramming for a pass. Dr. Quinlan thought that the licensing bodies should require a roll to be called at hospital. At present, the only body which took any precautions in this respect was the University of Dublin; and their method worked well. In conclusion, Dr. Quinlan referred to the condition of the Irish medical dispensary officer, and contrasted it with that which the army medical officer now enjoyed. He advised that the same means which the junior members of the profession adopted to improve the latter service—viz., by not entering it—should be put in force as regards the Irish Poor-law Service, until it was improved.

MATER MISERICORDIÆ HOSPITAL.

THE opening address of the twenty-first annual session of this hospital was delivered by Dr. T. MORE MADDEN, obstetric physician. He addressed the new students on the nature of the profession they had chosen, and the method by which they might prepare themselves for its responsibilities; and then proceeded to point out the value of clinical study. To it all other branches of medical education should be subservient. They were, indeed, essential, and the students should acquire, as soon as possible, as much rudimentary scientific knowledge as would enable them to interpret the otherwise unknown tongue in which disease revealed itself. But the hospital was the only safe text-book in which the art of medicine could be learned. The hospital, the largest of its kind in Ireland, afforded unsurpassed opportunities for the practical study of every branch of the profession. From the youngest tyro, to the oldest member of the medical staff, all were bound together by the reciprocal ties of mutual consideration and respect, which befitted those who, whether senior or junior, were fellow students in the great school of medical science. Pupilage did not end on emancipation from the terrors of examination, but guarded the portals of that wide domain of science, which the longest life would not suffice to explore thoroughly. The duties performed in this institution by the sisters of mercy, by whose exertions it was founded and maintained, exemplified, in its perfection, woman's true and high mission in relation to medicine.

In speaking of the primary importance of clinical study, he disclaimed any intention of undervaluing the allied sciences on which medicine rested. The medical practitioner should take an intelligent interest in every branch of science which might either directly illumine, or shed its reflected light on pathology and therapeutics. It was essential to possess some knowledge of the natural laws governing all those agencies that might influence either physical or mental health. Whilst recognising to the fullest the triumphs of modern scientific medicine, he warned the students against the too prevalent fallacy of completely disregarding all the teachings of ancient medical experience. Reference was made to the fact that, in ancient days, Ireland was not less noted as a seat of learning—*insula doctorum*—than it was as an abode of sanctity—*insula sanctorum*; and at a period when the flickering flame of science was almost extinct in many parts of Europe, it still burned comparatively brilliantly in this remote island. In the library of the Royal Irish Academy there existed an extensive collection of ancient Irish medical manuscripts. In some of these documents, written in the twelfth century, there was evidence of a high degree of intellectual and scientific culture, as well as of an intimate acquaintance with classic medical literature.

Dr. Madden congratulated those who were about to commence the study of medicine on the near prospect of having a feasible system of university education within reach. The new Royal University, it might be hoped, would be an institution in which every Irish medical student might seek, and, if worthy, might obtain, the great advantage of an university stamp on his medical qualifications.

In a general introductory lecture, he would avoid giving any details concerning gynæcology, and would only say a word on the importance of giving some consideration to it. To fit the pupils for their duties in regard to this subject, the preparation demanded by the licensing bodies was lamentably deficient. This deficiency they might, however, to some extent provide against, by voluntarily availing themselves of the clinical lectures on the subject. None of the special branches of modern medical practice had made more rapid progress than gynæcology. Twenty years ago, many of the complaints now included in this province were either unknown, or entirely ignored, by the ablest clinical teachers of that time, who had not the advantage of those methods of investigation, by the aid of which the humblest medical practitioner could now easily recognise diseases which then baffled the most eminent members of the profession. Dr. Madden referred to the changes of opinion in regard to the use of the speculum, flexions of the uterus, etc., and remarked that such transitions of medical opinion on matters of practical importance, well illustrated the aphorism of Hippocrates, "Experience is fallacious and judgment is difficult", and showed the risk of the premature acceptance or rejection of new ideas. At the same time, he strongly advised his hearers, whilst availing themselves of every new light of science, to be most cautious in departing

from the well-known and approved rules of practice. In their future practice, difficulties would present themselves, and complications arise, which no mere book-learning would enable them to deal with fitly. In these moments of trial, when human life would depend on soundness of judgment and on promptitude of action, they would face the emergency calmly, and act judiciously, in proportion as they now availed themselves of the opportunities afforded of acquiring a store of sound clinical knowledge.

THE MEATH HOSPITAL.

MR. HEPBURN, one of the surgeons of the hospital, delivered the introductory address. The medical profession, he said, might be fitly compared to a vast army, possessing different elements, but combining for a common cause, and making up a grand harmonious force that is ever at war with disease and suffering—like St. George in the fable, ever doing battle with the numerous dragons which still infest this world, and, after some brilliant victory over an enemy, still marching on to further achievements. The greater portion of the address consisted in good advice to the students present, and recommendations as how best to utilise the golden opportunities presented to them in the hospital.

HOUSE OF INDUSTRY HOSPITALS.

MR. WILLIAM STOKES delivered the inaugural address for the session at the Richmond Hospital. At the outset, the lecturer devoted himself to a consideration of the effect produced on medical and surgical science by the promulgation of the germ-theory of disease. He then referred to the loss which the staff of the hospitals had sustained by the death of Sir Dominic Corrigan, and enumerated his most important contributions to medical literature. Sir Dominic Corrigan, he said, was not one of those who wrote for practice, but from practice. The outcome of close, diligent, and accurate "observations, rendered fruitful by study", his contributions stood out in bold relief in the medical literature of this century as gems, the beauty and truthful lustre of which time can never tarnish. Of this distinguished physician, he might in truth say that few, if any, of his contemporaries did more to elevate his calling, increase the *prestige*, or maintain the high and honourable position of the profession, than he did. In conclusion, Mr. Stokes remarked that the present was a time in the history of the profession than which none was ever more important or critical. Never had public opinion been more, or as much, directed on it as at present, as evidenced by the deep interest now taken in all matters connected with sanitary science; in the efforts that have been and are being made to reform professional examinations; in the fact of our universities beginning now to take so keen and deep an interest in the furtherance of medical science and education; and by the fact that the profession is now, through its accredited representatives, always consulted on questions of medical reform by each successive Government. This side of the picture is pleasant enough to contemplate, but there is a dark side which we must also look at. We cannot shut our eyes to the fact that, side by side with this increased public interest in our profession, we observe the development of a school of sentimentalists whose ill-directed, though, perhaps, well-meant efforts, hysterical and persistent shrieking, have made outlaws of physiologists; and, not content with that, they are now engaged in thwarting the practical, successful, and most praiseworthy efforts of those who are endeavouring to mitigate or destroy that fell disease which, in the words of Marion Sims, is a "greater scourge than yellow fever and cholera and small-pox combined, quietly installed in our midst, sapping the foundations of society, poisoning the sources of life, rendering existence miserable, and deteriorating the whole human family". Another outcome of the action of the sentimentalists of the present day is the outcry against vaccination, by the discovery of which, it has been well said by Sir James Simpson, Jenner "shut one of the gates of human death".

THE LEDWICH SCHOOL OF MEDICINE.

THE introductory address in this school was delivered by Mr. A. H. BENSON, lecturer on Ophthalmic and Aural Surgery. Referring briefly to the vexed question of medical education, the lecturer would recommend that the student be allowed to study how he liked, and obtain his diplomas where he pleased, as at present, with this exception only, that it should not be possible for him to register until he had passed a Government test-examination, nor to present himself for this examination until he had obtained a double qualification. Thus the interests of the existing corporations would, he argued, be preserved, and the public protected against the danger of unscrupulous competition between the examining bodies. The tendency would then be to level up instead of levelling down.

The remainder of the address was on a subject connected with Mr. Benson's special department, viz., the ophthalmoscope as an aid to medical diagnosis. It was the employment of instruments of precision, such as the ophthalmoscope, that had of late years given such an impetus to medical diagnosis, and done more than any other cause towards elevating medicine into the position of an exact science. He cited several diseases which could be diagnosed at an early stage by the ophthalmoscope; and stated that he was confident that, in a few years, it would form part of every practitioner's armamentarium. In conclusion, Mr. Benson said that never, since its foundation in 1810, was the Ledwich School in such a flourishing condition as at present; the number of students was greater, and the facilities for teaching better than they had been ever before.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

THE next meeting of this District will be held at the house of Dr. Williamson, 44, Mildmay Park, on Thursday, the 25th instant, at 8.30 P.M., when the following subjects will be introduced for discussion:

1. Dr. Williamson: Scarlatina.
2. Dr. Dowse: Syphilitic Ataxy.

T. STRETCH DOWSE, *Hon. Sec.*

14, Welbeck Street, November 9th, 1880.

BATH AND BRISTOL BRANCH.

THE next ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday, December 9th, at 7.30 P.M.; ALEX. WAUGH, Esq., President.

R. S. FOWLER, E. MARKHAM SKERRITT, } *Hon. Secs.*

Bath, November, 1880.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held on Friday, the 3rd December next, at twelve o'clock, in the Belfast Royal Hospital.

Members intending to read papers are requested to communicate with JOHN MOORE, *Hon. Sec.*

2, Carlisle Terrace, Belfast, November 8th, 1880.

STAFFORDSHIRE BRANCH.

THE first ordinary meeting of the present session will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, November 25th, at 4 P.M.

VINCENT JACKSON, Wolverhampton, J. G. U. WEST, Stoke-upon-Trent, } *Honorary Secretaries.*

Wolverhampton, November 6th, 1880.

VICTORIAN BRANCH: ANNUAL MEETING.

THE first annual meeting of this Branch was held in the Hall of the Royal Society, Melbourne, on Friday, August 6th; the President, WILLIAM GILLBEE, Esq., in the chair.

Report of Council. The following report was read.

"Your Council have great pleasure in reporting to you the success which followed the establishment of this Victorian Branch, and the satisfaction they experience in viewing the extension of this Association to the sister colonies. On September 25th, 1879, this Branch was established, the by-laws to regulate its proceedings were adopted, and the Council elected. At that time we consisted of but 30 members; this number rapidly increased to 62. Our connection with the home Association is a very intimate one, while the BRITISH MEDICAL JOURNAL—the Journal of the Association—helps to increase and foster the bond of union. The total number of members of the British Medical Association is nearly 10,000; the members of the South Australian, the New South Wales, and the Victorian Branches numbering about 170 members. Two most important Branches are now in process of development, namely, one in New Zealand and one in Queensland. It is also intended to establish a Journal for all Branches in Australasia, as soon as the number of members increase to permit it. The few complaints we have had as to the irregularity in receipt of the home journal will now fall away. Any complaint should be communicated to the Honorary Secretary, who will at once see it remedied. Your representatives have established themselves well in the public estimation by dealing with

certain matters that concern the public welfare. One of the first steps taken by your Council was to visit the Kew Lunatic Asylum, and, later on, the Yarra Bend Asylum; and, by the publication of the reports of these visits, inducing the Government to take action to remedy the evils complained of. Following this up, your Council waited as a deputation on the late Chief Secretary (Mr. Ramsay), and presented him with a memorial and a scheme for the future management of lunatic asylums for the colony of Victoria. Your Council regret that the political changes through which the colony is now passing render it difficult for the Government to deal with this important measure. Your Council also received from Mr. Berry (Chief Secretary) a document granting permission to visit the asylums, of this Council, without previous communication. Your Council have also taken an active interest and prominent part in the questions of the Yan Yean water, and the outbreak of diphtheria at Hamilton. Further matters of medical interest, which your Council have tabled to inquire into, and to work out in detail, are: 1. The Medical Amendment Bill; 2. The Charity Organisations and their Relationship to the Medical Profession; 3. Provident Dispensaries; 4. Paying Hospitals; and other matters bearing on the interests of the profession and the public. We are also proud to report that one of our representatives to the Social Science Congress has been elected to the position of President of the Health Section, and that the Vice-President and Honorary Secretary of this Section are also members of your Council. It has been suggested that we might advantageously modify the rules so as to admit of honorary members being added to our list, and such a modification we very cordially recommend. We have made the commencement of a library, several contributions (notably from Baron Von Müller, K.C.M.G.) having been made. There have been five ordinary meetings during the year. Twelve papers have been read. Your Council have met eleven times."

This report was unanimously adopted.

Treasurer's Account.—The Honorary Treasurer (Dr. GRAHAM) submitted the cash statement, which showed receipts amounting to £81 15s. 7d., and expenditure to £74 12s. 6d.; leaving a balance of £7 3s. 1d.

Officers and Council.—The following officers and Council for the ensuing year were elected. *President:* W. H. Cutts, M.D. *Vice-President:* J. E. Neild, M.D. *Honorary Secretary:* Louis Henry, M.D. *Honorary Treasurer:* G. Graham, M.D. *Members of Council:* —. Browning, M.D.; W. Gillbee, Esq.; J. Jamieson, M.D.; T. L. McMillan, M.D.; A. Morrison, Esq.; J. T. Rudall, Esq. *Auditors:* W. Barker, Esq.; —. Haig, M.D.

Address of Retiring President.—The new President having taken the chair, the retiring President (Mr. GILLBEE) addressed the meeting. After thanking the members for the honour which had been conferred on him, he explained how the new Branch came into existence. It was not, as had been believed, started as a rival to the existing Medical Society of Melbourne. The establishment of a Branch of the British Medical Association in this colony had been desired for some time. It was, moreover, felt that the members of the medical profession in Victoria were practically as much removed from their brethren elsewhere in Australasia as if they were on the other side of the world. No member of the profession in Victoria could say at any time what was doing in the profession of New South Wales, South Australia, Tasmania, Queensland, or New Zealand. It was felt that they had common interests; but it was regretted that there was nothing in the direction of common action. When, therefore, a gentleman fresh from the old country had brought with him a distinctly expressed desire that Branches should be formed in the Australian colonies, those who at various times had contemplated such a possibility gladly availed themselves of the opportunity, at once, of allying themselves more closely with the profession in Great Britain, and of effecting an organisation which might help to bring about a more complete brotherhood in Australia. He thought no organisation was ever completed more pleasantly, or with such a harmony of action, as had been the Branch in Victoria. Mr. Gillbee then referred to the two subjects which the Branch had already taken into consideration—the management of lunatic asylums, and paying hospitals; and spoke of the field of exercise for professional knowledge in the improvement of hygienic conditions. The alarming difference in the rate of mortality in Melbourne, as compared with that in the country districts, was a constant reminder that much remained to be done. Certain forms of fever were unquestionably endemic there, and the explanation of their presence was to be sought in the unwholesomeness of the dwellings, and the imperfection of the arrangements for quickly removing all material favouring the germs of disease. It was the manifest duty of the members never to rest in the endeavour to make it by law compulsory upon persons to build properly constructed habitations; and to cause to be removed all material in which the factors of injury to health might lurk concealed. The general mortality was considerably increased by the neglect of instructions given to friends and nurses; and this source of difficulty and death would, no doubt, suggest subjects of inquiry into what might be termed the adjunctive treatment of disease. In many instances, the explanation of this difficulty was the scarcity of intelligent and trustworthy nurses. As a rule, nurses who were not absolutely stupid took too much upon them. They thought they knew better than the medical man, and they thwarted his efforts without the least hesitation. A project was on foot, in connection with the Alfred Hospital, to train nurses; and to this systematic instruction there could be no objection, if only it could be made certain that persons so trained confined themselves strictly to their functions, and did not encroach upon those of the medical man. Nurses, properly trained, who could be trusted faithfully to obey orders, were of inestimable value; but a meddlesome nurse, or a nurse who was careless, or stupid, or irritable, was a constant source of vexation both to the medical man and to the patient. He commended the subject to the attention of the Branch. Mr. Gillbee next referred to the position of the medical profession in the colony. For several years, endeavours had been made to obtain an amendment of the existing Medical Practitioners' Statute. Practically, that Act afforded no protection to the public against unlicensed practitioners. Theoretically, the Medical Act was competent to punish irregular practitioners; but, in the few solitary cases in which attempts had been made to enforce its clauses, the prosecution had virtually failed; and a decision, given some time ago by Judge Cope, in the case of Mohabeer, an Indian medicine-vendor, seemed finally to have settled the question of the utility of the Act. Medical men in Victoria were, therefore, without any rights that the law could enforce, other than that of enforcing a claim for services, and of obtaining appointments. For the last ten years, endeavours had been made to induce various Governments to introduce into the legislature an amending Act; but nothing had been accomplished, and, so far as could be seen, there was no prospect of anything being done. The burning political questions of the time absorbed all the attention of legislators. The draft of an amended Act had long been ready for presentation, and it might be not unprofitable, on some early occasion, to pass it in review at a meeting of the Branch. The great increase in the number of medical students in the University was encouraging; but it was not satisfactory to know that, as yet, no medical graduates had been elected to the Council of the institution. He was gratified to know that Branches had been formed and were in course of formation in New South Wales, Queensland, and South Australia; and he hoped that, before long, there would be sufficient alliance between the Branches to make it possible for annual meetings to be held in the capitals of the several provinces of Australia. Such a federation of interests necessarily suggested the desirability of establishing a publication, in which to record the transactions of the Branches. It is true that they had a limited claim upon the conductors of the BRITISH MEDICAL JOURNAL to record meetings and print papers; but, as a matter of course, there were many topics which would possess not more than a local interest, and for the making known of these a local publication would be necessary. As the conductors of the *Australian Medical Journal* had refused to accept the reports furnished by the Honorary Secretary, there was no alternative but to establish another organ. In conclusion, he congratulated the Branch on the complete success which had attended its formation and progress, repeated his thanks to the members for having elected him President, and expressed, in the name of the Branch, thanks to the Royal Society for permitting the use of their room for the Branch meetings.

Supper.—On August 20th, the members of the Victorian Branch celebrated their first anniversary by a supper, at which forty members sat down. The ex-President (Mr. Gillbee) occupied the chair; and amongst the invited guests were: Mr. Gray (President of the Medical Society); Mr. Ellery (Royal Society); Mr. Blackett (Pharmaceutical Society); Dr. Ralph (Microscopical Society); Dr. Lucas (Naturalists' Society); Dr. Brownless (Vice-Chancellor of the University); and Baron Von Müller. Dr. Renwick (President of the New South Wales Branch of the Association) was also invited, but was unable to be present, being obliged to leave Melbourne.

After the usual loyal toasts had been disposed of,

The CHAIRMAN proposed "The Parent Society"; coupled with the names of the Honorary Secretary and Founder; and, in doing so, said that he was sure that all of them, as Englishmen, Scotchmen, or Irishmen, would feel their hearts warm to the old Society, and pride at being a Branch of that Society. There were now upwards of 8,000 members of the old Society, and Branches had been established in nearly all the Australian colonies.

Dr. LOUIS HENRY, in responding, stated that the idea and plan of establishing Australian Branches of the British Medical Association had been suggested to him by Mr. Ernest Hart, the editor of the BRITISH

MEDICAL JOURNAL, to whom the institution of this Branch was primarily due. The parent Association was established in 1832, and at the end of the first year numbered 300 members. Thirty-five years afterwards, in 1867, when Mr. Hart undertook the editorship of the BRITISH MEDICAL JOURNAL, they had still only 2,000 members; but that number had from that date rapidly increased, and it now numbered upwards of 8,000. He referred briefly to the objects they had in view—the uniting of all the members of the profession by a common bond; forwarding the great scientific interests of medicine; promoting a higher standard of ethical rule; and, by its extended organisation in the interests of the public, exercising a powerful action upon the Government, as many matters of public medical interest were constantly cropping up, upon which it was desirable that the voice of the profession, as a whole, should be known.

Mr. ELLERY proposed "The Victorian Branch of the British Medical Association".

The CHAIRMAN, in reply, said he was very proud to be the first President of such a Society. He had seen many societies formed in Melbourne, but few had been as successful as that. They had only been in existence twelve months, and now numbered nearly 70 members.

Dr. NEILD proposed "The other Branches in the Australian Colonies"; and expressed a hope that, ere long, they would be formed into a medical federation, and would hold their annual gatherings in the various capital towns of the colonies. Dr. GRAHAM responded.

"The health of Dr. Louis Henry" was proposed by Dr. CUTTS, with a warm and eulogistic acknowledgment of his services, and was enthusiastically drunk. He responded, assuring the members that his success had been largely due to their aid and forbearance.

Amongst the other toasts proposed were "The Medical and Scientific Societies of Victoria", "The Medical School of the University", "The Health Section of the Social Science Congress", "The Hospitals", "The Host", "The Ladies", etc. Several of the gentlemen enlivened the proceedings with songs, etc., and altogether a very pleasant evening was spent.

SPECIAL CORRESPONDENCE.

MELBOURNE.

(FROM OUR OWN CORRESPONDENT.)

THE first annual report of the Victorian Branch of the British Medical Association shows the increase of the Branch to seventy members. The report also gives evidence of a large amount of work done during its first year, while the balance-sheet of the Treasurer shows a sum to credit. The address of the retiring President carefully reviews the work of the Society; refers to matters of medical local interest; and proposes a number of medical topics which might be advantageously discussed under the guidance of the new President. Mr. Gillbee, the retiring President, in the latter part of his address, expresses the honour he feels at having been the first President of the Branch, and the pride he has experienced in reviewing the extensive growth of the Society. Dr. Cutts has been elected President for the ensuing year, and Dr. Neild, Vice-President.

The indiscriminate admission of persons, who, when they have met with an accident, are taken to the public hospitals, was the subject of a paper read by Mr. Rudall at the last meeting of the Branch. Mr. Rudall remarked that hospitals have been hitherto established for those who cannot procure the help their cases require in the ordinary mode—by paying for it. The police are accustomed to take every subject of an accident to the hospital straightway, a method which seems to meet with the approval of the general public. Mr. Rudall hopes that his remarks might induce the Victorian Branch to give a collective opinion which might have some influence on those concerned in the administration of hospitals. It was ultimately decided by the meeting that a letter should be forwarded to the Chief Commissioner of Police, drawing his attention to the fact of the police taking nearly all cases of accident to the hospital, and requesting him to instruct the police to make inquiries in such cases, and see if the persons could not be taken to their own homes.

At the same meeting, the Honorary Secretary, Dr. Louis Henry, drew the attention of the Society to the great adulteration of food in this colony, and the great difficulty in obtaining a conviction against the sellers of adulterated food, through notice being required to be given them, by a purchaser who intended to have the food analysed, of his intention in that respect; he also informed them that steps were being taken to bring in a Bill to amend the Public Health Statute, in order to overcome the difficulty in obtaining convictions.

A school for the training of nurses has been opened in connection with the Alfred Hospital. It is the intention to educate the nurses by means of lectures and demonstrations; the subjects to be taught will be very exhaustive, and comprise the elements of minor surgery and medicine. Dr. Louis Henry, who was the initiator of this movement, has taken an active interest in the carrying out of this scheme.

CORRESPONDENCE.

GUY'S HOSPITAL.

SIR,—I have just read the letters of resignation of Dr. Habershon and Mr. Cooper Forster, the senior physician and the senior surgeon of Guy's Hospital. The unhappy contest at Guy's now enters on a new phase; and it seems to me a favourable opportunity for the profession at large to show how deeply it sympathises with the medical staff. The contest is one in which every medical man is interested, and in its issues some of our most cherished rights and privileges are involved. It is our duty to express our approval of the manly course adopted by Dr. Habershon and Mr. Cooper Forster, and to give all the moral and material support in our power to their colleagues, who have to carry on the struggle. With this view, I would suggest that a fund should be raised: (1) to present the two gentlemen named with some mark of the approbation of the profession; and (2) to aid the staff of Guy's in any constitutional method for procuring redress for their grievances.—I am, sir, yours very truly, B. F.

November 15th, 1880.

SIR,—Now that the resignations of Dr. Habershon and Mr. Cooper Forster are accomplished facts, will you allow me a morsel of space for a suggestion? While leaving the broader question at issue, in the late deplorable strife at Guy's, in the hands of the British Medical Association, let old Guy's men, who have been associated with Dr. Habershon and Mr. Forster as clinical clerks, dressers, or students, take this opportunity of expressing their united regard and sympathy for them in the step they have taken in thus voluntarily severing their time-honoured association with Guy's. After having spent the better part of a lifetime as teachers within its walls, their last year has been embittered by conflict and controversy; and they have felt themselves compelled to resign, in obedience to the dictates of duty and honour. Will it not be a peculiarly fitting opportunity for their old friends and students to present them with an address, accompanied by a substantial mark of their appreciation of their labours in the happier past, and their deep sympathy for them in the troubles of the present? I will gladly take my share in the organisation of the work.—I am, sir, etc.,

HENRY ASHBY.

13, St. John Street, Manchester, November 16th, 1880.

UNCERTIFIED CAUSES OF DEATH.

SIR,—The leader in the JOURNAL of November 13th, on Uncertified Causes of Death, gives no alternative view of the question; and I will venture to put in a plea for a body of public servants, also medical men, who act as registration-officers. I will, in few words, submit that the proposed duties, in cases where no certificate of death from a registered medical man is produced, could be well allotted to those registrars of births and deaths who are medical men; and, as there are upwards of one hundred and twenty doctors doing duty as registrars in England and Wales alone, I venture to claim consideration. I have no wish to disparage the suitability of medical officers of health for the duties; but I do hold that a registrar of births and deaths, who is also a registered medical man, is well fitted for the post; and that, from the fact that his district-area is generally compact, and his local knowledge superior to a medical officer of health, acting possibly for a county or combined sanitary district, the registrar's appointment would be well and economically made. In the hope that legislation will ensue in the direction you have indicated, I ask your impartial sympathy on behalf of those medical men who are, like myself, a REGISTRAR OF BIRTHS AND DEATHS.

November 1880.

DEATHS FROM CHLOROFORM.

SIR,—It is, unfortunately, too true that deaths still occur during the administration of chloroform. Mr. Lister used to teach, in Edinburgh, that these deaths are due to faulty administration. Of the truth of this teaching I have long been convinced. "Want of attention", instead of the custom my "fatty heart", would perhaps more truthfully represent the cause of such deaths. The fatal result is brought about in two ways: first, by an overdose of the narcotic; secondly, from

shock, the operation being commenced before the patient is fully anæsthetised. Both generally take place during the performance of a minor operation. The chloroformist is helping the surgeon, and not minding his own business—hence an overdose; or the matter is regarded as so trivial that it is not thought worth while to administer a sufficient dose to cause abolition of reflex action, and the shock of the operation is communicated to the respiratory and cardiac ganglia. Without doubt, it is quite easy to give chloroform; but, that this may be done safely, a certain amount of knowledge and practice are requisite. At the present time, students pass through the curriculum of our English schools, and become qualified practitioners; yet the majority of them have never administered an anæsthetic in any form. I contend that the administration of anæsthetics should be taught at our hospitals; and that the advanced students should have opportunities afforded them of anæsthetising patients, under suitable supervision. When the importance of this step is fully recognised, and means are employed to remedy a very serious omission which now exists in our curriculum, then, I believe, deaths from chloroform will be very rare; and the dread of anæsthetics which is at present prevalent, and not without cause, amongst the public, will gradually disappear.—I am, sir, yours, etc.,

THOMAS F. CHAVASSE.

Birmingham, November 15th, 1880.

ETHER v. CHLOROFORM.

SIR,—I am glad to observe the persistence with which you continue to call attention to the superior safety of ether to chloroform as an anæsthetic; and I join with Mr. Hutchinson in the hope which he expresses, that you will continue your advocacy of the safer anæsthetic until ether is used in all suitable cases.

Dr. Beckingsale, in the JOURNAL of November 6th, argues that an unfair comparison has been made between chloroform and ether, because (*a*) "chloroform is given to a far larger proportion of generally recognised dangerous cases than is any other anæsthetic"; and (*b*) because "chloroform is the anæsthetic almost exclusively used in operations in the cavity of the mouth and on the palate", which, he considers, is "a still more potent cause for the higher rate of mortality accruing from the use of chloroform"; from which Dr. Beckingsale concludes (*c*) "that, if ether and chloroform were given in cases of a similar degree of risk, the mortality from the two would be found to be very much on a par".

The subject is of so much importance, that I venture to ask space to controvert very briefly both the facts and conclusions of Dr. Beckingsale's letter.

a. In many hospitals, and in the private practice of many surgeons, it is now the custom to give ether for all operations, both slight and severe, the duration of which is too long to admit of the convenient use of nitrous oxide gas; with the exception, perhaps, of staphylorrhaphy, which is usually performed upon children, who are especially favourable subjects for all anæsthetics.

b. If we except staphylorrhaphy, in which the greater secretion of saliva to which ether gives rise is certainly a source of some inconvenience, I think Dr. Beckingsale is in error in supposing that chloroform is the anæsthetic almost exclusively used in operations in the cavity of the mouth and on the palate; for I have both seen in the practice of other surgeons and have myself performed many such operations, in which ether has been the anæsthetic used; and I have administered ether in some hundreds of severe dental operations, for which, indeed, it is in daily use.

c. The conclusion of Dr. Beckingsale's letter is, I think, almost sufficiently answered in the letters of Mr. Hutchinson and Dr. Jacob, which immediately precede it in the JOURNAL. To the statements therein contained I may, however, perhaps be allowed to add my conviction of the very much greater safety of ether, inasmuch as that conviction is based upon a very large experience in the administration both of chloroform and of ether: an experience which includes persons of all ages and almost every kind of operation, and which is not open to Dr. Beckingsale's objection that chloroform was given to the more serious cases, inasmuch as, before the reintroduction of ether at St. George's, I was in the habit of using almost exclusively chloroform, and since then have used almost exclusively ether. Moreover, I have given ether in cases of the very kind which Dr. Beckingsale considers most dangerous—"bronchitis, phthisis, and extreme abdominal distension"; and have used it with great advantage in cases of grave depression and shock, in which I should certainly not have ventured to administer chloroform. (See my paper in *Med.-Chir. Trans.*, vol. lv.) But the consideration on which I wish to lay the greatest stress is, that the dangers of chloroform are of a kind which it is often impossible to foresee; that they occur suddenly; and, when they arise, are usually hopeless to overcome; whereas those which pertain to ether can generally be foreseen, and, with care, averted; and, when they do arise, they are much more often remediable.—I am, sir, yours obediently,

WARRINGTON HAWARD.

16, Savile Row, November 10th, 1880.

SIR,—I have read with interest the several letters in your issue of November 13th, all condemning chloroform as an anæsthetic. I perceive that no one says a word for bichloride of methylene, an anæsthetic which of late I have frequently administered. I have generally found that two drachms, given in an inhaler similar to that mentioned by Mr. Paul in your last issue, produced total insensibility, which can be easily kept up by the occasional addition of a drachm or so. In administering it, I always hold the inhaler at a distance of two or three inches from the nostrils for the first thirty seconds, gradually diminishing the distance until it firmly presses on the face; and thus avoid the struggling so often occasioned by the too rapid administration at first. If it be given too quickly at first, or for too long a period, vomiting is likely to ensue, commencing on recovery from the anæsthetic, when it does not last long; and, in a few cases I have had, not coming on for two or three days after, when it lasted longer and was more severe. I have administered it for plastic operations, lithotomy, amputations, reductions of dislocations, etc., and always safely, as far as the anæsthetic has been concerned; and, in one case, the patient had a distinct mitral murmur.—I remain, sir, yours faithfully,

F. W. H. DAVIE-HARRIS, M.R.C.S.,
Assistant Medical Officer, Suffolk County Asylum; late House-Surgeon to the West Kent General Hospital.

November 16th, 1880.

THE ADMINISTRATION OF ETHER.

SIR,—I cannot but think that the objections raised by your correspondents to the bag-inhalers for ether are more theoretical than practical. I have given ether more than twelve hundred times, using sponge, towel, the frame-inhaler of Dr. Allis (praised by Mr. Paul), Clover's gas and ether apparatus, and his smaller "portable" inhaler. To be drenched with ether from a sponge must be about as pleasant as being drowned. The frame-inhaler is better; but it takes from five to fifteen minutes to produce sleep, and four to twelve ounces of ether for an operation. There is, moreover, often considerable struggling, both at first and during recovery. With Clover's instrument, the narcosis is rapid and tranquil; there is no need to keep the patient cyanosed; the ether and air-supply can be regulated with the utmost precision, and the vapour given warmed to the temperature of the breath, thus avoiding chances of bronchitis, etc. As for struggling, I have only noted it in one out of every eighteen cases, and that to a very slight extent. I have no hesitation in saying that, were I to require to inhale ether, I should have the greatest objection to have it administered by any other method than the much abused bag. I have done my best to extend the use of this class of inhaler, from a strong conviction that, if ever ether is to take the place of chloroform universally, it will be only through the use of an inhaler of simple form, which shall make its administration as easy as that of chloroform, and as pleasant to the patient as to the administrator. Among minor advantages possessed by the bag-inhaler, I may mention that the atmosphere of the room is kept pure, and not drenched with ether—of great consequence in private practice. I have given ether to a large number of aged persons without any ill effects.

To recur to the subject of my former letter—viz., deaths from chloroform. The fact that one has to search not only all the medical journals, but the columns of the daily press, to obtain the accounts of *published* deaths from chloroform, shows how easily such deaths escape the notice even of the most vigilant editors. I am told by a friend, lately attached to one of the largest of the London hospitals, that they generally reckoned on four deaths from anæsthetics in the year: and yet, on referring to the medical journals, I find but one recorded in the past five years, and that from a mixture of chloroform and ether.

With regard to the above mixture, which has been recently recommended by high authority, I may point out that there have been three deaths reported under its use in the last four years. This, considering the small extent to which the mixture is used, must be a high percentage of the whole number.

Lastly, as to the new substances referred to in your leader of last week—viz., methyl-chloroform and monochlorethylen chloride—Richardson's experiments, numerous and exhaustive, gave him reason to think that no carbon-compounds containing chlorine were safe anæsthetics. This constitutes an important difference between chloroform and ether. As yet, none of the chlorine-compounds, chloroform,

chloride of methylene, tetrachloride of carbon, ethylene, dichloride, etc., have been shown to be free from danger; the safest anæsthetics yet known being the non-chlorinous substances, nitrous oxide and ether.—I am, sir, yours, etc., ERNEST H. JACOB, M.D.

Leeds, November 1880.

OBITUARY.

THOMAS HOPGOOD, M.R.C.S., Chipping Norton.

THE death of Mr. Hopgood, M.R.C.S. and L.S.A., aged sixty-seven, took place at his residence in Chipping-Norton, Oxfordshire, shortly after six o'clock on the morning of Friday, October 8th. He was the last of the old practitioners of Chipping-Norton; last year, in the same month, Mr. Farwell died. Mr. Hopgood had been in practice at Chipping-Norton since the time he qualified in 1846. For some time past the deceased gentleman had been in failing health, never having recovered a severe illness he had two and a half years ago, when he was suddenly seized with severe rigors and became unconscious, when exposed for several hours in the cold upon business connected with the office of Mayor. During the past winter, he was confined to his room for some time from a severe attack of bronchitis; from this, however, he so far recovered as to be able to resume his professional duties. A few weeks since, however, he became seriously indisposed, and, as above stated, died on October 8th. He was not one of the old school who cared little about the progress of medicine and surgery; but his greatest interest was in hygiene, and he lived, as he said, to see the greatest improvement that had ever taken place in the town—the supply of good water, and, with it, the almost total disappearance of fever. Mr. Hopgood had for a lengthened time taken an active part in the municipal affairs of the town; he was first elected a member of the Council in the year 1862, and, on the death of Mr. Alderman Rawlinson, was promoted to an aldermanic chair, which he occupied up to the time of his death. Mr. Hopgood had also three times filled the office of chief magistrate of the borough—viz., in the years 1863, 1873, and 1877—and, as a Churchman, acted as churchwarden for several years, the last time being in 1857 and 1858. He leaves three sons, all of whom are in the profession.

GEORGE H. HORNSBY, M.R.C.S., Bromsgrove.

WE regret to record the death of Mr. George Harcourt Hornsby, surgeon, who died of enteric fever at his home in Bromsgrove, Worcestershire, on October 21st, aged twenty-eight years. He was the youngest son of Mr. F. Hornsby of Emscote, Warwickshire. He received his medical education at Queen's College, Birmingham, where he was a diligent student; and he took the diplomas of M.R.C.S. and L.S.A. in 1877. He was subsequently taken into partnership by Mr. R. Prosser of Bromsgrove, at present President of the Birmingham and Midland Counties Branch of the Association. Mr. Hornsby was a young man of much promise; he worked hard in practice, and won the respect of all who knew him. As a lieutenant in the Worcestershire Rifle Volunteers, he was one of the crack shots of his company, and the winner of several prizes by his skill as a marksman. He was also captain of the Bromsgrove Fire Brigade. He leaves a young wife, to whom he had been married only about a year, and an infant child.

EDWARD GOODEVE, M.B.,

DEPUTY INSPECTOR-GENERAL, BENGAL ARMY.

WE notice with great regret the death of Dr. Edward Goodeve, Deputy Inspector-General (Bengal), and Honorary Physician to the Queen, which took place suddenly at Drinagh, near Bristol, on the 27th ultimo, at the age of sixty-four.

The early career of this gentleman was distinguished by such zeal and assiduity in the study of his profession as to attract the notice and approval of the late Sir William Lawrence, who, unsolicited obtained for him the appointment of Assistant-Surgeon in the East India Company's Service, which he joined early in 1841.

This devotion to his profession never ceased during his long service in the East, where, after holding several appointments, including the important post of civil surgeon at Cawnpore, and serving in the field during the second Punjab campaign, for which he received a medal and clasps (for Chillianwallah and Gujerat), he became, in 1850, Assistant Apothecary-General and Professor of Materia Medica in the Medical College, Calcutta. He was subsequently appointed Professor of Medicine in the same College, and *ex officio* Physician to the College Hospital, which offices he held until his final retirement from India in 1864.

During this busy portion of his life, which latterly embraced an extensive private practice, he was unable to devote much time to professional writing; but he contributed several valuable papers to Reynolds's *System of Medicine;* one on Epidemic Cholera, and another on Spinal Diseases of the Liver, being among the most important. At this time also he was commissioned by the British Government to represent it at the Cholera Conference held in Constantinople in 1866-7.

He then settled in London as consulting physician; but, while there, his health failed, and, relinquishing his practice, he retired to Drinagh, where his death took place.

His professional career was marked throughout by the wisdom and soundness of his opinions, as well as noticeable for the success of his treatment; while, as a teacher, he was eminently clear and practical. In private life, he was simple, generous, and affectionate, and his death leaves a void among relatives and friends that cannot easily be filled up.

EDWARD ISAAC SPARKS, M.B.Oxon., F.R.C.P.Lond.

DR. SPARKS was the younger son of Captain William Sparks of Crewkerne. He was educated at the Grammar School of that town, at Harrow, and Corpus Christi College, Oxford. On obtaining the Radcliffe Travelling Fellowship in 1868, he continued his studies at Paris and Vienna; and, on returning to England, held appointments at University College Hospital and Charing Cross Hospital, and afterwards commenced practice in Queen Anne Street. During the winter of 1875, he was compelled by ill-health to reside at Mentone, where, after obtaining a French diploma, he subsequently practised. He was the author of the *Riviera*, a contributor to various medical periodicals, and a reviewer of several foreign medical works. In 1874, he married Emily Sarah, daughter of the late Dr. Panton of Dorchester, and died at Misterton, Crewkerne, on October 11th, at the early age of thirty-seven.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE RECENT POOR-LAW INQUIRY AT ST. MARY ABBOTT'S, KENSINGTON.

ON Tuesday, the 2nd instant, an inquiry was opened at the boardroom in Kensington Workhouse, by Mr. Hedley, into charges made against the relieving officers of Kensington, that they were in the habit of levying black mail from the district medical officers when giving certificates in lunacy.

The Poor-law Inspector stated that the inquiry was instituted in consequence of a statement which had appeared in this JOURNAL in October of last year; that the statement had been the subject of inquiry in Parliament; and that the Local Government Board had directed him to make inquiry into the truth of it. The first witness, Mr. Liddard, district medical officer, and one of the complainants, deposed that he had held his office eleven years; that during the first seven he had complied with the demands of the relieving officers; but that, after conferring with his colleague Mr. H. Lilly, they had come to the conclusion that it was an improper, nay, "blackguardly, thing to do". He had, therefore, for the last four years, refused to give anything; and since that period he had not been called to a single case. The statement that he had thus paid commission was borne out by entries made at the time in his diary. After undergoing a severe cross-examination, his testimony remained unshaken. The testimony of Mr. Liddard was supported by his brother, who produced evidence to show that, in three cases where he had been called in, the relieving officer had been allowed one guinea off a private account he owed him for attendance on his wife and family, or seven shillings each case. Mr. Lilly, the other complainant, gave similar evidence as to his refusal to submit to this blackmailing; and that the result was, that since 1876 he had only been called in to three or four cases, while no less a number than two hundred and seventy-seven cases had been certified to by two medical men only: whereupon the Inspector stated "that the medical officers, as such, had no claim to certify in these lunacy cases". Dr. Goddard Rogers gave evidence that he had been occasionally called in, and had not given the relieving officers anything. The inquiry was thereupon adjourned. On its resumption, Dr. M. Townsend was called, and stated that he had been called in by the justices to certify in a great number of cases. On many occasions, he had made the relieving officer a present, the amounts varying from one to five shillings. "The present had been made when the fee was paid by the relieving officer." He had given

it for the valuable services they had afforded him in getting secondary evidence. It had never been demanded; it had been given voluntarily. Three justices were then called, who deposed that they had not been influenced by the relieving officers in the selection of the gentlemen who had filled in the certificates, but that they had selected either Dr. Townsend or Mr. Godrich, from the belief that they were skilled in lunacy cases. Mr. Resch, the solicitor who appeared for the defendants, now admitted, on the part of his clients, that they had from time to time received money from the medical officers for extra services; he might say *ex officio* services. Getting up the non-medical evidence was, he submitted, the extra services. He also read a letter from Mr. F. Godrich, stating that he had always received the fee in full; but, in return for the valuable services he had had from the relieving officers, he had from time to time made them presents. After some discussion, a written admission by the relieving officers was handed in to the Inspector, who said, on receiving it, that the medical men had distinctly denied these extra services. Knowing, from considerable experience, something of the duty of certifying in pauper cases, we are at a loss to determine what they can be. The relieving officers were then called; and, whilst distinctly denying that any bargain existed between them and the medical officers who had principally certified in lunacy cases, admitted that they had received presents from those gentlemen; one of them, a Mr. Vassie, stating that he had also at times received money from the medical officer called in by the justices, varying in amount from five to six shillings; but that such sums were always given voluntarily, never demanded; that, since 1876, neither Mr. Lilly nor Mr. Liddard had given him anything, but that Mr. Godrich and Dr. Townsend had.

Without anticipating the decision at which the Local Government Board may arrive, consequent on the *résumé* of the evidence and the opinion of its value which will be submitted to it by the Inspector, we feel that we are at liberty, from the evidence given by the complainants, supported as it is by Mr. Liddard's brother and by the admissions of the relieving officers, that a very unwholesome condition of things has for some time existed in Kensington in reference to the certification of pauper lunatics; and we have reason to believe, from information that has reached us, that, if an official inquiry were ordered, ugly revelations would come out as to the doings in other metropolitan unions. Whether the complaint of Messrs. Lilly and Liddard has been borne out by the evidence adduced by them and others, is for the present in the hands of Mr. Hedley and the Local Government Board. This fact, however, cannot be denied, that, after their refusal to give anything to the relieving officers, they were not called in to certify. *The justices did not select them.* We do not assume thereby that the justices had any motive for this, other than that they allege; but, given the correctness of the statement which they have made, it is not very difficult to imagine that an unconscious bias might have been created in favour of the two gentlemen who appear, according to their judgment, to have such a clear insight into the mysteries of pauper lunacy, and who are so willing to pay for the relieving officers' aid. We should hope that the inquiry would induce the Local Government Board to lay down some regulations touching the certification of pauper lunatics, in accordance with the request of the Council of the Poor-law Medical Officers' Association recently forwarded to them; and we express this hope from the knowledge we have of the very varying arrangements which hold in many unions. In a few, the statute relating to the subject is adhered to; in others, every variation of fee, practice, etc., is adopted, according to the penuriousness or liberality of the various boards of guardians, who legally have nothing to do with a pauper lunatic, beyond providing for his safe custody during the period that elapses between information being given to the relieving officer and the removal to an asylum and the payment of the fee to the certifying surgeon, the amount of which rests wholly with the magistrate or justices.

AUTUMNAL DIARRHŒA.

SIR,—As medical officer of health for a city which is, I may say, a "health-resort" I confess to being much and disagreeably exercised in my mind, as to the proper position to be assigned to the abovementioned disease, or rather "disorder" in my "quarterly sanitary report". In the weekly returns of the Registrar-General, it is classed with zymotic or infectious diseases. If I follow this lead, and place all deaths registered from diarrhœa under the head of zymotic diseases, I should swell this abhorred list to dimensions which, though fortunately, in the instance of my city, not very large, yet would be, in my conscientious opinion, unwarrantable and unjust to her fair fame. Such a general classification is entirely against my experience of many years.

At this season of the year, diarrhœa certainly does crop up sometimes to an alarming extent; but I assert there is a wide difference in the characters and consequences of this disease, according to its causation. In my humble opinion, the diarrhœa which is prevalent at this time of the year, owes its origin to one of two causes, and, according to its causation, differs essentially in character, course, and mode of treatment.

First, there is a form of diarrhœa prevalent, and known commonly as "summer or autumnal diarrhœa", which might much better be called "accidental diarrhœa", and is due to causes incidental to the season, such as consumption of unripe or unwholesome fruit, and probably still more to the use as an article of diet of fish in an unwholesome condition, particularly mackerel, which, in many parts of England, are largely consumed at this season. This form of diarrhœa frequently assumes a dysenteric or inflammatory type, and doubtless adds largely to infantile mortality. I cannot conceive how or why this form should be included under the head of "zymotic diseases". There is nothing zymotic in its cause, or infectious in its consequences. Moreover, its treatment differs widely from that which should be adopted in the second form of summer or autumnal diarrhœa, on which subject I have just perused a most interesting paper by Dr. Longstaff, embodied in the *Transactions of the Society of Medical Officers of Health* (Session II. Part I). I quite agree with him in the main conclusions drawn by him as to the imitation of that form of diarrhœa which is the result of "bad air", whether from the "soil" or sewer air, and which may, I suppose, with propriety be called "zymotic diarrhœa"; but an experience of twenty-five years does not corroborate the view that all, or even the majority, of cases of summer or autumnal diarrhœa are due to this cause. I quite agree with Dr. W. Johnston's theory, cited by Dr. Longstaff, that the exciting cause of summer diarrhœa is intimately connected with the process of putrefaction; but I differ from him in his conclusion that the infective material has its sources in the public sewers, and is introduced into the system through the lungs. Such may, doubtless, be the cause in certain instances, but not in the majority. In my opinion, and in accordance with my own experience, in the majority of cases the infective material derived from putrefactive processes is introduced directly through the medium of the stomach and intestinal canal, and not through the more elaborate process of respiration, nor do I believe they they are due to unhealthy atmospheric influences.

It appears to me that it is only fair to the repute of our cities that a distinction should be made between the two classes of cases, and that the gentleman certifying the cause of death should particularise it in some way as to whether it is zymotic or non-zymotic; one would then know under what head to place it, viz., either under the head of "diseases of the digestive organs", or under the head of "zymotic diseases".

I also think that the facts point to the necessity which exists of exercising a more stringent sanitary supervision over the articles of food publicly exhibited for sale in the streets of most of our cities and towns; *e.g.*, fruit, unripe, or in a state of decomposition; fish, in a state of decomposition, or even of putrefaction. Of the latter, quantities are sold, particularly mackerel, which are almost poisonous after twenty-four hours' exposure to the atmosphere in summer or autumn.—Yours faithfully,

A. B. BRABAZON.

Bath, October 18th, 1880.

POOR-LAW MEDICAL APPOINTMENTS.

CASE, P. W. Perkins, M.B. & C.M., appointed Junior Resident Medical Officer to the Whitechapel Union Infirmary, *vice* James Gibson, M.D , resigned.

DALY, James, C., L.R.C.P. & S.E., appointed Medical Officer to the Borrisokane Dispensary District of the Borrisokane Union, *vice* Geo. T. Kingsley, L.F.P.S.G., deceased.

FITZMAURICE, Ulysses, L.K.Q.C.P.I., appointed Medical Officer to Listowel Workhouse, *vice* B. J. Kenny, L.R.C.P.Ed., deceased.

GIBSON, J. Hill, M.D., appointed Medical Officer to St. John's Wood District of the St. Marylebone Union, *vice* Alfred J. Bell, M.R.C.S.Eng., resigned.

MARTIN, John M. H., M.D., appointed Medical Officer to the Third District of the Fulham Union.

MCGREGOR, Duncan Alistair, M.D., appointed Medical Officer to the Denby District of the Penistone Union.

OAKLEY, Henry C., L.R.C.P., appointed Assistant Medical Officer to the Leeds Workhouse, *vice* John K. Pickford, L.R.C.P., resigned.

POPPLEWELL, Thomas W., M.R.C.S.E., appointed Medical Officer to the Wadhurst District of the Ticehurst Union, *vice* Henry Harland, M.D.

RYAN, Joseph M., L.R.C.S.I., appointed Medical Officer to the Third District of the Colchester Union, *vice* Samuel Brough, M.R.C.S.Eng., deceased.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

BRAY, Francis T., L.K.Q.C.P.I., appointed Medical Officer and Medical Officer of Health to the Rathangan Dispensary District, *vice* C. Watson, L.K.Q.C.P.I., resigned.

GREEN, Charles, M.B., appointed Medical Officer of Health to the Gateshead Urban Sanitary Authority.

ST. JOHN AMBULANCE ASSOCIATION (HALIFAX CENTRE).—The fourth lecture was delivered at the Dean Clough Institute, Halifax, on the 18th October, by Dr. Dolan, the subject being, "Bleeding, how to stop it; accidents, how to treat them; bandages, how to use them; emergencies of many kinds, how to act in them." The hall was filled by representatives of all classes.

THE *Broad Arrow* writes that amongst the number of non-combatants who, as Sir Donald Stewart pointed out, have done noble service in the field, may be mentioned particularly Surgeon-Major Preston, of the 66th Regiment. This gentleman conducted himself in danger with professional coolness and a complete disregard for his personal safety. Surgeon-Major Preston was wounded very soon after his regiment had begun to take part in the engagement of Rhushki Nakhud. He was shot through one arm and both loins, and lay on the field helpless till Captain Slade, R.A., finding him lying on the ground, hoisted him upon a gun-limber and carried him into Candahar, thereby gallantly saving a most valuable life.

SURGEON ROBERT WALTER BIDDULPH, M.A., M.B., (1870), has been promoted to the rank of Staff-Surgeon in Her Majesty's Fleet, with seniority of the 8th October.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Second M.B. Examination, 1880. Pass List.

First Division.

Banks, William, University College.
Barnes, George Prescott, St. Bartholomew's Hospital.
Berry, Frederick Haycraft, Guy's Hospital.
Brierley, Samuel, Manchester Royal School of Medicine.
Castle, Hutton, St. Thomas's Hospital.
Day, Donald Douglas, St. Bartholomew's Hospital.
Hartley, Robert Nightingale, Leeds Medical School
Harvey, Alfred, Queen's College, Birmingham.
Hayward, John Davey, University College.
Heriz-Smith, George Arthur, St. Thomas's Hospital.
Jones, Robert, St. Bartholomew's Hospital.
Meek, John William, Guy's Hospital.
Money, Angel, University College.
Newsholme, Arthur, St. Thomas's Hospital.
Paddle, James Isaac, B.A., B.Sc., University College.
Parker, Louis Oldham, University College.
Penny, Edward, Guy's Hospital.
Permewan, Arthur Edward, University College.
Pollard, Bilton, University College.
Rice, Edward, St. Bartholomew's Hospital.
Rixon, Arthur Boswell, St. Thomas's Hospital.
Saunders, Arthur Rich, University College.
Sclater, William, University of Edinburgh and London Hospital.
Shaw, John, St. Thomas's Hospital.
Suckling, Cornelius William, Queen's College, Birmingham.
Wainewright, Robert Spencer, Guy's Hospital.

Second Division.

Baddeley, Charles Edward, King's College.
Bowe, Francis, St. Bartholomew's Hospital.
Brooke, Henry Ambrose Osgood, B.A., Owens College and Guy's Hospital.
Claremont, Claude Clarke, University College.
Colborne, William Wriothesley, University College.
Cuffe, Edward Meade, St. Bartholomew's Hospital.
Dalton, Norman, King's College.
Faulkner, John Thomas, Owens College.
Hutchison, Robert, B.A., Scholar, University of Edinburgh and London Hospital.
Notley, William John, B.A., University of Edinburgh.
Pegg, William James, University College.
Saver, Mark Pentinum, University College.
Walton, Robert Spence, University College.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 11th, 1880.

Hart, Ernest Ashley, Montague Street, Russell Square.
Savage, Henry Hurford, Highfield Road, Dartford.

The following gentleman also on the same day passed his Primary Professional Examination.

[illegible], Middlesex Hospital Medical College, London.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the recent examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, November 8th, 9th, 10th, and 11th, the following gentlemen were successful.

For the Licence in the Practice of Medicine.

[illegible] Cork; James Barry Gribbon, Londonderry; Joseph Hartley, Birmingham; Joseph Patrick Kirwan, Navan; Michael [illegible], Westport; Henry Christopher Mahony, Dublin; William [illegible], Dublin; [illegible], Loughborough; Thomas Charles Stevenson, [illegible], Dublin; Richard Batson Warren, Dublin.

[illegible] Licence in Midwifery.

The following Licentiates, having complied with the provisions of the Supplemental Charter of December 12th, 1878, have been duly admitted Members of the College.

[illegible], Belgaum, Madras; E. Lowsley; Arthur Hamilton Wilson; Thomas Henry Prosser, Limerick; Thomas Purcell, Dublin.

MEDICAL VACANCIES.

Particulars of vacancies marked with an asterisk will be found in the Advertisement Columns.

THE following vacancies are announced:—

GALLIONS UNION—Medical Officer for Beckton Dispensary District, [illegible]. Medical Officer of Health, registration and vaccination fees. Election on the 30th instant.

HOSPITAL FOR CHILDREN—House-Surgeon. Salary, £— per [illegible]. Applications with testimonials, to the Honorary Secretary, [illegible].

[illegible] SMITH—Medical Officer of Health. Salary, £— per [illegible]. Applications, with testimonials, to the Secretary, [illegible].

LEAMINGTON UNION—Medical Officer and Public Vaccinator for No. 3 District, [illegible]. Applications, with testimonials, on or before November [illegible].

CAMBERWELL, Parish of—Dispenser to the Infirmary. Salary, £100 per annum, with dinner and tea at the Infirmary. Applications, with testimonials, on or before November 10th.

*CHARING CROSS HOSPITAL—Assistant-Physician. Applications, with testimonials, on or before November 27th.

DERBYSHIRE GENERAL INFIRMARY—House-Surgeon. Salary, £100 for first year, increasing £10 annually up to £150, with apartments, board, and washing. Applications, with testimonials, to the Secretary, not later than December 4th.

ENNISCORTHY UNION—Medical Officer for Killan Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 23rd instant.

*EVELINA HOSPITAL FOR SICK CHILDREN—Registrar and Chloroformist. Salary, £30 per annum, with an additional £20 if the post be held for twelve months. Applications, with testimonials, not later than December 7th.

*FRENCH HOSPITAL AND DISPENSARY, Leicester Square, W.—Resident Medical Officer. Salary, £60 per annum, with board, furnished apartments, and attendance. Applications as early as possible, with testimonials to the Assistant Secretary.

GLENTIES UNION—Medical Officer for Ardara Dispensary District. Salary, £100 per annum, with £15 as Medical Officer of Health, registration and vaccination fees. Election on the 30th instant.

HUNTS. COUNTY HOSPITAL—House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, on or before December 3rd.

LANGPORT UNION—Medical Officer of Health. Salary, £30 per annum. Applications, with testimonials, on or before November 22nd.

LANGPORT UNION—Medical Officer to the Workhouse. Salary, £35 per annum. Applications, with qualifications, on or before November 22nd.

LEAMINGTON FRIENDLY MEDICAL SOCIETIES—Medical Officer. Salary, £30 per annum. Applications to the Secretary not later than November 25th.

*LEICESTER INFIRMARY AND FEVER HOSPITAL—House-Surgeon and Apothecary. Testimonials, addressed to the Secretary's Office, 24, Friar Lane, on or before Monday, December 13th.

*LEICESTER INFIRMARY—Honorary Physician. Applications, with testimonials, to the Secretary, not later than November 29th.

LISNASKEA UNION—Medical Officer for Brookeborough Dispensary District. Salary, £15 [illegible] with £15 as Medical Officer of Health, registration and vaccination fees. Applications received to 14th proximo, when a day will be appointed for election.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY—Resident Surgeon and Apothecary. Salary, about £250 per annum, with lighting, fire, and attendance. Applications not later than November 25th.

MITCHELL, Parish of, Derbyshire—Medical Officer. Salary, £50 per annum. Applications on or before November 30th.

*NORTH-WEST LONDON HOSPITAL—Physician. Applications, with testimonials, not later than November 23rd.

NOTTINGHAM DISPENSARY—Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 31st, to the Election January 3rd, 1881.

PONTYPRIDD GENERAL DISPENSARY—Resident Medical Officer. Salary, £[illegible] per annum, with apartments, coals, and gas. Applications on or before November [illegible].

ROYAL MALE AND FEMALE CHARITY—Physician for the Eastern District. A stipend [illegible] per annum. Applications, with copies of testimonials, before December [illegible].

ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon. Applications on or before December 30th.

ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon. Salary, [illegible] per annum, with lodging, and washing. Applications, with testimonials, [illegible] December 6th.

ST. BARTHOLOMEW'S HOSPITAL, Chatham—Assistant House-Surgeon. Salary, £[illegible] per annum, with lodging, washing, etc. Applications, with [illegible].

ST. MARY'S HOSPITAL, Paddington, W.—Resident Registrar. Salary, £[illegible] per annum, with [illegible] residence. Applications to the Secretary on or before November [illegible].

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, [illegible] Street, Henrietta Street, W.C.—An honorarium of twenty-five guineas for a [illegible] November, with testimonials, [illegible] before Nov. 22nd.

SURREY COUNTY LUNATIC ASYLUM, Jail for Assistant Medical Officer. Salary, £[illegible] per annum, with [illegible] washing, attendance, and furnished apartment. Applications to the Secretary, [illegible] before November 15th.

WAYLAND UNION—Medical Officer to the Walton District.

WEST LONDON UNION—Medical Officer to the East District and Workhouse. Salary, £[illegible] per annum. Applications, with testimonials, not later than November [illegible].

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM—Assistant Physician. Applications to the Honorary Secretary.

WESTMINSTER HOSPITAL—House-Physician. Appointment for six months, [illegible] per annum. Applications to the Secretary not later than November 15th.

WESTMINSTER HOSPITAL—Senior Registrar. Salary, £[illegible] per annum. Applications [illegible] November 15th.

WILTON UNION—Medical Officer to the Stapleford District.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

[illegible], Andrew, M.A., M.D. appointed Consulting Physician to the North-West London Hospital.

[illegible] Isaac Smith, M.D., appointed House Surgeon and Apothecary to the Cork Street Infirmary, [illegible] Hospital, Cork, M.D. [illegible] regard.

DAVIDSON, J., M.R.C.S., appointed Resident Accoucheur to King's College Hospital.

EVANS, W. G., M.R.C.S., appointed Assistant House-Surgeon to King's College Hospital.

FARMER, S., M.R.C.S., appointed House-Surgeon to King's College Hospital.

FRASER, Donald Manson, M.A., M.B., appointed Assistant Medical Officer to the Metropolitan Fever Hospital.

GULLIVER, G., M.D., appointed Resident Medical Officer to St. Thomas's Hospital, *vice* S. Sharkey, M.D., resigned.

HARRISON, Reginald, F.R.C.S.Eng., appointed one of the Examiners in Surgery to the University of Durham.

NEWMARSH, B. J., M.R.C.S.Eng., appointed Senior Resident Medical Officer to the Royal Free Hospital, *vice* R. Atkinson, F.R.C.S., resigned.

O'MEARA, Thomas P., A.B., M.B., L.R.C.S., appointed Resident Medical Superintendent to the Carlow District Lunatic Asylum, *vice* M. P. Howlett, L.R.C.P.Ed., deceased.

PENNY, W. J., M.R.C.S., appointed House-Surgeon to King's College Hospital.

PHILLIPS, J., M.R.C.S., appointed Assistant House-Accoucheur to King's College Hospital.

POTTS, James Ashford, M.B., appointed House-Surgeon to the Royal Maternity and Simpson Memorial Hospital, Edinburgh, *vice* W. Bassett, M.B., resigned.

POWELL, S., L.S.A., appointed Assistant House-Physician to King's College Hospital.

RANKING, John E., M.A., M.D., appointed Physician to the Tunbridge Wells Infirmary, *vice* J. R. Wardell, M.D., F.R.C.P., resigned.

SILK, J. F. W., M.R.C.S., appointed House-Physician to King's College Hospital.

SMYTH, A. C. Butler, L.R.C.P.Ed., appointed House-Surgeon to the Brighton and Hove Lying-in Institution, *vice* Frederick Blaker, L.S.A., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 5s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

BOTHWELL.—On November 12th, at The Strand, Topsham, near Exeter, the wife of Dr. G. G. Bothwell, of a daughter.

DEATH.

PERKS.—On November 12th, at Burton-upon-Trent, Sarah Elizabeth, the wife of Charles Perks, L.R.C.P., M.R.C.S., etc.

MEDICAL MAGISTRATE.—Dr. Hayes, of Naas, has been placed on the Commission of the Peace for Kildare.

DURING the past six weeks of the current quarter, the Metropolitan death-rate has averaged 21.4, against 20.8 and 21.1 in the corresponding periods of 1878 and 1879.

THE Walsall Cottage Hospital has had a windfall: for about three-quarters of an acre of the Lammas Lands presented to it by the Earl of Bradford, the committee of the institution have received from the Midland Railway Company £800, and nearly £76 interest, from the date of the purchase.

ST. JOHN'S AMBULANCE ASSOCIATION.—Mr. S. Osborn will shortly give a course of ambulance lectures to the Royal Naval Artillery Volunteers, in the Library of St. Thomas's Hospital, which has been kindly placed at his disposal by the Treasurer, Mr. Alderman Stone.

MEDICAL PHOTOGRAPHS.—Messrs. Boning & Smale, photographers, of 22, Baker Street, have forwarded to us specimens of an excellent series of photographs of London physicians and surgeons which they are commencing. The portraits submitted include those of Dr. Radcliffe, Mr. Spencer Wells, Dr. Robert Barnes, Mr. Ernest Hart, Dr. Robert Liveing, and others. They are of quite unusual artistic merit: being taken by a very rapid process, they have a singularly lifelike and normal expression; while the lights and shadows are very skilfully managed, and the half-tones, often deficient in rapid photographs, are soft and delicate in gradation.

URBAN VACCINATION STATIONS.—The Hackney Guardians this week received a letter from the Local Government Board, of considerable importance to Boards of Guardians generally in urban districts. The upper board wrote that they considered it of the highest importance that vaccination stations, for populous urban or metropolitan districts should be of as public a character as possible, as the people would thereby become familiar with the vaccination stations as permanent institutions, and with this view it was desirable, as far as possible, to obtain fixity of tenure of these stations. The Local Government Board preferred that boards of Guardians should procure the use of mechanics' institutes, lecture halls, reading rooms, chapel vestries, or other institutions, rather than indifferent rooms in private houses where the tenancy was liable to be frequently disturbed. They also urged the necessity of stating in vaccination notices, the time at which vaccination would be commenced, so as to insure the punctual attendance of parents with their infants.

PUBLIC HEALTH.—During last week, being the forty-fifth week of this year, 5,740 births and 3,897 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 24 deaths annually in every 1,000 persons living. The annual death-rate was 23 in Edinburgh, 24 in Glasgow, and 40 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bristol, 17; Sheffield, 19; Plymouth, 19; Portsmouth, 19; Oldham, 19; Bradford, 20; Nottingham, 20; Leeds, 20; Brighton, 21; Hull, 22; Birmingham, 22; Leicester, 22; Wolverhampton, 23; London, 23; Manchester, 25; Liverpool, 25; Salford, 26; Newcastle-upon-Tyne, 27; Norwich, 28; and the highest rate, 29, in Sunderland. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 1.4 both in Plymouth and Wolverhampton, to 7.3 and 8.9 in Salford and Sunderland. Scarlet fever showed the largest proportional fatality in Sunderland, Norwich, and Brighton; and measles in Salford and Newcastle-upon-Tyne. The highest death-rates from enteric fever occurred in Norwich, Salford, Leicester, and Nottingham. Diphtheria caused 16 deaths in London, and 3 in Portsmouth. The fatal cases of small-pox increased to 17 in London, whereas no death from this disease was recorded in any of the nineteen provincial towns. In London, 1,636 deaths were registered, which exceeded the average by 17, and gave an annual death-rate of 23.3. The 1,636 deaths included 17 from small-pox, 47 from measles, 84 from scarlet fever, 16 from diphtheria, 17 from whooping-cough, 22 from different forms of fever, and 21 from diarrhœa—being altogether 224 zymotic deaths, which were 12 below the average, and were equal to an annual rate of 3.2 per 1,000. The deaths referred to diseases of the respiratory organs, which had steadily increased from 124 to 355 in the nine preceding weeks, further rose last week to 421, and exceeded the corrected weekly average by 9; 271 were attributed to bronchitis, and 99 to pneumonia. Different forms of violence caused 50 deaths; 47 were the result of negligence or accident, including 13 from fractures and contusions, 7 from burns and scalds, and 20 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 46.3°, and 2.9° above the average. The general direction of the wind was westerly, and the horizontal movement of the air averaged 15.6 miles per hour, which was 3.8 above the average. Rain fell on four days of the week, to the aggregate amount of 0.24 of an inch. The duration of registered bright sunshine in the week was equal to 12 per cent. of its possible duration. No ozone was recorded during the week, except on Friday and Saturday.

ST. JOHN AMBULANCE ASSOCIATION.—At a meeting of the Central Executive Committee, held at St. John's Gate, on October 29th, the deputy chairman, Major F. Duncan, R.A., D.C.L., reported that during the last fortnight he had been on a tour of inspection of many of the northern, midland and western centres, most of which were evincing great enthusiasm in the renewal of work for the winter session; at one place—Halifax—he having had an audience of nearly 4,000 persons. Major Duncan, in this tour, has opened new centres at Beighton, Durham, Bearpark Brancepeth Colliery, Carlisle, Whitehaven, Hawkshead, and Ulverston (Carnforth), and Mr. John Furley, the director of stores, and Major Malet have attended a meeting for a similar purpose at Sandgate. In London much activity is being shown in the City, and another district has been formed which will include Holborn, Chancery Lane, the Strand and Charing Cross, and classes will shortly be started at the Birkbeck Institution. New detached male and female classes are being held at Canonbury, Richmond, Clapham, Worcester Park, Bloomsbury, Stamford Hill, and Long Acre; and in the country, at Barrow-in-Furness, Chatham, Maidenhead, Bagshot, Bury St. Edmunds, South Shields, Liskeard, Tiverton, Tavistock, Sedburgh (Yorks), and Redruth. An advanced course for certificated female pupils is also being conducted at the Royal Hospital for Children and Women, Waterloo Bridge Road, where, after each lecture, the students are taken round a ward and given practical hints on nursing and the treatment of the sick.

CANNOCK RURAL DISTRICT.—Contrary to the experience of most places, the mortality in this district was lower in 1879 than in 1878. Last year a total of 262 deaths were reported, 80 of which were in children under five years of age. This is a considerable diminution in the infantile mortality of the district; but, as Mr. Manby observes, "the breast-suckled children of a healthy population should not die in anything like the proportion that they do in this district." Zymotic diseases caused 30 deaths, scarlet fever, which was mainly prevalent during the early part of the year, being responsible for fourteen of these. There was no death from enteric fever during the year; and no case of sickness from it was reported.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M. Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M. East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. A Clinical Night. Dr. R. [illegible], "A Case of Apoplexy, from Embolism, in a Woman aged [illegible]"; Mr. Thomas Bryant, "A Case of Acute Hip-Disease, the result of Inflammation [illegible] Head, Neck, and Shaft of the Femur (with specimens); Dr. Collier, "A Case of Perforation of the Stomach, due to Hydatid Mole, and Pregnancy"; Mr. Walter Coulson, "Exhibition of a Lithotrite (Bigelow's) of an unrecorded kind.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. F. H. Champneys, "On Artificial Respiration in Still-born Children"; Mr. Henry Lee, "On the Radical Cure of Varicocele".

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Carrington, "A Case of Hydro-encephalocele"; Mr. Gould, "A Case of Varicocele, with Atrophy of the Testicle, with Observations on the Nature of Varicocele"; Dr. Goodhart, "A Case of Chronic Obstruction, with Dilatation, of the Œsophagus, treated by Œsophagotomy and Bougies"; Dr. [illegible], "A Case of Fatal Hæmorrhage after Scarlatina, Recovery from Blood Corruption, with an Attack of Death from Depression".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE O'BRIEN JONES FUND.

SIR, I enclose a further list of subscriptions to the fund which is being raised for the purpose of reimbursing Mr. A. O'Brien Jones for the heavy expences he has incurred in the [illegible] Queen College Prosecution". The total amount received up to the present time is £281 16s. 6d.; but the Committee venture to express their full confidence that a further appeal to the profession will be promptly and satisfactorily responded to. I am, sir, yours obediently,

ED. HART VINEN, M.D., Treasurer.

[illegible] Queen's Road, Bayswater, November 15th, 1880.

	£	s.	d.
Amount Previously Acknowledged.			
F. Mackey, Esq., Southsea	1	1	0
John Gay, Esq.	1	1	0
C. Ashwell, Esq., Hastings	1	1	0
Dr. [illegible]	1	1	0
Dr. Henry May, W.	1	1	0
E. R. Hayes, Esq., Shrewsbury	1	1	0
E. M. [illegible]	1	1	0
[illegible] Nash, Esq.	2	2	0
[illegible] Lee, Esq., [illegible]			
W. R. [illegible] Stirling, Esq.	1	1	0
Mrs. Stirling	1	1	0
By Dr. Geo. C. Jonson:			
Dr. Jervis	1	1	0
Dr. Wyman, Putney	2	2	0
[illegible]			
W. [illegible], Esq.	5	5	0
	0	1	0
Amount previously advertised	281	15	6
	£281	16	6

A SUBSCRIBER OF TWENTY YEARS' STANDING.—The card sent us is that of an irregular and illegal practitioner, whose proceeding might be properly brought under the notice of the Medical Alliance Association, through its Secretary, Mr. R. H. S. Carpenter, 100 Stockwell Road, S.W.

DR. [illegible] REYNOLDS.

SIR,—If Dr. [illegible] Surgeon will refer to a paper in the [illegible] Journal of Medicine for March last, by Dr. Walter G. Smith, and to the first [illegible] November 1st, 1879 by Dr. Liveing, he will find the treatment of ringworm by [illegible] and there recommended.—I am, sir, yours faithfully,

Norwich, November 15th, 1880. R. CROSSE.

MICRO-ORGANISATION.

SIR,—I would feel obliged if any of your readers could kindly inform me if the local application of [illegible] to 5j of lard) to the scalp for the relief of [illegible] symptoms of micro-cutaneous parasitisation when continued for a length of time.—I am, sir, yours, etc., PARASITUS.

A SEWAGE-PRESSURE WELL.

SIR,—Pray allow me to state that all the local medical men here are consenting parties to [illegible] lately established at the new auxiliary well. I informed the Committee of the Dunstable Waterworks Committee, last month, that the sewage [illegible] the well and that I positively protested against its being allowed to [illegible] longer. He was in attendance [illegible] but was indignantly denied that it [illegible] and [illegible] vigorously defended it against all [illegible] which I [illegible] Dr. [illegible] says that no person [illegible] well, perhaps not, but the [illegible] to your [illegible] months ago, there was [illegible] sewage [illegible] into the well, for the sewage-pipe which crosses the well burst under pressure. Apologising for troubling you with this note, I am, sir, yours truly,

[illegible], November 15th, 1880. G. W. [illegible], M.D.

[illegible] in the Letter for November 13th, page [illegible], column [illegible], line [illegible] "Lancet" [illegible] "Lancet and Times".

RESIGNATION OF OFFICES.

DR. SPENCER, of St. Paul Minnesota, [illegible] the Chairmanship of the [illegible] Wright Resigned [illegible] Medical Council [illegible] to [illegible] that [illegible] which [illegible] The [illegible] which [illegible] The paper is [illegible] which [illegible]

OBITUARY.

A [illegible] the [illegible] of [illegible] Manchester [illegible] present, [illegible] between the months [illegible]

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

QUESTION OF A FEE FOR CERTAIN CERTIFICATES.

SIR,—I am accosted by two persons with an urgent request that I should visit their brother dying. I give two visitings, issue the certificate of death, and receive my fees. Subsequently, forty-eight hours elapsing, I am interviewed; the object being to get me to duly fill up and sign the by no means short form of death-certificate peculiar to two of our insurance offices. I suggest a five-shilling fee in each instance. A few weeks thereafter, upon meeting the internuncio in the street, I am informed the latter fees "cannot be paid; as, upon inquiry, it would be contrary to custom". I do not now ask whether it is fit that professional work of that nature should go unrequited; but, rather, your, and your readers', judgment for or against the duty I am owing the profession as to suing at law to recover without delay.—Yours, etc.,

FIDELIS.

THE MEDICAL PROFESSION AND INTEMPERANCE IN ALCOHOL.

SIR,—Will you allow me to reply, as briefly as possible, to Mr. Baker's renewed attack upon me? He speaks of "nameless drunken women". I have offered to give to him, or to any other medical man, in confidence, the names of several cases known to myself; and I think he must see that I could not send them to you for publication. He has not applied to me for them. I send you a few cases, written as shortly as possible. Of two of these, I may not give the names; but, for each, I can refer you to friends who are worthy of credit.

That the victims of alcoholic prescription whom I have cited are not yet all of them dead, will not, I think, invalidate the truth of my words, nor justify the assertion of utter collapse of my statements. Alas! that they are true. With all my heart, I wish that they were not.

Several medical men have told me of patients of their own who, by their own prescription, have become drunkards. But this was told me in confidence; and I must not, to justify myself, betray that confidence. They have spoken with keen self-reproach of what they had unwittingly done; never with contemptuous indifference of the unhappy victims of their prescriptions.

I was visiting at the house of a friend, a woman of remarkable energy and benevolence, but who was slowly killing herself with secret drinking. We had begun to suspect the cause of her illusion and oddities, and were trying to persuade her to cease from taking stimulants; when, to our astonishment, her medical man, who had attended her for many years, prescribed brandy. She got a quart bottle of it; and, in two days, it was empty. The doctor was shocked, but he did not even then forbid stimulants. About a year after this, she died of alcoholic poisoning, having striven in vain to free herself from her besetting sin.

A young man, on the verge of his third attack of delirium tremens, was met by a friend of mine in the street, with an empty brandy-bottle in his hand. Remonstrated with, he exclaimed, "Brandy I began with, and brandy will end it". My friend pressed him still; but he replied that he was dying, and he must have the brandy. He could neither eat nor drink anything else. And he told how he had learnt to love it. He was an abstainer up to the age of twenty-three, when he had a serious attack of illness. His doctor ordered him brandy; but he refused, as so many teetotalers do, to take it. The doctor insisted; and, to his medical authority, the poor fellow unhappily yielded. He soon became fond of it, and now he was past hope. "It is killing me", he said, "but I must have it". And he hurried on to the public-house. In three days, he was dead.

A man in a very respectable position was, for twenty years, the leading temperance spirit of the small town in which he dwelt. About ten years ago, he suffered from pains in the head. All the medical men whom he consulted recommended alcoholic stimulants. He is become a drunkard.

Another similar case, causing relapse of a reclaimed drunkard, occurred in the same town. Of these two, I can give name and locality.

But Mr. Baker may object that these last are men; and that, therefore, my assertions are a miserable failure. Here is a woman's case. Dr. C., the medical man who last attended her, described her as very beautiful, amiable, accomplished, and ladylike. Her symptoms puzzled him; excessive, seemingly dangerous, prostration, yet the most remarkably rapid recovery; until, at last, he began to suspect the real cause, although he had never been able to detect even the smell of alcohol. When, after much pressing, she confessed her weakness, she told him that her appetite for drink began with taking brandy prescribed for her by her doctor three times a day, when she was ill some years previously. Dr. C. told her frankly that, unless she ceased to take stimulants, she would die before very long. With his aid, she strove against her besetment, but in vain. One day, her husband rushed down in his slippers to the doctor's house, and besought him to come instantly. He feared that his wife was dead. He came, and found the poor lady in a heap on the floor. Her husband had laid her in utter drunkenness upon the bed, beside which, in its cot, her little baby was sleeping. She had slipped off upon the floor, and had died of suffocation.

And, now, may I ask: Does Mr. Baker deny that medical men prescribe alcoholic stimulants to their patients? Or does he flatter himself that, when prescribed, they have not the tendency which they would otherwise have to create the drunkard's craving, that deadly appetite to which so many fall victims?—I am, sir, very truly yours,

HELLENA RICHARDSON.

Foley Cottage, Redland, Bristol.

SIR,—I regret exceedingly that your correspondent Dr. J. James Ridge should feel scandalised by my having presumed to criticise and impugn certain statements contained in an "appeal", which stigmatised the medical profession as being notorious instigators of drunkenness. Such conduct on my part can, no doubt, only be attributed to that perversity of human nature which leads practical men to regard with derision those fanatical theories of the present day which land their votaries in an abyss of folly. My offence, it appears, is considerably enhanced from the fact that the lady whose effusion I so irreverently challenged is an ex-member of the Bristol School Board. As Miss Hellena Richardson, in her reply to my challenge, could only produce three drunken women, and her champion, Dr. Ridge, is unable to add more than two to the list, I apprehend that, long before the "hundreds and thousands dying from drink, and denouncing the doctor who brought them to such a fearful death" have been accounted for, the author of "this gross libel" on the profession will be relegated to that position in society from which it would have been well for herself in particular, and for her sex in general, if she had never emerged.

Dr. Ridge admits that the "appeal puts the matter in a very strong way, often the only way of reaching some people"; hereby intimating that, before medical men can be aroused to a sense of duty, it is requisite to accuse them of being the parties "who first taught women to drink". This point I will leave Dr. Ridge to settle with his professional brethren, feeling assured that they are perfectly competent to maintain their own honourable principles. It is not my intention to enter into a disquisition upon teetotalism, or any other of the numerous "isms" of the present age, as every experienced and unprejudiced practitioner will avoid extremes in the treatment of his cases.—Your obedient servant,

Brentwood, October 29th, 1880. BENJAMIN BAKER, M.R.C.S.

PUBLIC ADVERTISEMENTS.

SIR,—The enclosed cutting is from a local paper. May I ask: (*a*) Is it professional conduct? (*b*) Are there no means by which it may be stopped?—I remain, yours, etc.,

A. S. B.

"Dr. Horniblow, 76, Clarendon Street, gives advice free from 9 to 10 A.M." "Dr. Stanton Wise begs to inform his patients he may be consulted every Tuesday and Friday mornings, from ten till two o clock, at 55, Parade, Leamington. Advice to the poor at 9.30, at 5, Church Street."

THE *Mid-Surrey Gazette* of Saturday, November 6th, contains the following advertisement.

"Mr. C. G. Edmonds, Physician, Surgeon, and Accoucheur, 'Te Aro', Bolingbroke Grove, Wandsworth Common. At home for consultation before 11 morning, and after 5 evening."

MR. LEWIS MACKENZIE (Tiverton) asks for "the best literature on coroner's law and courts".

THE ONE PORTAL SYSTEM.

SIR,—A keen discussion has been going on for a considerable time about the "one portal system", and also about the title of "Dr." The use of the title of "Dr." by medical men holding the double qualification has become a serious grievance. Why gentlemen holding a diploma from a College of Physicians and a diploma from a College of Surgeons should be prohibited from putting "Dr." before their names, seems difficult to understand. Personally, I do not desire the title of "Dr."; yet if anyone seems to be entitled to use that term, it should be a man who is both a physician and a surgeon. It may be said that it is not the fitness of gentlemen who have been licensed to practise by the different licensing bodies that is the real grievance; but what tends to keep up this agitation about a State examination, is the hardship that so many medical men practising in the United Kingdom and the British Colonies feel, in being prevented from using the term "Dr.".

As the "One portal system" is not acceptable to the entire body of the medical profession, some other means must speedily be found to get over the difficulty. Therefore, might it not be suggested that a College of Physicians and a College of Surgeons, in each of the three great divisions of the United Kingdom, should combine and obtain an Act of Parliament giving them the power to grant the title of Doctor of Medicine to their licentiates? The Government might also be represented on each of the boards by one or two examiners, so as to satisfy the public about the examinations. A clause might also be inserted in the Act, giving those who hold a double qualification the right to use the title of "Dr.". If such a scheme were carried out, this agitation about a State examination would soon pass away; the necessity for so many licensing bodies would cease to exist; and a better and a more generous feeling would pervade the profession. Besides, this would not interfere with the greater universities, and those who wished could still take their degrees at an university.—I am, sir, yours sincerely,

G. R. GILRUTH, F.R.S.E.

9, Union Street, Edinburgh, November 10th, 1880.

A NOTE UPON ELEMENTARY PATHOLOGY.

SIR,—Sir James Paget's address may tend to restore botany to the pre-eminence which it formerly occupied as a medical science; but I would, nevertheless, call in question this system of elemental pathology. The cell is seemingly a simpler structure than such a developed and differentiated organism as the human body. But does it follow that it therefore forms a simpler subject for pathological investigation? I believe not. We are told that in plants possessing no nervous or vascular systems, we may discern diseases analogous to those which affect the human economy; and that we should not, therefore, attribute morbid phenomena essentially to nervous or vascular influences, but rather to the vital properties of individual cells. But is not the human body itself a developed cell? No nervous or vascular systems are to be detected in the early ovum; but the essences of those systems the primitive cell undoubtedly contains. The most minute cell possesses some size, and must be provided with some method whereby nutrition is distributed: that method is the homologue of the developed vascular system. Development furnishes us, I believe, with an exposition of disease; for were an early ovum to perish, who could declare which of its essences was at fault? In the grown body, the matter is by no means so difficult. The vascular and nervous systems are developments and not appendages.—I am, etc.,

GEORGE BUDD (junior).

A. C. M., Manchester.—The writings of Mr. E. Hart on food questions have not yet been reprinted; and the journals containing them are out of print.

PRURITUS SCROTI.

SIR,—Should the treatment for the above-named troublesome malady, recommended in the BRITISH MEDICAL JOURNAL by "M.B.Cantab" and Mr. Ready, fail to effect the desired relief, I would venture to suggest a trial of the following remedies, which in many analogous cases, I have found very efficacious. ℞ Unguenti zinci oxidi ʒv; unguenti hydrargyri nitratis ʒss; morphiæ hydrochloratis gr. iij; spiritûs rectificati ʒiij; ess. rosæ q.s. Misce bene. A little of the ointment to be applied to the part affected, night and morning, after careful ablution with tepid water. If the digestive organs are disordered, as is generally the case, some such mixture and pills as the following will assist in effecting relief. ℞ Potassæ citratis ℈v; potassæ bicarbon. ℈iv; liquoris ammon. citratis ʒij; spiritûs ætheris nitrosi ʒij; tinct. chloroform comp. ʒss; tincturæ zingib. fort. ℥xl; infus. gentianæ comp. ad ʒviij. Misce. Two tablespoonfuls to be taken in two or three hours after breakfast and dinner. ℞ Pilulæ hydrargyri: Extracti hyoscyami ää gr. ix; extracti colchici acetori gr. ij; gingerini gr. iv; pilulæ rhei comp. gr. xxiv. M. Fiat pilulæ xij. One or two of the pills to be taken at bedtime occasionally.—Yours truly,

L. M. D.

THE INJUNCTION OF CASTOR-OIL AS A PURGATIVE.

SIR,—I see, in the BRITISH MEDICAL JOURNAL, page 741, that by applying castor-oil on spongio-piline that is moist and hot, you get gentle purgation. Allow me to call Dr. R. H. Hilliard's attention to the fact that, if he will apply the hot moist application alone, "*i.e.*, without castor-oil", he will get the same result. In obstinate constipation I recommend the abdomen to be rubbed with soap and warm water, and this usually succeeds in causing an evacuation. In chronic cases, a piece of warm moist spongio-piline worn all night causes a gentle daily laxation.—I am, etc.,

T. R. ALLINSON, L.R.C.P.Ed., etc.

2, Kingsland Road, E.

Brachial Neuralgia.

SIR,—If "Inquirer" will try a solution of iodine made as follows, and without any spirit, I think his patient will derive some benefit. Iodi gr. vi; potassii iodidi grad; aquam ad ʒiv. The affected part to be freely painted twice a day for a week with a brush. If tried, I should be pleased to know the result.—I am, etc.,

Fareham, Hants. W. F. Brooks.

SIR,—"Inquirer" is advised to try the application of chloral-hydrate of camphor, a term which I apply to the compound prepared by the saturation together of equal quantities by weight of chloral-hydrate and camphor until fluidification is effected. A marble mortar is used for the purpose. The application may be repeated every four or six hours by means of a camel's-hair brush. He should also apply a hot poultice, made of "crushed linseed". If a calico bag be used, it may be reapplied when cold by simply subjecting it afresh to the heat of boiling water, and so on for a whole day, without the necessity of renewing the crushed meal.

"Inquirer" is further advised not to rest altogether satisfied with local treatment, but to have an eye to the necessity of rectifying, or at least bringing the chylopoietic viscera within a therapeutic intention; as the local sensations complained of may be—and, as I think, are—in a measure symptomatic, as well as sympathetic, of something occult hereabouts.

If the hypodermic use of morphia in the neighbourhood of the seat of pain have not been tried, this should be done at once, taking the precaution to adjust the quantity of morphia to the age of the patient. Before puberty, and subsequently to the age of thirty-five, this medicament is not well tolerated beyond the third of a grain by subcutaneous introduction.

Assuming no amelioration of the case from recourse to the measures suggested, then I advise the limb to be fixed for a time.—I am, etc.,

November 11th, 1880. A Practitioner of Long Standing.

Vaccination for Chronic Eczema.

SIR,—I have read with considerable interest the correspondence on this subject. I think it has been fairly proved that vaccination frequently acts as a cure for chronic eczema in children. Is revaccination likely to be equally efficacious in the cure of chronic eczema in adult life? I have a patient who has hitherto resisted all treatment; and I cannot find that it is caused by gouty or other diathesis, and the patient is otherwise in robust health. I shall be glad to have the opinion of some of the more experienced members of the profession on this point.—I am, yours truly,

A Young Surgeon.

General Practitioners and Preventive Medicine.

SIR,—Referring to the letter of Dr. Phillips, in the JOURNAL of the 13th, under the above heading, allow me to state that the mode of remuneration for professional services, which he proposes for adoption, has long been followed in the colony of Newfoundland. At St. John's, as well as at the out-harbours, medical men are paid by annual fees for all ordinary attendance and medicine; midwifery and surgical cases counting as extras. The system is found to work satisfactorily. Each family knows the approximate amount of its liability, and is enabled to meet the indebtedness the more easily on that account. To the practitioner, a stated sum is in this way assured, and he knows the amount of his income. Not only does it serve to lighten the doctor's labours by promoting the earliest attendance on all cases of illness, but it gives him a freedom to make unasked-for calls when most convenient **to himself, and enables him to impress upon his *clientèle* the importance of sanitation and preventive medicine. The system of annual attendance favours the continued visits of the practitioner during the period of recovery, when he might otherwise hesitate to keep the same vigilance over his convalescent patient, knowing how jealous even the wealthier class is of incurring what they consider unnecessary expense.**

The medical year in Newfoundland begins on the first of November, and it very rarely happens that there are defaulters on the doctor's list. If they fail to pay their dues, they know that subsequent attendance will be charged for at remunerative rates. The smaller dues paid by single fishermen are guaranteed by the "planters", or merchants, in whose service they are engaged. It was probably in this way that the annual system originated there; and the extension of the club practice and the increase of provident dispensaries in this country tend to favour the adoption of a similar mode of payment here. I have known the system of annual payments of a stated sum to have been partially followed elsewhere than in the colony referred to, but it was by private arrangement, and not, as there, the general custom.—I am, etc.,

James R. De Wolf, M.D.Edin.

Ilfracombe, November 15th, 1880.

Nature states that Professor Graham Bell has been well received in the scientific circles of Paris during the past week. He exhibited his photophone at the establishment of M. Antoine Breguet, and elsewhere, and was the object of much curiosity wherever he went. [illegible]

The Pathology of Sea-Sickness.

SIR,—I remember something there to have been a more rational, if not a more simple, explanation of the phenomena of sea sickness than that given by Dr. Whitney; but it, what personality, or who was the author of the paper, I cannot now call to mind. Quoting from memory, it was stated that sea-sickness was caused by the disturbing influence of the ship's motion upon the supply of blood to the brain. The blood in the vessels of the body is a fluid contained in tubes, and therefore possesses a momentum of its own; consequently, in the descent of the ship, the blood in the arteries would be driven with greater force into the brain than when the body is at rest in the normal state; and *vice versâ*, in the ascent of the ship, the heart's action and the elastic recoil of the arteries would be, to a certain extent, neutralised by the *vis inertiæ* of the blood-column; the pressure of blood upon the brain being greatest at the beginning of each descent of the ship, and least at the beginning of each ascent of the ship, as the blood-column would continue falling after the body had commenced its ascent, and continues rising after the body had commenced its descent. The consequent supply of blood to the brain causes an irritable condition of that organ, and consequent sickness.

This theory can more readily be reconciled with the facts of sea sickness than can Dr. Whitney's theory, that the [illegible] action of the pneumogastric the normal check [illegible] circular motion, substituting for it a rapid jumbling up and down of the contents of the stomach; it also explains and suggests the best treatment derived from rational treatment, viz., rest in the recumbent position, if possible, with the head and feet towards the sides of the ship; and also a large dose of bromide of potassium, given about two hours before starting on a voyage, to make the brain-centres less susceptible to the influence of irritation.

No doubt, as Mr. James Turton says, the disturbing influence upon the sensorium of a number of objects passing in quick succession before the sight, would aid in producing the brain-irritation and sickness. Faithfully yours,

Thomas Sansome.

West Bromwich, November 15th, 1880.

Gloves for Wet Weather.

SIR,—In answer to J. T. K.'s inquiry, I have found the coarsely knitted woollen gloves of mixed colours, now much worn, most suitable for cold and wet weather.—Yours truly,

Bernard Roth, F.R.C.S.

18, Grand Parade, Brighton, November 15th, 1880.

ERRATUM.—In the notice of Lawley's Surgical Pocket-Case, at page 732 of last week's JOURNAL, the name of Mr. Lawley of the Strand was put by mistake for Messrs. Lawley and Son of Farringdon Street.

H. R., Bristol.—The request shall be attended to.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. W. A. Brailey, London; Mr. J. M. Palmer, Armagh; A Practitioner; Mr. R. Harrison, London; Medicus; Mr. W. F. Brooks, Fareham; Dr. E. Haughton, Norwood; Dr. John Rose, Chesterfield; Mr. J. Kershaw, Oldham; Surgeon; Mr. C. Oakes, Leamington; Mr. G. Meadows, Hastings; Dr. H. Finch, Colchester; A Member; Mr. W. Taberner, Wigan; Dr. E. MacDowel Cosgrave, Dublin; Mr. J. E. Burton, Liverpool; Mr. H. Davies, Haverfordwest; Dr. F. Seaton, Nottingham; Dr. Joseph Coats, Glasgow; M. M. Franchini, London; Dr. Hickinbotham, Birmingham; Mr. A. Cooper, London; Mr. B. J. Leary, Howth; Mr. G. Eastes, London; Dr. J. Rogers, London; Mr. R. S. Fowler, Bath; Dr. F. W. Jago, Plymouth; Mr. Vincent Jackson, Wolverhampton; Dr. F. P. Atkinson, Kingston-on-Thames; Dr. F. D. Paul, Liverpool; Dr. Newman, Stamford; Mr. W. J. Davis, Hereford; Mr. G. L. Moffat, Bervie; Mr. Kirkham Fox, Ashford; Mr. G. Gilruth, Edinburgh; Dr. Carlo Labas, London; Dr. E. A. Jacob, London; A Young Surgeon; Mr. Spenser Wells, London; Mr. G. S. Pollard, London; Dr. Thin, London; Dr. W. T. Greene, London; Mr. Roger M'Neth, London; Dr. Fairlie Clarke, Southborough; Mr. J. Mann, Glasgow; Mr. J. Robertson, Edinburgh; Mr. T. Allison, London; Dr. J. Hill Gibson, London; Mr. Grey Smith, Clifton; Mr. W. B. Spanton, Hanley; Dr. A. B. Shepherd, London; Mr. Arthur Kempe, Exeter; Mr. J. W. Browne, London; Dr. D. N. Knox, Glasgow; Dr. MacLaughlin, Londonderry; Mr. B. Roth, Brighton; Mr. F. W. Silk, London; Mr. G. Abbott, Tunbridge Wells; Mr. Percy Potter, London; Mr. R. Clement Lucas, London; Dr. G. W. Jotham, Kidderminster; Mr. C. W. Priestley, York; Dr. Habershon, London; Mr. Harold Lee, Liverpool; Mr. H. G. Mahon, Dublin; Dr. Nuttall, Leicester; Dr. T. F. Pedley, Rangoon; Dr. B. Foster, Birmingham; Mr. Alfred Kebbell, Flaxton; Mr. Albert May, Newton Abbot; Mr. F. Long, Wells, Norfolk; Dr. J. W. Moore, Dublin; Dr. Rabaghati, Bradford; Mr. Joseph Clegg, Epping; Dr. T. Churton, Leeds; Dr. J. G. McKendrick, Glasgow; Dr. F. Taylor, London; Mr. Nelson Hardy, London; Mr. James Startin, London; "Prevention better than Cure"; Dr. A. Brabazon, Bath; Mr. Rowland Coombs, Bedford; Dr. W. M. Whistler, London; Mr. C. Phillips, Haverfordwest; Dr. Yandell, Louisville; Dr. H. Ashby, Manchester; A Member; Mr. J. G. Langley, London; Mr. F. W. Way, Portsea; Mr. W. Hood, York; Dr. J. W. Edgar, Settle; Mr. H. Mallins, Walton; Dr. T. F. Chavasse, Birmingham; Mr. J. A. Potts, Edinburgh; Dr. F. H. Worswick, Manchester; Mr. Lewis Mackenzie, Tiverton; Dr. A. H. Hassall, San Remo; Derbyshire; Mr. H. B. Noble, London; Dr. F. Chance, Sydenham Hill; Dr. J. K. De Wolf, Ilfracombe; Mr. B. Browning, London; Dr. J. C. Uhthoff, Brighton; Mr. Thomas Sansome, West Bromwich; Dr. C. E. Glascott, Manchester; Mr. John Bloxton, London; Dr. Ernest Jacob, Leeds; Dr. R. Atkins, Waterford; Dr. W. S. Thomson, Peterborough; Mr. A. Baker, Aysgarth; Mr. W. Chessall, Horley; Dr. E. McKellar, Brighton; Dr. E. R. Tenison, London; Dr. T. Curtis, Bervie, etc.

BOOKS, ETC., RECEIVED.

Practical Histology and Pathology. By H. Gibbs, M.B. London: H. K. Lewis. 1880.

The Descriptive Atlas of Anatomy. London: Smith, Elder, and Co. 1880.

Function of Vision and its Anomalies. By Dr. Giraud-Teulon; translated from the French by Lloyd Owen, F.R.C.S.I. London: Bailliere, Tindall, and Cox. 1880.

Note-Book of Materia Medica, Pharmacology, and Therapeutics. By R. E. Scoresby-Jackson, M.D. Fourth edition, revised and brought down to the present date, by Dr. Francis W. Monro, F.R.S.E. Edinburgh: Maclachlan and Stewart. 1880.

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REMARKS
ON THE
TREATMENT OF ENTERIC FEVER.*

BY JOHN S. BRISTOWE, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

IN undertaking to open a discussion on the extremely interesting and important subject of the treatment of enteric fever, I did not undertake to treat it exhaustively, or to bring before you any novelties of view or practice. But the object which I set before myself was to discuss (as far as possible by the light of my personal experience) mainly those questions of treatment which are debatable, or on other grounds worthy of special consideration, in order the more directly to provoke controversy, and to elicit the opinions and experience of those of you who have opinions or experience to give.

The heads under which it was suggested that I should introduce the subject to your consideration, and which I saw no reason to add to, to subtract from, or to modify, are, as is stated in the notice summoning this meeting, four in number: viz., 1. Diet; 2. Medicine; 3. Alcohol; 4. Baths. These I proceed to consider *seriatim*.

1. *Diet.*—It was formerly the custom to "starve fevers". During the last thirty or forty years, however, and in no small degree owing to the teachings of the late Dr. Graves, the practice of "feeding fevers" has been very generally adopted; and few, I should think, can doubt the wisdom of the change; for not only are fevers characterised by rapid degradation of tissue, with progressive emaciation and enfeeblement of system, but experience has demonstrated that fever-patients are capable in no inconsiderable degree of assimilating nourishment, and that the specific symptoms of their diseases are seldom, if ever, aggravated by its judicious administration. These remarks are especially true of enteric fever, which is a disease of long duration, and one in which emaciation and asthenia not only are rapidly developed and apt to become extreme, but are exceptionally slow to be recovered from. But it is a fever which, probably more than any other specific fever, demands care and judgment in its dietetic management; for its incidence is mainly on the alimentary canal, and dietetic errors are likely, therefore, to be attended with immediate injurious results. I need scarcely remind you, that Peyer's patches and the solitary glands in the lower part of the small intestine are always affected in enteric fever, and the solitary glands in the large intestine in about one-third of the total number of cases; that ulceration of the diseased patches commence, for the most part from the seventh to the tenth day of the fever; that cicatrisation usually begins some time during the fourth week, but may be delayed indefinitely and indefinitely prolonged; and that the specific consequences of the intestinal lesion, against which we have especially to take precautions, are uncontrollable diarrhœa, intestinal hæmorrhage, and perforation of the ileum. Under these circumstances, it is clear that the food to be administered should be easy of digestion and assimilation, and that its residue should be unirritating to the diseased bowel along which it has to pass. Dr. Murchison observes that it "may consist of such articles as the following: milk, eggs, beef-tea, veal- or chicken-broth, to which may be added vermicelli or arrowroot, meat-essences, meat-jellies, custard, bread-and-milk, sago, and tea or coffee diluted freely with milk". But this, it seems to me, is to be regarded rather as an enumeration of the articles of diet from which we may select under special circumstances, and in exceptional cases, and to which we may resort indifferently during convalescence, than as a list of foods to be administered indiscriminately during the febrile stages of the disease. Indeed, Dr. Murchison admits, what most of us know by experience, that beef-tea and other animal broths and essences not unfrequently promote diarrhœa in enteric fever; and the suppression of the salivary, and probably of the pancreatic, secretion which attends the disease interferes importantly with the digestion and assimilation of starchy matters, which thus, as Dr. Cayley especially maintains, become irritants to the alimentary canal. These facts serve to control our liberty of action in no inconsiderable degree, and reduce us to the necessity of feeding patients almost exclusively on milk and eggs. Indeed, I suppose that few physicians at the present day give anything besides milk to enteric fever patients so long as the temperature remains febrile. That is the practice which Dr. Murchison himself advocates; it is the practice recommended by Dr. Cayley; it is the practice which has prevailed at St. Thomas's Hospital for many years past; and one which, with few exceptions, I have carried out as long as I can recollect, both in private practice and at the hospital. Very few patients are unable to take milk; and in almost all instances in which patients protest that it disagrees with them in health, they yet take to it kindly here. Even when the stomach is irritable, as it often is early in the disease, and as it may continue during the greater part of its course, it will still generally retain milk given in small quantities and, if necessary, cooled with ice or diluted with soda-water or lime-water. It should be given, in quantities determined by the circumstances of the case, every one, two, or three hours; and thus from one to three or four pints may be readily administered even in severe cases during the twenty-four hours. The feeding of patients during convalescence is a matter of considerable nicety. The presence of a clean tongue and a good appetite, and the need of restoring health and strength to the enfeebled and emaciated frame, tempt one strongly to allow the patient to give full play to his lust for food. But when it is recollected that, during early convalescence, relapses are not unfrequent; that the characteristic ulcers of the disease are not generally healed until convalescence is far advanced; and that unhealthy processes, leading to diarrhœa, hæmorrhage, and perforation, may be readily re-excited in them by anything which irritates the alimentary canal, as well as by anything which causes constitutional disturbance; the need of extreme caution becomes apparent. It is the usual custom at our hospital not to give anything beyond milk until the temperature has ceased for a full week to present a febrile rise; and then to commence with bread and milk, eggs, or rice-pudding; only subsequently adding fish, and fowl, and butchers' meat to the dietary. Of course, many cases occur in which it is thought right not to adhere rigorously to this rule; but it is curious, as most of our sisters know by experience, that the premature addition of solid matter to the diet, is constantly followed by exacerbation or temporary renewal of fever.

2. *Medicine.*—Enteric fever is one of the many diseases for which as yet no specific is known, and for which I am inclined to think no specific will ever be discovered. It was maintained, even a few years ago, that an emetic, given early in its course, would frequently arrest its progress, and my late colleague Dr. Brinton was a believer in this reputed effect of emetics. It has also been held that the diarrhœa is salutary and eliminative, and that, by promoting or encouraging it, the disease may be shortened or rendered less severe. These views were based on an imperfect appreciation of the nature of the disease; on the belief either that the intestinal affection is primary, and to be got rid of, like lice externally, or intestinal worms within, by local remedies; or that the intestinal mucous membrane is an organ by means of which the specific poison of the disease is endeavouring to escape. But even though the contagium of enteric fever be received into the stomach, it has long passed thence into the system before the symptoms of the disease arise; and obviously at this time, whatever opportunity for the successful use of emetics might theoretically have been present at the beginning, has long passed away. And to look on the diarrhœa which is due to the enteric lesions as eliminative, is to look upon these lesions as centres of elimination, and is equivalent to regarding the eruptions of the eruptive fevers, which are mere foci for the growth of poison, as organs developed for the discharge of poison pre-existing in the blood—a view which is manifestly absurd when applied to the pustules of small-pox, or the tubercles of syphilis. But, if we cannot cure enteric fever, or eliminate its specific poison from the system, we can at any rate treat, and in most cases relieve, some of its most distressing symptoms or complications.—*Diarrhœa* is one of the most characteristic, and often one of the most troublesome and dangerous, symptoms of the disease. It is often absent, however, for days together; and occasionally is replaced by constipation during the whole course of the disease. Many physicians, and some even of our most distinguished contemporaries, would encourage by laxatives the diarrhœa, if not carried to excess; and would endeavour to excite it in cases attended with constipation. The practice is based on the opinion already referred to, that the poison tends to escape by the bowels, and on that that the retention of poisonous and putrefactive matters in the bowel is a source of danger. From the former of these views, I have already expressed my reasons for dissenting. As to the latter, I can only say that the motions are not, I believe, specially offensive, or, except in a specific sense, poisonous; and that the bowels, after all, naturally contain ordure. But, on the other hand, persistent diarrhœa tends materially to weaken the patient; the commotion which attends it is a source of direct danger to the diseased bowels; and, further, diarrhœa, once brought on artificially, is very often difficult to be

* Read in opening a discussion at a meeting of the South London District of the Metropolitan Counties Branch.

restrained. I have no doubt myself that, although two, or even three, evacuations in the day may not call for measures of restraint, diarrhœa, if it should exceed this amount, as a rule, ought to be checked. Of all medicines, opium, in its various preparations, is the most valuable for this purpose. It may be given by the mouth in frequent small doses, or by the rectum in the form of a small enema or suppository. The dose and frequency of administration must, of course, depend on the amount of diarrhœa present, and on the age and condition of the patient. Other remedies, which may be employed either alone or in aid, are the vegetable astringents, especially kino, catechu, and tannic acid, sulphuric acid, and lead. It is important to bear in mind that the danger of diarrhœa depends not only on the actual profuse discharge of fæcal matter, but on the peristaltic movements which accompany it, and which tend to cause rupture of thin-based ulcers. Now, this peristaltic movement may be present in the ileum, even when constipation prevails: for the large intestine, from being healthy or torpid, may fail to propel onwards the matters which are being constantly poured into it from the small intestine; that is, diarrhœa, so to speak, may be taking place, from the small intestine into the large, at a time when actual constipation exists. It is clear, therefore, that opium may be demanded to restrain the painful or violent movements of the bowels, even when the bowels are constipated.—*Constipation*, nevertheless, has, at times, to be dealt with. Is it right that constipation, when present, should be allowed to continue until nature brings relief, or should it be obviated by medicinal treatment? I do not think that constipation of a few days' duration is at all likely to be injurious; and, indeed, I have seen it continue for a considerable length of time without causing any ill-effects. It is not, however, desirable in itself that the bowels should be locked up; and, moreover, constipation, long continued, is apt to induce diarrhœa. Whether we should do anything, however, and what we should do, depends largely upon the condition of the patient and on the stage of his disease. There can be no doubt that, during the first week or ten days—that is, before ulceration has commenced—laxatives, such as castor-oil and rhubarb, may be given with impunity, and often with benefit. But, after ulceration has begun, and thence onwards until convalescence is far advanced, even the mildest opening medicines must be looked on with suspicion; and, although I would not venture to maintain that under no circumstances should castor-oil or rhubarb be given during this period, I am sure that, on the whole, it is better and far safer to relieve the overloaded bowels by mild enemata. In support of this statement, I may remind you that constipation is almost always due, not to sluggishness of the small intestine but to sluggishness of the large intestine in which the fæces accumulate and harden. —*Hæmorrhage* from the bowels may occur early in the disease, and is then small in quantity and of no importance. When, however, it takes place from the ulcerated surfaces, and after the second week, it is a matter for serious alarm. It is true that the patient usually recovers, even though it be copious, and that very often it does not recur. But in some cases the blood escapes with sudden impetuosity, and the patient dies rapidly in a state of collapse; and in some the hæmorrhage is so frequently repeated that the patient, who may seem doing well for a time, finally sinks. I am inclined to think, with Sir W. Gull, that this bleeding is practically beyond our control; and that the patients in whom our remedies seem to be efficacious are those in whom the hæmorrhage would not have recurred, even if no treatment had been adopted. It is not by applying weak astringent solutions to external bleeding wounds that hæmorrhage therefrom is restrained; and few, I should think, would have any faith in the possibility of arresting such hæmorrhage by the internal administration of astringents. Nevertheless, feeling it to be my duty to do everything in a dangerous crisis which might tend, however little, to benefit my patient. I should certainly, under such circumstances, give him ice-cold fluid to drink, apply cold compresses to the abdomen, and administer either lead, or tannic acid, or digitalis, or ergot, or turpentine, or perchloride of iron.—*Perforation of the bowel and consequent peritonitis* are almost invariably fatal; the only treatment, in addition to local applications to the abdomen, consists in bringing the patient speedily, and in keeping him, under the influence of opium. *High temperature* (a subject to which I shall presently recur) is, no doubt, in itself, an element of danger; and, for this reason, its reduction seems desirable. Various medicines have been employed with this object; the most important and efficacious of which are quinine and salicylic acid. In order that quinine shall reduce temperature, it requires to be given in large doses—thirty or forty grains at once, or in instalments at short intervals. Thus administered, it reduces the temperature by three or four degrees in the course of a few hours, and the temperature may remain low for a dozen hours or more. Salicylate of soda may be given in doses of twenty or thirty grains every four hours, and also causes marked reduction of temperature. But in both cases the reductions is of temporary duration only, and the drug requires to be continued. I have not employed either of these remedies largely in the treatment of enteric fever; and I must confess that my own experience of their use has not impressed me favourably. Of the treatment of other complications, I do not propose to speak; and it only remains for me to add, under the head of treatment, that, during convalescence, tonics, and especially the vegetable bitters, are of great value.

3. *Alcohol.*—It is impossible to discuss the subject of the treatment of fevers without referring to the question of the use of alcohol in relation to them. In the early part of this century, when blood-letting was the fashion of the day, stimulants were seldom employed in the treatment of febrile disorders. Of late years, however, alcohol has not only been regarded by most physicians as an essential element in the treatment of fevers, but by many has been esteemed our sheet-anchor, and has been administered sometimes in appalling quantities. The reason, however, for giving it thus was not simply to obtain its stimulating effect, but the belief that it was an article of food, and that it was assimilated by the patient at a time when other kinds of food could not be taken or were inadmissible. I see no reason to doubt that alcohol is a food; at any rate, it contains the same elements as starch and sugar, which are undoubted foods; and the experiments of Thudichum and Dupré show that, when once taken into the system, it is in some way used up in the system, and escapes in very minute proportion through the emunctories. But we have, doubtless, many foods that are more valuable as foods than alcohol; and in milk, at any rate, we have one which is generally well suited for invalids. It is rarely necessary, therefore, to have recourse to alcohol as food; and its use in fevers depends mainly on its primary or stimulating—its medicinal—influence. I have never used alcohol indiscriminately in any kind of fever cases; and, indeed, ever since I have had the care of patients in St. Thomas's Hospital, I have been very sparing in my use of it. In the year 1863, when typhus was prevalent in London, I carried out an experiment, which I have never published, and which Dr. Murchison carried out independently, and on a larger scale, a few years later at the Fever Hospital, with similar results to those which I also had obtained. I treated, without selecting them, half my typhus patients with alcohol from the beginning to the end, half my typhus patients without alcohol also from the beginning to the end, and found no appreciable difference in the results. From that time, I have never regarded alcohol as an essential item in the treatment of either typhus or enteric fever; and I have seldom given it, unless special circumstances in the case indicated to my mind the need of stimulation. Many typhoid cases, and even severe cases, have recovered under my care without having tasted a drop of alcohol. Many no doubt have had it; but the circumstances under which I have given it have been: the presence of extreme debility, indicated by a feeble heart and rapid pulse; the supervention of typhoid symptoms; the occurrence of pulmonary complications; and the debility of prolonged convalescence. My friend Dr. Ord, in an interesting paper on Enteric Fever, in the eighth volume of the *St. Thomas's Hospital Reports*, based upon sixty cases (of which twenty-four were my own) received into the Hospital from the end of July 1877 to the end of March 1878, observes that "twenty-four patients received no stimulants at all; six only a small quantity during convalescence; eight not any till after the tenth day of admission; twenty-two received them within the first ten days of stay in the hospital, or while the fever was in activity; but very few indeed received them till after the end of the first week of illness". "The quantity of stimulants varied from a glass of wine or a glass of beer up to sixteen ounces of wine daily in one case, and eight ounces of brandy in another." Of these cases, eight were fatal, the mortality being at the rate of 13.33 per cent. The remarks above made, while they tend, on the one hand, to show that alcohol is less valuable than many persons suppose in the treatment of fever, tend, on the other hand, to demonstrate that alcohol is not injurious in fevers. Indeed, I never recollect to have seen a case in which, even under physicians who have used it largely, alcohol has clearly acted injuriously. My main reason for withholding it has not been the fear of doing mischief, but simply because I have not thought it necessary; and, not finding it necessary, I have allowed economical considerations to weigh with me. I am satisfied that there are many occasions in enteric fever when alcoholic stimulants are of the greatest value; and that whoever then neglects to have recourse to them imperils his patient's life.

4. *Baths.*—It is admitted that, in all fevers attended with high temperature, the high temperature, though merely a consequence of the active disintegration that is going on in the system, is itself injurious by promoting disintegration and in other ways. There are theoretical grounds, therefore, in favour of reducing temperature in enteric fever. With this object, the patient may be kept in a cool and well-ventilated room, may be covered only lightly with bedclothes, and may have his food given to him cool or cold; and there is no doubt that these measures, which are generally adopted, are judicious; but they are quite in-

sufficient of themselves to cause any obvious refrigeration of the body. I have already referred to the employment of quinine and salicylate of soda, and to the powerful influence they severally possess, when duly administered, in reducing temperature. The most powerful agent, however, in this respect, is the cold bath. I need not here go into the history of its introduction. It is sufficient to state that for some years past it has been very largely employed abroad, especially in Germany, in the treatment of enteric fever; and that lately it has been extensively adopted among us by some of those physicians who are connected with fever-hospitals. I have already referred to the admirable Croonian Lectures on Typhoid Fever by Dr. Cayley. In the last of them he discusses, with equal learning, knowledge, and skill, the use of the cold bath in this disease. He quotes statistics from foreign writers, which go to show that the mortality from enteric fever has been reduced by one-half among those who have been treated systematically by cold bathing; and he shows that, in his own hands, this mode of treatment has appeared to be almost equally successful. He argues forcibly that, by keeping the temperature systematically depressed from an early period of the disease, the intestinal lesions, and other morbid processes which are going on in the body concurrently with them, and which collectively bring on asthenia, impede recovery, and hasten death, are kept under; and that dangerous complications are hence less likely to ensue. He admits, however, that relapses appear to follow this kind of treatment in much larger proportion than they follow other plans of treatment; and he concludes a powerful argument by urging that the treatment by cold bathing should, at any rate, receive a fair trial. I am sure that any opinion or advice of Dr. Cayley's will be received with respect by all who know him, and by all who read what he writes; and I should be sorry if a course of treatment which has his sanction be not fully tried in this country by those who have the opportunity of trying it. I confess for myself, however, that I am very much in the same frame of mind as he acknowledges himself to have been in a little while ago; and that I am not yet fully satisfied of the great advantages of cold bathing. I am not absolutely convinced by his arguments, that the lesions attending enteric fever are kept in abeyance by reducing temperature. I know that, under the influence of the bath, delirium disappears, and the patient's condition seems to improve for a time; but I recollect how exactly the same kind of thing used to occur in cholera patients in whom injection of fluid was made into the veins; and how that practice, once much vaunted, has practically been abandoned. And I must acknowledge that, without being able to explain them away, the statistics, honest though they doubtless are, do not satisfy me. The result, in fact, seems too good to be true. If the mortality of a disease be diminished one-half by a particular kind of treatment, the benefit resulting from that treatment ought to be apparent to the most casual observer; it ought, like the effect of salicylate of soda on rheumatism, or of quinine on ague, to be utterly beyond dispute. And yet Dr. Cayley speaks with great caution of his own results. The results which I have witnessed in my own practice have not—at any rate, in my opinion—been favourable. I admit that I have not resorted to the systematic use of the cold bath at all extensively, and that during the last year or two I have scarcely employed it at all; but, two or three years ago, those of my hospital patients whose temperatures ran high were submitted to this plan of treatment. Some of the patients did well, and I was inclined to attribute the improvement which followed the baths to the baths; but two cases occurred in rapid succession in which I thought, perhaps erroneously, that the baths were instrumental in causing death.

The first case was that of a young man who had the disease severely, and a very high temperature; the baths were systematically employed, with the usual immediate effects; but suddenly, after they had been continued for some days, he passed into a state of collapse, with rapid breathing and great duskiness of face, and I assumed, notwithstanding that there was no abdominal pain, that perforation of the bowel had taken place. He lived for two or three days more, and at the *post mortem* examination I found that, though there was extensive bowel-disease, there was neither perforation nor peritonitis, but the lungs were in a condition in which I never recollected to have seen them before in enteric fever. They were small, collapsed, almost devoid of air, and of a deep slate colour. There was no pneumonia nor œdema. I attributed his collapse and his death to the condition of his lungs, and I could not avoid attributing the condition of his lungs to the use of the baths. The other case was also that of a young man; and although he was very ill and had a high temperature, I demurred, after my recent experience, to treat him with baths. Nevertheless, I left it to the resident assistant-physician to employ them, if, in my absence, circumstances arose to make him think it desirable. The boy died, and at the *post mortem* examination his lungs were found in precisely the same condition as those in the previous case. Believing that the patient had not had baths, I observed half jokingly to the resident assistant, who was present, that if only baths had been employed I should certainly have attributed his death to them. His answer was that they had been employed.

There are two ways of cooling patients by baths: the one is by means of what is sometimes termed the graduated bath, the other by means of the cold bath. In the former case, the patient is immersed in water, the temperature of which varies from 90 to 100 degrees, and is reduced gradually while he is in the bath to 65 or 70 degrees; in the latter case, he is at once plunged into a bath, the temperature of which from the beginning is made to stand at 65 or 70 degrees. In either case, the patient should remain immersed for a time varying between ten minutes and half an hour, or until he feels cold and shivers, and his temperature has been reduced by two or three degrees. It is important to recollect that the temperature continues to fall for some little time after removal from the bath. The bathing should be repeated whenever the temperature has again risen, and in many cases needs to be repeated as often as every three hours. The graduated bath is that which alone we have employed at St. Thomas's; but it is much more troublesome of application than the other, and it takes a longer time to reduce the bodily temperature. It is a less severe remedy, however, and may be preferably employed, as Dr. Cayley suggests, for old people, and patients who are extremely prostrate, and for those who have organic disease of the heart or lungs. The cold bath is preferred, as a general rule, by foreign physicians and by Dr. Cayley. Those who employ the baths habitually, commence its use in any case of enteric fever, as soon as the temperature in the mouth or rectum has attained an elevation of 102.2 degrees, and then carry on the treatment systematically as long as febrile temperature is maintained.

In conclusion, gentlemen, let me state briefly the treatment to which I should like to be subjected if ever, unfortunately, I should become affected with enteric fever. I should like to be placed in a cool, well-ventilated room, and covered lightly with bedclothes; to have a skilful and attentive nurse to look after me; to be fed solely with cold milk, unless vomiting should demand the addition to the milk of medicine calculated to allay vomiting. If diarrhœa became troublesome, or ever there was much pain or tenderness in the cæcal rings and in the bowels, I should like to be treated, not with laxatives, but with opium, given either by the mouth or by the rectum. If constipation were present, I should, excepting in the first week, like to have enemata only employed for its relief. In the event of intestinal hæmorrhage coming on, I should like to have ice to suck or ice-cold fluids to drink, cold compresses to the belly, and cold injections into the bowels; and, though I am sceptical as to their efficacy, I should still choose to have astringents, and more especially lead, given to me at short intervals. If perforation should take place, let me have large and repeated doses of opium. Stimulants I should prefer to be without early in the disease; later, however, and during convalescence, I should like to have them in moderation. As to the cold baths, I would rather not have them; but I would, nevertheless, leave it to my physician to exercise his discretion in the matter. I would leave it also for him to decide, according to circumstances, whether alcohol should be administered to me in large quantities. I would prefer not to be treated at a temperance hospital.

ON THE ACTION OF PANCREATINE UPON FAT, AND THE PROPER FORM IN WHICH TO USE IT.

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I HAVE watched with much satisfaction the reinforcement, under the flag of Dr. W. Roberts, of the interest in the medical use of pancreatic preparations, first excited by my papers in 1864-6; and, hoping that nothing but good could come of Dr. Roberts's campaign, I have hitherto carefully abstained from intermeddling.

After carefully restudying Dr. Roberts' contributions, however, I find myself, at last, constrained to come forward to prevent more harm from being done by one part of his statements, than would be compensated for by all the good that could accrue from the test. He has done excellent service by bringing prominently forward his experiments, confirmatory of the wonderful effects of the pancreatic secretion in digesting starch and albuminoids, and especially in formulating his results in the very useful recipe for "peptonised (pancreatised) milk-gruel", which seems somehow or other to have fascinated the professional mind more strongly than the forms for pancreatised suet and milk; pancreatised milk, egg, and arrowroot; pancreatised milk-cocoa; and pancreatised nutritive enemata, published by me from time to time (1870, 1872, 1875, 1878, 1880).

But it must be remembered that, while we have excellent means of digesting albuminoids and starch in pepsine and vegetable diastase, and, therefore, are not thrown upon the pancreas for these purposes for want of any other agent, this is not the case with regard to the emulsification (digestion) of fat by the pancreatic method. Here we are left entirely destitute if deprived of pancreatic action.* There is no other known means of arriving at the same sort of emulsification of fat as that produced by pancreatisation. Yet it is this special action of the pancreas on fats—so far the most precious of its powers—that Dr. Roberts disposes of, as though it were of the least importance to medical practice, in the following passage. "I have not had an opportunity of examining the behaviour of pancreatic juice with fatty matter, and cannot, therefore, speak of its properties; but it is singular, if, as alleged, the effect of pancreatic juice and pancreatic tissue on fat is due to the presence of a soluble ferment, that the extracts of pancreas possess none of the same power.....I could not satisfy myself that any of these extracts possessed any special power of emulsifying fat." (*Lumleian Lectures.*)

No one who has experimented much with the pancreas will be surprised that an experimenter should be so charmed by the almost miraculous celerity and completeness of its amylolytic and proteolytic action, as to be in danger of neglecting the other properties of the secretion. But the emulsifying power of the pancreas is so remarkable, so unmistakable, and so important, that I am certainly astonished at Dr. Roberts' statement.

I hope shortly to publish my private journal and correspondence relating to the experiments made by me, and for me, since 1863; but in the meantime I append to this article a few extracts from them, plainly showing the effect of the pancreas and of pancreatine on fat. Since the first experiments were made by Mr. Heathorn and myself in 1863, hundreds of thousands of pounds of fat have been made into pancreatic emulsion, simply by the action of the pancreas. There is no gainsaying this practical demonstration of the power of the pancreas to emulsify fat. But it does not therefore follow that pancreatic extracts, essences, and liquors, have the same power; and what I wish most conspicuously to bring before the profession is, that Dr. Roberts is quite right in stating that they have not. These fluid extracts, essences, and liquors, of pancreas, were all tried by me years ago, and rejected as useless on this very account. They possess the amylolytic and proteolytic properties — which are easily obtained, and are convenient and useful for the digestion of starch and albumen—like pepsin and vegetable diastase—but they do not, in a sufficient degree to be valuable, possess the peculiar special property of the pancreas, that which no other substance at present known possesses, viz., the power of converting fat without saponification into a true permanent emulsion, capable of admixture with water. The property which I described and demonstrated to the Royal Society in 1868, and which was referred to by Dr. Letheby in his Cantor Lectures at the Society of Arts, shortly afterwards, was as follows.

"More than twenty years ago, Bernard proved what Valentin had long before suspected, that pancreatic fluid was concerned in the digestion of fatty matters; but he fell into error in supposing that its action was to saponify the fat and to set free the glycerin. Here is a specimen of glycerin and of lead soap obtained from the fat upon which the pancreatic fluid had previously acted, showing that saponification had *not* been effected. The true action of the pancreatic secretion is, evidently, to break up the large granules and crystals, and globules of oil and fat, into myriads of minute particles of from the 1-3000th to 1-15000th of an inch in diameter. In this way, the fat is emulsified and converted into a milky fluid which mixes freely with water.....We are indebted for this knowledge to Dr. Dobell.....When the fresh pancreas (that of the pig) is rubbed down in a mortar with twice its weight of hog's lard, it rapidly emulsifies it."

Dr. Roberts speaks of its being "alleged" that this "effect of pancreatic juice and pancreatic tissue on fat is due to the presence of a soluble ferment"; but he does not say who alleges this. In the introduction to my book on Tuberculosis, in 1866, I said "We found that there are several active principles of the pancreatic secretion all essential to its proper functions. There is no one of these taken singly which completely represents the true properties of the healthy pancreatic juice"; and in my paper to the Royal Society in 1868, I stated that up to that time, "all attempts to isolate the several properties of the pancreas into separate products had failed — no one of such products having been found to possess in perfection the property of acting upon fat in the manner described in this paper as peculiar to the pancreas. By the term 'pancreatine' therefore, I desire to represent the entire properties of the pancreas in a convenient form for keeping for experiment and for administration as a remedial agent." The only preparation with which I am acquainted which answers to this description is the pancreatine powder of Savory and Moore—practically, powdered pancreas. This was the outcome of the experiments made for me by Mr. Heathorn and Mr. Schweitzer; and it cannot be too emphatically stated that when the object is to assist in the digestion and assimilation of fat, the liquid pancreatines must be rejected, and no other preparation used except the pancreatine powder.

Extracts from private Journal on experiments made for me, and by me, with Pancreas and Pancreatine.

September 1863.—"To prepare pancreatic emulsion, take the pancreas of the pig immediately after its removal from the body, and after separating all external suet, dissect out the lobes, of which the pancreas is composed, avoiding, as far as possible, the rupture of the ducts which intercommunicate with them.....The pancreas, so dissected, will probably weigh about one ounce avoirdupois.....This is to be well pounded in a mortar, and one ounce and a half of tepid distilled water added.....set aside to infuse in a water oven for thirty minutes, at temperature 100°; on removal, strain through muslin, and while still warm, mix with oil or fat in a fluid state, either by agitation in a bottle or trituration in a mortar."—(Signed) A. Heathorn.

To this I noted, that "the emulsion so made, under a quarter of an inch object glass, appears peculiarly equal; the oil-globules being less than half the size of a blood-corpuscle. This emulsion, treated with pepsin, and hydrochloric acid and water, remained complete two days after such mixture."

September 1864.—"The emulsion with lard-oil (made by the same process) is satisfactory.....it is a far more elegant pharmaceutical preparation than our former emulsion of beef fat."—(Signed) A. Heathorn.

August 23rd, 1864.—"The total amount of emulsion consumed by the patients of the Royal Hospital amounts to 156 lbs. avoirdupois; requiring 468 pancreases to emulsify the fat. The thirty-three patients consumed 105 lbs., requiring 315 pancreases to emulsify the fat."—(Signed) A. Heathorn.

October 29th, 1864.—"I have recently succeeded in obtaining from the pancreas some of the secretion, viz., pancreatic fluid. It possesses very active properties in emulsifying oil, and is, I think, one more proof of the reality of the pancreatic emulsion. The specimen I have preserved for your examination."—(Signed) A. Heathorn.

July 24th, 1867.—Specimens of pancreatine and pancreatic emulsion were exhibited at the Royal College of Physicians at my request, and after the exhibition, Mr. Julius Schweitzer wrote, July 27th, 1867: "I made this specimen of pancreatine on purpose for you.....It will digest sixteen times its own weight of lard. For carrying out the experiment I take, say, one grain of pancreatine, rub it up in a mortar, with about two drachms of distilled water, and add sixteen grains of lard, and mix the whole; I stir it together occasionally, till I find that the water has been absorbed, when I add a little more water, and, as before, stir it occasionally. It is best to commence this experiment in the evening, and to leave the mixture undisturbed all night; next morning the pancreatine will be found to have acted on the lard, the mixture readily mixing with water; and the above quantities will require about three ounces of water to form a smooth thick creamy emulsion. This emulsion still possesses the power to destroy the blue reaction of starch paste, made of two grains of starch-paste, and three or four ounces of boiling water. By itself, one part of this pancreatine destroys the blue reaction of starch paste made of eight times its weight of dry starch.....The pancreatine does not decompose lard, it seems solely to alter the molecular condition, adding, perhaps, a little water, but rendering the single minute globules into which it splits up the fat, able to suspend and emulsify the water. The glycerine is still left in the fat, and can be extracted from the first crude emulsion by means of ether, and combining it with oxide of lead.....This pancreatine also acts on albumen, but the extent of its action I have not yet ascertained. All these experiments are made at the suggestion of Dr. Dobell."—(Signed) Julius Schweitzer.

On the next day, July 28th, Mr. Schweitzer wrote to me: "I tried the experiment of digesting white of egg, boiled hard, with pancreatine. I took one part of pancreatine and twenty parts of boiled white of egg, I found that this was somewhat too much, but at a rough guess I should say that it dissolved about sixteen or seventeen parts of the coagulated white of egg. It is a curious coincidence that one part of pancreatine emulsifies sixteen parts of lard, digests seventeen parts of dry starch, and made into paste, sixteen parts of boiled white of egg."

October 6th, 1868.—"The pancreatine exhibited at the Royal Society to illustrate your paper (December 12th, 1867) is exactly the same as what is sold to-day. It is perfectly good, and possesses the

* See my Paper to the Royal Society, No. 97, *Proceedings*, 1868.

same properties now as then.....Pancreatine is a very wonderful thing, and not half understood or appreciated at present."—(Signed) Julius Schweitzer.

HEPATIC ABSCESS OPENED ANTISEPTICALLY: DEATH.

By NEIL MACLEOD, M.B.Edin., Shanghai.

W. M., a merchant's clerk aged 39, complained, on November 1st, 1879, of a severe stitch-like pain in the right infra-axillary region, and of inability to lie on either side. He had resided in Shanghai without a change for fourteen years, had been a free liver, had taken little or no exercise for some years, and had a specific history dating ten years ago. In July 1879, he had a severe attack of diarrhœa; in the end of August, an acute attack of dysentery; and in the middle of September he went to Japan, the stools being solid, and one daily. He continued well until October 22nd, when the dysentery returned slightly; and, on his return to Shanghai in the end of October, the motions were liquid, two or three a day, light yellow, fœtid, and occasionally contained a little blood and mucus.

From the 1st till the 13th of November, in the morning, the temperature varied from 97.8 to 100.3 deg.; in the evening, from 101.8 to 103.8 deg., once reaching 104.6 deg. The pulse varied from 80 in the morning to 104 in the evening, and latterly he had had night-sweats. There was no rigor or shivering at any time. The motions were sometimes solid, sometimes fluid—one to three daily; and there was occasional vomiting. The hepatic dulness was increased, but not markedly so. On November 11th, he was removed from the country house where he was residing into the settlement, when abscess of the liver was suspected, from the increased liver-dulness, fever, sweats, tenderness and pain on the right side, and slight bulging just behind the anterior axillary line. Fifteen to twenty grains of quinine, given frequently, had no permanent effect on the temperature; and opium and chloral were given to procure sleep. Mustard, a blister, and heat in various forms, were applied to the side.

November 13th. I attempted a thorough systematic examination (but had to desist, as the patient seemed unable to bear it), with this result. The tongue was dry, with a white fur at the back part; no appetite, and nausea. Slight bulging was to be seen over the lower ribs in the mid-axillary line and behind it; and in this region there were flattening of the intercostal spaces, slight œdema, and a tender spot. In the nipple-line, comparative dulness stretched six inches from the fifth rib to half an inch below the costal margin; absolute dulness four and a half inches from the sixth rib in the same line. On tracing the line of dulness backwards, nothing abnormal could be made out in its direction. Breath-sounds were inaudible over the bulging area, where friction could be distinctly heard on deep respiration, which caused a stitch-like pain and a sudden check in the respiratory act. Pulse 90, feeble; face flushed slightly; apex-beat not displaced. Morning temperature 99 deg.; evening pulse 104; temperature 102.8 deg.

November 14th. Pulse 101; temperature 98.3 deg. At 9 A.M., with Dr. Little's assistance, I performed the following operation under chloroform, with antiseptic precautions. I passed the largest-sized Matthieu's aspirator-needle between the seventh and eighth ribs in the medio-axillary line, at the tender spot before mentioned. At a depth of little more than an inch, yellow pus flowed through the tube. Aspiration was immediately stopped; and, the cannula being left *in situ* as a guide, I made an incision on each side of it, and cut down until pus began to well up by the side of the cannula. Having removed the latter and enlarged the opening with a probe-pointed bistoury, fully a pint of thick yellow odourless pus flowed from it, with the aid of pressure in the epigastrium. A drainage-tube four inches and a half long, with a calibre of half an inch, and stout silk guards, was introduced; and the usual dressings applied, and secured by gauze and elastic web bandages. No attempt was made to prevent the entrance of air into the cavity, which allowed a probe to pass five inches in a direction right across the body, at right angles to the surface. At noon, the pulse was 80; at 4 P.M., 78, and compressible; temperature 97.2 deg. At 9 P.M., pulse 90; temperature 98 deg. The patient said he was very comfortable. The discharge, under the microscope, showed pus-corpuscles full of granules, much free granular matter, and many large cells about two or three times the diameter of a pus-cell, free and in masses, and also very granular.

November 15th. Pulse 90; temperature 97.8 deg. He passed an uncomfortable night, serum having soaked through in large quantity at the edge of the dressing behind, and the bandages having been too tight. He had no pain. There was about an ounce of thick shreddy pus in the dressing. The expression was no longer anxious. He had one solid motion. Evening: pulse 108; temperature 100.8 deg. He passed a very comfortable day, and the appetite was very good.

November 16th. Pulse 98; temperature 99.4 deg. He slept well. The dressing contained about half an ounce of pus in shreds. Round the wound there was a little bulging and tenderness. Temperature at noon, 97.8 deg. Evening: pulse 108, temperature 101.4 deg. He had one motion.

November 17th. Pulse 96; temperature 98.4 deg. The discharge was bile-stained. There was quite a deep hollow in the right hypochondrium. Evening: pulse 114; temperature 101.8 deg. He had two motions.

November 18th. Pulse 98; temperature 97.8 deg.; discharge less, but enough to necessitate daily dressing. Bulging and tenderness were still present, chiefly behind the wound over the seventh rib. Evening: pulse 108; temperature 102.1 deg. He had two motions. For three days, the patient had taken ten grains of iodide of potassium thrice daily, periostitis of the rib being suspected.

November 19th. Pulse 108; temperature 99.7 deg. I gave the patient chloroform, and slit up the bulging side of the wound backwards. Pus had burrowed backwards under the skin; and the rib could be felt thickened, but not bare. Evening temperature 103 deg.

November 20th. Pulse 108; temperature 97.6 deg. The wound looked healthy and filled with clot. The discharge was as yesterday, and still bile-stained, very thick. Evening: pulse 114; temperature 103 deg. Twenty grains of quinine were given in the afternoon.

November 21st. Temperature 98 deg. I suspected tension from accumulation of matter. By means of a glass funnel, an India-rubber tube attached to it, and a long glass nozzle, having a calibre of a quarter of an inch, the whole being filled with a saturated solution of boracic acid (antiseptic and unirritating), I drew out of the abscess an ounce and a half of thick curdy pus. The air was first expelled from the tube by keeping the funnel a little above the abscess-level; then, on introducing the tube into the abscess, and lowering the funnel beneath the level of the abscess, the apparatus acted as a syphon. Evening: pulse 114; temperature 102.4 deg.

From this date to December 1st, the pulse continued to rise gradually. The temperature in the morning varied from 97.7 to 99 deg.; in the evening, from 99.4 to 101.7 deg., being once 102.4 deg. The motions became loose and frequent, but were kept under control by means of small doses of Dover's powder and bismuth subnitrate. The dressing was changed daily; and the discharge soon ceased to be bile-stained, remained odourless, and varied from a quarter to half an ounce in twenty-four hours, latterly becoming of a livery colour. It contained aseptic. On the 28th, the probe passed three inches obliquely backwards and downwards. Twenty grains of quinine were given frequently, without appreciable effect on the evening temperature. The patient sat up all day, sometimes walked in the verandah, and did not seem to loose strength.

From the 1st to the 20th of December, the temperature in the evening varied from 99 to 102.5 deg., being usually about 101 deg.; in the morning, as a whole, below normal. Two severe rigors, with an interval of a week between, were each followed by a change from the liver-coloured discharge to a fresh yellow pus, lasting for two or three days, and then becoming once more dark-coloured, remaining aseptic throughout. Strength began to fail, and the appetite was lost; and, finally, severe diarrhœa set in. All action ceased in the wound, and the walls of the abscess could be felt soft and rotten by means of the probe. Death occurred on the 20th. I may add that there were never any lung-symptoms present.

POST MORTEM EXAMINATION, twenty hours after death.—There was no smell in the wound. The interior of the body was warm. The organs were anæmic. The liver was very fatty, the left lobe being about twice its natural size. The back part of the right lobe, opposite and behind the wound, was occupied by a cavity nearly twice the size of a hen's egg, having what appeared to be prolongations backwards and inwards; one of these, nearly two inches long, admitting the finger; and all containing pus of a lighter colour than the cavity. The liver-tissue round the abscess was soft and extremely friable, and bands of fibrous tissue ran through the cavity. There was no abscess outside of this softened area. Firm adhesions were present opposite the abscess, over a space of about six square inches from the wound backwards. The peritoneal cavity was normal. From the friability of the liver-tissue in the neighbourhood of the abscess, and the firm adhesions on removal of the organ (which I took the precaution to slice from left to right *in situ*, removing each slice), it was impossible to determine whether it was a case of multiple or of single burrowing abscess. From the clinical history and the result, I am inclined to think it was a multiple abscess of the liver.

REMARKS.—This is the first and only case treated by the method

above described which has been unsuccessful. I have had two cases in my own immediate charge; this one, and another which was published in the *Lancet* of June 29th, 1878. I have seen in consultation, and assisted in operating on, four cases under the care of two of my colleagues in Shanghai, all of which recovered; and Dr. Johnston of Shanghai treated a case in a Chinaman in the summer of 1879, with the same result. In all seven cases thus treated, one has died. The number of cases is as yet small; but I think that the results so far are encouraging, and better than those obtained by any other method of treatment yet published, being 85.71 per cent. cured. The other five cases that have been treated in Shanghai are, I am informed, to be published shortly.

CHAULMUGRA OIL IN PHTHISIS.

By WILLIAM MURRELL, M.D., F.R.C.P.,
Senior Assistant-Physician to the Royal Hospital for Diseases of the Chest; Lecturer on Practical Physiology at the Westminster Hospital.

During the last two and a half years, I have used chaulmugra oil in fifty-nine cases of phthisis—forty-two being men, fourteen women, and three children. Of the adults, all, with the exception of five, were between the ages of twenty and fifty. In sixteen, there was consolidation; in twenty-eight, there was softening; and in fifteen, there were signs of cavities.

My first endeavour was to find out what dose could be given with safety. In twenty-two cases, the chaulmugra was given in cod-liver oil; and in thirty-one cases in milk. The latter was decidedly the better vehicle. The plan usually adopted was to begin with three drops, three or four times a day; and then gradually to increase the dose, week by week, till the patient could take no more. In about half the cases, ten minims four times a day was the limit; and this frequently gave rise to vomiting and purging. Sometimes the diarrhœa would come on after only a few ten-minim doses had been taken, but more commonly not till the expiration of a week. Often enough the attack was a sharp one—the patient having five or six watery motions during the day, and as many at night. The stools were in most cases described as being liquid, and were unattended with griping or straining. There was usually a temporary disrelish for food, the patient feeling altogether out-of-sorts. These symptoms quickly subsided on discontinuing the medicine. In a few cases, they were produced by smaller doses—even two or three drops upsetting the stomach. On the other hand, some patients were able to take considerably larger quantities. Thus a man, aged 26, took chaulmugra oil four times a day, for six weeks, in doses of from six to twenty-four minims, without experiencing the slightest difficulty. He then tried half-drachm doses, but this made him violently sick, and he had to discontinue it. Most patients found that they could take it better after meals than on an empty stomach.

An attempt was made to estimate the value of chaulmugra oil by giving, alternately, for periods of six weeks, cod-liver oil, and the same dose of cod-liver oil with the addition of the chaulmugra. This plan presented so many difficulties that it had to be abandoned; and the conclusions here given are derived almost exclusively from those cases in which the oil was given in milk.

In twenty-four of the thirty-three cases, I was satisfied that benefit was derived from the treatment, although in some instances the results were not very striking. The chaulmugra seemed to act first as an expectorant, and "the phlegm came up more easily"; then "the cough was less troublesome"; and, finally, the patient "felt better in himself". I was unable to discover any improvement in the physical signs, even after the oil had been taken for many weeks. Sometimes the loss of weight appeared to be temporarily arrested, but there was rarely any absolute gain. Several of the patients took the chaulmugra with benefit after they had ceased to improve on cod-liver oil.

I have had very little experience of the chaulmugra oil *perles*, as they are too expensive for hospital use. In one case, however, the results were very satisfactory. In twenty-three cases of phthisis, I used chaulmugra oil as an external application—the patient rubbing into the chest from two to four ounces weekly. This is an excellent mode of administration, and yields the best results. I have never known it to upset the stomach, and it certainly eases the cough and loosens the phlegm. In some instances, there has been a marked gain in weight. As a rule, I have employed it alone, experimentally; but ordinarily it would be used simply as an adjunct to other treatment. The smell is not very pleasant, but can be readily covered by using a sweet-scented violet-powder. In some cases of marasmus, I have employed inunctions of chaulmugra oil with marked benefit.

SURGICAL MEMORANDA.

EXTENSIVE CARBUNCLE.

In reference to the remarkable case of carbuncle reported by Mr. Walter, in the Journal of October 23rd, I would like to call attention to the extraordinary extent to which the disease spread, in special relation to the fact that such a continuous extension almost proves that a carbuncle is something more than it is generally reputed to be, viz., a sloughing inflammation, or destruction of cellular tissue, induced by a faulty condition of the blood or general-health. Such a course and progress, as is described, goes very far to confirm the opinion formerly expressed by Mr. Startin, and since several times repeated by me, in the medical journals (British Medical Journal, 1876; *Lancet*, 1874 and 1869), that carbuncle is essentially not a mere destructive inflammation, but the growth and life of a distinct superadded skin-disease. Whether in it there be a parasitic vegetable cause, or a special growth of animal cells, the whole appearance, course, and almost definite duration of the disease, point strongly to its specificity; whilst microscopical examination has certainly, now and again, shown the presence of apparently cryptogamic germs, in addition to the hyperplasic cell elements of the growing disease.

Further: in view of the fatal issue of the case, I venture to recall attention to the marvellous efficacy of carbolic acid in staying the spread and progress of a carbuncle, when applied by the "insertion" method.

This method, as detailed in the above papers, has now been largely and successfully employed by myself and many others; and consists in inserting into the diseased spot a small quantity of a concentrated solution of the acid, so as to destroy, especially, the centre—the presumed root or stem of the disease—from which it spreads circularly. In the earliest stages of both boil and carbuncle, almost any caustic will, as is well known, commonly abort the disease. After the first periods, there is nothing like the carbolic acid: for it can be used concentrated, and yet freely, as it has the valuable property of only mildly attacking healthy organised tissue; whilst it destroys the life and vitality of free cells and germs. The carbolic acid is of little avail when merely applied externally, but it at once arrests the growth when inserted into the disease, so as to come into direct contact with the morbid germs or cell-elements; and its effect, when visible, upon the colour and aspect of the sloughing tissue, is very remarkable. The acid appears to have but little influence in removing the hard infiltration which may already exist; but, when properly applied, it almost certainly prevents its spread and increase, and so nearly limits the size of the sore to that which it has already attained.

In Mr. Walter's case, a slight local improvement appears to have followed even the superficial use of the carbolic acid in the form of lotion.

Peter Eade, M.D., F.R.C.P., Norwich.

FRACTURE OF THE INTERNAL TABLE OF THE SKULL ALONE.

As this accident is of rare occurrence, I think the following may be worthy of record.

C. C., aged 35, was brought to the Sheffield General Infirmary, in a cab, on December 22nd, 1879, suffering from a scalp-wound. He was said to have been struck by the handle of a crane, heavily weighted, over which he had lost control.

On examination, I found a contused wound of the scalp, longitudinal in direction, and situated a little to the left of the median line in the fronto-parietal region. The pericranium was severed, for about half an inch, in a direction corresponding to the wound; but, upon careful examination by finger and probe, no fracture could be detected. The left edge of the wound was undermined, and detached from the pericranium beneath, as if the force of the blow had been partly expended in separating these structures. Statements made by eye-witnesses confirmed this view, leading me to suppose that the patient had been *brushed*, not directly *felled*, by the crane-handle.

The subject of the accident was a healthy man: he had not lost consciousness, and could walk, but was somewhat collapsed; his pulse, however, being good. On this account, he was advised to remain; but, having a good home, and a cab at the door, he preferred to become an out-patient. The friends having been warned to bring him at once should any untoward symptoms arise, his wound was dressed with carbolised oil, and the patient allowed to go.

He returned eight times during the course of the next fortnight, during which the wound was healing kindly. He walked on each of these visits, and complained of no symptoms. Five weeks after the

accident, I received information that the patient, having become suddenly ill, had called in a medical man, who had since attended, and that death followed from pyæmia.

A *post mortem* examination was made, and a fracture of the internal table of the skull found; the portion fractured lying loose upon the dura mater. There was no fracture, nor other injury to the external table. There were, in addition, the usual pathological signs of pyæmia. It is, perhaps, desirable to add, that the patient ceased to attend entirely of his own accord, and that he was not discharged as recovered.

To those engaged in hospital work, this case teaches the importance of obtaining a correct history of the manner in which injuries are produced; and impressed me very forcibly with the truth of that oft-repeated axiom—"No head-injury is too trifling to neglect, or too bad to despair of." CHARLES M. GOYDER, Senior House-Surgeon,
Newcastle-upon-Tyne Infirmary.

CLINICAL MEMORANDA.

THE SLUGGISHNESS OF WHITE BLOOD-CORPUSCLES IN LEUKÆMIA.

IN the report of Dr. Cavafy's paper on Amœboid Movements of the Colourless Blood-Corpuscles in Leukæmia, in the JOURNAL of November 20th (p. 777), he is said to have found, from recent careful observations of the white blood-corpuscles in this disease, "that the character of the movements was much changed, when they occurred at all, as they were very sluggish and ill-marked, although the observations were made at fever-temperatures". The following passage also occurs. "The earliest observations on the point brought forward in this paper were made by Dr. Laking in 1873, but remained unpublished. The results were communicated by Dr. Pye-Smith to the Pathological Society in 1878, and, in the same year, to the *Lancet*, by the author of this paper."

The fact itself of the sluggishness of the white blood-corpuscles in this disease has been long familiar to me, and was, I find, referred to at the Pathological Society in January 1869 (see *Pathological Transactions*, vol. xx, p. 14); and also subsequently, in 1872, in my *Beginnings of Life*, where the following statement occurs (vol. i, p. 226) in reference to the "very slow amœboid alterations in shape" that may occur in medium-size and smaller corpuscles. "The amœboid movements of the white corpuscles, however, are not generally very marked in blood taken from leucocythæmic patients. They have often seemed to be much less obvious than usual—a large number of the corpuscles remaining for a long time more or less spherical."

I have been unable to find any record of the communication of Dr. Pye-Smith, above referred to, either in vols. xxix or xxx of the *Pathological Transactions*. H. CHARLTON BASTIAN, London.

THE ACTION OF ETHER AS AN ANÆSTHETIC.

IT is a matter of increasing surprise to me that the constantly recurring record of a death from chloroform, in surgical practice, should not induce those who still continue its use to consider whether they may not some day incur a charge of criminal negligence. The cases of accident from ether are so rare, and even those on record are so doubtful, that, between ether and any other anæsthetic yet known, there seems to me no room for choice for any surgical purpose. On the other hand, chloroform is so absolutely safe, in the hands of the skilled obstetrician, as to leave nothing to be desired.

In surgical practice, it is not only the safety of ether which is its charm, but it does not, even in the most inexperienced hands, give rise to those pains which occur with all other anæsthetics, but chiefly with chloroform. Performing, as I do, a large number of abdominal sections, I should feel deeply the increased worry of being stopped, every now and then, in the middle of an operation, by indications of suspended animation on the part of the patient, and the constant and ever present dread of some catastrophe. From all this I am free with ether, and the relief is blessed.

Two incidents have occurred in my practice this year, which illustrate two peculiarities of ether: one well known; and the other, so far as I know, as yet unsuspected. In operating upon a case of extra-uterine fœtation, where the child was living, we found the child profoundly hypnotised, and its breath smelt strongly of ether for some hours. Simpson, long ago, pointed out the curious fact that, whilst chloroform does not affect the fœtus by passing from the maternal circulation, ether does.

The second incident suggests a point for study: an investigation of the influence of ether upon the renal secretion. Some months ago, Dr. Roberts of Four Crosses, Monmouthshire, sent me a case of urinary fistula. The lesion was very high up; and, with a great deal of trouble, I found a valvular opening, just in front of the cervix, and at the bottom of a long oblique cicatrix running up far into the cervix. This oblique opening did not allow milk and water to issue when the bladder was distended, and its closure did not benefit the patient in the least. It became perfectly evident, therefore, that there was leakage from the ureter into the cervix; for, with the bladder completely distended with milk and water, clear urine trickled away; and I could clearly see the points of emission to be within the cervix, on the left side. When I placed this patient under ether, for the purpose of operating, the flow from the fistular orifices (two in number) entirely ceased, and none came until she had almost regained consciousness. This experience was confirmed by a second trial, and I had to operate without ether. I had no difficulty then in finding the orifices, and I succeeded perfectly in closing them. The administration of ether seemed to suspend the action of the kidneys entirely; and, whilst no urine flowed, I could not see the minute apertures through which it came from the ureter. It is, of course, easy to see that, whilst operating upon a vesical fistula, such a peculiarity would remain unnoticed.

LAWSON TAIT, Birmingham.

OBSTETRIC MEMORANDA.

REPEATED MISCARRIAGES WITH DISCHARGES OF UTERINE CASTS.

THE following may be deemed of sufficient interest for insertion in the JOURNAL.

I was summoned on the afternoon of September 27th to Mrs. C., a married lady, whom I found dressed, but lying upon the bed, and in labour, although the pains were apparently slight. On inquiry, I learned that she believed herself to be rather more than seven months pregnant, and that she had felt no motion of the child for about a week. Until an hour before my visit, she had been sitting quietly sewing, when she felt "a pain in the stomach"; this pain had increased in severity, and came on at intervals. There had been no "show", or escape of "waters". On proceeding to make an examination *per vaginam*, I found presenting at the orifice a tough and rather hard-feeling membranous mass. A pain occurring at the moment, this mass was expelled, and proved to be the body of a fœtus (breech-presentation) enclosed in the membranes, the head being retained. The membranes were dry and opaque, and so tough that I could not tear them with my fingers, but had to use scissors, when they cut like leather, and with a gritty sound. A very little dark-coloured fluid escaped after division. I then delivered the head, and afterwards extracted the placenta. The fœtus was about seven months old, and apparently had been dead four or five days. The mother had lost no blood. The placenta was of normal size, and showed no trace of disease; the cord appeared also normal. Thirty-six hours after delivery, a tough leathery mass—a complete cast of the uterus—was passed. No hæmorrhage occurred.

The mother made an excellent recovery. The lochia were very slightly sanguineous at first, soon becoming greenish, and, though encouraged by tepid bathing, ceased after the third day. There was no trace of fœtor from first to last, and no other vaginal discharge. The secretion of mllk was abundant.

My patient, aged 34, has been married twelve years. She is the mother of two healthy girls, aged 11 and 8½ years respectively, having lost a healthy boy between these two from convulsions during dentition. Since the birth of her younger daughter, she has become pregnant each year—in all, eight times; and she informs me that on each occasion, at a period of the pregnancy from the sixth-and-a-half to the seventh-and-a-half month, she has given birth to a dead fœtus, which has always been expelled enclosed in dense tough membranes. In the last five pregnancies, parturition has been followed, at a period varying from twenty-four hours to four days, by the "uterine cast" before mentioned. In the three previous deliveries, no cast followed, although the child was dead.

Mrs. C. is a lady in good circumstances. She enjoys good health (except, as she says, for being so continually in the family-way), is rather indolent, but cheerful and even-tempered. She knows of nothing which causes the death of the child; but always, about the seventh month, suddenly misses the fœtal movements; then has a feeling of weight in the abdomen; and, after a period of three days (the shortest time) to sixteen days (the longest time), parturition occurs as above stated.

The two living children are strong healthy girls; and her husband is healthy, and without any suspicion of syphilitic history. Physical ex-

amination of the patient shows the lungs, heart, kidneys, liver, and spleen to be sound. The heart's action is somewhat feeble, with unusually slow pulse—as a rule, 54, sometimes 46 only, and never above 62. Her appetite and digestion are good. There is no abdominal pain or tenderness, and no tumour; no leucorrhœal discharge. Since marriage, she has rarely menstruated more than once or twice before again becoming pregnant; previously to marriage, she was quite regular in that respect. I see no evidence of disease of the fœtus, of the funis, or of the placenta. Emotional causes and mechanical injuries are excluded. An "inveterate habit" contracted by the uterus to miscarry at the seventh month in this case is unlikely; and, unless it is an inflammatory condition of the uterus itself, I cannot account for it; and, if it be such, why it should act upon the child so as to destroy its vitality, always at the same advanced period of pregnancy, is unusual, I believe.

F. SYDNEY SMYTH, Brockley, London, S.E.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

MIDDLESEX HOSPITAL.

CASES OF HERNIA.

(Under the care of Mr. HULKE.)

FEW cases are more interesting to the surgeon than those of hernia; for few others offer greater variety of anatomical detail, greater differences in their clinical features, and respecting few other disorders have authorities differed more in the directions they have laid down for the details of their surgical treatment.

The first of the following cases is so remarkable for the concurrence of fæculent vomiting with the passage of stools and flatus *per anum*, that it is given at length from notes taken by the dresser, Mr. J. M. Rogers. The fæculent nature of the vomit was so distinct that it was not open to doubt; and it occurred, not once, but continued over a couple of days. That no piece of small intestine was entangled in the omentum was distinctly proved, both at the time of the operation and again when the wound was opened, the omentum pulled out of the belly, and cut off. The cessation of the vomiting after this had been done offers, perhaps, the key to the enigma. It is well known that, in omental herniæ of large size, the protruding omentum drags after it the transverse colon, which, in the *post mortem* room, is often seen pulled down from its normal relations, acutely bent in a V-like form, the apex of the angle lying at the abdominal opening of the rupture. Such an acute bend might offer a nearly complete hindrance to the passage of the contents of the gut, which would show itself by the ordinary signs of intestinal obstruction. It is not impossible that such an acute bend of the transverse colon may have been present here. The reduction of the omentum at the operation, by lessening the drag upon the colon, was followed by some remission of the symptoms; but still, weighted by the mass of omentum, the acute bend of the gut did not wholly disappear; the colon did not rise to its normal position, and its thorough pervious was not restored; but, when the omentum was cut off, the colon gradually rose, became again quite pervious, and all evidence of obstruction ceased. The sequel showed that it would have been preferable to cut off the omentum at first; but its natural condition, excepting a slight degree of congestion, was judged to warrant its replacement.

CASE I.—*Strangulated Scrotal Epiplocele. Fæcal Vomiting, Evacuation of Stools and Flatus passed per anum.*—An old white-haired coachman was admitted into Broderipp Ward in the evening of November 29th, 1879, with a large strangulated scrotal rupture, which had resisted the repeated trial of the taxis by his master's family *medicus*. The strangulation had existed for about thirty hours. The rupture was tense, painful, and tender. The man was suffering greatly; he had distressing hiccough; but he had not vomited. Chloroform was given; and, the taxis again failing, herniotomy was immediately done. A constriction corresponding to the external inguinal ring, had led to the hope that, upon the division of the constriction evidently present here, reduction might be practicable without opening the sac; but, after division of this ring, and of several fibrous threads outside the sac, the rupture was still irreducible. The sac was, therefore, opened. It was filled with a large mass of omentum, slightly congested, but otherwise natural in texture. The finger could be now readily passed through the external ring (the margin of which was very thin and sharp) into the belly. The omentum was unfolded, in order to make certain that no bowel was concealed in it; and it was reduced without difficulty. The anæsthesia passed off; and he slept until 12 (midnight), when he awoke in pain, and half a grain of opium was given him; after which he slept again till 6 A.M., when, being in pain, the dose of opium was repeated. At 9 A.M. (30th), the temperature in the armpit was 99° Fahr.; the pulse 80 per minute; the tongue moist. At midday, the wound was dressed; it was free from swelling. His belly was soft. He was cheerful, and said he was greatly relieved. In the course of the evening, his hiccough, which had not ceased, became very troublesome. At 11 P.M., he began to vomit. What he threw up was distinctly fæculent; and he also passed flatus by the anus.

The fæculent nature of the vomit seeming to indicate unrelieved obstruction, the house-surgeon sent for Mr. Hulke, who, concurring in the probability of this, at 2.15 A.M. (December 1st) opened the wound; and, finding the sac empty, and nothing at the internal inguinal ring, passed the finger into the belly through this. Finding the omentum, which had been reduced, lying in a mass against the ring, he caught and pulled it out, on the possibility of bowel being entangled in it; but none was discovered. The omentum having been during some time exposed and handled, it was cut off, preferably to again reducing it. At 6 A.M., he again vomited a quantity of distinctly fæculent fluid. A hypodermic injection of one-sixth of a grain of morphia and the one-hundred-and-twentieth of a grain of sulphate of atropia was then given, after which the vomiting ceased. Flatus several times escaped *per anum*. At the midday visit, his temperature was subnormal, 97.2° Fahr.; tongue clean; belly soft, and not tender. At 7.30 P.M., and again at 8.45, he passed two large loose stools. At 9 P.M., hiccough being very troublesome, the morphia and atropia injection was repeated. At 10 P.M., fæculent vomiting recurred.

December 2nd. He had vomited three times later in the night. The vomit was less fæculent, and hiccough less. The belly was soft, and not tender; the wound healing. As his strength seemed flagging, one drachm of brandy every hour was ordered. At 9 P.M., his temperature was 99° Fahr.; Pulse 108.

December 3rd. At midday, the pulse was 100; temperature 97° Fahr. There was some inflammatory swelling of the right side of the scrotum.

From this date, the progress of the case did not offer anything remarkable. The hiccough continued more or less troublesome during several days, and did not quite cease till December 9th. Next day, a slough was drawn out from the lower angle of the incision; on the 19th an abscess was opened in the scrotum; and on the 29th another abscess was opened in the bottom of the scrotum, and a drainage-tube passed through the two cuts. It was withdrawn a few days later. Cicatrisation soon followed, and in the second week in January he left the hospital convalescent.

CASE II.—*Strangulated Femoral Epiplocele.*—An obese woman, aged 46, was admitted into Bird ward, on December 19th, 1879, with a femoral hernia. Signs of strangulation had existed two days: the day before they set in, she had had an attack of diarrhœa. She had been aware of the occasional presence of a swelling in the left groin for nearly two years. The obstruction had been treated by several strong purges. The rupture was a long, narrow, tense swelling, parallel with Poupart's ligament; she had much pain in it and in the belly, and she retched frequently. Taxis failing, herniotomy was at once had recourse to. It was necessary to open the sac, which contained a little dark serum and omentum only, which, as it was thickened, knotty, and congested, was cut off. Whilst the patient was under ether, vomiting occurred, and some fluid entering the glottis, nearly fatal suffocation happened—the patient not coming round until artificial respiration by Silvester's method had been practised for several minutes. This was followed by a rather sharp bronchitis. The bowels acted on the fourth day, and the first stool contained some blood. She was discharged from the hospital on the 20th of the following month.

That the retching which attends strangulation of a rupture is, in its inception, not, as some have thought, due entirely to mechanical obstruction of bowel, might be inferred from the rapidity with which it often supervenes on the strangulation; but its occurrence in genuine epiplocele proves it a reflex act.

CASE III.—*Obstruction of the Neck of a Hernial Sac, and Gradual Degeneration of Omentum into Inflammatory Scirrhus of Nodular Form.*—Obliteration of the neck of a hernial sac appears more frequent in femoral than in inguinal rupture. Should the sac contain omentum, the part lying in the narrow neck of the sac is apt to atrophy, and become converted into a fibrous slightly vascular thread-cord. Should this occur, the vitality of the free portion of omentum is preserved by adhesions contracted with the sac, but such omentum is very liable to thickening and cystoid changes. The following is a fair example of this.

A stolid woman, aged 50, but older-looking than her years, was admitted into Bird ward, on April 21st of this year, with a very tense, elastic, globular swelling in the situation of femoral hernia. It was tender and very painful. No impulse was communicated to it when she coughed. Her bowels were bound. She said that she had had a rupture for several years; that about three years previously it had occasioned her much trouble, but never since then till nearly one week ago, when it became larger, and very painful, coincidently with which she vomited. Although the symptoms were not urgent, as the position of the swelling and its distinct prolongation into the crural canal showed it to be a rupture, and it was perfectly irreducible, it appeared more prudent to operate than to wait. On opening the sac, a few drachms of yellow serum escaped. Its other contents were two small pendulous cysts, the stalks of which were blended into a cord with the tubular neck of the sac, which was obliterated at the crural ring. They appeared to be two small pieces of omentum, which, upon the obliteration of the neck of the sac, had undergone cystoid degeneration. By May 10th, the wound had healed, but an attack of cystitis detained the patient in hospital till June 1st.

MANCHESTER ROYAL INFIRMARY.

CASE OF TALIPES EQUINO-VARUS.

(Under the care of Mr. WALTER WHITEHEAD.)

[Reported by Mr. HENRY PAYNE.]

SAMUEL W., aged 6, was admitted into hospital with extreme talipes equino-varus of the left foot, and the same condition, in a less degree, of the right foot. The deformity was congenital, so far as it could be ascertained.

On July 3rd, under chloroform, a T-shaped incision was made over the calcaneo-cuboid articulation of the left foot under the carbolic spray, and a triangular piece of bone was removed from the anterior surface of the os calcis; viz., that portion which is contained within a line drawn from the peroneal tubercle to the inner extremity of its articulation with the cuboid. The separation was effected in part by a keyhole-saw, and completed with a chisel. The foot could then be brought into a straight position as regards the varus; the equinus was left for future treatment.

The wound was dressed, after being brought together with catgut sutures, in the usual Listerian manner, and a splint applied. In about three weeks, the wound was perfectly healed. The temperature during the healing never exceeded 99°. The foot was afterwards kept in position by means of an ordinary outside wooden splint; and, on October 28th, the boy left the hospital with the talipes varus completely cured, and the equinus rapidly improving under elastic tension.

REMARKS.—This plan of dealing with confirmed talipes equino-varus commends itself as being much simpler than dissecting out the cuboid bone, and certainly one much less tedious in execution. The obstructive wedge-shaped piece of bone slips away, as the condyle does in Ogston's operation on the femur, and at once permits the unfolding of the deformed foot.

ADELAIDE HOSPITAL, DUBLIN.

NOTE ON A CASE OF PECULIAR ALBUMINOUS URINE.

(Under the care of Dr. WALTER G. SMITH.)

ABOUT the beginning of last May, Dr. Walter Smith was asked to see Dr. M., aged twenty-three years, and found him labouring under scarlatina, with a fully developed rash. He passed through the disease favourably, without any bad symptom, and examination of the urine upon several occasions failed to betray the presence of albumen. He seemed to convalesce fairly, and was allowed to leave his room, and to take open air exercise. One day, after he had been out, he complained of his neck feeling a little sore, and of some difficulty in swallowing. He remained in bed, and, when visited next morning, the glands below the angle of the jaw were slightly swelled, and there was some duskiness of the fauces. The glandular swelling soon subsided; but his aspect became more pallid than previously, and his manner (at no time a very vivacious one) assumed a character of monotonous depression and apathy, which persisted for several weeks. Attention was then called to the condition of his urine, and some of the morning urine was examined within half-an-hour after it had been passed. The urine was markedly acid, dark opaque brown, and exhaled a mawkish odour. After acidification with acetic acid, it acquired and retained for days an odour almost indistinguishable from that of sour buttermilk. When the urinometer was placed in the liquid, it was noted with surprise that the instrument was buoyed up so high that a portion of the bulb rose above the surface; and that, consequently, the density could not be read upon its scale, which graduated only to 1060. The density was subsequently determined in the laboratory by the specific-gravity bottle, and found to be 1065.8. The urine flowed sluggishly, like thin syrup, and possessed some degree of adhesiveness: for it felt sticky between the fingers, and could be drawn out to a certain extent. When allowed to nearly dry, it left a glutinous residue sufficient to fix a glass vessel firmly to the table. It was now submitted to the tests for albumen, with these results. Immediately upon *warming* the liquid a whitish film formed on the side of the test-tube, and in a few seconds the whole was converted into a cream-coloured coagulum, so coherent that not a drop of fluid escaped when the tube was inverted. From a subsequent observation, the temperature of the fluid was about 111° Fahr. when coagulation commenced on the side of the test-tube, which could not have been many degrees hotter. Even when diluted with an equal volume of water, the liquid was rendered perfectly solid by heat. *Nitric acid* caused an abundant opaque yellow precipitate. *Acetic acid* caused a slight stringy turbidity; and, followed by ferrocyanide of potassium, a copious opaque yellow precipitate, resembling custard. Addition of an equal volume of a strong solution of magnesium sulphate produced no effect—neither did the further addition of acetic acid—until heat was applied, when an abundant precipitate was obtained. *Liquor ammoniæ*, added until the liquid smelt strongly of ammonia, lightened the colour. The urine was heated, and, when cool, it set into a firm brown jelly. This remarkable phenomenon was likewise observed if the urine were first acidified by acetic acid, and then supersaturated with ammonia. Gelatinisation could not be effected under the influence of potash. Under the microscope, a few granular tube-casts and blood-discs were seen.

In order to see whether the exceptionally high density were due to excess of urea, Dr. C. A. Cameron was good enough to submit the urine to analysis, and kindly furnished these figures (per cent.): Mineral matters, 0.62; solid matters, 12.00; including urea, 2.3; total nitrogen, 4.9. Hence it seems that the proportion of urea was not materially above the average.

Two days later, no drug meanwhile having been administered, the colour and general appearance of the urine were unchanged. Total quantity in twenty-four hours, 18 fluid ounces. The addition of a little ammonia cleared it and deepened its colour, but the gelatinous change could not be induced. Neither did heat effect solidification, although the quantity of albumen was still very large. Next day, the quantity of urine excreted ran up to 45 ounces, and the specific gravity fell to 1015, at or about which point it afterwards remained.

On June 5th, the albumen had nearly disappeared, but only to return again in a few days in large proportion. Although Heller's test for blood gave, on many occasions, only slight or equivocal results, the guaiacum test reacted speedily. The colour of the urine, when freshly passed, was always dark brown; but latterly, the observation was made that, after it had stood for some time, it assumed a distinct red tint. Thus the urine, which when recently excreted was brown, would, in the course of a few hours, become almost as red as the washings of raw meat. The coloured urines were examined with the spectroscope, and it was found that each fluid, especially the brown liquid, shut off a great portion of the spectrum. The red urine yielded two absorption-bands, apparently corresponding, or nearly so, to those of oxy-hæmoglobin; and the brown urine similarly gave two faint bands coincident with the preceding bands. That this curious chromatic change depended on a process of oxidation seems probable, because it quickly occurred when the urine was exposed to the air, and was not observable after twenty-four hours' preservation in a well-filled and closely corked bottle. The urine was examined for sugar by the copper and bismuth tests, but with negative results. Coincidently with the appearance of albuminuria, the temperature, which had been normal, rose and fluctuated irregularly for weeks—rising in the evening to 100°, 102°, and even 104°. There was no trace of œdema of the face, or of anasarca of the extremities, until two months later, when very slight œdema of the feet supervened. Later on in the case (*e.g.*, June 25th), the urine deposited a good deal of pus, and continued to do so for weeks. Matters went on from bad to worse until the patient succumbed on September 4th, with uræmic symptoms.

REMARKS BY DR. W. SMITH.—There can be little doubt that the reactions just detailed belong to one of the forms of "modified" albumen which, every now and then, confront us among the rarities of clinical experience; and, as such, it is published. Scattered throughout medical literature are numerous cases in which the urine has been found to contain unusual forms of albumen; but, in our regrettable ignorance of the chemistry of albuminous bodies, we are not yet in a position to comprehend these isolated anomalous cases under any general laws.

The particulars of especial interest which this case appears to present are these.

1. The specific gravity of 1065.8. A density of 1065 is rare, even in highly saccharine urines, and is scarcely to be thought of apart from a large excess of sugar or of urea, neither of which occurred in this case. Yet it is well to remember a remark made by Dr. W. Roberts, in his valuable work on *Urinary and Renal Diseases* (second edition, p. 17), that the heaviest urine ever submitted by him to examination, and which had a density of 1065, did not contain a particle of sugar, but a very large quantity of albumen.

2. The gelatinisation of the urine with ammonia and heat is very remarkable; and it is not easy to advance anything as to the cause of this, beyond the conjecture that the gelatinous product was probably allied to one of the forms of alkali-albumin, several varieties of which are believed to exist. At first, the viscidity and appearance of the urine suggested the possibility of the presence of paralbumin, notwithstanding that this compound had not previously been recognised in urine. Although closer examination did not confirm this supposition, it may be mentioned, in passing, that recently Leube is reported to have ascertained the presence of paralbumin in the urine of a patient affected with chronic parenchymatous nephritis. (*Revue des Sciences Méd.*, 1879, from *Sitzungs-Berichte der Physiol.-Med. Societ. zu Erlangen*, 1878.)

3. The transition of the urine from a brown to a red tint within a few hours. The persistently high colour of the urine could scarcely be explained by the small quantity of blood present; and there was seemingly a considerable amount of some pigment other than hæmoglobin in solution.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 23RD, 1880.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

ON ARTIFICIAL RESPIRATION IN NEW-BORN CHILDREN. I. THE AMOUNT OF VENTILATION SECURED BY DIFFERENT METHODS: AN EXPERIMENTAL INQUIRY.

BY FRANCIS HENRY CHAMPNEYS, M.B.

THE number of bodies experimented on was twenty-six, of which twenty were utilised for this part of the subject; only such as had never breathed being used. Tracheotomy having been performed, a cannula was tied into the trachea, the cannula being connected by an India-rubber tube with a V-tube filled with water, which thus registered inspiration and expiration by the rise and fall of the water, the results in the same body only being compared, and the highest effect being the standard of comparison. The methods used were nine, viz., those of Marshall Hall, Howard, Silvester, Pacini, Bain, Schücking, Schüller, Schroeder, and Schultze. The conclusions were the following. 1. Since the position of equilibrium of a still-born child's chest is one of absolute respiration, airlessness, or collapse, no method which depends on elastic recoil of the chest-walls will introduce air into its lungs. The methods of Marshall Hall and Howard are useless as means of directly ventilating the lungs of still-born children. 2. Silvester's method, and its modifications by Pacini and Bain, introduce more air into the lungs than any other method. 3. In using Silvester's method, the arms should be held above the elbows, and everted. 4. In using Pacini's or Bain's method, the legs should be fixed; the second half of Pacini's method, and Bain's second method, should not be employed, as the weight of a new-born child's body is insufficient counterpoise to the necessary traction. 5. In using these two latter methods, the operator may face the subject, and lift the shoulders from below; by this means he is able to watch the child's countenance, and is able to introduce an equal quantity of air. 6. Schücking's method is no improvement on Silvester's. 7. Schüller's method is useless, and not free from risk. 8. Schroeder's method is useless. 9. Schultze's plan, although its power of ventilation is less than that of Silvester and its modifications, yet acts efficiently. 10. In Schultze's method, the diaphragm does descend, though but slightly; its principal action, however, is on the thoracic-walls, as in the Silvester group. 11. In Schultze's method, it is important that the whole weight should rest (at the end of the inspiratory movement) on the index-fingers in the axillæ, and should not be distributed on other fingers. 12. The violence of the action of the method of Schultze is not in its favour. 13. Opisthotonos always reduces respiration by tension of the anterior body-walls, and should be avoided. Böhm's experiments, six in number, dealt with children truly still-born in two cases only (one other having failed). His general conclusions spoke highly of Marshall Hall's and Howard's methods, which, however, in the [illegible] were nearly or quite failures. His error was in not appreciating the collapsed state of the thorax in truly still-born children.

Dr. MATTHEWS DUNCAN said that the paper appeared to be one of great importance, and, when the author's researches were matured, they must lead to results of cardinal value. He believed that Schultze's method acted too violently; but it introduced air quickly into the lungs. The methods of Marshall Hall and Howard had been much recommended, but were not practically useful, if any trust was to be placed in Dr. Champneys' researches. He had long studied the theory of artificial respiration, but had made no such experiments as those described in the paper. He had for some time arrived at the conclusion that the methods formerly taught, and which were conducted with much hurry and haste, were not of great value, and were indeed sometimes injurious. He had seen the liver and spleen ruptured by violent manipulation. One of the methods formerly in use was the inflation of the lungs by means of a catheter. This was quite unnecessary: there was no difficulty in getting air admitted to the child's lungs. The catheter, too, was very liable to be passed into the œsophagus, and the stomach to be inflated instead of the lungs. He had long used Silvester's method, and thought that it at present promised the greatest advantages. He believed that a child had a chance of recovery if its heart beat at all. A fœtal heart might cease to act for a minute or more, and yet be capable of recommencing action; and in such a condition the child was capable of resuscitation.—Dr. ROPER had had a large experience in the resuscitation of still-born children. He agreed with Dr. Duncan that Silvester's method was the most efficacious; but children often recovered spontaneously, though the recovery was attributed to artificial respiration. Occasionally, a spontaneous movement of inspiration took place when artificial expiration was being practised. With regard to the cessation of the heart's action, he said that he had seen children put aside as dead, which had afterwards revived. In one case, the heart was found beating, in an immature child, eleven hours after birth; and in another case, in which the infant—a monstrosity—had been laid aside as dead, it began to cry at the end of two hours. He thought that infants possessed more tenacity of life, and recovered spontaneously more often, than was generally supposed. He thought that suspended animation depended on congestion of the brain, affecting the respiratory tract.—Dr. DOUGLAS POWELL had no doubt of the superiority of Silvester's method, except, perhaps, over that of Schultze. He did not think that the fact that the diaphragm was not brought down was of much importance. The respiration of new-born children was very like that of emphysematous adults, as regards the lifting of the shoulders. He did not think that the diaphragm would be drawn up by acting on the lungs; it was fixed by the remains of the umbilical cord, and by peritoneal adhesions. He had watched the action of Silvester's method in a case of impending death from methylene; and had noticed the marked effect, in increasing inspiration, of a vigorous push in the axillæ. It would be interesting to know the author's opinion as to the dependence of the efficiency of methods of artificial respiration on the elastic recoil of the ribs. He did not see how there could be any elastic recoil in a new-born infant; it was brought about by the tonic contractions of the muscles and the growth of the costal cartilage.—Dr. SILVESTER said that the study of the subject under consideration required to be kept up. His rules had been drawn up rather for the public than for the medical profession. Artificial respiration might be performed in various ways; but what was wanted was a method which could be used by all classes of the public without doing injury to the subjects, and which might, for instance, be applied safely by a rough boatman to a delicate female. Such directions as those which ordered the operator to stand behind the patient, and not to press on the chest, were issued on the ground of decency, and in order to avoid injury of the cartilages of the ribs in females. Again, the rule to elevate the arms from the elbow was given in order to prevent injury to the axillary vessels and dislocation of the shoulder. In his own practice, he generally acted from the arms. In still-born children, he raised the arms to produce a vacuum, and believed it the best plan; but he did not approve of pressing the arms on the chest, as this was liable to produce injury. Sometimes the heart would cease beating, and be revived under artificial respiration; and this would occur several times, and at last the child would die. Respiration was not the only thing at fault; perhaps there was also pressure on the brain. He thought that the paper was one which indicated great care and careful investigation on the part of the author.—Dr. CHAMPNEYS said that it was quite true that still-born children might recover spontaneously; but such cases were, he thought, the exception. Elastic recoil of the lungs was at first impossible; but, in a few hours after birth, the costal cartilages had grown so much that the equilibrium was that of inspiration. Dr. Silvester's plan of acting from the hands might be best in his experience; but Dr. Champneys preferred to take the arm above the elbow, and so

to evert the limb. He thought that it would be useful if Dr. Silvester would draw up a second set of rules for the use of the medical profession and of midwives.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

WEDNESDAY, NOVEMBER 10TH, 1880.

S. O. HABERSHON, M.D., President of the Branch, in the Chair.

The Treatment of Enteric Fever.—Dr. BRISTOWE opened a discussion on this subject. His remarks are published at page 839.—Dr. BROADBENT agreed with nearly every word of Dr. Bristowe's address, except on the subject of baths. He thought the general principles of treatment were so well settled, that it was more important to the patient that special attention should be given to details. As to food, he would scarcely restrict it to milk; beef-tea or other animal-broth once or twice in twenty-four hours was of advantage. He thought the reason why milk had fallen into discredit was, that the distinction between it as a food and as a drink was too often lost sight of, and it was given as if it were merely drink to allay thirst. He insisted on the necessity for the medical man or nurse to see every stool, by doing which they might often prevent or anticipate vomiting, if they saw masses of curds appearing in the stools. Beef-tea was sometimes the cause of diarrhœa; but, unless this exceeded three stools *per diem*, it need not be checked. Opiate enemata were, in any case, the only treatment he should adopt for it. If there were sleeplessness, he would give 20 minims of laudanum at night. In hæmorrhage, a large dose of opium might be given to arrest peristaltic action, which was carrying blood down the bowel. Tannin was useless, because it became changed before reaching the bowel. Ergot in large doses, or turpentine, might be tried. Tympanites coming on early prognosticated a fatal termination. Later, it might be treated with opium in full doses. Sir W. Jenner had proposed charcoal; but this would be ineffectual unless given in enormous quantities. One or two grains of solid opium, or a drachm of laudanum at a dose, caused tympanites to disappear in twelve hours. As to cold baths, his experience was one of gradually increasing confidence, and he believed that many lives might be saved by their use. Whenever the temperature rose above 104°, he would give a bath tentatively, and repeat it if it seemed to do good. As to alcohol, he agreed with Dr. Bristowe, and would be very sorry to be treated in a temperance hospital.—Dr. DOW advocated the use of hydrochlorate of potash and hydrochloric acid, by which he found that the fever was rapidly subdued, and diarrhœa checked. He had had no mortality in the cases treated by this method. Alcohol was of use only in the later stages of the disease.—Dr. CAYLEY would confine his remarks to the treatment by cold baths, and communicated some passages of a letter which he had received a few days ago from Dr. Brand of Stettin, to whom the reintroduction of this mode of treatment must be ascribed. Dr. Brand insisted upon the necessity of commencing the treatment in the first few days, if it were desired to obtain its full benefits; if delayed beyond this period, though it would prevent many of the injurious effects of the fever, the patients would still be liable to the various accidents due to the intestinal ulceration. On his recommendation, the director of the hospitals of the Second German Army Corps gave orders that all cases of typhoid fever were to be treated systematically in this manner. In four of these hospitals, this was done thoroughly; and in these hospitals, since 1877, four hundred cases of typhoid had been treated, without a single death. In the other hospitals, where the treatment was less thoroughly carried out, the rate of mortality was 3.5 per cent. The average rate of mortality from typhoid fever in the German military hospitals under the ordinary treatment was 26 per cent., which was about the same as in the English army. These statistics would shortly be published and illustrated by Dr. Abel, Physician-General to the Prussian Army. In England, the systematic treatment of typhoid fever according to Brand's method had not as yet been sufficiently tried to enable positive conclusions to be drawn as to its true value; but, from the brilliant success which had attended it in Germany, it was certainly worthy of a fair trial, and it was to be hoped that, in public institutions, this trial would be given it. In private practice, one often heard the objection that it was impossible to carry it out, and, moreover, that it was dangerous. With regard to the first point, it must be remembered that the difficulty was really a moral rather than a physical one; and that, if we were in a position to assure our patients and their friends that by this mode the chances of recovery would be increased tenfold, not only would they, as in Germany, willingly submit to it, but would insist upon its application. With regard to the danger, Dr. Cayley thought that the experience of it in this country was ample to show that it was not attended by danger. During the present year, forty-nine cases of typhoid fever had been under treatment in the Middlesex Hospital, under the various physicians, and all except the very mild ones had been systematically bathed. Only one death had occurred. He thought this number of cases sufficient to show that there were no special dangers attending the treatment. If forty-nine cases of well-marked typhoid could be successively treated with only one death, he thought that the treatment was not injurious. In only one of these cases had there been severe hæmorrhage.—Dr. NORMAN KERR supposed that all were agreed that cases of enteric fever occurred which might be treated without alcohol, and he was ready to admit that some cases did require stimuli of some sort. The indications of requiring stimulants were two: in rapid tissue-waste, to reduce it; and, in high temperature, to reduce temperature and restore the vital powers. Could alcohol reduce tissue-waste? He thought it could, but that there was great danger of reaction after alcohol, and that quinine or the cold bath was in many respects preferable. Could alcohol restore the vital powers? He thought it could, but the remedy often became worse than the disease. He had found an enema of very hot water of great value in restoring vital action. He also recommended flying blisters, and the use of digitalis and ammonia.—Dr. COLLIE said that, of every hundred cases of enteric fever, seventy-five would recover without any medical treatment, fifteen would die in spite of any treatment, while the recovery of a small percentage would depend a good deal on the nursing. He thought it was very rarely necessary to treat diarrhœa by opiate enemata. He would give stimulants of the stronger kinds to those accustomed to drink them in health, but preferred for others claret or other light wines. Quinine reduced temperature, but did not do the patient any good. As to baths, he did not believe in German statistics, and did not believe that four hundred cases of enteric fever had been treated without a death. If enteric fever were to be diagnosed during the first few days, and by the thermometer alone, then there might be any number of cases without a death. Cold baths had been tried at Homerton, and found useful for certain symptoms; but, in bad cases, the cold bath was given up on the evidence supplied by the Germans themselves, who said it should not be used in cases with weak hearts or defective circulation.—Dr. ORD said statistics had a great charm for some minds, but he thought averages were not things that could rule us when treating the individual. Of baths of 60° to 68° he had no experience, being afraid to use them; but graduated baths of 90° to 95°, lowered to 70° or 75°, he had found very useful, either to reduce temperature, or for modifying intestinal mischief, or to procure sleep. If the temperature were at 105.5°, and running up, graduated baths controlled it, if the pulse, etc., permitted their use. They mitigated delirium, and promoted sleep. In pulmonary complications, bronchitis and pneumonia gave way under the use of the graduated bath.—Dr. MAHOMED strongly deprecated the doctrine of averages and routine-treatment advanced by Dr. Collie. He advocated the very free use of opium throughout the disease, and in all cases. He had lately adopted its use, in both mild and severe cases, as an essential and invariable element of treatment, prescribing one grain every three or four hours. He pointed out its great benefit in allaying nervous excitement and anxiety, in retarding the intestinal peristalsis, preventing diarrhœa and tympanites, soothing the tender and painful intestine; it was invaluable in the low restless delirium characteristic of the disease, and was an important form of stimulant. He had not found it produce headache, a furred tongue, or other unpleasant symptoms. Dr. Mahomed drew attention to the use of direct transfusion of blood after intestinal hæmorrhage, and narrated a case in which he had lately adopted the treatment with most favourable results. Certain cases of repeated and considerable hæmorrhages were likely especially to be benefited by this measure. He wished to add his testimony to the great benefit obtainable from the methodical use of cold bathing. This remedy he believed to be rather preventive than remedial. In other words, he deprecated its employment only in advanced and severe cases, but advocated its methodical use from the earliest period of the disease, the bath being employed whenever the temperature was above 102°. It prevented destructive changes in the intestine, and the production of exhaustion and tissue-changes, the result of prolonged high temperature. All other forms of cold bathing he regarded as more or less useless. The value of cold bathing as a mode of treatment should not be judged from the results obtained in cases, in which it had not been methodically and thoroughly carried out.

The discussion was adjourned.

THE Metropolitan Commissioners of Sewers have voted £210 to the Metropolitan Convalescent Institution, £105 to the Hospital for Epilepsy and Paralysis, £105 to the Hospital for Consumption at Brompton, and £52 10s. to the National Hospital for the Deformed.

HUNTERIAN SOCIETY.

WEDNESDAY, NOVEMBER 10TH, 1880.

JOHN COUPER, F.R.C.S., President, in the Chair.

Nephrectomy by Lumbar Section.—THE PRESIDENT exhibited a girl, from whom last April he removed the right kidney, which had become converted into a large purulent cyst. The illness began in 1879, with pain in the right loin. The patient, a woman, lost flesh, became weak, and the urine was always turbid when passed. No symptoms pointed to disease of the bladder. On April 17th, she was admitted into the London Hospital under Dr. Barlow, with a more or less solid mass in the right iliac and lumbar regions. There was slight visible fulness to the right of and below the umbilicus, but no marked swelling. On grasping the loins posteriorly, there was pain on the right side only. Urine was passed from three to four times daily, and contained one-third of its volume of pus. The colon lay in front of the tumour, and deep-seated fluctuation was detected in the latter. The inner edge of the tumour reached the middle line; the lower edge to one inch above Poupart's ligament; and its upper edge three-fourths of an inch below the margin of the ribs; it did not extend into the pelvis, was movable, and could be tilted from hand to hand; it was not connected with the liver, and was not altered by deep inspiration. There were no symptoms of cystitis. It was decided to withdraw the pus through an incision into the cyst from the right loin, and to perform nephrectomy, if, after this exploratory examination, it were deemed necessary. The other kidney had been diagnosed by Dr. Barlow to be healthy, because 1. there had been no vomiting; 2. the urine was normal, both as to quantity and the percentage of solids contained in it; 3. the amount of albumen present was very small: and lastly, the size of the tumour was incompatible with the persistence of any trace of normal secreting structure. The case was considered exceptionally favourable for nephrectomy. On April 24th, a horizontal incision, precisely in the position of that practised in lumbar colotomy, was made in the right loin. The tumour thus exposed was pierced by a trocar on the outer border of the quadratus muscle, and a large quantity of dark-coloured foul-smelling pus evacuated. Having enlarged the opening, Mr. Couper passed his forefinger into a loculated sac, obviously the disorganised and dilated kidney. The removal of the kidney was decided upon, and at once undertaken. In separating the tumour from its anterior adhesions, the peritoneal cavity was penetrated, and some pus from the kidney contaminated it. The ureter and an artery of moderate size below the hilus were separately ligatured with strong catgut, and divided. The main vessels were tied *en masse* with carbolised silk, and divided. The tumour was then quickly detached from its peritoneal connections below the liver, and removed. The operation lasted two hours and a quarter, and was throughout all but bloodless. Recovery was uninterrupted, the patient left her bed on the thirty-sixth day, and was discharged on August 3rd. A preparation of the parts removed at the operation were shown.—The discussion which followed was sustained by Messrs. Corner, Clement Lucas, Barker, Scott; and Drs. Barlow and Stephen Mackenzie. The chief points raised were (1) as regards the choice of the abdominal or lumbar incision in performing nephrectomy; (2) as to the advisability of ligaturing the ureter, and removing or leaving the renal capsule; and (3) the guides for determining the "working" power of the other kidney.—The President, in replying, said a tumour of some dimensions might be removed through a transverse lumbar incision, and considered that all fluid tumours should be removed through the loin.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

MONDAY, NOVEMBER 1ST, 1880.

ALFRED WOODHOUSE, Esq., President, in the Chair.

Ancient Egyptian Dentistry.—The presentation by Mr. S. J. HUTCHINSON of a photograph of a curious picture in the Dresden Gallery, representing a surgeon extracting a tooth, led incidentally to a discussion on the subject of ancient Egyptian dentistry.—The PRESIDENT questioned the correctness of a statement made by Sir Gardiner Wilkinson, to the effect that teeth stopped with gold had been found in the mouths of mummies. He had made careful inquiries when in Egypt, but could not meet with a single authentic specimen.—Mr. T. ROGERS and Mr. COLEMAN, as the result of personal investigations, expressed their disbelief in the statement; the latter adding that the late Mr. Bonomi, a high authority, said he had never been able to find any trace of gold-stopping in a mummy's tooth.—Mr. C. TOMES also expressed his belief that the authority on which Sir Gardiner Wilkinson made the statement that of "a Greek merchant long resident at Thebes" was not reliable.

Abscess of Antrum.—Mr. C. TOMES related three cases of abscess of the antrum, in which there had been almost complete absence of symptoms. In two of these, decayed stumps were present; but, in the third, all the teeth were apparently sound, and no cause could be assigned for the abscess. He also called attention to the uncertain results of treatment in these cases, some being cured in a few weeks, whilst in others the discharge continued for years.

Necrosis of Superior Maxilla.—Mr. STORER BENNETT read notes of a case, in which necrosis of a portion of the nasal and palatine processes of the superior maxilla resulted from an alveolar abscess. The disease came on acutely after exposure to cold and wet, the patient being a healthy man, fifty years of age; there was no suspicion of syphilis.

Cervico-facial Neuralgia.—Mr. COLEMAN read notes of a case, in which osseous degeneration of the pulp of two apparently sound teeth set up intense cervico-facial neuralgia, which was cured by their extraction. It occurred in the practice of Waller Bey of Cairo.

Boils.—The Secretary read a communication from Mr. H. W. JACKSON of Lewisham, in which he stated that, for fifteen years, he had been constantly subject to the occurrence of boils on the right side of the face and neck, which at once ceased on the extraction of the stump of a decayed upper molar, which had set up a chronic abscess and fistula.

Cancer of Gum.—A communication from Mr. F. R. LLOYD of Agra was read by the Secretary, in which he related how he had been able to settle the diagnosis of a tumour of the gum, by extracting a carious molar which was involved in it, and submitting portions of the periodontal membrane to microscopical examination. He pronounced the disease to be cancer, although there was at that time no pain or tendency to ulceration. The diagnosis was afterwards confirmed, and the patient submitted to operation.

Papilloma of the Mouth.—A memoir on papilloma of the oral cavity, by Dr. ARKOVY of Buda-Pesth, was read. Only four cases of this disease were recorded; to these Dr. Arkovy added another, which was remarkable on account of the situation of the growth; it was attached to the soft palate. The author described its minute anatomy, pointing out its close relation to epithelioma, and discussed its etiology and surgical treatment.—Mr. CHARTERIS WHITE showed, under the microscope, a section of one of these tumours.—A discussion followed, in which the President, Mr. Coleman, Mr. R. White (of Norwich), Mr. Tomes, and others took part.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 3RD, 1880.

D. J. LEECH, M.D., Vice-President, in the Chair.

Unusual Complication of Skin-Disease.—Mr. BOUTFLOWER showed a youth, aged 19, who stated that immediately after his vaccination, when three months old, he was attacked by an inflammatory skin-disease, in various patches, pervading the right lower extremity and left buttock, leaving a marked cicatrix when healed. Three years ago, œdema of the penis and scrotum appeared, to such an extent as to cause a suspicion of renal mischief. There was no albumen, no stricture or history of syphilis, but slight enlargement of the inguinal glands. The only feature indicating a relation between the two affections was that, whenever the inflammatory condition of the skin increased, the œdema increased also, and *vice versâ*. The meeting was unanimously of opinion that this was a case of lupus non exedens implicating a chain of glands, situate over, and producing pressure on, the genital veins.

Hæmorrhagic Diathesis.—Dr. EMRYS-JONES mentioned a case of rupture of the eyeball in a patient suffering from hæmorrhagic diathesis. The case was brought to the Eye Hospital on November 1st, 1878, under the care of Dr. Little. On examination, the right eyeball was found to be ruptured through its entire breadth by a shuttle from the loom where the patient, a boy aged 14, was working; and the hæmorrhage was profuse. The application of pads steeped in different astringent remedies, and of a compress and bandages, had no effect. The mutilated globe was enucleated, and the contents of the orbit cleared, and the cavity packed carefully with cotton-wool steeped successively in tincture of perchloride of iron, turpentine, collodion, and with cotton-wool mixed with powdered cup and sulphate of iron, but without avail. Even the actual cautery, well applied, gave no relief, and the internal administration of sulphate of iron, sulphuric acid, and the hypodermic injection of ergotine proved ineffacious. The boy was taken home in a fortnight, in spite of warning. The oozing continued for a week longer, when he "fell into a faint", and the bleeding completely stopped. The case was interesting on account of the rarity of such a coincidence, the failure of the usual remedies, and the favourable result through natural processes.

Pancreatised Papers.—Dr. WILLIAM ROBERTS exhibited samples of pancreatised papers. These papers were obtained by soaking bibulous paper in a very strong extract of pancreas, and then drying it at a heat not exceeding 100° Fahr. Each square inch of the paper represented the active ferment principles of one fluid drachm of Benger's liquor pancreaticus. In using them, one or two pieces of a square inch were placed in a wineglass with an ounce of water. The ferments speedily dissolved out of the paper and passed into the water. In an hour or so, if the papers were occasionally agitated with the water, all the ferment power was transferred to the water, which thus supplied a simple aqueous solution of trypsin and diastase. When solution was completed, the water was poured off from the pieces of paper, and it might then be taken by the mouth, or added to milk-gruel which it might be desired to peptonise. The advantage gained by the use of these papers was, that the preparation retained permanently, or at least for a very long time, its pristine activity; and that it was not exposed to the chances of decomposition. All liquid preparations of the digestive ferments gradually lost activity, and, in the course of a twelvemonth or so, became nearly inert. These papers could be easily sent by post, and to any quarter of the globe, without any risk of loss of activity. They were hygroscopic, and should be kept in a stoppered or corked bottle.

Fibromyoma of Uterus.—Dr. THORBURN showed a large uterine fibroid tumour removed by hysterectomy. The pedicle, consisting mainly of elongated and attenuated tissue of the supravaginal portion of the uterus, had been secured by strong silk ligatures. For two days, the patient was free from shock, fever, or other consequence. On the third, she sank rapidly, and died in a few hours. Some blood, though not so much as expected, was found in the pelvis; but the source of the hæmorrhage could not be traced.

Supposed Aneurism of the Left Carotid Artery: Distal Ligature: Continued Increase of Aneurism: Death: Necropsy: Aneurism of Aortic Arch overlying Carotid.—Mr. HARDIE related the particulars of this case, and showed the preparation. The patient was a woman, aged 33. The aneurism lay behind the left sterno-clavicular articulation, and projected into the neck. After careful dietetic medicinal and electrolytic treatment, without avail, the carotid artery was ligatured with a carbolised silk thread. A slight diminution of pulsation only was observed on tightening the ligature, and on the following day the pulsation became as marked as previously. Mr. Hardie was then convinced that, notwithstanding repeated careful examination to determine the precise situation of the aneurism, an accurate diagnosis had not been arrived at; and that it was, in fact, situated on the aortic arch. The wound healed by primary union, and the tumour continued steadily to increase. Further electrolytic treatment was tried; but it only seemed to weaken the anterior wall and the sac at the seat of puncture. The patient died six months after the operation, when there was found a sacculated aneurism, larger than a fist, situated on the aorta, its aperture reaching from the innominate to the left subclavian, and in front of the origin of the carotid. The carotid itself was not implicated, but was pushed backwards and slightly to the left. It thus lay just behind the tumour, and had become occluded by its pressure. The ligature was found, apparently unchanged, embedded in fibrous tissue. Mr. Hardie, remarking on the great difficulty of diagnosis in such a case, stated that he thought he had not attached sufficient weight to the singular fact of the extreme rarity of aneurism of the left carotid. He also remarked on the bearing of the case as regards treatment of aneurism of the arch by ligature of the carotid.

Obstruction of Left Carotid Artery, with Angina.—Dr. LEECH showed the heart and aorta of a man, who suffered during life from many of the symptoms of angina pectoris; but the attacks of pain and strangling were located almost entirely in the jaws and throat. Pulsation was absent in the left carotid artery. The preparation showed that one coronary artery was wholly, and the other partially, occluded; the walls of the arteries being rigid and calcareous in many parts. Extensive atheromatous changes had occurred in the aorta, and the orifice of the left common carotid was completely blocked up.

Paralysis of the Right Lower Extremity following an Injury to the Sacral Plexus during Labour.—Dr. WALTER mentioned the case of a patient, aged 28, who was admitted into St. Mary's Hospital, under the care of Dr. Lloyd Roberts, for wasting and loss of power of the right lower extremity, her ailment dating back to her second confinement, which took place seven weeks before admission into hospital. The labour was tedious, the head being delayed for some hours at the brim, and requiring the use of the forceps to effect delivery; during the passage of the head through the pelvis, the patient complained of very violent pain and cramp in the thigh and leg, which ceased on the birth of the child. The next day, her foot and leg were cold and numb, and complete loss of motion existed throughout the entire limb. On admission, wasting and paralysis of all the muscles supplied by the sciatic nerve existed; cutaneous sensibility was normal, excepting over a small area in front of the ankle-joint, where œdema was visible. No paralysis of the bladder or rectum existed. The treatment employed was friction, and shampooing of the limb, with the regular use of the interrupted current. In six months, the patient was completely cured.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, NOVEMBER 6TH, 1880.

E. H. BENNETT, M.D., President, in the Chair.

Stump after Syme's Amputation.—Mr. W. I. WHEELER exhibited a stump after Syme's amputation, which had been performed for compound dislocation of the ankle-joint of some months' standing. A cast of the dislocation was laid on the table. The amputation was performed on March 11th, 1880. The stump healed in the usual course, but the patient wore an artificial limb soon afterwards, contrary to directions. Inflammation ensued in the stump, and the bones subsequently became diseased. There was a specific history. The limb was now amputated below the knee. The stump consisted of a thick pad of connective tissue, and the lower ends of the tibia and fibula were carious.

Exophthalmic Goître.—Dr. A. W. FOOT showed the eyeballs, thyroid gland, and heart of a girl, aged 22, who had suffered for six months from Graves's disease (exophthalmic goître), and who succumbed to an attack of typhus fever on the twelfth day of her illness. The eyeballs were not larger than usual; but there was a notable quantity of adipose tissue behind and around the globes. The thyroid gland was not very large. It was firm and condensed in structure, as if the congestion to which it had been subject had provoked a hyperplasia of the connective tissue of the organ. There was neither hypertrophy nor dilatation of the ventricles of the heart, owing probably to the short duration of the disease. When removed from the body and emptied of coagula, the heart weighed nine and a half ounces.

Fracture of the Os Calcis.—Dr. C. B. BALL showed a specimen of fracture of the right os calcis, caused by muscular action, in which bony union had taken place. The specimen was taken from the body of a man, who, at the age of sixty-five, was working at the top of a blast-furnace. Suddenly he felt the staging on which he was standing giving way, so that he made a violent effort to jump off. He succeeded in doing this, but, at the same time, broke his right calcaneum. The symptoms of the injury were very evident. The upper fragment was drawn upwards by the tendo Achillis about an inch and a half, and, between the fragments, a deep sulcus could be felt. The displacement could be decreased considerably by extending the foot and flexing the leg. The man was killed five years afterwards by a locomotive engine. An examination of the macerated bone showed that a fracture had passed horizontally across the middle of the posterior aspect of the bone, chipping off a wedge-shaped piece, the base of which looked directly backwards and the apex towards the astragalus. At the posterior extremity, the fragments were separated a distance of one and a quarter inches; but, anteriorly, there did not appear to be much displacement.

Fracture of Os Calcis par écrasement.—The PRESIDENT exhibited an example of fracture of the left os calcis *par écrasement*, caused by a fall on the foot from the roof of a two-storey house on to the pavement in front. The individual also sustained a Colles's fracture of the arm of the same side. Gangrene of the upper extremity, extending to the trunk, was the cause of death. The lines of fracture were identical with those described by Malgaigne. During life, and after death, crepitus could hardly be elicited, although the os calcis was shattered.

Crushed Fracture of the Os Calcis.—Mr. P. S. ABRAHAM presented an example of "crushed" fracture of the calcaneum, or "fracture *par écrasement*" of Malgaigne. The superior surface of the bone showed two main, deep, but irregular furrows, indicative of lines of fracture—one, the larger, transversely across and near the anterior border of the large articular surface; the other, longitudinal and near the external side of the bone. The measurements, accurately taken, brought out: 1. That the principal change of shape consisted in a widening out in front; 2. That this was mainly opposite the sustentaculum, and that here was the greatest lateral separation of fragments; 3. That there was some shortening between the posterior aspect of the bone and the sustentaculum—pointing to a slipping backwards of the sustentacular fragment.

SATURDAY, NOVEMBER 13TH, 1880.

A. W. FOOT, M.D., President, in the Chair.

Croupous Pneumonia: Aortic Aneurism.—The PRESIDENT showed a specimen of pneumonic exudation, engaging the entire of the right lung of a man, aged 49, intemperate, who was a week ill before his ad-

mission to hospital, and died three days afterwards. In the right lung were about twenty-nine ounces of exudation. The lung was in a state of grey hepatisation. The interlobular fissures were obliterated, and the pleura was universally thickened. The left lung was emphysematous, and collateral hyperæmia was present. An extensive aneurism of the descending thoracic aorta had eroded the bodies of several dorsal vertebræ.

Cancer of Rectum.—Mr. THOMSON presented the rectum and bladder of a man, who had been operated on a year ago for epithelial cancer of the rectum. He suffered from diarrhœa. A No. 8 catheter could with difficulty be passed into the bowel, owing to cicatricial contraction of the neighbouring tissues. Absence of pain was a notable feature in the case. After death, a constriction was found just above the sigmoid flexure. This was caused by a portion of mesentery. The bladder was thickened. There was no secondary disease of the prostate. No secondary cancer existed in the liver. The left kidney was studded with several pale-coloured nodules. The left common iliac vein was flattened and collapsed, and contained a clot. The inferior vena cava also contained a clot.

Staphyloma.—Mr. J. B. STORY showed an eyeball, which had been enucleated by his colleague, Mr. A. H. Benson. There was no history of injury; but the patient, a discharged soldier, aged 39, complained of pain and blindness in the right eye. Dimness of vision preceded the pain, and total blindness ensued in six months. There was a prominence at the upper and outer portion of the eyeball, caused by a staphyloma, which was probably due to a sclerotico-choroiditis.

Tumour of Bladder and Uterus.—Dr. J. K. BARTON detailed the case of a woman, aged 37, who, in 1877, complained of irritable bladder, at last accompanied by severe hæmaturia. There was no calculus; but digital examination revealed the presence of a villous growth at the right side of the bladder. Death was certainly brought about by hæmaturia and menorrhagia combined. The diseased organs were laid on the table. The bladder was thickened (muscular hypertrophy). A pedunculated villous tumour was attached close to the right ureter. This growth used to fall forward into the urethra, temporarily occluding it partially. In the os uteri lay a myxomatous growth. A well-marked myoma was found in the muscular tissue of the upper part of the uterus. Abscesses occupied the kidneys. Mr. Abraham reported that the microscopical characters of the vesical tumour were those of carcinoma.

Myoma of Testicle.—Mr. P. S. ABRAHAM exhibited an enormous tumour, engaging the testicle of an otherwise healthy boy of twelve years. The mass was excised by Dr. Thomas Swan of Abbeyleix. It was noticed for the first time in infancy, and was then thought to be a hernia. It grew slowly until 1879, when the growth became more rapid. There were no enlarged glands. The tumour was bound down to the pubes by strong fibrous bands. The inguinal canal was slit up in order to divide the cord as high as possible. The lad made an excellent recovery. Under the microscope, cells of unstriped muscular fibre were observed in all parts of the growth.

NOTES ON BOOKS.

Du Myxœdème. Par Dr. HADDEN. Paris: Aux Bureaux du *Progrès Médical.*—This is a reprint of a paper by Dr. Hadden, formerly medical registrar at St. Thomas's Hospital, in which he furnishes an interesting report on the disease first described by Sir William Gull in this country as "cretinoid", and more thoroughly studied and named myxœdema by Dr. Ord of St. Thomas's Hospital. This disease is characterised superficially by generalised and firm œdema of the skin and connective tissue—not pitting like ordinary œdema. It had recently attracted the attention of M. Charcot, who was about to describe it under the name of *cachexie pachydermique*, when he became aware of the researches of Dr. Ord, and has adopted his nomenclature of this now well-established clinical study. Dr. Hadden gives, in the *Progrès Médical*, an excellent summary of the clinical characters, especially pointed out by Gull and Ord; the thickened eyelids, swollen, and flattened nose, thick purple lips, slit-like mouth, spade-shaped fingers, awkward to bend or use, broad œdematous feet, dry horny transparent skin, florid and waxy complexion, scanty and brittle hair, broken nails, broad and thick tongue, slow, nasal and monotonous speech, retarded by swallowing, bodily languor, and intellectual torpor, slow movements, irregular muscular action in walking, leading to a precipitate gait and falling about; ultimately, increasing somnolence, pronounced headache, sometimes delirium and insanity. The course of the disease is slow and progressive, death usually supervening owing to visceral complications, especially of the kidney. Dr. Ord has found at the *post mortem* examination, firm, almost solid, œdema of the skin, heart, palate, larynx, stomach, and other viscera, shrinking of the thyroid, atheroma of the large arteries, and thickening of the arterioles, with hypertrophy of the left ventricle, effusion into the large serous cavities, atrophy of the kidneys, with granular state of their cortical substance. Chemical examination of the skin showed it to contain fifty times the quantity of mucine found in healthy skin, or even in skin œdematous under ordinary conditions; the connective tissue fibres are gelatiniform when examined by the microscope. The cutaneous nerve-ends are enveloped in a soft transparent substance which shields them from external impressions. This peripheral change explains, in Dr. Ord's view, the lessened excitation of the receiving nerve-centres, and the lethargy and inertia, and slowness of movement observed. The suggestion has been made by Dr. Goodhart that the cerebral symptoms are probably due to a degeneration of the central nervous system, similar to that which is observed in the cutaneous and other connective tissue; and Dr. Hadden inclines to that view, but *post mortem* observation has not hitherto confirmed it. The subject is one of great interest, and the disease which has been wholly made out thus far by English observers, Gull and Ord especially, deserves the vigilant study of our British school of clinical physicians and pathologists. Dr. Hadden has put the facts before French readers in a very clear and well prepared document.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SWAN AND CROWN WHISKEY, BOTTLED, LABELLED, AND DATED IN BOND.

MESSRS. T. SCALLY AND CO., of Eustace Street, Dublin, have adopted, a system of bottling whiskey, which offers to the purchaser guarantees of an absolute kind, such as are not otherwise to be obtained; and ensures to the consumer an exact knowledge of the age of the whiskey which he is consuming. More than once, extensive series of analyses of cheap whiskeys sold in low quarters of London have been made; one extensive series was conducted for the *Sanitary Record*, a year or two ago, at great expense, with the result of showing what is, we believe, now a well established fact: that the maddening and infuriating effect of the fiery spirit sold in common liquor-shops is not due to adulteration with other products so much as to the sale of new raw spirit, with its deleterious fusel-oil and ethylic compounds. That which is essentially required in whiskey of a high class is, that it shall be a pot-still whiskey which has mellowed, ripened, lost its fusel-oil, and acquired its flavour by age and the changes which age evolves. In the various devices by which these qualities may be simulated, there lies a large and open field for commercial deception, of which vendors have not been slow to avail themselves. Messrs. Scally and Co. have adopted a system which is, so far as we know, unique, and which is beyond doubt or suspicion. They not only bottle their whiskey in bond, under supervision, therefore, of the Customs officers—for this, although largely held out as a guarantee, is not a complete or efficient safeguard—but they label it in bond with a numbered serial label under the same supervision, each label bearing the date of age of the whiskey, as well as its serial number. This is, for the first time, a complete and serious guarantee of the allegation of age, which is so often put forward in a specious, but generalised, manner. This system could only be adopted by a house holding large stocks of old whiskey in bond, that is to say, by a house of great financial resource and large business connection. They are, however, holders of great stocks of pot-still whiskey of all ages; and they sell their whiskey—which is of fine quality—with an absolute guarantee of age, according to the taste of the purchaser, who, at a reasonable scale of prices, can choose his whiskey of any age, and be sure that he is getting what he asks for. This is the most satisfactory system yet adopted, and will certainly commend itself to those who desire to secure for themselves or others a spirit of high quality and definite characters of maturity. We should like to see this system, which Messrs. Scally have had the honesty and the enterprise to adopt in the sale of whiskey, extended by some merchants to wines and spirits generally.

MR. GEORGE FRANCIS BLAKE has been elected assistant librarian to the Royal College of Surgeons in Ireland, *vice* Dr. John Alexander Spencer, resigned.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 27TH, 1880.

THE UNIVERSITY OF LONDON.

SERIOUS attention is being given by the governing body of the University of London to a letter of Dr. Bristowe, addressed, in December 1879, to Lord Granville, as Chancellor. The letter embodies a strong protest against the arrangement and method of the examinations of that body as at present conducted. Many a good word may be said for the University of London. Every one must recognise its high purpose, its careful selection of the best men for the various offices within its organisation, its indifference to lucre, to popular clamour, to the reputation which may be bought by the number of its graduates and dependents. No one can deny to it the honour of having exercised a decided influence on the advancement of scientific, and therefore true, medical education in the United Kingdom. Nevertheless, as we have repeatedly demonstrated by figures, and now upon Dr. Bristowe's showing, the University has, up to this date, failed to take its proper place in the roll of degree-conferring bodies, has failed in its duty to the students directly or indirectly affiliated with it. If it could be granted that it has succeeded in setting forth practically a pattern of the highest possible standard of medical education, it has yet, at the same time, disregarded the practical needs of the students, and the generally existing arrangements of study in the medical schools; so that, as Dr. Bristowe mentions, during forty years of its existence, this University has conferred no more than 761 degreès in Medicine, or an average of only one *per annum* for each medical school, the number of students undergoing education being in the same time between 16,000 and 20,000. At the time when Dr. Bristowe wrote, the total number of medical graduates (M.D. and M.B.) living was just 534.

It may be argued that this need not trouble the University; that, on the most thorough consideration, it has fixed what in its opinion should be the standard of knowledge necessary for a medical degree; that it is the fault of the schools and the students, if so few have been found worthy of the distinction. The reply is, that the University is so far out of sympathy with the actual needs and circumstances of students, that it hinders a great number of men who would be worthy of its degrees from seeking them at all. Admitting that the proper medical examinations of this body are in themselves admirable and fair, though indeed of so highly pitched a standard as may justify us in calling them really "honours" examinations, we contend once more, with Dr. Bristowe's support, that the nature of the Matriculation and Preliminary Examinations, and the way in which they are conducted, cut off at the outset an enormous number of possible graduates. If the word "University" mean anything, it should mean that any body of the kind, having a local name, should put itself from the beginning in such relation with the men studying within its geographical extension, as would enable every one of them capable of taking a degree to go on to that end. Any man entering a college at Oxford or Cambridge, does so with the knowledge that all the organisation of the place leads up to the degree; and every one knows that, if he goes away without the degree, it is pretty certain to be by his own default, or by reason, at least, of some personal disability. It is pretty nearly the opposite with one-half of those who muster up courage, strength, cramming-power, and intellectual agility, sufficient to enter for the degrees of the University of London. The University of London as first constituted had, no doubt, a wider ambition. It was not to be only the University of London, but the Medical University of England. Perhaps for this reason it felt less compelled to establish close relations with the London medical schools. Yet at this moment it would seem to be, in a sense, the university of the London schools. Of twenty-six men who passed in the first-class in the last examination for the M.B. degree, twenty-one had been educated entirely, and two partly, at London schools; but how incompletely it is a university for the London schools, is known to all who know the general history of the London medical student. Experience shows that a large proportion of the students entering the schools come up with very little knowledge of the general course of their future study. They find that, before they can be students at all, they must pass certain preliminary examinations in general knowledge. Here the College of Surgeons and other bodies are ready to receive them; ready with an examination, which is just a fair test of the possession by the candidate of a good school education. But where is the University of London? Certainly not ready to take the *alumnus* by the hand, and introduce him within its portals. It presents him with a list of subjects which he can only master by a new and severe course of study, or, more generally, of "cramming". He feels that to enter on this will throw him back at once in time, and defer his entry on hospital work for a year; and, looking at the results of the examinations of past years, he finds that his chances of being plucked are *primâ facie* greater than his chances of passing. Dr. Bristowe shows, for instance, that, from 1861 to 1878 inclusive, the rejections at the Matriculation Examination were 48.94 per cent.; that, in 1876, 1877, and 1878, more than 50 per cent. were rejected. And, in the examination of last summer, the student would find that nearly two-thirds were rejected. Assuming this ratio to proceed, he might soon expect to have one chance in four of passing. So it comes to pass that a relatively very small number of medical students connect themselves with the University at all. Yet a great number of students soon find that it is necessary to have a degree in addition to the diplomas of the medical corporations. There are few who have not seen many a good man, whose knowledge and promise would have made him fully equal to the medical examination of the University of London, actually driven away from London to the universities of the North; because, when he recognised the need of a degree, and was found to be worthy of such a distinction, he found himself confronted by the inelasticity of the requirements of the University of London. He could not arrest his medical work, perhaps in his third year, and go back to classics, etc.; or, if he were ready to make such a sacrifice, he could not afford the time that would then be required before the final degree could be obtained. He found that, elsewhere, abundant facilities were offered him; and so London, and the University of London, lost many who would have adorned them, and brought them reputation, and who might fairly claim an university status.

Turning, next, to the prospects offered to such students as may have passed the Matriculation Examination, we find that they still have to encounter the Preliminary Scientific Examination before their proper medical examinations begin. The rejections here, again, are nearly 50 per cent. To quote Dr. Bristowe: "The collective result is (allowing for the fact that no inconsiderable number of the candidates faint by the way, and never proceed beyond the Preliminary Scientific or First M.B. Examination) that not 10 per cent. of the young men who enter at the lowest of the series of examinations emerge successful from the last; and that at least 72 per cent. of the whole number are rejected at the Matriculation and Preliminary Scientific Examinations—examinations in subjects which, with scarcely an exception, have no direct bearing on medicine."

No doubt, much might be done at once to lessen the excessive percentage of rejections if medical students were instructed by their guardians and teachers to consider the Preliminary Scientific Examination as a previous examination, anterior to the commencement of their medical education; much, also, might be done by separating the subjects of passing, in the sense of allowing a man who fails in any particular

subject to pass in those in which he shows proficiency; and to be called upon to present himself again only in that in which he fails. Other immediate and simple modifications, with the same view, are suggested by Dr. Bristowe's letter; and we shall presently discuss them more in detail. Meantime, however, we would once and again lay stress upon the principle that, as at present organised, the University of London examination is what we have styled it, an "honours" examination in all its grades; and it is, in our opinion, a most vital question to determine whether a "pass" examination standard, of more moderate grade, should not be included in the objects of the University. If it aspire to be an University of London, and not merely an University in London, this must, sooner or later, be fairly, liberally, and largely considered; otherwise, the glories of medical London may greatly fade before the rising stars of the schools North of the Tweed, of Lancashire and its Victoria University, and of the University of Cambridge.

REGISTRATION OF DISEASE.

ENERGETIC steps have been taken by the Dublin Branch of the British Medical Association towards bringing the important subject of the compulsory notification of infectious diseases under the notice of the Public Health Committee of that city, and thus enlisting the strength of public opinion and the assistance of the Lord Mayor of Dublin, Mr. Gray, M.P. We need not again argue out the principles or details of this important measure before our readers. The model clause drafted by Mr. Ernest Hart for the Parliamentary Bills Committee of our Association, and the accompanying report upon the operation of measures for registration of disease in force in various cities of Great Britain, have been accepted by the Association as a satisfactory basis, and have been adopted by the Dublin Branch as the *primum mobile* of their action. In their recent deputation, the authorities of the Branch were supported by the leading representatives of the great medical colleges and institutions of Ireland, and had the co-operation of the Irish Medical Association. What Dr. Duffey and Dr. Moore do, they do well; and nothing could be more effective than the forces which were marshalled on this occasion before the civic authorities of Dublin, or the manner in which the facts and arguments were presented by the eminent medical speakers of this most weighty and representative deputation. The Lord Mayor had carefully studied the question; and, in his reply, he showed that he fully appreciated the vast public benefits which a registration of infectious disease might be expected to confer upon the population of Ireland, by arresting the diffusion of epidemic and contagious disease, facilitating timely isolation of the sick poor, who become so readily radiating centres of destructive epidemics; and lessening the cost, the misery, the suffering, and the mortality which follow upon the diffusion of infection. Mr. Gray promised his early and earnest assistance, and suggested that it would be well that such a measure should not be limited to Dublin, but should have a general application to Ireland.

In pursuance of his promise, the Lord Mayor brought this subject under the notice of the Dublin corporation at its meeting on Monday last. An important debate took place, and an unanimous opinion was expressed in favour of the compulsory notification of infectious diseases. Several of the speakers considered that the information should come from the medical attendant. But the Lord Mayor stated that he thought that, without committing themselves to the details of any scheme, the Council should adopt the suggestion of the deputation, which represented the whole medical body in Dublin, viz., that the medical man should be obliged to inform the householder, and that the householder should be responsible for giving notice to the sanitary authorities. Finally, the following resolution was adopted: "That the Council strongly approve of the notification to the sanitary authority of the existence of dangerous disease, and consider such notification most necessary in this city. That the Lord Mayor, and such members as think fit to accompany him, do seek an interview with the Chief Secretary, to request him to introduce a permissive Bill for the purpose applicable to all Ireland, or to give the support of the Government to such a Bill if introduced by the Lord Mayor and other members. That it be referred to a Committee of the whole House to prepare suggestions to lay before the Chief Secretary as to the mode of carrying out the proposal, with power to consult with the gentlemen of the medical profession who waited on the Lord Mayor with a view to joint action, and, if considered desirable, a joint deputation."

It is a matter of great satisfaction, that the Lord Mayor of Dublin has taken the matter in hand practically and immediately. He may count upon the assistance of our Parliamentary Bills Committee either in drafting the provisions of a Bill or at any subsequent stage. Meantime Dublin might, like Edinburgh, immediately take steps to protect its citizens by municipal legislation, and no doubt with not less good effect than that which Dr. Littlejohn reports from the northern capital.

BEGINNING AT THE WRONG END.

SOME time ago, in commenting upon a report by Dr. Edward Seaton, the health-officer for Nottingham, we expressed our disappointment at learning that the powers for requiring the compulsory reporting of each case of infectious disease, which Parliament conferred upon the Nottingham Town Council in 1878, had not been used at all, on account of the "expense" (see vol. i, 1880, p. 953). We ventured then to question the legality of the position of the Town Council in this regard; and to express a hope that, with the striking evidence which was brought forward by Dr. Seaton of the necessity of such information, the Council would at once decide to put the act in force. It is, therefore, eminently unsatisfactory now to find that the local authorities have made no further move in the matter; and to hear Dr. Seaton again lamenting, in his report for October, his lack of knowledge as to the existence of infectious disease. He now more particularly needs this information, in view of the presence of enteric fever in the borough; and he says that, in the absence of information with regard to cases of sickness, it is quite impossible for him to furnish a satisfactory report on the prevalence of the disease. He observes that, whereas, during September and October, 18 deaths from typhoid were registered—the total number of cases, therefore, being at least 150—the existence of illness from this cause was only notified to him in nine instances; and, in three of these, the reports were without medical authority. Dr. Seaton again impresses upon the authority that it is greatly to the public interest that all cases of enteric fever should be notified to his department; but the Town Council seem to be obdurate in the matter; and unless some local resident questions the legality of their procedure, and brings the case before the Local Government Board, it does not seem likely that they will yield. The fact is, that the Council are beginning at the wrong end. Whilst they grudge £350, which is Dr. Seaton's estimate of the annual cost of securing early knowledge of the existence of infectious disease, and thus of saving the town from epidemics, with their attendant suffering and mortality (to say nothing of expense), the Town Council are not afraid of spending the ratepayers' money in other and more vainglorious ways. Thus, in addition to the establishment of a Museum of Fine Art, which, though undoubtedly a source of general pleasure, is equally one of great and continuous draining of the public purse, an attempt is being made to found a sort of local university at Nottingham, in connection with Cambridge—as a first step to which the Council have recently erected a magnificent pile of buildings, at a cost of no less than £70,000. These will shortly be opened; and then must naturally come the question of endowments, lectureships, and all the numerous sources of expense which must naturally follow if the buildings are to be made use of as intended. The effects of all this expenditure have naturally begun to make themselves felt. Notwithstanding that a large income is derived from the estates which belong to the town, the district rate is equal to four shillings in the pound, which must certainly be regarded as high enough. Nevertheless, it is quite clear that, without some considerable increase in it (which the ratepayers will not hear of), other and more immediately useful departments of municipal work must continue to be seriously crippled. As regards sanitary work particularly, Nottingham must inevitably be

placed at a great disadvantage with other large towns, unless the present expenditure of the town be radically reformed. The elevation of the physical condition of the masses, by ensuring to them wholesome surroundings, certainly claims priority of their mental elevation by expensive museums and collegiate buildings. Sanitary expenditure has, however, always been, and for some considerable time yet will be, a distasteful subject to local governing bodies. The refusal of the Nottingham Town Council to spend a very moderate sum to help in checking the spread of infectious disease is an instructive commentary on their lavishness in the cause of higher education. It is but one more example of the tendency of local authorities, which is too commonly observed, and on which we have recently had once or twice to comment, to begin their municipal work at the wrong end, and to neglect sanitary improvement for schemes which are more imposing and attractive.

A SUBSCRIPTION is in progress throughout the Army Medical Service for the erection of a memorial in Netley Chapel to the late Surgeon-Major Porter.

DRS. BERGERON AND PIDOUX, both well known members of the French Academy of Medicine, have been nominated Commanders of the Legion of Honour.

DR. MATTHEWS DUNCAN is spoken of as the next President of the Obstetrical Society; Mr. Lister, as the next President of the Clinical Society; and Dr. Wilks, as the next President of the Pathological Society.

A ROYAL MEDAL of the Royal Society will be conferred next week on Professor Lister, on the recommendation of the Council, in recognition of his important physiological services, and the advances in surgery due to his studies and application of antiseptic principles.

MR. A. NEWSHOLME has obtained the Scholarship and Gold Medal in Medicine, at the second examination for the degree of M.B., at the London University. This is the fourth time, in succession, that the "blue riband" in medicine of the London University has been carried off by a student of St. Thomas's Hospital.

AN outbreak of small-pox of a somewhat virulent type has occurred at Walkden, in the Barton-on-Irwell rural sanitary district. There are well grounded fears of the extension of the disease into neighbouring places; and it behoves the local authorities to be specially on the watch to guard against this contingency.

OUTBREAKS of scarlet fever are very prevalent throughout the country. At Coventry, a severe outbreak of this disease has occurred; and several fatal cases having been reported, the schools in the district have been closed by the city authorities. The Neath Sanitary Authority are also taking steps to temporarily close all schools in their district, in consequence of a serious outbreak of measles and scarlet fever.

LAST quarter, there was an exceptional prevalence of diarrhœa at Lancaster, twenty-eight deaths being recorded, against none in the corresponding quarter of last year. The health-officer mentions, as a remarkable fact, that ague, after many years' absence, has again made its appearance in the district, "apparently due to summer heat and its effects in our moist tidal valley".

IF we may trust the official report of the United States Consul, Flushing, in the Netherlands, would seem to offer hardly a remunerative opening for members of the medical profession. The Consul states that, during the months of August and September, "a few people" died of ordinary ailments, "but there is so little sickness, that "the apothecaries are taking a general vacation in the absence of business. The military surgeon reports the same healthy condition among the troops in garrison, only seven cases of slight sickness occurring in three weeks among 760 men."

M. DUMONTPALLIER reports to the Société de Biologie a case of empyema, treated by thoracentesis, in which irritation of the pleura by injection of fluid gave rise to successive crises of contraction of the right side and paralysis of the left side. The phenomena, which rapidly passed off, were followed by sweating and excessive lacrymal secretion: they were attributable to reflex action successively upon the left and the right cerebral hemispheres. M. Lépine had previously reported hemiplegia, lasting for fifteen days, excited by a like irritation of the pleura.

ONE of the most thorough disciples of Listerism in Paris—where the antiseptic method, slow to take root, is now the subject of an ardent and convinced propaganda—is M. Richelot, Professor *agrégé* of the Faculty of Paris. M. Richelot took the place of M. Richet at the Hotel Dieu, during a three months' holiday of the latter. The remarkable successes which he achieved were the subject of much observation, and produced a great impression on those who were able to contrast his results with the surrounding state of things. M. Richelot has published a *Note sur les resultats du pansement de Lister*, which is very interesting and satisfactory.

FROM the report of the Health Officer for East Dereham, in Norfolk, it would appear that the health of the town is being seriously endangered by the refusal of the Local Board to undertake the scavenging of the district. In a place such as East Dereham, it is impossible to suppose that individual householders can provide for the removal of excrement and refuse from their houses so frequently and regularly as is desirable—indeed, Mr. Vincent, the health-officer, cites numerous instances where occupiers are obliged, much against their will, to keep excremental refuse festering in their midst for considerable periods, because of the difficulty and expense of carting it away. It is to be hoped that the outbreak of typhoid fever in the place will bring the Local Board to a right sense of its obligations in the matter; or, failing this, that the Local Government Board will intervene.

GUY'S HOSPITAL.

IT is reported that Guy's Hospital, which has now 180 beds closed to the public, is, further, £10,000 deficient financially on the results of the year's operations. This is a curious comment on late expenditure on the treasurer's house and the chapel.

SEAMEN'S DISPENSARY.

SOME time since, public attention was called to the commendable forethought of the committee of the Liverpool Sailors' Home in opening a dispensary for seamen, for the treatment of special diseases, in connection with their valuable institution. Its complete success has now been proved by actual experiment, the seafaring class having largely availed itself of the advantages afforded thereby. The number of attendances since the opening of the dispensary, now a period of three years and nine months, has reached the large total of 11,500. This is especially interesting in connection with the recent action of the governors of the Seamen's Hospital, Greenwich, in opening a dispensary in London, partly on the lines of the Liverpool institution.

THE ZOOLOGICAL SOCIETY.

THE first meeting of the Zoological Society of London for the season was held in the Society's rooms, Hanover Square, on the evening of Tuesday, November 16th. There was a very full attendance of Fellows of the Society and others. In the absence of Professor Flower, F.R.S., the President of the Society, the chair was occupied by Professor Huxley, F.R.S., one of the Vice-Presidents. Several interesting communications were made to the Society, amongst which we may mention that by Mr. Forbes, Prosector at the Society's gardens, on the shedding of the horns of the prong-horned antelope; and an interesting communication from Professor Parker, on the anatomy of the head of the Japanese giant salamander (*Siboldia maxima*), which lived for some time in the Society's gardens, and which unfortunately died during the spring of this year. The whole skeleton is beautifully mounted in the Museum of the Royal College of Surgeons, and forms

an object of great interest, this animal being the only one which remains of all the enormous batrachians which at an earlier period inhabited the earth. Professor Huxley protested strongly against the manner in which conchologists are in the habit of describing and classifying some of the invertebrated animals merely from the characters of the skull, without taking into consideration the anatomical characters of the animal which inhabits the shell. The meetings of the Society are held every fortnight, on Tuesday evenings, at 8.30 P.M.

GUY'S HOSPITAL.

THE members of the East Kent District of the South-Eastern Branch of the British Medical Association, assembled on November 18th at Canterbury (Mr. James Reid in the chair), before proceeding to the ordinary business of the meeting, tendered by resolution to Dr. S. O. Habershon their cordial sympathy under the painful circumstances that have caused him to resign the office of physician, which he has filled with much distinction and usefulness for a long period at Guy's Hospital. At the same time, they wished to express their full appreciation of the sense of honour and duty which compelled him to relinquish so high a position when his free action in the interests of the sick and incapable committed to his charge was unduly hindered and checked by a service that should be entirely subordinate to the functions of the office he held.

THE OBSTETRICAL SOCIETY.

AN interesting meeting may be expected at the Obstetrical Society, next week. Dr. Playfair, the President, will show the Pygopagi twins, of whom we gave a descriptive notice last week; and Dr. Priestley will read a paper on the rather delicate and highly important subject of the "Induction of Abortion as a Therapeutic Agent"—a question which has, of course, its ethical as well as its scientific side, and admits of the discussion of rather momentous incidents of practice.

THE POSITION OF THE MEDICAL STAFF AT GUY'S HOSPITAL.

APART altogether from the other pressing questions involved in the dispute at Guy's Hospital, there is one of a purely administrative character which is all-important. In a recent article on the administrative aspects of the quarrel, we pointed out that the gate-porter—if the acts of the governors might fairly be judged by the character of the laws they have enacted—was, in the treasurer's opinion, far more worthy of confidence than the honorary medical officers. Tracing out this thought a little closely, we have caused an abstract to be made of the regulations enacted by the governors of the various hospitals throughout the country. The result proves the humiliating position of the staff of Guy's Hospital to be, happily, all but unique in the annals of English hospital administration. In almost every English hospital, the honorary medical officers are, by law, *ex officio* governors. In twenty-nine out of thirty instances, the physicians and surgeons are either *ex officio* members of the committees of management, or they are largely represented at such boards. In no single instance, except at Guy's Hospital, has the medical staff consented to hold office at the will and pleasure of a self-elected and irresponsible board of lay governors. It is not surprising, in these circumstances, that men of the senior standing of Dr. Habershon and Mr. Cooper Forster should feel it absolutely necessary to rebel against such a humiliating servitude, when the collar was made to gall, and the chain rattled in their face. The feelings of those physicians and surgeons who still remain in office must be imagined; for it would be cruel to attempt to describe them. There need be no fear that, if the whole staff were to resign to-morrow, their places would be filled by eager aspirants.

FRENCH GINGERBREAD.

WHETHER our gingerbread-makers are as ingenious as those of France, we cannot say; but it appears, from observations made by Dr. Moynier and Dr. Galippe, that chromate of lead and chloride of tin are pretty extensively used in Paris to colour gingerbread, in place of molasses or honey. French gingerbread seems to be made of a certain amount of flour, a great deal of glucose, some carbonate of potash, and a little chloride of tin. This compound is, perhaps, more ingenious than wholesome; and it is to be hoped that it may not be adopted in this country.

THE CONTAGIOUS DISEASES ACTS AT COLCHESTER.

A LARGE meeting was held at the Public Hall, Colchester, on Monday evening, to advocate the immediate and unconditional repeal of the Contagious Diseases Acts. Miss Jessie Craigen and Mr. John Hunt Lynn, a deputation from the National Association for the Repeal of the Acts, delivered addresses. The Rev. E. Miller proposed, "That this meeting is of opinion that the Contagious Diseases Acts of 1866 and 1869 are unconstitutional, immoral, and unjust; and requests the Chairman to sign a petition to Parliament praying for their unconditional repeal; and, furthermore, that a memorial be sent to the borough and county members, with copies of the petition, urging their support for the Repeal Bill in the House of Commons." The Rev. Mr. Brown seconded. Mr. H. Laver, surgeon, proposed, as an amendment, "That, in the opinion of this meeting, the Contagious Diseases Acts have had a moral, sanitary, and beneficial effect." He showed that, since Colchester came under the operation of the Acts, there was a vast improvement, not only in the health of the civil and military population of the town, but also in the morality of the inhabitants. In Colchester, the number of persons afflicted with the disorders in question was 18 per 1,000; while at Ipswich, Norwich, and Warley, where the Acts were not in operation, the numbers were respectively 42, 75, and 144 per 1,000. The amendment was seconded by Dr. Wallace, and carried almost unanimously amid tumultuous applause. The courageous and public-spirited course pursued by Mr. Laver in exposing the misstatements in which these "deputations" are wont to indulge, has had the satisfactory result of showing that, when the true facts are put before audiences, even of a mixed class, the result is the utter discomfiture of the agitators. Mr. Laver had communicated with us, asking for references to the existing data, prior to the meeting; and we furnished him with the following references to articles in the BRITISH MEDICAL JOURNAL of recent years, in which the facts and figures have been analysed and discussed. We append the list here, believing that it may be of use to others who, under like circumstances, may feel called upon to set forth the facts and figures which illustrate the beneficial influence upon the health of the population in the protected districts, and of the public forces, since these Acts have been in operation.

Effects of the Contagious Diseases Acts upon the Health of the Civil Population (JOURNAL, July 8th, 1876, p. 50). Repeal or Extension of the Contagious Diseases Acts (July 15th, 1876, p. 80). Report of Speech by Lord Mount-Edgcumbe referring to Devonport Hospital (December 2nd, 1876, p. 731). Article relating to the Army (July 28th, 1877, p. 107). The Contagious Diseases Acts and the Health of the Navy (March 24th, 1877, p. 356). Fallacies in a Letter by Dr. Bell Taylor (July 19th, 1879). Summary of Police Report (July 12th, 1879). Report of Examination before Select Committee of Army Medical Officers (July 10th, 1870, p. 107; July 26th, p. 145; August 2nd, p. 188; August 16th, p. 209). *Résumé* of Acts (February 28th, 1880). Report of Dr. Nevins's Examination before Select Committee (March 13th and 20th, 1880).

SMALL-POX IN EAST LONDON.

THE fatal cases of small-pox in London, which had been 2, 7, and 17 in the three preceding weeks, were 10 last week; 7 were recorded in the Metropolitan Asylum Hospitals at Homerton and Deptford, and 3 in private dwelling-houses. No fewer than 8 of the 10 deceased small-pox patients had resided in East London, including 5 in Bethnal Green. The number of small-pox patients in the Metropolitan Asylum Small-pox Hospitals, which had increased in the three previous weeks from 77 to 118, further rose to 182 on Saturday last; no fewer than 99 new cases were admitted to these hospitals during the week, against 24 and 31 in the two preceding weeks. During the ten days ending on 21st instant, 27 cases of small-pox were admitted to these hospitals from Bethnal Green, 20 from Hackney, 20 from St. George-in-the-East, 13

from Stepney, 10 from Mile End Old Town, and 8 from St. Saviour, Southwark. The Highgate Small-pox Hospital contained 15 patients on Saturday last, of whom 7 had been admitted during the week.

THE BROWN INSTITUTION.

THE annual course of five lectures, in connection with the Brown Institution, will be delivered by Dr. W. S. Greenfield, Professor-Superintendent, in the theatre of the University of London, Burlington Gardens, W., on December 13th, 15th, 17th, 20th, and 22nd, at 5.30 P.M. The subject will be: "Further Investigations on Anthrax and Allied Diseases in Man and Animals." Microscopic specimens will be exhibited on December 22nd, from 4.30 P.M.

CHIAN TURPENTINE.

THE following resolution was passed at the last meeting of the Medical Committee of the Middlesex Hospital:—"That, as the results of a prolonged and careful trial of Chian turpentine in the treatment of cancer prove the drug to be quite useless as a cure for that disease, directions be given to the dispenser not to obtain any more of the drug for the cancer patients."

NEPHRECTOMY.

FROM the report of the Hunterian Society, which we publish in another column, it appears that Mr. Couper has successfully removed a kidney —or what remained of that structure—from a young girl suffering from pyonephrosis, thus adding one more to the few successful cases of that operation hitherto reported. During the past twelve months, since a new impetus has been given to the treatment of unilateral kidney-disease by surgical operation, extirpation appears to have been thrice successfully performed in this country, viz., by Mr. Knowsley Thornton, Mr. Clement Lucas, and by Mr. Couper, as now reported. One of these cases, Mr. Lucas's patient, was an adult aged 34, who had long suffered from strumous pyelitis; the other two were young girls, afflicted, the one with hydronephrosis, the other with pyonephrosis; and it is probable that, in each instance, the secreting structure of the kidney removed was almost completely destroyed. In the discussion which followed the paper, four cases in which the operation proved fatal were mentioned: three by Mr. Barker, and one by Mr. Scott, who, as house-surgeon at the Bath Hospital, had assisted Mr. Stockwell to remove a kidney for calculous pyelitis. The mortality at present is high; but, as with ovariotomy, it is not improbable that, with increased experience, a judicious selection of cases, and improvements in the performance of the operation, excision of the kidney may eventually rank as a comparatively safe procedure. Surgeons are not at present agreed as to which of the two operations, the ventral or the lumbar, is to be preferred; though it seems reasonable to suppose, and the results of operations hitherto performed support the view, that the extraperitoneal operation through the loin will prove the safer. Indeed, when the peritoneum is opened in this situation, as actually happened in Mr. Couper's case, the drainage of all secretion through the dependent opening may save the patient from peritonitis, though fœtid pus be extravasated in immediate contact with the serous membrane. Again, supposing the lumbar operation to be the one selected, in what direction is the incision to be made? That usually chosen is a vertical one, on the outer margin of the quadratus lumborum; but this has sometimes been found insufficient; whilst, on the other hand, in the case now reported, a transverse incision was made, and satisfied the requirements of the operation. Other matters of detail were brought out by the discussion. Mr. Lucas pertinently asked, of what service was a ligature on the ureter? and after-speakers agreed that not only might it probably be safely omitted, but that it might be to blame for the vomiting which occasionally follows the operation. The best means of securing the pedicle, and the question whether or not the capsule should be left, are also points deserving of special attention. Above all, it is of the utmost importance that the condition of the other kidney should be ascertained before the operation is attempted. So far, we may assume that success in operations on the kidney has not yet reached its maximum, but we would hope that the names required to indicate these procedures have reached theirs. Already, we are provided with the terms Nephrectomy, Nephrotomy, and Nephro-lithotomy. It is to be hoped that each of the words, when employed, will be used in its precise and literal signification.

NIGHT MEDICAL SERVICE.

AT a recent meeting of the New York Academy of Medicine the following preamble and resolutions were offered by Professor A. C. Post, and were unanimously adopted.

"It being one of the objects of this Academy to approve and further any innovation tending to advance the science and art of medicine or to facilitate the beneficent practice thereof; and, moreover, it being our desire to show due appreciation to those who may, by their labours, have succeeded in accomplishing such an end; therefore be it resolved: 'That this academy believes that the establishment of the night medical service in the city of New York is a boon to the community; and that by its means, much good will accrue to both patients and physicians; inasmuch as it places by the side of the suffering patient skilled medical attendance at the shortest notice; and on the other hand gives the assurance to the physician that his merited remuneration will be duly received. Believing the law to be a benefit, and recognising the fact that it is due to the earnest and well directed efforts of Dr. Henri Nachtel, a stranger among us, that we owe its establishment, we therefore desire to testify to him our appreciation, and to extend our cordial thanks for his disinterested zeal in accomplishing so much good for the welfare of the community, including the medical profession. That the above resolutions, signed by the president and secretary, be engrossed and forwarded to Dr. Nachtel, in Paris.'"

A motion made by Dr. R. J. O'Sullivan, that the above resolutions be generally published in the medical and secular press, was also unanimously carried.

NOMENCLATURE OF DISEASES OF THE ROYAL COLLEGE OF PHYSICIANS.

THE following have been appointed by the College of Physicians, for the decennial revision of the nomenclature of diseases, published by the College: Drs. Risdon Bennett; W. Farr; Peacock; Bristowe; Radcliffe; Barnes; Bucknill; Barclay; Galabin; Andrew; Ord; Pye-Smith; W. Ogle; Weber; Savage; Buchanan; Gowers; Buzzard; W. H. Stone; Payne; Dickinson; G. Johnson; Mahomed; Sir J. Fayrer; Dr. J. W. Reid of the Naval Medical Department; Dr. L. Kidd of the Army Medical Department; and Messrs. Simon, Holmes, Hutchinson, and Holden. Dr. Ord will, we believe, be requested to act as Honorary Secretary.

DIVERS WATER-ANALYSES.

IN the report of Lieutenant-Colonel Bolton, the water-examiner to the Local Government Board, on the water supplied to London by the different water-companies during the month of October, just issued, attention is called to a discrepancy in the analyses of the Kent Company's water. The total solid matter in Kent water Dr. Frankland gives as 29.624 grains per gallon, Dr. Tidy as 33.610 grains, while Dr. Bernays makes it only 23.520 grains per gallon. Analyses made by Wanklyn and Cooper for the Local Government Board and the Metropolitan Vestries conflict with the statement of Dr. Frankland, that the waters of the Southwark and Vauxhall, and of the Grand Junction Company, were "alone efficiently filtered". According to Wanklyn and Cooper, the waters from the Southwark and Vauxhall Company, and from the Grand Junction, contained more organic matter than the other waters. Colonel Bolton makes the suggestion, that the question of a practical standard of quality should be considered and determined by the highest authorities connected with the medical and chemical professions; and when such standard is adopted by authorities it will then become the duty of engineers connected with the water companies to work up to such a standard.

EMBRYO OF THE TAPE-WORM.

M. POINCARÉ of Nancy lately announced, in the *Comptes Rendus*, that he had discovered, in diseased beef and in measly pork, a new parasite, which he described as an embryo of tænia. This parasite appears,

however, to be that known, since 1837, as the corpuscle or utricle of Mescher or of Rainey. M. Megnin points out, however (Société de Biologie, October 16th), that the assertion that this parasite is a larva of tænia is novel, and would tend to explain the noxious power of raw beef relatively to the tænia, since, in beef, the most persevering research has only exceptionally discovered the unarmed cysticerci; and, nevertheless, the *tænia medio-canellata* is more frequent in Europe than the *tænia armata*.

LEPROSY IN THE SANDWICH ISLANDS.

THE United States Consul, Mr. Thomas Dawson, reports from Samoa, that the most serious disease of the country is the "fee-fee," or elephantiasis (leprosy), which is common among the natives, and also attacks foreigners. The disease begins with enlargement of the legs, testicles, or arms; and, beginning in childhood, may not prove fatal till old age. In some cases the enlargement is attended with dropsical effusion; in others it seems quite solid. In adults, the disease generally begins with chill and fever. The Rev. George W. Turner, M.D., eleven years a missionary at Samoa, has in that time operated on one hundred and forty cases of elephantiasis affecting the testicles. In some cases both of the glands were saved; in others one or both were removed, the latter cases being those where the enlargement was solid. In one instance the organs and parts removed weighed ninety pounds. The disease does not generally interfere with the daily avocations of the patient, unless he is disabled by extensive ulceration, or by the occasional attacks of chill and fever which are observed in leprosy. Foreigners may sometimes remain in the islands for many years without being affected, but most of them are attacked within a few months after their arrival.

DETERMINATION OF ORGANIC MATTER IN THE ATMOSPHERE.

A CAREFULLY written paper on this important subject by Mr. Ira Remsen appears in the *National Board of Health Bulletin*, September 11th, 1880. He describes his method of examination, and the instrument which he used—viz., the pumice-stone tube, which intercepts and absorbs organic matters. When free and albuminoid ammonia are determined, the results obtained do not always agree very closely; but still sufficiently so for the purpose of detecting such variations as are likely to occur between pure and impure air. Air contaminated by being drawn through water containing decaying meat does not yield more than the usual quantity of albuminoid ammonia; whereas, if drawn over comparatively dry decaying organic matter, it yields a more than usual quantity of that substance. Air contaminated by respiration yields the like excess. It is necessary, in judging of the purity of air, to take all the facts known in regard to it into consideration. The simple determination of any one constituent can never be a sufficient basis for the formation of a competent judgment.

THE SPECIFIC GERM OF MALARIAL FEVERS.

DR. G. M. STERNBERG, of the United States Army, who was associated with Dr. Chaillé and others on the Havana Yellow Fever Commission, and who, some time after the return of the commission from Havana, was directed to continue his researches upon suspended particles in the air of places liable to infection, has recently been engaged in that work in the city of New Orleans; and in the somewhat kindred work of investigating organised particles from the swamps and well-known malarial regions in the vicinity of that city, with the view of verifying or else of disproving the observations which have been made by Klebs and Tommasi-Crudeli on the existence of spores in such localities, supposed to have a causal relation to malarial fevers. He is performing physiological experiments on living animals, with reference to the determination of this question.

NOMENCLATURE OF DISEASES.

AT the conference held in Washington on the 6th and 7th of May, in accordance with a request of the American National Board of Health, it was unanimously resolved that the nomenclature published by the Royal College of Physicians of London be provisionally adopted; and that a committee of five be appointed by the chair, whose duty it shall be to indicate the most urgently needed additions to the said nomenclature at the present time, and that this committee shall be instructed to confer with the committee of the Royal College of Physicians in charge of the revision of said nomenclature with reference to obtaining an uniform system both for Great Britain and her colonies, and for America. Recognising the great importance of this subject in connection with its bearing on the means of securing an exact registration of the causes of death, the American Board of Health has appropriated the sum of five hundred dollars, or so much thereof as may be necessary, to defray the expenses of a selected member of the committee appointed under these resolutions, who shall be required to proceed to London and confer with the committee of the Royal College of Physicians engaged in the revision of the standard nomenclature of diseases.

CHOLERA IN BENGAL.

THE number of deaths registered from cholera last year in the presidency of Bengal was 133,363, against 95,192 in 1878, giving a death-rate of 2.27 per 1,000 of the population under registration, against 1 58 in the former year. It is probable that a larger proportion of the deaths from this disease is registered, than of deaths from fever and other complaints. Nevertheless, there are good grounds for thinking that, even under cholera, the recorded figures are very considerably below the truth. The death-rate from this cause in the urban circles is shown to have been 4.9 per 1,000, against 2.16 in the rural circles. The disproportion is very marked in some of the districts which are known to have suffered severely. It is not possible to doubt that, in many cases, less than half the deaths that occurred were registered, and that the total mortality from cholera greatly exceeded 133,363. It is remarkable that, in Bengal, the seasons of greatest virulence were the first two months of the cold, and the last three months of the hot seasons, the advent of the rains being attended by an immediate check to the disease. Dr. Coates comments on the surprising circumstance that, in a year of great prevalence of cholera, the large number of fairs held in the province should have been almost exempt from the disease. At some of the fairs, at which the gathering is great, and which last for any length of time, sanitary precautions against outbreaks of disease are taken; but, at many of such fairs, and, as a rule, at the smaller fairs, which last for a very short time, little or no care is taken.

CREMATION IN FRANCE.

A SOCIETY for the furtherance of cremation in France has just been started in Paris, under the presidency of M. Kœchlin-Schwartz, Mayor of the Eighth Arrondissement. The object of the society is to obtain by ministerial circular, or, if necessary, by legislation, the recognition of cremation as a permissive form of burial. The society has already received the adhesion of a large number of persons whose names are a sure guarantee of success. The annual subscription to the society is ten *francs* for the first year, and five *francs* afterwards. Its offices are at No. 11, Rue du Penthièvre.

THE PLAGUE IN ASTRAKHAN.

A MEETING of the Epidemiological Society will be held at University College, Gower Street, on Wednesday, December 1st, when there will be read a paper, by Dr. E. Dickson, British Delegate to the Ottoman General Board of Health, on "The report of Dr. Cabiadis on the Outbreak of Plague in the Province of Astrakhan, 1878-79".

ANIMAL VACCINATION IN INDIA.

THE practice of animal vaccination would seem to be meeting in India with increasing favour. Last year, it was carried on in the Bombay Presidency at Bombay, Poona, and Kurrachee; and in Hyderabad at Akola—the lymph having, in the latter case, been obtained from Bombay. In Poona, sixty-six heifers were inoculated, with success in all but four cases. They were bought for 218 rupees; and, after costing 59 rupees for assistance, etc., were resold for 104 rupees—so that their net cost was 172 rupees. In Bombay, five hundred heifers were inoculated, against four hundred and four in the preceding year. On twelve

heifers the operation was unsuccessful. The total cost was 2,718 rupees, against 2,252 in 1878. In Kurrachee, after the introduction of the Compulsory Act of 1879, twenty-two heifers were inoculated, with two failures. The total cost was 64 rupees. At Akola, the number of vitulations is not stated; but it is reported that calf-vaccination "was kept up throughout the season, for the purpose of renewing the supply as required".

THE ÆSTHESIOGENIC PROPERTIES OF COLLODION AND THE RESINOUS GUMS.

M. DUJARDIN-BEAUMETZ has been experimenting on the æsthesiogenic properties of collodion, as pointed out by M. Seure. The latter has endeavoured to explain the phenomena of xylotherapy by the remarkable electric properties possessed by cellulose, especially that of collodion. This substance, as well as the wood-resins, produces æsthesiogenic phenomena. It is stated that collodion, and a certain number of the resins, have revived sensibility in some of M. Dujardin-Beaumetz's anæsthetic cases.

CHOLERA IN JAPAN.

To the just issued eighteenth volume of the half-yearly medical reports of the Chinese Maritime Customs, Dr. D. B. Simmons of Yokohama contributes an important monograph on the subject of cholera in Japan, and the influence of the habits and customs of races on the prevalence of that disease. This paper has considerable interest for epidemiologists, especially those who are concerned with the travels of cholera, both east and west, from its home in India. Dr. Simmons's observations possess, moreover, a peculiar importance at the present time, in view of the serious and wide-spread epidemic of cholera which afflicted the Japanese Empire last year. The early history of cholera in Japan, as in China, is quite obscure; but one Japanese authority gives 1817, 1854, and 1861-2 as years when epidemics occurred; while another fixes the dates 1819, 1821-2, and 1858-9, as pestilential seasons. Dr. Simmons neither saw nor heard anything specific of cholera in 1859 or in 1860; but there were epidemics in 1861 and 1862. Since the latter year, no traces of the disease were observed until 1877. Indeed, so far from cholera being a domestic epidemic disease in Japan, a singular freedom from bowel-complaints of all kinds is noticeable, especially in the northern provinces. In 1877, the disease seems to have been imported from China; and, during that year, 12,378 cases were recorded, with 6,508 deaths. In 1878, the infection was kept up in various provinces, a total of 975 cases and 532 deaths being recorded, though this is below the actual number. The disease lingered persistently in Osaka and other southern portions of the empire, which thus became the foci of the very grievous and widespread epidemic of 1879. Cholera made its appearance simultaneously in several districts, some time previous to April 20th of that year; it manifested itself in others two or three weeks later, and then followed irregular courses, generally tending northward, until by the beginning of October it had overspread the whole empire. In Osaka, at one time, as many as a hundred and more deaths occurred daily. Up to December 20th last, a total of 164,274 cases of the disease were recorded, 97,422 of which were fatal, 47,162 had been cured, and 19,590 were under treatment. The percentage of mortality was 59.3, and the proportion of patients per 10,000 of the population was 47.4. A large number of facts were gathered, showing, as usually observed, that the great routes of travel were the principal means of spreading the disease from one part of the country to another. That a contaminated drinking water-supply was the immediate cause of an extended prevalence of the malady, in a number of large country towns especially, was demonstrated with great certainty. The places of this description which suffered most in Dr. Simmons's neighbourhood were, in nearly every case, located at the foot of mountains, where the custom of directing streams of water through the streets was followed—this supply being too often used both for drinking and laundry purposes. Dr. Simmons adds some valuable experiences as to the action of pilocarpine in the relief of uræmic symptoms in cholera. He says that he is convinced that it will be found on further trial to be a drug of considerable value in many cases of the disease. Its action on the kidneys, especially, when used hypodermically, was often more pronounced than on the skin. In a number of cases, even after suppression had lasted for several hours, and symptoms of coma had set in, the kidneys would commence to act profusely, so as to saturate the patients' clothes and bedding. This was followed by a relief of the stupor, and final recovery, when such a termination had been regarded as almost hopeless. It was found, however, to be necessary to use a certain amount of caution in the use of pilocarpine, as the first depressing effect of the remedy appeared, in two or three cases, to have diminished the chances of recovery, reaction not having been sufficiently established.

CULTIVATION OF BACILLUS ANTHRACIS.

DR. GREENFIELD has published, in the *Journal of the Royal Microscopical Society*, a "preliminary note" as to the results of some investigations into the pathology of anthrax recently made by him at the Brown Institution. The practical purpose of these investigations was to ascertain (1) by what means the virus of splenic fever may be so modified as to be capable of inoculation without fatal result; and (2) whether a modified attack, produced by inoculation, exerts any protective influence against a future inoculation with unmodified virus. The conclusions arrived at from these experiments were as follows. 1. Anthrax may be artificially communicated to bovine animals by inoculation with the blood or spleen of the guinea-pig which has died of the disease artificially induced, and the same result may be attained by inoculation with the *bacillus anthracis* cultivated from the fluids of a rodent; the disease thus induced being severe, but rarely fatal, to previously healthy bovine animals—a result previously attained by Dr. Burdon Sanderson independently. 2. In all cases thus inoculated, the animals appeared to have acquired either a considerable degree of protection or entire immunity from the results of subsequent inoculation, although much larger doses of the virus were employed. In the course of these experiments, Dr. Greenfield used, on several occasions, *bacillus anthracis* artificially cultivated in successive generations in aqueous humour. Finding that the results appeared to vary considerably with the stage of the cultivation, those furthest removed from the original parent-source being more frequently inactive, he made a series of observations, from which he found that, when *bacillus anthracis* is artificially grown in successive generations in a nutrient fluid (aqueous humour), it maintains its morbific properties through a certain number of generations. Each successive generation, however, becomes less virulent than its predecessor, requiring both a longer time and a larger quantity to exert its morbific action; and after continuous diminution of virulence, at a certain stage in the successive cultivations, the *bacillus*, though maintaining all its morphological characters and its power of growth, becomes completely innocuous even to the most susceptible class of animals. It may be added that the modified virus produces forms of modified disease which differ widely from ordinary splenic fever, both in the distribution of the *bacilli* and in the nature of the symptoms and pathological appearances.

POISONING BY AMYL-NITRITE.

DR. G. F. SENTER, of Evansville, Indiana, reports, in the *Indiana Med. Reporter*, the rare case of a young lady who, by mistake, took a dessert-spoonful of nitrite of amyl. A druggist gave an emetic, which acted promptly. The doctor saw her in twenty-five minutes. She was ejecting great quantities of fluid from her stomach, which saturated the whole room with an amyl-like odour. Her face was grayish-white, her pupils widely dilated, her eyes glassy and vacantly rolling in their sockets. The mouth was wide open, breathing spasmodic and irregular; a few breaths would be very rapid, then slow and long drawn; finally, they ceased all rapidity, and became barely perceptible. The pulse was irregular and jerking when first examined; soon, however, it became so slow and feeble, that often it could not be detected at the wrist. The patient was "the most limpid, limber, relaxed body imaginable". The skin was cold and clammy, suffused with a moist adhesive perspiration, super-

saturated with amyl. The treatment was locally, massage, and warmth to the head and extremities, alternated with ambulation and flagellation; internally, after free emesis, hot coffee, sometimes with and sometimes without ten drops of tincture of opium.

SCOTLAND.

It has been decided to furnish Paisley with an additional water-supply from the Dalry Hills. The new reservoir will cover about one hundred acres of ground. The source of supply is excellent.

EPIDEMICS IN GREENOCK AND PORT-GLASGOW.

Dr. Wallace, Medical Officer of Greenock, in his recent report, alludes to the great prevalence of infectious diseases within the burgh, which, however, he expects, will be reduced by careful isolation of cases. He states that in Port-Glasgow, where isolation has only been imperfectly carried out, there had been a high mortality from scarlatina.

ABERDEEN UNIVERSITY MEDICAL STUDENTS' SOCIETY.

This society was opened on November 19th by Professor Ewart, who delivered an able address on "Evolution". The lecturer drew his illustrations chiefly from the morphology of the limbs of the present horse and its fossil allies, and contrasted them with the limbs of closely allied forms. The deviations from a typical limb, such as that of the water-turtle, were considered, and special reference was made to the peculiarly modified limbs of the bat and the extinct pterodactyle. Further illustrations were adduced from the water-vascular system of the echinoderms. On reviewing all the evidence, the lecturer was of opinion that such facts as were stated were best explained by the theory of evolution. Professor Struthers and Professor Stirling indicated certain useful suggestions for the management of the society; and specially urged upon all students, after their first year, the desirability of becoming members of a debating society, where they would get not only much purely medical information, but would learn courtesy and forbearance; and, above all, would acquire a knowledge of the forms of debate and business.

THE ROSS MEMORIAL HOSPITAL.

The peace of the little hospital at Dingwall, which was raised a few years ago to the memory of the late Dr. Ross, has lately been seriously disturbed. The friends of Dr. Adam, who commenced practice in the town ten months ago, have attempted, in a very ill-considered manner, to thrust him into a post on the honorary medical staff of the institution, in association with Dr. Bruce, who has been for years the only medical practitioner in Dingwall, and who organised and has alone superintended the hospital. Although the annual number of patients admitted into the Ross Hospital is not much over twenty, we are sure that Dr. Bruce would be the first to welcome any useful reform connected with the medical staff, such as the introduction of the system of attendance by rotation of the various medical men of the district. But Dr. Adam's supporters have taken the most unfortunate means to secure this end, by striving for his immediate appointment, forgetful of the interests of other practitioners in the neighbourhood; and it is with them that the blame must be held to rest, if the governors of the hospital decline to make any alteration in its constitution.

POPULAR HEALTH-LECTURES IN EDINBURGH.

The first of the series of lectures (mentioned in a previous number of the Journal) on matters of public health, by authorities on the subject, for the benefit of the working classes, was delivered last Saturday by Professor Fleeming Jenkin, in the large hall of the Watt Institution. The Lord Provost presided, and the room was crowded. The lecture was entitled "Care of the Body"; and in it, Professor Jenkin urged the necessity and duty of providing, as far as possible, for the health of the individual, both on personal and on social grounds. In particular, he alluded to the importance of attention to all that is known regarding infectious diseases, and drew a lesson from the death of the Princess Alice of Hesse. He also directed attention specially to the propagation of disease through milk-supply; and, in reference to legislation, he stated that it was the duty of everyone to be cheerfully obedient to all those laws passed to prevent the spread of infectious disease, as also to exercise political power by supporting at elections candidates who took an interest in, and had a knowledge of, sanitary matters.

GREENOCK PAROCHIAL AUTHORITIES AND INFIRMARY PATIENTS.

Considerable dissatisfaction is being felt at present in Greenock, owing to the conduct of the local authority and the parochial board towards respectable families who, unfortunately, during the present epidemic of fever and measles, have sanctioned the removal, in the public interest, of any member of their family to the infirmary for treatment. In consequence of the arrangement between the infirmary and these boards, the latter pay a share of the expense connected with the treatment of patients suffering from infectious diseases sent to the hospitals, either voluntarily or by the order of the sanitary officials. Afterwards, this sum is refunded by the inspector of poor of the parishes to which the patients belong, and their names appear on the list in future as paupers. The same course has been followed by the authorities in the present epidemic; and respectable ratepayers, who have sent their servants or children to the infirmary for treatment in the public interest, find them branded as paupers. The result of this unsatisfactory action on the part of the parochial authorities is seen in the fact, that householders are taking every means in their power to prevent the sanitary authorities from getting information of epidemic disease in their families. Hence, fever and measles are spreading with alarming rapidity; and, unless the local authority are prepared to remove at once the above interpretation of the Act, the death-rate of Greenock will soon return to its previously unenviable position, and all the good sanitary work instituted and carried out during the past few years will be rendered of no avail.

EDINBURGH PROVIDENT DISPENSARY FOR WOMEN AND CHILDREN.

The second annual meeting of the Edinburgh Dispensary for Women and Children was held last week, the Lord Advocate presiding. This was the first year that this previously free dispensary had been converted into a provident dispensary. The result had been to reduce the number of first visits within more manageable and really practical proportions; considerably increasing, on the other hand, the proportion of cases attending throughout the course of illness to its termination. It is one advantage of the provident system, that it reduces the number of errant, aimless, and careless patients, who wander from place to place, paying a single visit, and giving little heed to the advice and medicine, and not following it up to cure, because they are treated free of payment, and can any day look in again at whatever dispensary is nearest. The consulting physicians are Dr. Heron Watson, Dr. G. W. Balfour, Dr. Angus Macdonald, and Dr. R. Peel Ritchie. The attending physicians are Miss Jex-Blake, M.D., and Miss Agnes McLaren, M.D.

HOW FEVER IS SPREAD.

On the 20th instant, a landlord was summoned in Glasgow, at the instance of the Sanitary Department, for having let a dwelling from which his daughter, suffering from scarlet fever, was recently removed, without having previously disinfected the same. He was fined £5 by the sheriff, who commented severely on his conduct, pointing out that the offence was aggravated by the defender having actually occupied the dwelling himself when fever existed in it, and by the further fact that a child of the tenant to whom the house was let was then, in consequence, suffering from the same disease.

BABY-FARMING IN SCOTLAND.

A woman named McIntosh, residing at Portobello, has been arrested on a charge of being accessory to the death of an illegitimate child. The police allege that she had been in the habit of receiving large premiums along with illegitimate children, and that, after a short time, the children were removed to different parishes, where several of them

died. The police have traced nine or ten cases of this sort, and, in all these instances, the deaths are said to have been due to emaciation and want of proper feeding; while certain appearances also point to the conclusion that noxious drugs, calculated to undermine the health, had been administered to them.

HEALTH OF GLASGOW.

FROM the report of the Medical Officer of Health, for the fortnight ending November 13th, it appears that the death-rate was 25 per 1,000, in place of 22 during the preceding fortnight. The mean temperature during the fortnight was 42.7° Fahr. There were 556 deaths registered, being an increase of 45 over the preceding fortnight—the increase being chiefly due to the epidemic of scarlet fever, though, in lung-diseases and general diseases, there has also been greater fatality. Among infants below one year, there was an increased mortality from scarlet fever; and, among the aged, from the low temperature and fogs. The number of deaths from pulmonary diseases was 179, and from fever 21—viz., 13 from enteric fever and 8 from typhus. There have not been registered so many deaths from the latter disease since March 1877. The number of deaths from infectious diseases of children was 72—viz., 50 from scarlet fever, 14 from measles, and 8 from whooping-cough. Scarlet fever has apparently not extended during the fortnight, but there has been a sudden increase in the fatality of measles. The number of cases of fever registered was 76—viz., 59 of enteric fever, 15 of typhus, and 2 undefined. There are at present in the Belvidere Hospital 242 cases of scarlet fever, 124 of enteric, 45 of typhus, 19 of measles, and 3 of whooping-cough—in all, 433, as compared with 502 a fortnight ago.

THE REGISTRAR-GENERAL'S RETURNS.

FOR the week ending November 13th, the death-rate in the eight principal towns was 23.8 per 1,000. This rate is 5.1 above that for the corresponding week of last year, but 0.4 below that for the previous week of the present year. The lowest mortality was recorded in Dundee—viz., 19.5 per 1,000; and the highest in Greenock—viz., 30.1 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.0 per 1000, being 0.4 above that for last week. The increase is chiefly due to the deaths from measles in Glasgow, and those from scarlatina in Edinburgh. Acute diseases of the chest caused 154 deaths, being an increase of 27 on the number for last week. The mean temperature was 45.6°, being 6.0° above that of the week immediately preceding, and 5.7° above that for the corresponding week of last year.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS.

DURING last month, the deaths of 2,262 persons were registered in Scotland, of whom 1,131 were males, and, curiously enough, the same number of females. After making suitable estimate for increase of population, this is 169 under the average number for the same month during the last ten years. The respective mortalities were, per 1000, Leith, 19; Glasgow and Aberdeen, 20; Edinburgh, Dundee, and Paisley, 21; Greenock, 23; and Perth, 28. The deaths of children under five years of age numbered 978, or 43 per cent. of the entire mortality; the rates being almost in inverse ratio to the general death-rate. Thus, in Perth, the infant mortality was 22 per cent.; in Aberdeen, 29; Paisley, 35; Edinburgh, 42; Dundee, 45; Glasgow, 46; Greenock and Leith, 49. Zymotic diseases caused 22.7 per cent. of all the deaths; this rate was much exceeded in Edinburgh and Leith, owing to the prevalence of scarlet fever; thus, in Edinburgh, 17.1, and, in Leith, 20.7 per cent. of the total mortality was ascribed to scarlet fever. Of other fevers, enteric caused 56, typhus 5, and simple continued fevers 4, deaths. Apoplexy and paralysis caused 89, cardiac diseases 124, hydrocephalus 48, and premature-birth debility 52, deaths. Phthisis pulmonalis accounts for 10.9 per cent., and inflammatory diseases of the respiratory organs 18.7 per cent., of the entire mortality. To diarrhœa were attributed 79, to whooping-cough 59, to croup 35, to diphtheria 30, and to measles 17, deaths. There were 73 deaths from violent causes, 3 of them being of suicides. The births of 3,215 children, of whom 1,662 were females, and 1,553 males, were recorded. As regards meteorological conditions, the mean barometric pressure was greater by 0.172; the mean temperature less by 4.0°; the mean humidity less by 3; the rain-depth less by 2.02 inch, and the wind-pressure greater by 0.19 lb., than the average of the same month during the previous 23 years. The lowest mean temperature, 42.4°, was at Glasgow; the highest, 44.6°, was at Leith. The smallest rainfall, 0.60 inch, was at Greenock; while the greatest, 4.15 inches, was at Edinburgh, and had thirteen days for its falling.

IRELAND.

HER Excellency the Countess Cowper visited the Mater Misericordiæ and the Adelaide Hospitals last week.

THE LATE DR. HUDSON.

THE funeral of this distinguished physician took place on Thursday last, at Mount Jerome Cemetery, Dublin. It was, as might be expected from the great regard in which Dr. Hudson was held, very numerously attended. The King and Queen's College of Physicians, of which he was an Ex-President, was represented by its President and officers; the mace of the College, draped in crape, being also carried in the procession. Dr. Hudson had resigned most of his appointments a short time before his death. Those which that melancholy event now leaves vacant are the posts of Physician in Ordinary to the Queen in Iraland, and Consulting Physician to the City of Dublin and to the Rotunda, and the Coombe Lying-in, Hospitals. The last meeting of the Pathological Society of Dublin, of which Dr. Hudson was a member, was adjourned, as a mark of respect to his memory. We elsewhere publish an obituary notice of this eminent physician.

HEALTH OF DUBLIN.

THE deaths registered in Dublin during the week ending Saturday, November 13th, represent the appalling annual rate of mortality of 39.5 in every 1000 of the population by the census of 1871. A serious outbreak of typhus fever is, we regret to see, now imminent. There were 49 cases of this disease admitted into the principal hospitals during the week, being nine over the high number for the preceding week, and making a total of 109 cases under treatment in the hospitals on the 13th instant. All past experience has shown that typhus is a disease of winter; and, also, that it is one which, above all other contagious diseases, perhaps, can be "kept in hand" by firm sanitary measures.

HEALTH OF CORK.

DURING the four weeks ending November 6th, the deaths registered in Cork amounted to 163, of which 28 were due to infectious maladies, and 15 were infants under one year; while 133 births took place. The annual death-rate per 1,000 inhabitants, calculated on the above figures, gives a total ratio of mortality of 26.94; from general diseases, 22.31; infectious diseases, 4.52; an infant mortality of 2.47; and a birth-rate of 21.98. There has been a slight increase in the ratio of urban mortality, caused by infectious diseases, during the month, as compared with the three corresponding periods immediately preceding it.

BELFAST ROYAL HOSPITAL.

A BAZAAR, in aid of the funds of this institution, will be held in the Ulster Hall, on the 16th, 17th, and 18th of December. Hospital Sunday, which previously was held on the last Sunday in December, has been, after due consideration, changed to the last Sunday in November. It is, however, disappointing to learn that, although 170 circulars were sent out by the honorary secretary to the clergy of the town and neighbourhood, only sixteen have agreed to take up collections on Sunday, the 28th instant. We are gratified to state that the Roman Catholic clergy, acting with their Protestant brethren, will hold collections in their places of worship.

GUY'S HOSPITAL.

THERE have naturally been made several suggestions of various kinds respecting the manner in which the assistance of old Guy's men firstly, and possibly of other members of the medical profession in the second place, might be invoked on behalf of the staff in the varied phases of the struggle at Guy's Hospital. That contest has, however, of late, so frequently shifted its grounds, that outsiders have no sooner come to appreciate the exact position of affairs, than some new element has come to the fore, and changed the aspects of the contest. Meetings of the friends of the staff have been proposed, to protest against this or that abuse, when the scene has shifted, and the proposal for the projected meeting has consequently met with little or no encouragement from the chief physicians and surgeons themselves; and so it has come to pass that, in order to leave the staff quite unhampered, no large meetings have been organised. Now, to retrace the elements of the strife no further than its penultimate phase, the professional friends of Dr. Habershon and Mr. Forster have wished, as letters sent to us from all parts of the country testify, to assemble in some large concourse, and express their deep sympathy with the late senior members of the staff in the step which they have felt constrained to take. Again, however, it is considered, by those who have the most intimate knowledge of the quarrel, and are yet outside the acting staff, that such a meeting would probably further complicate matters for the physicians and surgeons who have not followed their seniors in their retirement. This view is strengthened by the circumstance that the Committee of Governors, in their recent relations with the staff, have shown a disposition to retrace their former position of hostility, and have entered upon a course of deference to the opinions of the physicians and surgeons of the hospital, in the details of the nursing at the institution, which appears to offer a prospect of an improved *modus vivendi* for the future. Much, therefore, as old Guy's men may wish to express their sympathy, in a public manner, with their old and highly valued teachers, Dr. Habershon and Mr. Forster, in the present distressing emergency, it is, we believe, considered better policy not to hold such a meeting at the present juncture.

CREMATION AT MILAN.

[FROM A SPECIAL CORRESPONDENT.]

AT the close of the International Congress on Hygiene, recently held at Turin, the members of the Congress visited Milan, at the invitation of the Society of Cremation, which has its head-quarters in that town, for the purpose of becoming practically acquainted with the processes employed by the Society for disposing of human bodies by the aid of fire.

The Society was founded in 1876, with the object of "diffusing the principles of cremation, and of examining the methods by which the human body may be resolved into its primitive elements, yielding to the survivors, in a simple and innocuous manner, and conformably with the exigencies of civilisation and sentiment, a harmless residue fit for preservation". Having obtained, with some little difficulty, the sanction of the Government for their proposal, the Society devoted itself without further delay to experimenting with various forms of apparatus, proposed by different inventors. It is needless to specify all the forms investigated; it is enough to say that the Society finally decided to adopt for use the system invented by Professor Gorini. The first furnace of this description was erected at Lodi, whence it has been named the "Crematoio Lodigiano"; but a similar apparatus has been erected in the great cemetery at Milan, where a "Tempio Crematoio" was erected at his own expense by Signor Alberto Keller, and presented by him to the city; and it is by this system that the great majority of cremations have, up to the present time, been effected.

Professor Gorini's apparatus is very simple. It consists of a firebrick chamber for the reception of the corpse; of a furnace, opening into this chamber at one side, in which is burnt the fuel, from which the heat necessary for the destruction of the body is derived; of a flue, passing downwards from the other end of the chamber, by which the gases escape; and of a chimney, into the bottom of which this flue enters. On the floor of this chimney is a small fire, for the purpose of increasing the draught, and of completing the combustion of any gases that may not have been before entirely resolved into carbonic acid, water, and ammonia. A few small holes are pierced in the walls of the principal chamber, which are glazed at their outer extremities. These enable the operator to see how the combustion is progressing. A fire (generally of wood) having been lighted in the furnace, the cremation-chamber is gradually heated before the body is placed in it. The latter, on its arrival at the building, and at the close of the religious service, is taken through a door, where the relatives take leave of it, just as they would were it being taken through the door of the family vault. The body is then placed in a heavy iron cradle outside the cremation apparatus, and in this it is transferred by simple mechanical means into the hot chamber, the door of which is subsequently secured with fire-clay. A certain quantity of charcoal is placed in the chamber with the body to increase the heat, and, at the end of two hours, the body is completely burnt; all that is left being a light ash, still retaining the form of part of the bones, its weight representing from 3.5 to 5.5 per cent. of that of the body before combustion.

It will thus be seen that the *Crematoio Lodigiano* of Gorini is a simple kind of reverberatory furnace, in which the body is burned by flame coming directly from the fuel employed. It has been now used in about seventy cremations, and, on the occasion of the visit of the members of the Hygienic Congress, a body was burned in their presence. The apparatus acted satisfactorily in every way; and, although the products of combustion were being turned into the air at no great height above the ground, not the least odour of burning flesh could be detected.

Of late, however, some dissatisfaction with this apparatus has been expressed by certain members of the Society. They assert, that, in order to burn a large mass of hydrocarbonaceous material like the human body, so large a quantity of oxygen is required that not sufficient is contained in the air which is introduced through the mouth of the furnace. A considerable quantity of this air is employed in combining with the carbon and hydrogen of the fuel; and thus, by the time the air reaches the chamber containing the body, it is already highly charged with carbonic acid and partially deprived of its oxygen. Thus, it might happen that, whilst it is sufficiently hot to volatilise and partially decompose the tissues of the body, it may not be sufficiently oxygenated to enable these hot gases to be completely transformed into carbonic acid and water. They state, moreover, that the small fire placed at the bottom of the chimney is not sufficient to ensure the final combustion of such gases as may escape from the cremation chamber, and that it is not unlikely to come about that odoriferous emanations might escape into the air and be detected in the neighbourhood, to the great detriment of the popularity of this method of disposing of the dead. Although, with careful management, the fire may be arranged so as to avoid this evil, yet fuel must be added every few minutes—thus varying the amount of burning material, and, consequently, of oxygen used in the furnace—whence it must result that the conditions under which the body is burning must be continually changing, instead of being uniform; and that, if employed on a large scale, it would be in the power of careless workmen to bring the whole system into disrepute.

In order to remedy these defects, and to enable the operation to be carried out on strictly scientific principles, Signor Venini, an engineer of Milan, has constructed an apparatus in another part of the cemetery, in which eight or ten bodies have up to the present time been burned; and in this also a body was burned under the inspection of the members of the Congress. The essential features of this apparatus are—that a definite mixture of heated air and inflammable gas is conducted into the cremation chamber; that fresh air is also conducted in large quantities straight into this chamber, to supply oxygen for the combustion of the body; that the resulting gases are taken to a further hot chamber, where they obtain a fresh supply of air to complete the oxygenation of gases that may have been only partially decomposed in the cremation chamber itself; and that yet another admixture of these gases with hot air is made before they are allowed to escape into the atmosphere. The inflammable gas is obtained by the distillation of wood in a retort; and the air with which it is subsequently mixed is heated by passing through a chamber surrounding the retort, the wall of which is double. The gas coming from the wood and the hot air can be mixed in any given proportion by means of regulating valves. The resulting mixture, rendered intensely hot by the chemical changes taking place between its two components, is conducted straight to the chamber containing the body, into which chamber air is freely admitted by two large tubes, passing in a curved direction through its walls. The rest of the apparatus, which is somewhat complicated, need not be specially described, the purpose of the remaining parts having been indicated above.

This apparatus did its work, on the occasion of the visit of the Congress, equally well with the other, and there appeared to be little to choose between them in this respect. It is evident, however, that if the one apparatus does its work with scientific accuracy, while in the other a good deal is left to chance, the scientific apparatus is likely to gain the day. Signor Gorini does not, however, intend to allow his

invention to lose its position easily; for he has brought a lawsuit against Signor Venini, in which he charges that gentleman with plagiarising his invention and infringing his patent. This lawsuit is still pending; but it must necessarily turn upon technical points of law only, because the methods adopted in the two forms of apparatus are open to all; and it is evident that they differ so materially from one another that, even though Signor Venini may have got his first idea from Signor Gorini's apparatus, he has modified it in so many essential points that the charge of plagiarism can scarcely be maintained.

The time necessary for complete combustion is said to be rather less by the Venini method than by that of Signor Gorini. The price of the fuel is about the same in each—that is to say, about four or five *francs*. The tariff charged by the Society is thirty *francs*, and an additional ten *francs* is paid to the Municipality, to whom the cemetery belongs. The ashes are placed in an earthen jar, which costs four and a half *francs*; and the jar may be placed in the Cinerarium recently erected by the Municipality—a single charge of three *francs* being made for a place in the general compartment, and one of fifty *francs* for a special compartment.

Thus it may be said that cremation is fully established at Milan, as a practical method of disposing of the dead. The experiment is one which will doubtless attract much attention, and it will probably be imitated in many other places before many years have elapsed. We may expect, therefore, without much delay, to have an opportunity of judging of its practicability for more general application.

OUR CONFESSIONAL.

MAGNO INGENIO, MULTAQUE NIHILOMINUS HABITURO, CONVENIT ETIAM SIMPLEX VERI ERRORIS CONFESSIO; PRÆSERTIM QUÆ IN EO MINISTERIO, QUOD UTILITATIS CAUSA POSTERIS TRADITUR; NE QUI DECIPIANTUR EADEM RATIONE, QUA QUIS ANTE DECEPTUS EST.—(Celsus *De Medicina*, Liber viii, cap. 4.)

COMPOUND FRACTURE OF THE LEG WITH FAULTY UNION.

THIS case, which has given me more annoyance than any that has occurred to me during a practice of more than forty-five years, was one of a stout but fairly temperate man of about 50, who on the 9th of January last fell in jumping from a stool on which he had been standing, and received a compound fracture of both bones of the leg a little below the junction of the upper with the middle third. The fracture was very oblique, and the lower portion of the tibia pierced the drawers and trousers. With some difficulty it was replaced in good position, and secured on an outer splint, so as to allow attention to the jagged wound, which was over the inner surface of the shaft of the tibia towards its posterior border. This I treated by total occlusion, first of all with layers of lint saturated with styptic colloid, and subsequently with carbolic acid putty. The wound healed kindly; and I constantly attended to the position of the limb, and measured it repeatedly during the first month, finding nothing wrong; but he was (as I now consider) suspiciously free from pain from the very first.

I removed the splints towards the end of February, and was then surprised, and I may almost say dismayed, to find a state of things totally different from what I had found at my last examination. The union was angular, giving rise to considerable deformity, which is now irremediable.

My patient being, fortunately for me, of a bright and cheerful nature, and having, moreover, as it would appear, no eye for straight lines, is contented with his recovery, and boasts of his progress in walking. About a month ago, however, he had an attack of periostitis in the limb; and four ulcers formed—two near the head of the tibia, and two near the ankle; and, on examining the leg, I feel sure that the deformity has increased since the removal of the splints. The ulcers healed, and he is well in health and contented.

I ought to note, in connection with this unsatisfactory case, that twenty years or more ago I attended this man with an enlargement of the same limb with œdema, but without ulceration. I think the periosteum was then the seat of mischief; but he recovered, and since that has had fair health. The cause of deformity was, I presume, the retarded development of firm callus from constitutional causes, and its subsequent development when faulty position, which I had not suspected, had occurred. But ought not the total absence of pain to have given me the hint?

DONATION.—Mr. Edward Rodgett, of Darwen Bank, has offered to contribute £4,000 towards the erection of an infirmary in connection with the Royal Albert Asylum for Idiots and Imbeciles, Lancaster.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE next ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday, December 9th, at 7.30 P.M.; ALEX. WAUGH, Esq., President.

R. S. FOWLER, E. MARKHAM SKERRITT, } *Hon. Secs.*

Bath, November, 1880.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held on Friday, the 3rd December next, at twelve o'clock, in the Belfast Royal Hospital.

Members intending to read papers are requested to communicate with JOHN MOORE, *Hon. Sec.*

2, Carlisle Terrace, Belfast, November 8th, 1880.

SOUTH OF IRELAND BRANCH.

THE first ordinary meeting for the session will be held in the Royal Cork Institution, on Wednesday evening, December 1st, at eight o'clock.

Members intending to read papers are requested to communicate with T. GELSTON ATKINS, B.A., M.D., *Hon. Sec.*

Cork, November 21st, 1880.

LANCASHIRE AND CHESHIRE BRANCH: MEETING.

A MEETING of the Branch was held at the Brook Street Schools, St. Helen's, on Thursday, October 28th, at 2.30 P.M.; E. LUND, Esq., presiding. In consequence of the extreme inclemency of the weather, the attendance of the members was small—thirty-seven members and eight visitors. Many availed themselves of the opportunity to visit the glass-works in the town.

Communications.—The following communications were made at the meeting.

1. Mr. E. A. Browne showed a new Ear-Inflator.

2. Mr. F. T. Paul read a case of Successful Removal of Aneurismal Tumour of the Jaw from an infant ten weeks old; with specimens and drawings.

3. Dr. Lauder Brunton (of London) read a paper on some points in the Pathology and Treatment of Dyspepsia.

4. Mr. W. M. Banks read a case of Radical Cure of Ventral Hernia.

5. Dr. Cullingworth showed a case of Syphilitic Eruption.

6. Dr. Cullingworth read a paper on a case of Diaphragmatic Pleurisy, illustrating some of the difficulties in diagnosing that affection.

Dinner.—Twenty-nine members and visitors dined together at the Fleece Hotel, at 5.30 P.M.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

THE first meeting of this District was held at the house of Dr. Henty, 308, Camden Road, on Thursday, October 28th; S. O. HABERSHON, M.D., President of the Branch, in the chair.

Papers.—The following papers were read.

1. The CHAIRMAN read a paper on the remedial use of Ice applied externally to the surface of the Abdomen in some cases of Intestinal Obstruction. He commenced his paper by stating that there was, in many cases of intestinal obstruction, a period when the medical practitioner was compelled to ask himself—"Can any further measures be used? What more can I do to relieve the obstruction, and to induce action of the bowels?" Intestinal obstruction might arise from causes external to the bowel; from the condition of the coats of the bowel; and from causes within the bowel. Dr. Habershon narrated cases, demonstrating these varieties of obstruction, showing that the application of ice proved extremely beneficial in relieving pain, and overcoming the obstruction, when other remedies had failed. The ice was broken into small pieces, and placed in an India-rubber bag or bladder, which was applied to the abdomen. It might be kept applied for two or three hours, according to the feeling of the patient. It was not, however, in every case that this treatment was likely to produce good effect; for instance, in intussusception, it would probably do more harm than good; so also in peritonitis, in malignant disease, and in fæcal accumulation.

2. Dr. WILTSHIRE briefly indicated the leading causes, local and

general, upon which Vulvar Pruritus might depend, especially emphasising its association with Diabetes and Glycosuria; and then pointed out the remedies respectively appropriate in the several conditions.

3. Dr. POTTER read a paper on the Medical Man of the Future. He prefaced his remarks by picturing the medical man of the middle ages, who kept an open shop and sold drugs; and he then dealt with what he called the peculiar customs which still prevailed at the present day, and he regretted that he could not speak of the apothecary in the past tense: for even now the family doctor still clung to his shop, as if it had a kind of fascination for him. The existence of this so-called surgery, or shop, produced a constant strife between the medical man and the druggist, and led the latter to prescribe for and to treat disease. In Dr. Potter's opinion, the family doctor must be, in every sense of the word, the physician of the future, and the educated and well-informed gentleman; and he must play a part in life, medically and socially, very different from that of the old apothecary of the past, or of the surgery practitioner of the future.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE first ordinary meeting of the session was held at the Bristol Museum and Library, on Thursday, October 28th: ALEX. WAUGH, Esq., President, in the chair. There were present thirty-three members, and three visitors.

New Members.—Messrs. W. R. Edmond and A. W. Coppinger were elected members of the Branch and of the Association.

Days of Meeting.—A letter was read from Dr. Clark of Weston-super-Mare, representing that members living at Weston and Clevedon were unable to attend the meetings on Thursdays, and asking that the day of meeting might be changed to Wednesdays. After discussion, it was resolved "that the matter be referred to the Council of the Branch for reconsideration".

Papers.—The following papers were read,

1. Dr. J. G. Swayne: The Treatment of Laceration of the Cervix Uteri.

2. Mr. Crossman: Notes on Inversion of the Uterus after Delivery; with a Recent Specimen.

3. Dr. Aust Lawrence: The Prevention of *Post Partum* Hæmorrhage.

SHROPSHIRE AND MID-WALES BRANCH: ANNUAL MEETING.

THE annual meeting of the above Branch was held at the Salop Infirmary, on October 19th. In the unavoidable absence of J. R. HUMPHREYS, Esq., President, the chair was taken by J. BRATTON, Esq., Ex-President.

Vice-President.—J. Sides-Davies, Esq., Oswestry, was elected Vice-President for the ensuing year.

Representatives of Branch in the General Council.—The following were elected: The President (J. R. Humphreys, Esq.); A. Matthias, Esq.; S. Tayleur Gwynn, M.D.; and the Honorary Secretary.

Council of the Branch.—The following were elected: The President; T. B. Barrett, Esq.; S. Tayleur Gwynn, M.D.; J. Rider, Esq.; J. D. Harries, Esq.; Wm. Eddowes, Esq.; J. Bratton, Esq.; R. W. O. Withers, Esq.; H. J. Elliot, Esq.; H. J. Rope, Esq.: and the Honorary Secretary.

Honorary Secretary.—Mr. Henry Nelson Edwards was re-elected Honorary Secretary and Treasurer.

New Members.—The following new members were elected: B. M. Skinner, Esq.; E. S. Scott, Esq.; H. J. Skelding, Esq.; Lambert Hall, Esq.; and Barnard F. Giles, Esq.

Papers.—The following papers were read and discussed.

1. Dr. E. Andrew: Treatment of Hæmoptysis in the later stages of Phthisis by Subcutaneous Injection of Morphia.

2. Mr. A. Bethell: Extensive Wound in the Knee-joint caused by Reaping-hook.

3. Dr. Alfred Eddowes: A Fatal Case of Hæmorrhage from the Gums.

4. A Case of Prolapse of the Uterus during Labour.

Dinner.—The annual dinner was held, after the meeting, at the Lion Hotel; about forty members were present.

NORTH OF ENGLAND BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the King's Head Hotel, Barnard Castle, on Tuesday, October 5th, at three o'clock P.M. G. B. MORGAN, Esq., President, occupied the Chair.

Papers.—The following papers were read:

1. Dr. G. S. Brady: Two Cases of Trichinosis.

2. Dr. Philipson: On Glosso-labio-laryngeal Paralysis.

3. The President: On the Power which we possess of Aiding in Temperance Reform.

4. Dr. Adamson: Case of Ostitis of the Tibia.

Dinner.—The members afterwards dined together at the King's Head Hotel. The President occupied the chair, and Dr. Barron the vice-chair.

STAFFORDSHIRE BRANCH: ANNUAL MEETING.

THE seventh annual meeting of this Branch was held on Thursday, October 28th, 1880, at the Railway Hotel, Stoke-upon-Trent. Dr. J. H. TYLECOTE introduced the President-elect, Mr. W. H. FOLKER, who then took the chair.

Vote of Thanks.—Mr. SPANTON proposed: "That the best thanks of this meeting be given to the retiring President, Dr. J. H. Tylecote, for his services during the past year." This was seconded by Dr. TOTHERICK, and carried with acclamation.

President's Address.—The PRESIDENT delivered an address, consisting of a statistical record of the capital operations he had performed whilst Surgeon to the North Staffordshire Infirmary.—Dr. ARLIDGE proposed that a cordial vote of thanks be given to Mr. Folker for the important and interesting address which he had just read, and that he be requested to allow it to be published. Dr. DAY seconded the resolution, and it was carried with applause.

New Members.—The following gentlemen were elected members of the Branch: Mr. W. Partington (Tunstall), Mr. John William Scott (Wolverhampton), Mr. G. Skerving (Wednesbury).

Report of Council.—Mr. VINCENT JACKSON read the annual report, as follows.

"Your Council reports that, during the year, two ordinary meetings have been held; the meeting at Wolverhampton, on account of unavoidable circumstances, was omitted. At Stafford, by the request of the Committee of Council of the Association, the meeting devoted much time to the consideration of the subject of Medical Education, principally as embodied in five resolutions which had been passed at a general meeting of the Metropolitan Counties Branch, December 1879. Each resolution was carefully discussed, and the opinion of the meeting was conveyed to the Committee of Council in a series of six resolutions, which were unanimously agreed upon. Your Council is pleased to observe that recently the Committee of Council has nominated a Committee to consider the question of Medical Education, and the resolutions which several of the Branches have passed in reference to it.

"The following gentlemen have, by their contributions, aided in the work of the year: Dr. J. H. Tylecote, Mr. L. Tait, Mr. Spanton, Mr. Allcock, and Mr. Orton.

"The number of members is 144, twenty-one having joined the Branch since the last annual meeting."

The adoption of the report was moved by Mr. ORTON, seconded by Mr. WOLFENDEN, and carried.

Financial Statement.—Mr. J. G. U. WEST read the statement of accounts for the past year, which showed a balance of £19 11s. 5d.

Next Annual Meeting.—Mr. ALLCOCK proposed that the next annual meeting be held at Stafford. This was seconded by Mr. RITCHIE, and agreed to.

Election of Officers for 1880-81.—The following were elected. *President-elect:* J. K. Wynne, Esq. *Vice-Presidents:* E. F. Weston, Esq.; J. H. Tylecote, M.D. *Honorary Secretaries:* Vincent Jackson, Esq.; J. G. U. West, Esq. *Auditor:* W. H. Folker, Esq. *Council:* J. T. Arlidge, M.D.; Henry Day, M.D.; E. Fernie, M.D.; F. J. Gray, Esq.; H. M. Morgan, Esq.; J. T. Hartill, Esq.; Joseph Hunt, M.D.; C. Orton, Esq.; G. G. Sharp, Esq.; Mulville Thomson, Esq.; J. Y. Totherick, M.D.; J. W. Wolfenden, Esq. *Representatives in the Council of the Association:* J. T. Arlidge, M.D.; A. Allcock, Esq.; H. Day, M.D.; W. H. Folker, Esq.; W. Millington, M.D.; D. H. Monckton, M.D.; C. A. Newnham, Esq.; W. D. Spanton, Esq.

Votes of Thanks were passed to the auditor and secretaries.

Dinner.—The members dined together at the close of the meeting.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at 198, Union Street, Aberdeen, on Saturday, July 24th, J. W. F. SMITH-SHAND, M.D., President, in the Chair.

President's Address.—The President began by thanking the members for the honour they had conferred on him, and referred to the good and earnest work which had been done during the past year. He took no credit for this to himself, but would point to the real organisers and mainsprings of the society—viz., the Secretaries—to the

untiring energy of one of whom, Dr. Alexander Ogston, the original organisation of the Branch was entirely, and its continued success greatly, due. During the year, the Branch had suffered by the loss from death of more than one of its members; and he could not refrain from specially mentioning, in this connection, the late Dr. Greig of Fyvie, one of the most efficient of the past Presidents of the Branch, a man of great natural ability, fertility of resource, and self-reliance—the very *beau ideal* of a country practitioner. The President alluded to the recent discussions as to the identity or non-identity of croup and diphtheria, of German measles and ordinary measles, the treatment of syphilis, the action of alcohol, and the alleged cure of cancer by a special kind of turpentine. He considered that these examples proved the necessity of instituting a system of more extended and prolonged observation and generalisation than had hitherto been attempted, in order to arrive at proper conclusions. Morbid anatomy even required the same process applied to it; and he referred to the differences of opinion regarding phthisis and tubercle, as seen in the views of Laennec, Virchow, and Cohnheim. The study of morbid anatomy—of the *effects* of disease—would always be an interesting one; but he believed that fully more advantage would now be derived by observers directing their attention to the *causes* of disease; and in this connection he gave every credit to Lister for having demonstrated the effects of treatment consisting of preventing or neutralising the presence of minute germs on the surface of wounds and in the tissues, and of having thus led to the conclusion that many diseases, such as diphtheria, relapsing fever, etc., were due to the presence of certain specific organisms, and the effects produced by them on the human frame. The President next touched upon medical education and medical qualifications. He was not in favour of extending the medical curriculum to five years, but would approve of taking out all subjects not purely medical, and putting them among the preliminary subjects; and he would make the preliminary examination a more stringent one than at present, as the experience of the Medical Council was that the men who passed the best preliminary were the men who got the highest marks in their professional examination. This more stringent preliminary examination would certainly necessitate a more advanced age to commence the study of medicine than obtained at present; but this, he thought, would rather be an advantage than otherwise. With regard to medical qualifications, he could not see what was to be gained by "the one-portal system". He doubted very much whether the examination for it would be equal to that at present required at the Scotch universities, while the result of it would be to materially damage the interests of the Scotch medical schools. He pleaded for a sound and liberal education in the old classical languages, in the modern languages, and in the natural sciences, before commencing the study of medicine; and he referred to the close relationship which had always existed between literature, philosophy, and medicine, as exemplified on the one hand by the elegant diction, pure style, and graphic descriptions of disease, as seen in the works of such masters as Hippocrates and Sydenham; and, on the other hand, by the high place attained in general literature by such men as Drs. Oliver Goldsmith and Tobias Smollett—not to mention other illustrious names. He concluded as follows. "The study of medicine will ever be a laborious and difficult one; but societies like the British Medical Association and its Branches are of great service in extending medical knowledge, and also in promoting good fellowship. The progress of medicine may seem to us at present slow and uncertain; but its advancement will be best attained by requiring of its votaries a high standard of mental culture before they enter on the threshold of the temple; and, although on many points we seem to be for ever groping in the dark, still let us work on, hoping that the motto of the medicine of the future may be, 'Post tenebras lux'."

BEQUESTS TO MEDICAL CHARITIES.—The Leeds General Infirmary, the Leeds House of Recovery, and the British Medical Benevolent Fund have each received £2,987 16s. 11d. (being the "residue") under the will of Miss Caroline Brown, of Cheltenham.—Miss Ann Elizabeth Watts, of Thornhill Crescent, Islington, bequeathed £1,000 to the Great Northern Hospital, £1,000 to the Royal Free Hospital, £500 to the London School of Medicine for Women, £500 to the East London Hospital for Children and Dispensary for Women, and the residue of her personal estate to the Great Northern Hospital.—Mr. Robert Linton Charrington, of Carshalton, bequeathed £1,000 each to the Earlswood Asylum for Idiots, and the Hospital for Incurables.—Mr. Wall, of Maida Vale, has bequeathed £1,000 each to St. Mary's Hospital, the Western Dispensary, and the Royal Hospital for Incurables.—Mr. W. H. Poynder, of Upper Brook Street, has bequeathed £1,000 to the Royal United Hospital at Bath, £1,000 to the Salisbury Infirmary, and £500 to St. Bartholomew's Hospital.

CORRESPONDENCE.

GUY'S HOSPITAL: THE STUDENTS' PROPOSITION.

SIR,—A good deal of surprise has been expressed in many quarters at the fact that the staff of this hospital, notwithstanding the extraordinary treatment which they have received at the hands of the Treasurer and the Governors, still continue their connection with the charity; and it is asked, why the example set by Dr. Habershon and Mr. Cooper Forster has not been followed by all their late colleagues. Their hesitation to take this step we consider to be due chiefly to two motives, both of them extremely honourable to the members of the medical staff; but we fear there is danger of both of them being carried to excess, and so defeating the very ends they have in view. These motives are: first, a genuine regard for the welfare of the patients under their care; and, second, a fear of injuring the medical school by hasty action. There can, of course, be no doubt that, if the physicians and surgeons were suddenly to resign in a body, the results to the patients in the hospital would be disastrous in the extreme. For, even supposing that the Treasurer was able to find qualified medical practitioners willing to take the vacant posts (which we think very improbable), they would certainly not be men of the eminence requisite for such an institution as Guy's Hospital; and it would be quite impossible to obtain substitutes of any kind at a day's notice. Moreover, the interests of the medical school would suffer most severely from such a course of action, deprived as it would be of its lectures, and of its practice in the wards; and much time must necessarily elapse before arrangements could be made for our attendance at other hospitals. We are, then, compelled to admit that anything like a sudden and universal resignation of the staff is out of the question; but it is at the same time equally clear that the present state of affairs cannot, in the interests of both patients and students, be allowed to continue. What, then, must be done? How are the difficulties embodied in the above objections to be surmounted? We, with great diffidence, would suggest a procedure somewhat as follows.

Although the medical staff would be wrong if they were suddenly to resign in a body, yet it seems to us that they would be perfectly justified in doing so, provided that they gave the Governors due notice of their intention—say, a fortnight or three weeks. This interval would give the Treasurer an opportunity of considering his position, and the Governors of deliberating as to the course they should pursue. If they persisted in their present attitude, they would have time to make arrangements for the welfare of the patients, and to attempt the organisation of a fresh staff, though we hope the *esprit de corps* of the profession would prevent anyone from coming forward to take the vacated posts. If this were the case, the Governors must either yield or close the hospital. If, on the contrary, it should be found possible to collect a new staff, we have already expressed our opinion that they would certainly not be men of the necessary ability and experience. We see, then, that the Governors would be reduced to three alternatives: either the existing obnoxious regulations must be repealed, or the hospital must be closed, or it must be worked by an inferior class of men. In either of the two latter cases, the appointment of incompetent men, or the cessation of a great medical charity such as Guy's, public opinion, already aroused, would demand a full inquiry into, and a thorough sifting of, a state of affairs which is at present a scandal to the whole medical profession; and this would undoubtedly result in the vindication of the authority of the medical over the nursing staff. Whether, then, the Governors agree or refuse to yield, the final upshot must be the reinstatement of the original staff and the former *régime*. But the settlement of this point would necessarily occupy some time, during which the interests of the students might be detrimentally affected; and the interval we have mentioned should be employed by the medical school in taking measures for its own safety, in case the battle should be prolonged. Again and again we have been told that we have the wishes of all the London hospitals with us. Now is the time to put this to the test; and we ask for their co-operation. We would suggest that a meeting should be convened of the authorities of all the London schools, and that they should discuss the possibility of making some arrangement for the temporary distribution of the Guy's students among the other hospitals, should the necessity for such action arise. Before the three weeks' notice had expired, everything should be ready for emigration; and not only must everything be ready, but the emigration must, if matters be allowed to go far enough, really take place in solemn earnest. Surely, some agreement could be come to by which we poor persecuted medicals should find a temporary home in the other hospitals of London. The need for it could only be

temporary; for, however long the strife might be protracted, it cannot be doubted that, when the final struggle did take place, we should be victorious. Would it not, then, be wise to precipitate the crisis, instead of allowing the reputation of both hospital and school to be ruined by needless delay?

We cannot see that anyone would be seriously injured, if such a course were adopted. Certainly, if any harm came to the patients, the Treasurer alone would be responsible for it. The staff would have done all, and more than all, their duty in giving the notice we advocate. The school could not be permanently injured; individuals, no doubt, would suffer some slight inconvenience through giving up appointments for a time, but we apprehend they would be content to do so *pro bono publico*. The very fact that the hospital cannot be satisfactorily worked without the assistance of the school, would necessitate its speedy re-installation.

The plan we have proposed may not be either new or original, and it may not be the best that can be imagined; but we think it to be, at any rate, worth consideration; and we therefore respectfully ask for a small space in your valuable paper. If it evokes criticism, it will have served its purpose.—We are, sir, your obedient servants,

Guy's Hospital, November 23rd. TWO SENIOR STUDENTS.

ETHER v. CHLOROFORM.

SIR,—I am glad the JOURNAL has so persistently kept this question before the profession, and hope the "chloroformists" are only wedded to their drug from unacquaintance with the advantages of ether. Let them give ether, and I am sure they will give up chloroform; at least, this conversion has happened in every case I know. There are cases, of course, in which chloroform must be preferred—cases in which ether is not well taken; but the consideration of these is outside of the present controversy, which, I take it, is upon ether *v.* chloroform as the anæsthetic for common use.

Dr. Chavasse, in the JOURNAL of November 20th, quotes Lister as saying of chloroform, "Deaths are due to faulty administration". This was the opinion of his predecessor, Syme, who abominated all kinds of *machinery*, and preferred to give chloroform on a folded towel, blaming the fatal results upon any other mode of administration, but not comparatively with ether. Some years ago, I prepared some statistics from the deaths recorded in the journals, and found that all means of administration were about equally fatal—the open method least so; and that the fatal dose was nearly always small. Dr. Chavasse suggests the training of students in its use. But will training make chloroform a stimulant of the heart's action? I fear not.

Dr. Foulds proposes, and gives two successful cases of the use of, a mixed anæsthetic. I cannot imagine a more unscientific mixture than that of alcohol, ether, and chloroform, all of which differ in the temperatures at which their vapours are given off, and in the density of the vapour. Does the patient get any alcohol-vapour at all? and, if so, is it sufficiently stimulating? Has Dr. Foulds tried what amount of stimulation he can get from breathing alcohol-vapour? I had thought that compound anæsthetics had been banished from use, as dangerous and unscientific.

I have seen ether given by most methods, and personally prefer the use of Ormsby's inhaler, the advantages of which are, briefly, rapidity of action, economy of ether, avoidance of the saturation of the atmosphere with the drug, and freedom from the frequent cough of ether. The open frame inhaler, as described by Mr. Paul, is wasteful of the drug, objectionable from the smell in private practice, and dangerous by artificial light.

In midwifery practice, I constantly give chloroform, but only during the pains, allowing the patient to become conscious between, the only evil effect of which is to cause the patient to magnify the passage of time. Of course, when operative measures are necessary, complete narcosis is unavoidable, in which case I do not see in what way the patient's condition is more favourable than for any other operation, and hence feel a very strong sense of responsibility. I doubt not the profession in a short time will agree to some such statement as the following. "Ether should be used in all cases where an anæsthetic is required, except in normal midwifery; operations on the mouth or jaws, where the mouth must be kept open (and a sufficient dose of ether not possible); and some operations on the eyes." Especially, I would add, when there is shock from injury, or feeble heart-action, ether only must be used. I was much struck and amused, some years ago, by a remark made to me by a friend whom I had asked to give chloroform to a very dear relative upon whom I was going to operate. "No," he said; "I am going off for my holiday next week." "What has that to do with it?" I asked. "Simply that I don't want to be detained by a coroner's inquest," he answered: "but I'll give ether, if you like." If this become the general feeling of the profession with regard to chloroform, we shall have greatly to thank the BRITISH MEDICAL JOURNAL.—I am, etc., W. MACFIE CAMPBELL, Surgeon Northern Hospital.

Liverpool, November 20th, 1880.

ARSENICAL WALL-PAPER.

SIR,—Will you allow me to call the attention of the profession to the fact that arsenic is now more largely used than ever in the manufacture of wall-papers; and to warn them to bear in mind the presence of the poison as a possible cause of disease, or of complications of diseases? A large number of cases of suffering from this cause have come under my notice of late, and I was at a loss to understand them until I tested the wall-papers, and found in them quantities of arsenic; and was unable to make any impression for good on the patients until the wall-papers were removed. Smarting in the eyes, though a fairly constant symptom, was not always present; and, when present, was not always a leading symptom. Deep general debility, a continued feverish state, chronic coryza, hæmoptysis, sickness and retching, cramps, spasms, diarrhœa, or constipation, I have observed in various cases.

It is not green papers alone that contain the poison. It is largely used in the manufacture of other pigments. I have found it in yellow, pink, blue, and drab; and no doubt it is to be found in many more. It would be well if every practitioner had one of the simpler tests for arsenic always ready for use. It would, I have no doubt, afford a solution for many trying cases, and save an immense amount of needless suffering.—I am, etc., JOHN H. CLARKE, M.D.

15, St. George's Terrace, Gloucester Road, S.W.,

November 19th, 1880.

OBITUARY.

ALFRED HUDSON, M.D.,

PHYSICIAN IN ORDINARY TO THE QUEEN IN IRELAND.

AN amiable physician, of high intellectual powers and of great practical skill, has just been lost to Dublin and to the profession in Ireland by the death of Dr. Hudson. Naturally a man of not very robust constitution, and of a nervous, retiring disposition, he suffered for some time past from vesical trouble. This was believed by himself to be of a malignant nature; but he was averse to any more exact diagnosis being made by a physical examination. Latterly, he had been obliged to relinquish gradually all his professional avocations. His sufferings, during the last six weeks of his life, we regret to say, were most acute, and continued with undiminished severity until within a short period before his death, which occurred at his country residence, near Dublin, on the 19th inst., at the age of seventy-two years.

Dr. Hudson was the eldest son of an Independent Minister, and was born at West Bromwich, Staffordshire, in 1808. He was educated at Bromwich, and commenced his medical career as an apprentice to Mr. Thomas Silvester, a surgeon of that town. After serving an apprenticeship of five years, Hudson pursued his medical education in Dublin, and was a clinical clerk of Graves and of Stokes at the Meath Hospital. He also studied for some time at Edinburgh, where he acted as assistant to Dr. Mackintosh, and subsequently at Paris. As a student, he was distinguished among his fellows, and gave early promise of that success which he eventually achieved. Pathology was the department of medicine to which, perhaps, he most devoted himself. His researches in this field, even at an early period of his professional life, show that he possessed large powers as an original investigator; and, doubtless, gave him that familiarity with the course and progress of disease which was so apparent in his treatment of it in after life.

Having obtained, in 1834, the degree of Bachelor of Medicine in the University of Dublin, and the Membership of the Royal College of Surgeons in England, Dr. Hudson practised for a few months in his native town. Subsequently, he came over to Ireland, and took up the practice of Dr. Gilroy, of Navan, in the County Meath, on that gentleman's retirement from active life. As Physician to the Navan Fever Hospital, to which he was shortly after appointed, Dr. Hudson cultivated those faculties of observation, reflection, and comparison, which were the most prominent characteristics of his methodical mind, and which are apparent in all his writings. Most of these, naturally enough, bear upon the subject of fever. In addition to his "truly philosophical" *Lectures on the Study of Fever*, the first edition of which was published in 1867, Dr. Hudson was the author of an able report on the Epidemic of Relapsing Fever of 1847-48. He also contributed several important articles to the *Dublin Journal of Medical Science*; notably "On Typhoid Pneumonia" (vol. vii, 1835): "On certain Remedies in

Typhus Fever" (vol. xi, 1837); "On the Use of Nitrate of Silver in affections of Mucous Membranes" (vol. xvii, 1840); "On the connection between Delirium and certain states of the Heart in Fever" (vol. xx, 1842); "On the Signs of Accumulation in Thoracic Diseases" (vol. xxii, 1856); and "On Cerebral Complications in Fever" (vol. xxiii, 1857). He also was the author of a valuable essay "On the Origin and Mode of Diffusion of the Fever-poison", in the *Medico-Chirurgical Review*.

While at Navan, Dr. Hudson had the best practice, such as it was, of the limited district; but mainly in consequence of being chagrined, as we have been reliably informed, at not obtaining a local medical appointment for which he was a candidate, he resigned the Fever Hospital, and removed to Dublin in 1854. Here he became a neighbour of his friend and former teacher, the late Dr. Stokes, and rapidly rose to a leading position in the Irish metropolis. He took the licence of the King and Queen's College of Physicians in the year of his coming to reside in Dublin, and was elected a Fellow of the College three years subsequently, having previously resigned the Fellowship of the Royal College of Surgeons in Ireland. In 1858, he became Physician to the Adelaide Hospital, where, however, he only remained three years, as he was elected Physician to the Meath Hospital on the death of Dr. Lees, in 1861. Thus, like Stokes and his former teacher Graves, Hudson, who was, as we have already stated, a clinical clerk to both these illustrious physicians, now became Stokes's colleague in the hospital which the triad have made universally known. The same year (1861), Dr. Hudson took his University degree of M.D. After holding the physicianship of the Meath Hospital for ten years, Dr. Hudson, whose practice had then become very large, resigned it. In the autumn of the same year (1871), he was elected President of the College of Physicians, which office he filled for two years. On the resignation by Dr. Stokes, in 1877, of his seat on the General Medical Council, as Crown representative for Ireland, Dr. Hudson was nominated in his stead; and, on Dr. Stokes's lamented death in 1878, he was appointed his successor, both as Physician in Ordinary to Her Majesty the Queen in Ireland, and as Regius Professor of Physic in the University of Dublin.

Amongst the other posts of honour, in which his eminent attainments and the high regard felt for him by the members of his profession placed him, was that of being elected the first President of the Dublin Branch of the Association. Dr. Hudson always evinced the greatest interest in the success of the Branch; and, at the conclusion of his year of office, gave an address—retrospective and suggestive—on the history and objects of the Association (BRITISH MEDICAL JOURNAL, February 9th, 1878, page 186), which, in its comprehensiveness and scope, is second only to his notable Address in Medicine, delivered at the annual meeting of the Association at Cork the following year. (JOURNAL, August 9th, 1879, page 204.)

It is not, however, our intention, in the present notice, to dwell further on Dr. Hudson's contributions to medical knowledge and literature. We would only remind our readers that it was he who gave a rational explanation of the remarkable phenomenon of tympanitic clearness, on percussion, over a solidified lung; that to him also, probably, was due the discovery of the value of vocal fremitus as a diagnostic sign; and that, by his teaching and writings, he did much to elucidate the facts which make the now generally recognised distinctions between typhus and typhoid fevers. We would prefer, in the limited space left at our disposal, to speak rather of his high qualities as a practitioner and as a consultant. In the latter capacity, he possessed the most perfect confidence and esteem of all those who sought his advice. Few there are who have had the advantage of his assistance in consultation, who have not benefited, at some time or other, by his modestly advanced suggestions and freely given experience. He had much confidence in the action of remedies, and was an excellent therapeutist. Quiet and unassuming in manner, he had a bright, intelligent, and active eye; and an impressive earnestness and thoroughness in all he said and did. He was gifted with a remarkable power of rapid diagnosis, which, however, he never permitted, whatever might be the expenditure of time or trouble on his part, to assert itself without satisfying himself of the existence of sufficient grounds for its correctness. And many of the younger members of the profession in Dublin have reason to be thankful to Dr. Hudson for numerous acts of kindness to them; and he was always ready to aid, unobtrusively and generously, with his purse any deserving case of need, especially if occurring in the person or the family of medical men.

The death of Dr. Hudson, coming so soon after that of Dr. Stokes and Sir Dominic Corrigan, leaves a serious chasm in the ranks of Dublin physicians, and one which it will be difficult to fill up.

Dr. Hudson was twice married. His second wife survives him, but he leaves no family.

MILITARY AND NAVAL MEDICAL SERVICES.

SURGEON-MAJOR M. COGAN, A.M.D., has been selected to organise the Base Hospital, 2nd Division Field Force, Kandahar, under the command of Major-General Phayre, C.B.

BY the regulations and instructions just promulgated to the army, by the direction of the Secretary of State for War, with reference to the Army Medical Department, it is provided (clause 245): "Medical officers of station hospitals will, on the written application of any established friendly society, furnish such society with a certificate as to the nature of the illness from which any soldier under their charge, who is a member thereof, may be suffering."

THE appointment as Honorary Physician to the Queen, vacant by the death of Dr. Edward Goodeve, has been conferred on Surgeon-General Frederick Freeman Allen, C.B., late of the Bengal Medical Department. Surgeon-General Allen entered the Indian Army as an assistant-surgeon on November 20th, 1848, and was promoted deputy surgeon-general in December 1876, retiring at the end of last year. He has seen a great amount of service in India. As an assistant-surgeon, he served throughout the whole of the siege operations before Delhi in 1857, was present at the assault and capture of the city, and afterwards accompanied Brigadier Showers's column in the Mewattee country, serving through the subsequent campaign in Oude, in medical charge of the Sirmoor Rifle Regiment (now 2nd Goorkhas), under Sir Charles Reid. With the 2nd Goorkhas he remained for a number of years, serving in the Hazara campaign on the Black Mountains in 1868, and in the Looshai expedition of 1871-72. For the latter service he received the Companionship of the Order of the Bath. As medical officer to Brigadier Campbell Ross's field-force, Mr. Allen served throughout the Jowaki-Afreedee expedition in 1877-78, and was mentioned in despatches as he had been on previous occasions. He also saw service in the first phase of the Afghan war as medical officer in charge of the Koorum Valley column; and, as an addition to the Indian mutiny medal and clasps, the frontier war medal with Hazara, Looshai, and Jowaki clasps, has to receive the new Afghan decoration.

A NEW ARMY MEDICAL WARRANT.

WE are glad to be able to congratulate the medical officers of the Brigade of Guards on the forthcoming promulgation of their warrant, which has now passed the Treasury, and only awaits its final approval at Mr. Childers' hands. It will be satisfactory to them to be placed, in all particulars of pay and allowances, on a precisely equal footing with their brethren of the line; and most especially will the certainty of fulfilment be welcomed by three of their number, who have been left ungazetted (one for two years) in anticipation of the formal publication of the warrant. We understand that a principal medical officer of the Brigade, in the shape of a Deputy Surgeon-General, will be granted; and thus, that the regiments will not only have their invaliding and other official business conducted by themselves, but that at least one step of promotion will, in future, be a legitimate object of ambition. We may remind our readers that, in exchange for exemption from foreign service, the Guards' surgeons virtually abandon all expectation of elevation to the higher ranks; and that, at the same time, they have been deprived of the exclusive possession, which they formerly enjoyed, of the title of Surgeon-Major, with the higher emoluments formerly attached to the position. Their duties are much more laborious and varied than those of the line, and their changes of quarters unusually frequent and inconvenient—so that, agreeable as the service is, and greatly coveted as one of the prizes of the department, it has its drawbacks, which it is the object of this warrant partially to remove.

MILITARY AND NAVAL MEDICAL SERVICES.

Royal Warrant, amending previous Warrants, for Pay, Promotion, and non-effective Pay in the Army.—We have compared the Royal Warrant, recently issued by the War Department, altering in various particulars the pay, promotion, and non-effective pay of the officers and men of the army, with the previous warrants which it is stated to amend, and do not find any changes of importance, so far as the Army Medical Department is concerned. The rates of pay of the medical officers of the army on active service, and on retirement, as well as the regulations affecting promotion, remain the same as they were in the Warrant of November 1879. A few advantages in some minor particulars are conceded by the new warrant, which affect medical in common with other officers of the army. Thus, by former warrants, leave of absence, not exceeding sixty-one days in the aggregate, with pay, was granted to

all officers during each year, provided the duties of their appointments could be performed without extra charge to the public; but, as regarded departmental officers, if they were kept away from their duties by sickness for any period, this period was counted as so much of the ordinary leave to which they were entitled. By the new warrant, however, should a departmental officer (and this includes medical officers) be sick at his station, his absence from duty, on account of this illness, is not to be included in the period of absence with pay allowed by the regulations, provided it does not exceed thirty days in duration. Beyond that period, it is to be treated as a portion of his ordinary leave of absence.

THE INDIAN MEDICAL SERVICE.

SIR,—My attention having been drawn to a letter entitled as above, and signed under the *nom de plume* "Swindled" (BRITISH MEDICAL JOURNAL, July 31st, 1880, p. 192), I beg you will be pleased to insert this brief one, by way of a rejoinder to some of the unjustifiable insinuations cast by that anonymous writer. I am, indeed, astonished both at the tone in which he couches his epistle, warning medical men against entering our service, and its subject matter, evidencing, to my mind, imperfect knowledge of the changes wrought about by the novel arrangement. Your correspondent boldly asserts, by way of advice: "Let me warn your readers against being misled by the *Lancet* in England and the *Pioneer* in India on this subject." He goes on to say that "A more unfair and unjust article than that in a recent *Lancet*, commenting on letters received from officers of the Indian Medical Service, while suppressing the letters, I have never seen in that paper; in fact, it is simply a caricature of the matter." Now, in my humble opinion, this is a very grave charge placed at the door of a journal which has done so much for the three services, and no doubt will always strive its best to do. The Indian Medical Service should be, and doubtless is, particularly grateful to the *Lancet* for the disinterested support it has invariably rendered, both to medical men belonging thereto, and to the State. That this portion of the letter, at least, under notice is objectionable to the highest degree, there can, I think, be little question.

Our feelings of loyalty, and much more so respect for our profession, should guide prudence on the ground that personal interests ought, in a measure, to give way to State considerations and advantages. The new changes, as far as I can judge, affect only a very few who had been and are high up on the different lists. The late Surgeon-General of Bengal (I.M.D.), and the late Surgeon-General of Bombay (I.M.D.), respectively, Drs. Beatson and Hunter—both men of great professional ability; men who, indeed, are pioneers in Indian medicine, pathology, and hygiene—probably were obliged to retire from the service at a disadvantage as compared with what they might have derived had the change not taken place; but then, it must be said, the Government did not fail in its duty to compensate this loss to as great an extent as it had lain in its power to make good.

The giving of appointments and making of promotions by seniority, as was in vogue until recent years, had its inevitable evils, as seniority and age did not and cannot always be read as synonymous with fitness, ability, and merit. The present plan of selection is by no means without its drawbacks; that is to say, that the selection always can be the best and *sans reproche* no one for a moment contends. Likes and dislikes, prejudices for and against, relationships, friendships, acquaintances, must always be expected to play in these matters a most prominent part on the minds of those in whose power and gift promotions and appointments are. This must be so, unless the world alters; we must take it as we find it.

With regard to the statement of "Swindled" that "our service is *essentially a military one*" (the italics are mine), it is open to exception; for I believe that our service is dual—military and civil—and that it "has been made subordinate to the Army Medical Department in every military particular", is, *ceteris paribus*, a very small matter, looking upon it from a professional, and not from an official, standpoint, as there must have been sound State *raison d'être* for this innovation; we are bound, as members of a noble art and as servants of the State, to nobly submit to such reforms as the advisers of the Sovereign may deem fit to introduce. The Surgeon-Generalship of the Indian Medical Service has not been abolished practically; there is, in each Presidency, an Indian Medical Department head, who presides over the welfare of our service, is the chief adviser to their respective Governments on matters medical, and has, moreover, the administration of the important civil work. Promotions, and the more important appointments, which certainly are in the civil department, are, I am inclined to think, made on his recommendation and representation of the claims and merits of the candidate he thinks right and fit for nomination and for the favourable consideration of the Government. That, in the conduct of this responsible and onerous task, it is the Surgeon-General's fate to err sometimes, I allow; still more: I would say that *gravis ira regum semper* is applicable in his case; and I freely admit that I have myself been a sufferer in this latter manner; but, for reasons above stated, I would not be justified in rushing to print, and parading my personal grievances to the public gaze; my policy has been to "grin and bear it", however painful and galling it may have been at the time.

The superior merits of Dr. De Renzy, the able Sanitary Commissioner of the Punjab, for whom I entertain profound respect on sanitary matters, I allow; but, at the same time, I am equally in duty bound to object and protest against the remarks made by "Swindled" against Dr. J. M. Cunningham, an authority for whom I have great respect, although there have been certain views of his, as published in his annual reports—which, *per se*, unquestionably have always formed valuable contributions to hygienic literature—from some of which I have been considerably at variance: for instance, those on cholera; but because we may happen to differ on scientific questions of theory and practice, it does not, *a priori*, follow that our scientific adversary, and perhaps opponent, should in our estimation of ability be lowered. Dr. Cunningham, in my humble opinion, and without dispute in the opinion of most of his critics, is a professional brother entitled to our respect and admiration; he is, indeed, one of the cleverest and wisest of those who honour our service. The authorities, therefore, were justified in their selection of him who had, for a long number of years, done such excellent and unsurpassable service to the State. Surely the medical officers of the Madras establishment and the Government of that Presidency to be congratulated in the selection of Cornish by the latter to preside over the affairs of the former. The appointment of Dr. Beatson to the Surgeon-Generalship of Bombay can also scarcely be objected to. This gentleman had, for a number of years, been civil surgeon of the most important station in the Presidency; presumably acquired considerable experience, then been Deputy Surgeon-General, Physician of the Maltese expedition, and being the most senior deputy at the time of the retirement of his predecessor, the Government could hardly be expected to pass him over. I unreservedly admit the excellent claims of Dr. Planck, whose valuable contributions on the subject of plague, etc., have enriched our literature on those matters and sanitary science in general.

Referring to the "remedies" "Swindled" proposes, I agree with him that it would perhaps be as well that "all appointments in the military administrative grades be made alternately from the British and Indian Medical Departments". But then, "Swindled" must remember that the secretaries to them should also be alternately from the two departments, else it would not be fair to the Army Medical Department officers who may desire these appointments, which carry good emoluments; but, of course, with the *sine quâ non* that a man be found fit for it, and, doubtless, there are always many so. I endorse, *in toto*, the second proposition, that "the rule should be made absolute, that no officer refusing promotion to Deputy Surgeon-General be eligible for that grade in future". I also agree in his third proposition. I cannot agree with the writer in his fourth. I pass over without notice his fifth, and am sorry that he ever penned it. Sixth. This a just grievance, and we all hope that the authorities will before long set to work to remove it. Seventh. This is also fair, and merits favourable consideration.

Having thus replied to the different points promulgated by "Swindled", I trust he will not think ill of me, as all that I have ventured to put forth has been in good faith, and with the longing hope and desire that our young married brethren will not be deterred from entering a service, several of the members of which have been the highest luminaries in our art. I have also to apologise for the length of this letter, as on first taking up the pen I scarcely thought it would cover so much space; and, craving your indulgence, I subscribe myself with name, and not under any anonymous cover.—I have the honour to be, sir, your most humble servant,

Afghanistan, August 1880. JOHN C. LUCAS.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

IN consequence of the spread of small-pox in the north-eastern suburbs of London, there being 50 cases of that disease in the Homerton Hospital belonging to the parish of Bethnal Green, the Guardians of that union have considered it necessary to prohibit the visitation of the inmates of their workhouse by their friends; and also to stop the holidays of the paupers under their charge, as a protection against the further extension of the complaint.

THE NOTIFICATION OF INFECTIOUS CASES.

SIR,—Could you kindly inform me as to where, and in what form, I could obtain the best information regarding the working of the powers, compelling the compulsory notification of infectious diseases? Also, in how many places these powers have been obtained.—I am, yours very truly, L. A. MALCOMSON, M.D.

November 15th, 1880.

*** Our correspondent will probably find more information on this subject in these columns than anywhere else. Everything that has been published on the working of the local Acts requiring the notification of infectious cases has been reproduced in abstract in the JOURNAL. Reference may especially be made to the Reports of the Chairman of the Parliamentary Bills Committee of the Association, published in vol. ii for 1879, p. 830, and vol. i for this year, p. 259; as well as to the articles in vol. i, 1879, p. 906 and p. 980; vol. ii, 1879, p. 661 and p. 867; vol. i, 1880, p. 158, p. 172, p. 861; and pp. 482, 603, and 677 of the present volume. The towns that have compulsory notification of infectious cases now number seventeen, and are Huddersfield (1876 and 1880), Bolton (1877), Burton-on-Trent (1878), Nottingham (1878), Jarrow (1878), Llandudno (1879), Warrington (1879), Blackburn (1179), Norwich (1879), Edinburgh (1879), Rotherham (1879), Blackpool (1879), Leicester (1879), Derby (1879), Lancaster (1880), Oldham (1880), and Preston (1880). Three other towns—Exeter, South Shields, and Birkenhead—have also inserted clauses in the local Acts to the same effect; but these were, for local reasons, not persevered with.

LIABILITY FOR INFECTION.

LAST week, Mr. Martineau gave his deferred judgment, in the case of Sampson *v.* Marshman, in the Brighton County Court, in favour of the defendant, and with costs, on a question of great interest to hospital managers, and to hotel and lodging-house keepers. Mrs. Sampson had been admitted into a convalescent home at Brighton on April 24th, a patient having been removed from the home to hospital with scarlet fever on April 17th. On May 14th, Mrs. Sampson got scarlet fever; and, after remaining in hospital for a month, brought an action against Mrs. Marshman, lady-superintendent, for negligence; and claimed £50 damages. She had not been put into the same bed, nor into the same room, as the previous patient: the three patients in that room at the time of the first case did not take the infection, nor did any other of

the one hundred patients in the home: the room and its contents were thoroughly disinfected with chlorine, and locked up for three weeks; yet the plaintiff's solicitor contended that, according to the Sanitary Act, the authorities were liable to a prosecution, because they had admitted a patient within six weeks after an infectious case. This reading of the Act was not sustained by witnesses or judge. The defence turned on a point of law—that Mrs. Marshman, as matron, was not personally liable, and on points of fact—that the disease was not contracted in the home, and negligence was not proved. On both these "crucial points", his honour held the plaintiff's case failed. The first patient caught fever outside the house; the second might equally have done so, for she went out freely from time of admission. The reasonableness of this judgment will be evident; and there seems no sufficient ground why the action should have been brought.

MEDICAL OFFICERS OF HEALTH.

THE last report of the Local Government Board gives some rather interesting figures as to the different fashions in which appointments of medical officers of health have been made by sanitary authorities. Thus, it appears that 235 rural and 323 urban authorities have appointed separate officers acting for only one district; 112 rural authorities have appointed 355 medical officers for divisions of sanitary districts; 170 rural authorities have appointed 34 medical officers, and 118 urban authorities 30 medical officers, acting for two or more districts; whilst the employment by 43 rural and 95 urban sanitary authorities of 107 and 95 district medical officers, as medical officers of health, has been sanctioned by the Local Government Board, under Section 191 (3) of the Public Health Act. These returns, however, only account for about eleven hundred authorities, who receive the Government subvention in aid of their officers' salaries. There are five hundred more, many of them corporations of important towns, who, not claiming the Government grant, do not appear in the return. Meagre as the particulars are, they yet give important indications of the direction in which appointments of health-officers are tending. In an article which recently appeared in these columns (see page 481), we sounded a note of alarm as to the apparently growing practice of the Local Government Board to encourage separate appointments for sanitary districts, in place of combinations. In the report before us, we find this—as we think, retrograde—practice dealt with somewhat at length, and in terms of approval. There can be no doubt that the appointment of district medical officers as medical officers of health for their Poor-law districts is a very unsatisfactory expedient; but the substitute for it, which the Local Government Board seems now to favour, is at best but a half measure. It is much to be regretted that the Board did not make an effort to publish the return, as to the appointment and remuneration of medical officers of health, which was moved for in the last Parliament by Dr. Lush, at the suggestion of, and in the form devised by, Mr. Ernest Hart. (See Vol. II, 1879, page 145.) This return would have given most important facts as to the present position of the public health medical service, and would have afforded a basis upon which action could be taken for its amelioration. The return was moved for in ample time last year to have been compiled during the recess; but it seems to have been overlooked, and, when the dissolution came in March last, it became a dropped order. Efforts will however be made to resuscitate the return, since it will probably form an important factor in the action which will evidently have to be taken in the immediate future, to put the appointment and tenure of office of medical officers of health on a more satisfactory footing.

We add, as a matter of interest, the observations of the Board on the quality of the health-reports submitted to them. They agree very closely with our own experience on the subject.

"In the reports of the many medical practitioners who hold the appointment of medical officer of health, we find, as might be expected, very great diversities. There are some reports, not for large districts only, that give an able account of the sanitary history of the year; and show the medical officer of health to have been active in investigating conditions relating to health within his district, and in advising his authority as to the nature of the measures requisite for sanitary purposes. These reports present him as cognisant of the introduction or origin of communicable diseases, and busy in seeing to the use of all available means for preventing their spread; and they sum up the advice and the action of the year, and help the sanitary authority to appreciate the value of their functions, while indicating the directions for their future work. In other reports, we find more or less of approximation to such a standard of work and of reporting; but there are still far too many reports which consist of a few numerical statements, with some merely perfunctory paragraphs, which enumerate outbreaks of disease that experience has shown to be within the range of sanitary work, as if they were no concern of the writers; and which are in no sense profitable to the sanitary authority. On the whole, however, we are glad to recognise the fact that the reports, year by year, show that progress is being made by medical officers of health in correctly appreciating the questions with which it is their function to deal; and that they contain, on the one hand, much information which enables us to advise local authorities as to the sanitary necessities of their respective districts; while, on the other hand, they record much useful work which those authorities have carried out."

REPORTS OF MEDICAL OFFICERS OF HEALTH.

SUNDERLAND.—The death-rate of this large and important district has lately experienced some rather considerable fluctuations. Last year it was 21.8 per 1,000, against 25.5, 22.7, 23.6, 20.8, and 22.5 per 1,000 in the five previous years. Of the 2,507 deaths, 1,104 were those of children under five years of age, and of this number 599 were under a year old. The mortality of persons aged sixty years and upwards showed an increase of 64 over that of the previous year; whilst the infant mortality showed a decrease of 433, as compared with that of 1878. Zymotic diseases caused 398 deaths, representing a death-rate from this class of disease of 3.4 per 1,000, as compared with 6.4 in the previous year. Four deaths from typhus and 23 from enteric fever were registered, making a total of 27, the lowest number of deaths from fever recorded in the borough. Measles, which was epidemic during the last half of 1878, caused only one death in 1879. Scarlatina was fatally prevalent during the whole year, causing 243 deaths—no fewer than 149 being in children between one and five years of age. Whooping-cough caused 44 deaths, against 175 in the previous year, diphtheria 10, and diarrhœa 73, against 204 in 1878. Diseases of the lungs were credited with 423 deaths, 380 being caused by bronchitis, pneumonia, and pleurisy. Consumption was returned as the cause of 219 deaths; 138 deaths were due to heart-disease; 383 to diseases of the brain and nervous system; and 163 to diseases of the digestive organs. The apparently large proportion of uncertified deaths, upon which the Registrar-General recently commented severely, is explained by Dr. Yeld to have been due to the fact that the certificates of a qualified medical man, who had been registered after the publication of the *Medical Register*, had been returned by the local registrar as uncertified. We are glad to find that an increasing use is being made of the fever hospital, 90 cases (including 30 of scarlatina and 29 of fevers) having been removed thither during the year. The undertaking of the scavenging by the Town Council has proved, practically as well as theoretically, a great improvement. In the port of Sunderland, which, until very recently, was the only one on the north-east coast in which vessels were systematically inspected, a total of 1,908 ships were visited during the year. Of these, 253 were foreign vessels. The sanitary condition of 1,224 was reported "good", 356 were "passable", and 328 were "in an unsanitary state". Thus, 83 per cent. were in a good and fair condition, and 17 per cent. in an unsanitary state. When the authority first undertook the inspection of vessels, upwards of 60 per cent. were in an unsanitary condition. Of foreign vessels, the Dutch and Danish are reported as being kept in the best sanitary condition. Many vessels, however, are still kept in a very dirty condition, and require constant inspection, especially the Scotch vessels.

LIVERPOOL.—The mortality statistics of this great city must be regarded with no common interest. Liverpool is so immense an aggregation of people, that its sanitary regulation is of necessity an affair of the vastest. When one reads of 5,410 visits being paid to houses during a single year for the purpose of disinfection; of 35,054 articles being sent to the disinfection apparatus; of 140,834 pounds of beef and half as much mutton and pork, and 191,027 pounds of fish being seized by the inspectors as unwholesome; of 68,454 nuisances being reported, and 34,846 notices issued; of 101,511 houses being examined; of 24,961 middens and 54,115 ashpits being emptied; and of 85,564 days' keep of horses having to be paid for, a dim idea is obtained of the magnitude of the operations of the sanitary department. The efforts of Dr. Stopford Taylor and his staff appear to have been successful in securing the removal of many unwholesome conditions during the year; but the overcrowding of the lodging-houses and sub-let houses is still a very serious question. During 1879, there were 20,844 births and 14,502 deaths in Liverpool, equal to rates of 38.7 and 26.9 per 1,000 respectively. The year was remarkable for the low temperature which prevailed, more particularly in the first quarter, when it was lower than in any corresponding period for the last twenty years, and was consequently marked by a great increase in deaths from lung-diseases. The cold and stormy weather had a beneficial effect in lessening the number of deaths from diarrhœa, which were fewer than

ever recorded in Liverpool. Typhus continues to decline, only 91 deaths being registered from that disease. Scarlatina was prevalent during the year, and occasioned 734 deaths, or 16 more than the average of the last ten years. Measles was more fatal than usual, owing to the complications arising from the cold in the last quarter of the year, when 321 deaths from this cause occurred, out of 445 for the whole year. Altogether 2491 deaths occurred from zymotic diseases, or 17.2 per cent. of the total mortality. The average number of deaths from these diseases for the preceding ten years was 3,827, so that the percentage of zymotic deaths for 1879 was 8 per cent. less than the proportion for the preceding decennial. The deaths of children under five years of age amounted to 6,346, or 43.8 per cent. of the total deaths; the average for the preceding ten years being 7,118, and the average percentage 47.6. Dr. Taylor's tables, elucidating and explaining the figures given in the report, are particularly full and valuable.

KINGSTON-UPON-HULL.—The total number of deaths in this district during 1879 was 3,235 in an estimated population of 146,347—thus giving a death-rate of 22.0 per 1,000 against one of 24.5 in 1878. Zymotic diseases caused a total of 329 deaths, or one tenth of the total number, against 589 in 1878, and 418 in 1877. This decrease is attributable mainly to the absence of infantile diarrhœa, which prevailed so fatally in 1878. In the latter year there were 341 deaths from this cause, whilst in 1879 the number fell to 66. The deaths from fever also fell from 07 to 53; but there was an increase of 33 deaths from measles, 54 from scarlatina, and 4 from diphtheria. The deaths of children under twelve months old numbered 965, or 33.5 per cent. of the total deaths, being a decrease of 227 on the returns for 1878, and an increase of 29 on those for 1877. As to the circumstances in which the outbreaks of zymotic disease occurred, nothing is stated; but a good deal of information is given as to the sanitary works performed and required in the district. Mr. Holden strongly urges the provision of pumping stations for the relief of the sewers of the borough—a necessity which is yearly becoming more and more urgent. The destruction of offensive refuse is at present under consideration, and it is hoped that the erection of a destructor will soon be determined on. The staff of nuisance inspectors has been strengthened, and an appreciable improvement has been made in the system of night-soil collection. Other departments of sanitary work have also made satisfactory progress.

POOR-LAW MEDICAL APPOINTMENTS.

FITZMAURICE, W., M.D., appointed Medical Officer to the Listowel Union Workhouse, vice Bryan J. Kenny, M.D., deceased.

KENNY, James H., M.B., L.R.C.S.I. din., appointed Medical Officer and Public Vaccinator to the Clapham District of the Settle Union, vice C. Deighton, M.D., deceased.

SMYTH, George, L.R.C.S.I., appointed Medical Officer to the Newtownbarry Dispensary District of the Bawnboy Union, vice James B. Kenny, L.K.Q.C.P., resigned.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

EXAMINERS.—The following gentlemen have been nominated by the Vice-Chancellor as Examiners for the Degree of Bachelor of Medicine. In the first examination for M.B.: S. H. West, M.A., M.B., Christ Church; J. A. Dale, M.A., Baliol; A. G. Vernon Harcourt, M.A., Christ Church. In the second examination for M.B.: T. K. Chambers, M.D., Christ Church; James Andrews, M.D., Wadham; T. P. Teale, M.A., M.B., Brasenose. In the examination in Preventive Medicine: W. Ogle, M.D., Corpus; G. W. Child, M.D., Exeter; W. F. Donkin, M.A., Magdalen; Douglas Galton, Capt. R.E., Hon. D.C.L.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Mr. A. P. Luff, of the University of London, has gained the Scholarship of £150; and Mr. J. H. Fisher, of the University of Oxford, that of £125. Fourteen candidates presented themselves; of whom three were B.A. Oxford, three B.A. Cambridge, and six matriculated students of the University of London.

THE first prize of 500 dollars, offered by the National Board of Trade of the United States of America, for the best essay and draft of an Act to prevent injurious adulteration, and regulate the sale of food, without imposing unnecessary burdens upon commerce, has been awarded to Mr. G. W. Wigner, F.C.S., F.I.C., honorary secretary of the Society of Public Analysts, etc., of London.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations, were admitted members of the College, at a meeting of the Court of Examiners on the 16th instant.

Messrs. H. W. Gosse, Hastings; F. T. Bayes, Walsingham; W. W. Pryn, L.S.A., Saltash; C. E. Strickland, Warwick; H. J. Blakesley, Birmingham; Alfred Hare, Chapel Street, W.; H. K. Fuller, Basingstoke; Edward Cotterell, Rochester; G. M. Wasse, L.S.A., North Tawton; H. C. Burrows, L.R.C.P.Ed., Hartlepool; J. C. Saunders, Sheffield; I. Gutierrez-Ponce, M.D. Paris, Paris; John Waldron, Moulsford, Berks; G. J. Haslam, M.D. Queen's Univ. Ireland, Manchester; R. E. G. Cuffe, Horncastle; S. H. Lyle, Liverpool; J. T. E. Mackenzie, Newcastle; and Charles Sanders, Cheshunt.

Nine candidates were rejected.

The following gentlemen passed on the 17th instant.

Messrs. T. G. Jenkins, L.R.C.P.Ed., Ruthin; John Smith, L.S.A., Commercial Road, E.; J. O'M. McDonnell, M.D. Queen's Univ. Ireland, Duke Street, St. James's; Ben Hall, Huddersfield; E. H. Locker, Highgate; W. C. Beevor, M.B.Ed., Worksop; H. H. Dummere, Victoria Dock Road, E.; A. B. Coffin, Holford Square, W.C.; V. A. H. Horsley, High Road, Kensington; C. H. Willey, M.B.Edin., Leicester; H. R. Fuller, B.A.Cantab, Granville Place, W.; Arthur Cutfield, L.S.A., Lee, S.E.; P. R. Griffiths, Aberdare; C. R. Owen, Fulham; A. C. Roper, Exeter; D. C. Trott, Ledbury Road; and Charles Tweedy, Northallerton.

Ten candidates were rejected.

The following gentlemen passed on the 18th instant.

Messrs. Frederick T. Thistle, Ashburton, Devon; William Renner, Quittah, West Coast of Africa; George L. Galpin, Grahamstown, Cape of Good Hope; Joshua S. Gabriel, Ceylon; William Pasteur, Stratton Street, Piccadilly; Thomas M. Day, Haslow, Essex; William Chisholm, Goulburn, New South Wales; James McCulloch, Swansea; Andrew Baird, Plymouth; Thomas R. Pickthorn, L.S.A., South Kensington; Edward S. Cockell, Hackney; Stephen H. Appleford, Champion Grove, S.E.; Henry W. Campbell, Claverton Street, S.W.; Francis J. Pound, L.S.A., Odiham, Hants; Christopher J. Watkins, L.S.A., Mornington Road; Edward Fielding, Rochdale; Joseph H. H. Laurence, Frome; Richard G. Cooper, Southport; Alfred C. Otway, Kennington Park Road; Geoffrey Strad, Shrewsbury; and Ernest E. Griffiths, Barnstaple.

Six candidates were rejected.

At the half-yearly primary examination for the Fellowship of the College, on the 23rd instant, the following gentlemen passed in anatomy and physiology, and when qualified will be admitted to the pass examination.

Messrs. John F. Bullar, B.A.Cantab, diploma of Membership dated July 30th last; William F. Hoyle, B.A.Oxon; Ernest G. Colville and James E. Square, students of St. Bartholomew's Hospital; Edward S. Bishop and Charles Plant, of the Manchester School; Percy Warner, of Guy's Hospital; and Arthur R. Edwards, of King's College.

Eight candidates were rejected.

The following gentlemen passed on the 24th instant.

Messrs. Francis H. Weekes, of St. Thomas's Hospital; and John H. Russell, of the London Hospital.

Twelve rejected, out of the twenty-two, for six months.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ASYLUM FOR IDIOTS, Earlswood, Redhill.—Assistant Medical Officer. Salary, £— per annum, with board and washing. Applications, with testimonials, to the Secretary, on or before December 2nd.

BATH HOSPITAL, Harrogate.—Secretary and Dispenser. Applications, with testimonials, to the Secretary, before January 6th, 1881.

BORRIS-IN-CARLOW UNION.—Medical Officer for Workhouse, at a salary of £— per annum. Election on the 15th instant.

BURTON-ON-TRENT AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION.—Medical Officer. Salary, £— per annum, with residence, coals, and gas. Applications, with testimonials, to the Secretary, not later than November 15th.

CHARING CROSS HOSPITAL.—Assistant-Physician. Applications, with testimonials, before November 20th.

DARLINGTON HOSPITAL.—Assistant House Surgeon. Salary, £— per annum. Applications, with testimonials, at once.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Medical Tutor and Demonstrator of Anatomy. Applications on or before December 13th.

DEVONSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £— for first year, increasing £— annually up to £—, with apartments, board, and washing. Applications, with testimonials, to the Secretary, not later than December 4th.

DORSET COUNTY ASYLUM.—House Surgeon. Salary, £— per annum, and £— additional as Secretary. Applications, with testimonials, to the Chairman, before January 15th, 1881.

EVELINA HOSPITAL FOR SICK CHILDREN.—Registrar and Chloroformist. Salary, £— per annum, with an additional £— if the post be held for twelve months. Applications, with testimonials, not later than December 8th.

FRENCH HOSPITAL AND DISPENSARY, Leicester Square, W.—Resident Medical Officer. Salary, £— per annum, with board, furnished apartments, and attendance. Applications as early as possible, with testimonials, to the Assistant Secretary.

GLENTIES UNION Medical Officer for Ardara Dispensary District. Salary, £100 per annum, with £15 as Medical Officer of Health, registration and vaccination fees. Election on the 30th instant.

HUNTS. COUNTY HOSPITAL – House-Surgeon. Salary, £60 per annum, with board and lodging. Applications, with testimonials, on or before December 3rd.

*KING'S COLLEGE, London.—Curator of the Anatomical Museum. Applications to the Secretary.

*LEICESTER INFIRMARY AND FEVER HOSPITAL – House-Surgeon and Apothecary. Testimonials, addressed to the Secretary's Office, 24, Friar Lane, on or before Monday, December 13th.

LEICESTER INFIRMARY — Honorary Physician. Applications, with testimonials, to the Secretary, not later than November 29th.

LISNASKEA UNION—Medical Officer for Brookeborough Dispensary District. Salary, £115 per annum, with £15 as Medical Officer of Health, registration and vaccination fees. Applications received to 14th proximo, when a day will be appointed for election.

LISNASKEA UNION Medical Officer for Workhouse, at a salary of £45 per annum; and Consulting Sanitary Officer, at a fee of £2 for each consultation. Election on the 4th December.

*LIVERPOOL NORTHERN HOSPITAL—Assistant House-Surgeon. Salary, £70 per annum, with board and residence. Applications, with testimonials, not later than December 11th.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY—Resident Surgeon and Apothecary. Salary, about £250 per annum, with lighting, fire, and attendance. Applications not later than November 30th.

MUTHILL, Parish of, Perthshire—Medical Officer. Salary, £50 per annum. Applications on or before November 30th.

NOTTINGHAM DISPENSARY Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 20th; election January 3rd, 1881.

PONTEFRACT GENERAL DISPENSARY—Resident Medical Officer. Salary, £130 per annum, with apartments, coals, and gas. Applications on or before November 30th.

*ROYAL MATERNITY CHARITY – Physician for the Eastern District. A stipend of £40 per annum. Applications, with copies of testimonials, before December 1st.

ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon. Applications on or before December 30th.

ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon. Salary, £75 per annum, with board, lodging, and washing. Applications, with testimonials, on or before December 6th.

*ST. BARTHOLOMEW'S HOSPITAL—Casualty Physician. Applications, with testimonials, on or before December 6th.

ST. BARTHOLOMEW'S HOSPITAL, Chatham — Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, washing, etc. Applications, with testimonials, on or before December 13th.

ST. MARY'S HOSPITAL, Paddington, W.—Resident Registrar. Salary, £100 per annum, with board and residence. Applications to the Secretary on or before November 27th.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM —Assistant Physician. Applications to the Honorary Secretary.

WESTMINSTER HOSPITAL—House-Physician. Appointment for six months, with board and lodging. Applications to the Secretary not later than Nov. 27th.

WESTMINSTER HOSPITAL — Surgical Registrar. Salary, £40 per annum. Applications on or before November 27th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BANKS, Wm., M.B., appointed Assistant Medical Officer to the Friends' Retreat, York, *vice* C. M. Campbell, M.B., resigned.

*BENNETT, Storer, L.R.C.P., appointed Assistant Dental Surgeon to the Dental Hospital of London.

*FOX, T. Calcott, B.A., M.B., appointed Honorary Assistant Physician to the Victoria Hospital for Sick Children, *vice* J. Pearson Irvine, B.A., M.D., deceased.

HORMAZDJI, Robert N., M.R.C.S.E., appointed Resident Surgeon and Honorary Secretary to the Cheltenham General Hospital Branch Dispensary, *vice* J. G. Boughton, L.R.C.S.Ed., resigned.

LAWFORD, J. B., M.D., appointed Ophthalmic Assistant to St. Thomas's Hospital.

MCDERMOTT, P., L.R.C.S.I., appointed House-Surgeon to St. Michael's Hospital, Dublin.

RICHARDSON, C.B., L.R.C.P., appointed Assistant House-Physician to St. Thomas's Hospital.

SYMES, J., M.B., appointed Resident Accoucheur to St. Thomas's Hospital.

SMYTH, A. C. Butler, M.R.C.S.Eng., etc., appointed Honorary Surgeon to the Brighton and Hove Lying-in Institution and Hospital for Diseases of Women and Children.

STOKES, James Beveridge, M.D., appointed Medical Superintendent of the Staffordshire Asylum at Burntwood, near Lichfield, *vice* R. A. Davis, M.D., resigned.

SWALE, H., L.R.C.P., appointed Assistant House-Surgeon to St. Thomas's Hospital.

WAGSTAFF, Ernest H., M.R.C.S.Eng., appointed Assistant House Surgeon to the Hull General Infirmary, *vice* W. H. Smith, M.R.C.S., resigned.

WATT, George, M.D., elected Medical Officer to the Aberdeen General Dispensary, *vice* R. J. Garden, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

WRIGHT.—On the 9th of November, the wife of Francis James Wright, M.D., of Northumberland House, Stoke Newington, of a son.

MARRIAGES.

HOFFMEISTER—ROBY.—November 16th, at Holy Trinity, Paddington, by the Rev. J. C. Hose, assisted by the Rev. C. W. Whitfield, Dr. John B. Hoffmeister, of Brighton, second son of Dr. Hoffmeister, Surgeon to the Queen, of West Cowes, Isle of Wight, to Fanny Georgiana, youngest daughter of C. J. Roby, Esq., of 50, Gloucester Gardens, Hyde Park. No cards.

SCOTT—DICKSON.—At Inveresk House, Musselburgh, N.B., on the 17th instant, by the Rev. J. G. Beveridge, Minister of Inveresk, Thomas Rennie Scott, M.B.Edin., to Emily Jane Charlotte Elizabeth, only daughter of the late David James Dickson, Esq.

DEATH.

DEIGHTON.—At Clapham, Yorkshire, on the 21st instant, C. Deighton, M.D., aged 56.

MR. PHILIP N. WAGGETT, son of Dr. John Waggett, of Ladbroke Grove, has been elected to the Science Exhibition, at Charterhouse School; and to the Holford Exhibition, at Christchurch, Oxford.

GLASGOW HOSPITAL AND DISPENSARY FOR THE DISEASES OF THE EAR.—Mr. James C. Robertson has been reappointed, for the further term of six months, as Senior Clinical Assistant in the above hospital; and Mr. George Haddow has been appointed Junior Clinical Assistant for a term of six months, *vice* Mr. W. B. Violette, whose term of office has expired.

PRESENTATION.—On November 16th, the members of the Provident Dispensary attached to Messrs. Sangye Brothers, Cornwall Works, Soho, Birmingham, presented their late medical officer, Cordley Bradford, L.R.C.P.London, with an illuminated address, and a gold watch of the value of £25, as a token of the respect in which he was held by them.

VACCINATION.—Dr. C. G. Ellis, of Attleborough, has received, for the fourth time, a Government grant for successful vaccination in his district; the amount being £12 7s.—Mr. Burroughs has been awarded the Government grant of £4 15s., for successful vaccination in the Nunney district of the Frome Union.—Dr. Mulville Thomson, of Newport, Salop, has been awarded the Government grant of the first class for efficient vaccination.—The Local Government Board has voted Dr. J. S. Walker a grant for successful vaccination in the Bucknall district of Stoke-upon-Trent.

PUBLIC HEALTH.—During last week, being the forty-sixth week of this year, 5,433 births and 3,564 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living. The annual death-rate was 22 in Edinburgh, 19 in Glasgow, and 33 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Birmingham, 16; Hull, 16; Sheffield, 19; Leeds, 19; Wolverhampton, 19; Plymouth, 19; Bradford, 20; Brighton, 20; Portsmouth, 21; London, 21; Sunderland, 21; Newcastle-upon-Tyne, 22; Manchester, 22; Nottingham, 23; Leicester, 23; Salford, 24; Bristol, 24; Oldham, 24; Norwich, 24; and the highest rate, 25, in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 2.6 per 1,000 in the twenty towns, and ranged from 0.7 and 1.0 in Plymouth and Hull, to 4.3 and 6.3 in Norwich and Sunderland. Scarlet fever showed the largest proportional fatality in Sunderland, Oldham, Norwich, and Salford; and whooping-cough in Sunderland. The 19 fatal cases of diphtheria included 12 in London, 2 in Liverpool, and 2 in Portsmouth. The highest death-rates from enteric fever occurred in Portsmouth and Norwich. Small-pox caused 10 more deaths in London, but not one in any of the nineteen large provincial towns. In London, 1,489 deaths were registered, which were 232 below the average, and gave an annual death-rate of 21.2. The 1,489 deaths included 10 from small-pox, 41 from measles, 66 from scarlet fever, 12 from diphtheria, 16 from whooping-cough, 17 from different forms of fever, and 22 from diarrhœa—being altogether 184 zymotic deaths, which were 73 below the average, and were equal to an annual rate of 2.6 per 1,000. The deaths referred to diseases of the respiratory organs, which had steadily increased from 124 to 421 in the ten preceding weeks, declined to 332 last week, and were no fewer than 112 below the average; 195 were attributed to bronchitis, and 97 to pneumonia. Different forms of violence caused 65 deaths; 62 were the result of negligence or accident, including 27 from fractures and contusions, 6 from burns and scalds, 4 from drowning, 2 from poison, and 21 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 40.8°, and 0.8° below the average. The direction of the wind was variable, and the horizontal movement of the air averaged 16.6 miles per hour, which was 4.3 above the average. Rain fell on five days of the week, to the aggregate amount of 1.38 inches. The duration of registered bright sunshine in the week was equal to 13 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 2; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. T. Gilbart Smith, "A Case of Perforation of the Stomach, due to Hydrochloric Acid Poisoning"; Mr. Richard Davy, "The Advantages of Ogston's Operation in the Treatment of Genu Valgum". Mr. Samuel Benton will show a case of Recovery from Severe Knock-Knee, treated by Tenotomy and Instrumental Means.

WEDNESDAY.—Epidemiological Society of London, 8 P.M. Dr. E. Dickson, "The Report of the Turkish Medical Commissioner (Dr. Giovanni Cabiadis) on the Outbreak of Plague in the Province of Astrakhan (1878-79).

THURSDAY.—Harveian Society of London, 8.30 P.M. First Harveian Lecture. [illegible] "On the Principles and Treatment of Chronic Diseases [illegible] to Modern Pathology".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications relating to editorial matters should be addressed to the Editor, 161, Strand, W.C. Letters relating to the business matters of the Journal should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

Authors of communications are requested to make immediate application to the Manager, B.M.A. Office, 161, Strand, W.C.

Gentlemen who write to us are requested to look to the Notices to Correspondents in the following week.

WE ARE UNABLE TO RETURN MANUSCRIPTS NOT USED.

THE MEDICAL PROFESSION AND INTEMPERANCE IN ALCOHOL.

SIR,—As an old lay temperance worker and a total abstainer for upwards of forty years, may I be permitted to say a word on the subject of Mr. Baker's letter? During my career as a total abstainer, it has been my lot to suffer from two rather serious, though brief, periods of sickness. On the first occasion, it was my privilege to be attended by an able local physician, who was also a personal friend. While passing through the most critical period of this illness, no mention was made of ale bottles; but, during convalescence, the duty of taking some amount of alcohol was very kindly urged; with an intimation that, if the advice were not followed, I ran the risk of sacrificing my life, or materially retarding my recovery—if, indeed, I ever should recover without it. Having then disused alcohol for many years; having been greatly impressed by the evils which grow up out of its use; and feeling, also, that my taking it, even medicinally, would diminish my usefulness in temperance work, I absolutely refused to take it. My recovery from that illness was not unusually slow, and, I am thankful to say, complete.

I think we are justified in asking that medical men should adduce some well defined reasons for their practice of so frequently recommending the use of alcoholic beverages—the more so when their prescription of alcohol to reclaimed drunkards, in the shape of brandy, wine, or porter, is productive of such great evil. A long experience convinces me that, in such cases, the craving returns with redoubled force.—I am, sir, yours truly, RICHARD BEAGLEY.

St. Leonard's-on-Sea.

A MEMBER must restate his request, and forward his name. We cannot attend to anonymous communications.

THE ADMINISTRATION OF ANÆSTHETICS.

SIR,—I beg to forward for your notice the report of an inquest on a case of death from chloroform at Devonport, and some correspondence which has resulted therefrom. The object of my letter was to inform the readers of the *Western Morning News* that professional opinion on the question of galvanism in cases of failure, sudden or otherwise, of the heart's action under chloroform was by no means so favourable as its energetic advocacy by Dr. Row would lead them to suppose. Though the subject was only fit for discussion in a medical paper, I thought it better then and there to protest against the views advanced by Dr. Row, as the general public is quite ready to believe statements so forcibly and confidently put before them if they are allowed to pass without notice. Though I am only a junior surgeon to a provincial hospital, Dr. Row knows very well that, while I was resident medical officer to the Royal Albert Hospital, I administered the anæsthetics in all cases for a period of nearly five years; and, therefore, I had some slight claim to an opinion on the subject. In the present state of our knowledge, I must here express my concurrence in the view of Mr. Hutchinson, that chloroform should be restricted to cases of old people and young children, and I would also add midwifery and some prolonged operations about the mouth and face, where it is difficult to use ether.

In conclusion, I dare say the profession would be glad to have an account of half-a-dozen of the cases where recovery is said to have followed the judicious application of galvanism.—Your obedient servant, GEO. THOM, Junior Surgeon,

Devonport, November 8th, 1880. Royal Albert Hospital, Devonport.

PRACTITIONER might wait till the new comer left his card.

HOSPITAL DRAINAGE AND VENTILATION.

SIR,—Where could I see in operation the simplest, cheapest, best, and most approved systems of drainage and ventilation suitable to a moderate sized special hospital?—I am, sir, your faithful servant, T.

*** A very effective simple system of drainage and ventilation has been recently carried out by Mr. Eassie, C.E., of 11, Argyll Street, at the General Lying-in Hospital, York Road, Lambeth; and he would, no doubt, agree to meet our correspondent at the hospital, and explain it to him.

GENERAL PRACTITIONERS AND PREVENTIVE MEDICINE.

SIR,—I have read with much interest the letter, under the above, in the JOURNAL of November 13th, by Mr. Phillips, and concur in his opinion that the time has now come when medical practitioners should be remunerated on a different footing than is at present done. Sanitation is advancing with rapid strides, and high authorities are beginning to foretell the time when many of the diseases to which flesh was long heir will be banished from the land; and when this time does arrive, it is evident that medical aid will not be required. Then what is the poor doctor to do to keep the wolf away from his door? A medical man endeavouring to prevent disease is working in his own light, and yet to do so is one of the greatest aims he has; but it is sad to think that the more he succeeds, the less he will be appreciated by the public—at least, as far as his fees are concerned.

If it be true that "Prevention is better than cure", I think it is evident that medical men should be paid to prevent, even more than they are to cure; and the sooner this is laid plainly before the public, the better it will be both for medical men and the public. The enormous extent to which the public are now educated on health and sanitary subjects, must be almost sufficient to alarm the doctor, who naturally begins to wonder where he is to get his bread. The public ought to be shown that it is preferable to pay to be kept in good health than to pay to be cured, at a time often when the poor patients' funds are already at a low ebb, and the doctor's sympathies are so awakened that often he has to pocket nothing but thanks for all his labour.

I think there is one fault in the club system (although it is an excellent plan on the [illegible] that the [illegible] has to [illegible] with a [illegible] fee, it may be [illegible] a family. To obviate this, may there not be a charge per head, and, it may be, according to age. With this change, I think the club system [illegible] into private practice. No doubt, the change is so radical it would meet with considerable opposition; but were the medical profession to [illegible], that would soon disappear, and though time the public would [illegible] for their benefit. I trust that the medical world may raise such an agitation, in the pages of your and other valuable journals, that ere long the [illegible] to keep away disease, [illegible] with every success that could be prevented. I am, yours truly,

[illegible] PREVENTION BETTER THAN CURE.

A NEW CORRESPONDENT must send his name to this letter if he wishes it published.

PRACTICE OF DISTRICT NURSES.

SIR,—I shall be much obliged if anyone acquainted with the arrangements for a perfect district nurse to the poor at their own homes will let me know the salary given and particulars of the rules for her and for patients [illegible]. It is [illegible] she should receive a definite sum [illegible]; but how [illegible] she is to be thoroughly trained [illegible]. Yours very truly,

[illegible] Nov. 1880. J. LEE ANDREWS.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

STAINING MICROSCOPIC ORGANISMS.

KOCH'S method of staining organisms in fluids, blood, pus, etc., is described in Cohn's *Beiträge zur Biologie der Pflanzen*, and is as follows. The fluid to be examined is spread out in a thin layer on a cover-glass, and then dried. The staining agents used are methyl-violet, fuchsin, or anilin brown. A saturated alcoholic solution of the two former is prepared. A drop or two of this is added to about a drachm of distilled water, so as to give a deep blue or red colour. The dried specimen is now taken, a drop of this fluid is placed on it, and kept in contact with it for about sixty seconds, or longer if the staining is not sufficient. The cover-glass is again dried, and then mounted in Canada balsam. The anilin brown is used as a glycerine solution, and the specimens mounted in glycerine. His method of staining tissues is described in his recent work on traumatic infective diseases. The material to be examined is hardened in alcohol, and the sections are allowed to lie for a suitable length of time (this must be learned by experience) in a pretty strong watery solution of methyl-violet. The sections are then treated with dilute acetic acid, then with alcohol and oil of cloves, and ultimately mounted in Canada balsam. The result ought to be, that only nuclei and any organisms which are present are stained.

GLOVES FOR WET WEATHER.

SIR,—India rubber gloves, just large enough to slip on over ordinary dogskin, are to be recommended. With care, they will last six months; and one can get a good grip of the reins. The price, I think, is 8s. 6d. They can be obtained from Poole, India-rubber manufacturer, Lime Street (opposite Washington), Liverpool.—I am, etc., H. E.

THE INUNCTION OF CASTOR-OIL AS A PURGATIVE.

SIR,—Some time ago, I was attending a case in which free purgation was required; but, owing to excessive irritability of the stomach, all medicines were at once rejected. It being a well known fact that the inunction of cod-liver oil is attended with beneficial results in suitable cases, it occurred to me that a similar administration of castor-oil might be employed with advantage. One ounce was applied under flannel wrung out of hot water; and in a few hours, three copious stools were obtained, with relief to the bad symptoms. Since then, I have frequently resorted to the same practice, which has invariably been followed by the desired result.—I am, sir, yours obediently, J. W. OGLESBY, M.R.C.S.

Bradford, November 15th, 1880.

DERBYSHIRE.—The thirty-second section of the Medical Act (1858) says that "no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, etc., unless he shall have proved upon the trial that he is registered under this Act". Whether a practitioner could recover fees for attendance prior to registration (he being otherwise fully qualified) is a matter for legal decision.

FLACCIDITY OF THE IRIS IN REAL DEATH.

SIR,—I WAS pleased to find that my communication on this subject brought forth a rejoinder from my friend, Dr. Hunt of Wolverhampton, although his observations have not been identical with my own on this point; because, of course, in the interest of science, one wishes to arrive at the strict truth: and this cannot be done without numerous experiments on the part of several unbiassed observers.

I hope, therefore, others who are interested in the subject will, if they have not already done so, give this test a fair trial; and let the result be known through the medium of the BRITISH MEDICAL JOURNAL.

I may say, however, in furtherance of Dr. Hunt's remarks, that I have myself noticed a very slight alteration in the shape of the iris by compression of the globe during life; but this has been incomparably less than what occurs after death, and is produced with far less amount of pressure; and I have sometimes thought that, in consequence of the greater amount of pressure needed to produce any slight alteration in the shape of the pupil during life, part of this alteration, if not all, may be attributed to the change in the refractive surfaces of the structures in front of the iris, owing to the bulging forward of the cornea.—I am, etc.

BOYD B. JOLL, M.B. Lond., St. Ives, Cornwall.

MR. FOLKER (Hanley).—The statement that teetotallers would rather let patients die than break through their teetotalism, is an extraordinary one. We have never heard of such an incident; and we are inclined to doubt whether the statement has any foundation.

AMBULANCE CHAIR.

SIR,—Would some of your readers kindly tell me the best kind of ambulance chair in which to remove sick boys from school to the sanatorium (distance half a mile). It must be so that a boy can lie at full length, and must close up thoroughly (except the necessary ventilation), and be of such a weight that one man can push or draw it.—I am, etc., A. B.

PARTNERSHIP.

SIR,—In reply to "Enquirer", I would advise him to proceed thus. He says that the practice returns £1,200 *per annum*, that is to say, the gross returns amount to that sum. To arrive at the nett profit, he must deduct the expenses incidental to a practice, the drugs, etc., say £150, leaving £1,050 as nett profit. Of this, he might properly take one-fourth, or one-third, to be increased to one-half in four or five years. If he took one-third, his income would be £350; but, if he have to keep a horse, it would be reduced by £70, leaving him £280 to live upon until he took a larger share. He must be careful to make a distinction between returns and profit, because all expenses must be paid before he has a shilling for himself.—I am, etc., SURGEON.

SIR,—For the services "Enquirer" has rendered to his principal, he has been paid, and he has no right now to expect that, in consideration of his past efforts, he should be admitted to a share of the practice without purchase. If "Enquirer" can afford to purchase, he had better migrate to another locality; and if he cannot purchase, he has no right to expect his employer to give him for nothing that which in the open market has its fair value, in return for services for which "Enquirer" has been already paid. An "assistancy with a view to partnership" is practically an exploded idea, and most of the arrangements so made are only with the purpose of obtaining valuable help for a small remuneration, whilst holding out hopes which are seldom, if ever, realised.—Yours faithfully, M. B.

MEMBER B. M. A.—All information regarding the St. John's Ambulance Association may be obtained by application to Captain Perrott, Secretary, St. John's Gate, Clerkenwell.

AN IDIOSYNCRASY.

SIR,—I recently prescribed for a patient, in the out-patient department of a London hospital, a pill containing a quarter of a grain of opium, to be taken at night. The pill contained no other active ingredient. On my next day of attendance at the hospital, the patient's wife presented herself (the man himself being unable to come), and after describing his general condition and symptoms, informed me that the pill ordered on the previous occasion had caused her husband much suffering. I inquired into the matter, and found that he had taken it as directed, and had very soon afterwards been seized with severe pain "in his chest and inside", which, according to the woman's account, lasted for the greater part of the night. Both husband and wife were positive that the pain was caused by the pill, although they were aware beforehand that its administration was intended to have a directly contrary effect. I should not be inclined to attach any weight to their opinion, were it not for some experiences of my own, about which I can have no doubt whatever. More than a year ago, I had occasion to prescribe for myself a small dose of morphia. I forget the precise quantity, but I know that it was moderate. I took it in the form of a draught at bedtime; and I well remember waking up in the course of an hour or so, in considerable suffering. The pain, which was really intense, was referred to the middle of the sternum, and radiated to the spine and shoulders; I was unable to lie quietly in any position; I was literally bathed in perspiration from the severity of the suffering; and was fully convinced, in my own mind, that I had made a serious mistake, and had taken some irritant poison instead of my harmless draught. I soon satisfied myself, however, that what I had drunk was the draught itself, and nothing else; and that the error, if error there were, must be ascribed to the chemist who had compounded it. The pain lasted for about an hour; nausea and vomiting supervened; and after that I fell asleep.

My next experience is the following. Some months ago, I was troubled with an irritating cough, which I was anxious (perhaps foolishly) to cut short as soon as possible. With this object, I took an ounce of a mixture consisting of liquor morphiæ hydrochloratis and water (ten minims to the ounce), intending to repeat the dose in a few hours. In a very short time after drinking my ten drops, I began to experience a grievous aching pain in the chest and shoulders, which rapidly increased in severity, until it precisely resembled that which I had felt on the previous occasion. This time I was up, and with my mind fully awake was able to analyse my sensations as accurately as one in much suffering could be expected to do. The pain was constant, not subject to exacerbations or remissions; it was not felt in the abdomen, but limited to the thorax and shoulders; it was not (at first) accompanied by any sensation of sickness. After the lapse of an hour, vomiting came on, and my distress gradually disappeared. I may add that, on this occasion, it is quite certain that the medicine was the liquor morphiæ, and that the amount taken was ten minims. The time of administration was the evening, about two hours after dinner.

One more experience I have to relate. Within the last few days, I provided myself with some cough-lozenges, containing 1-36th of a grain of morphia in each. I had taken (as I believe, but I am not certain of the number) four of these in the course of an afternoon, when I became aware of the old distressing sensation beneath the sternum, in the back and shoulders. This time, although the pain was bad enough, it did not reach any high degree of intensity, and was not succeeded by vomiting.

I must acknowledge that I have not sufficient courage to make any further experiments on my idiosyncrasy; but the foregoing facts demonstrate clearly enough that, in my case, morphia has very peculiar effects. These are, as far as I am aware, the only three occasions in my life on which I have taken an opiate; on all three occasions, the succeeding symptoms were practically identical; I am not subject to these symptoms, but, on the contrary, have never at any other time experienced anything resembling them; consequently, I think I am justified in concluding that there is no question of *post hoc* or *propter hoc* in the matter, but that the taking of the morphia and the succeeding pain stand to each other in the relation of cause and effect. It is well known that opium and its alkaloids "disagree" with many people; but I have not heard of such immediate and peculiar toxic effects as those which I have described. For this reason, I am anxious to make known my experience, and shall be glad to learn whether similar facts have been observed by others.—Your obedient servant, M.R.C.P.

THE POISONOUS EFFECTS OF ACORNS.

THE *Gardener's Chronicle* states that the crop of acorns that has been produced this year over a considerable portion of the southern counties has not been approached since 1874, in which year it was not equal to that of the present season. Whilst this heavy yield of acorns is of some use as food for pigs, it is the reverse of an advantage where the trees are numerous in pasture and meadow land, for when they begin to fall, cattle soon eat next to nothing else, as may be seen by their being continually under the trees after them. When eaten in such quantities they have a poisonous effect. Six years ago a good many cattle died through eating them, and now the same thing is again happening. The worst consequences arise after high winds, such as occurred the week before last, when the acorns were brought down so as to almost cover the ground. Death is caused by violent inflammation of the small intestines immediately below the third stomach, which, when the animals are opened, present a mass almost approaching putrefaction. Those that recover after being affected, are usually left in a greatly reduced condition, from which they take some time to recover. At first sight it seems strange that deer, which also eat the acorns, confined in the same parks with the cattle thus affected, are not injured by them. But, no doubt, being less under the influence of domestication, their natural instinct remains stronger.

BRACHIAL NEURALGIA.

SIR,—Brachial neuralgia, for a case of which "Inquirer" seeks a remedy, can only be dealt with in full knowledge of the state of the patient; of the exact locality of the pain; and of the time, circumstances, etc., under which the pain diminishes or increases. It often dates its beginning from some exertion: lifting heavy things, driving a lazy horse, archery, gymnastics, packing, using a hatchet, etc; but conditions tending to it existed previously: something that has lowered the strength; some exposure to malaria; some gout in the system; some disorder of nutrition. When the right arm is affected, the liver is often at fault; when the left arm, the heart. The musculo-spiral and radial nerves are very commonly affected; less frequently the axillary plexus, the scapular nerves, and the ulnar. Each of these nerves require to be carefully examined. Should tenderness be detected, one may suspect an inflamed state of the neurilema; in its nature, either simple, as when caused by injury, over-exertion, pressure, etc., or rheumatic or gouty; in its locality, either confined to the neurilema, or spreading to the superjacent areolar tissue, sometimes even causing abscess. Tenderness is often relieved by repeated very hot fomentations, with plain water, with decoction of hop, or of poppy, also

by hop-poultices, etc. Tincture of aconite painted over painful nerves, aconitine, unguentum veratriæ, or other anodyne local applications, will help. A few drops of chloroform in the palm of the hand, held down air-tight over any particularly painful spot, give relief. Whatever is done to the arm should be done with gentleness; even shampooing may injure; all movement aggravates the evil; rest, and support of the arm in a comfortable position, now and then varied, are essential. Neuromatous tumours should be looked for; also neighbouring exostosis, caries, necrosis, periostitis, glandular swelling, chronic abscess, also pressure of tight garments in the axilla. For the musculo-spiral nerve, acupuncturation does good in some states. Faradisation, wrapping in carded wool, lukewarm anodyne lotions under gutta-percha tissue, or spongio-piline, are useful; and endless other local remedies.

Both local and general treatment are, of course, guided by the opinion formed from all possible evidence as to the nature and cause of the pain. It may be mixed up with myalgia, or with rheumatism, or with rheumatic gout, or with true gout; or it may be a pure neuralgia, periodic, and needing quinine (eight grains every four hours); or with simple debility and feeble pulse, removable by iron (citrate or black oxide) and port-wine; or associated with vascular tension, and curable by nitro-glycerine, long known to me as an important and useful remedy. My son finds chloride of ammonium, in thirty-grain doses, every two hours for a short time, very efficacious. I have no doubt that hypophosphites would also do good.

—I am, sir, your obedient servant,
W. E. C. Nourse, F.R.C.S.

Exeter, November 22nd, 1880.

Reported Recovery of Speech.

In the course of a case heard at the Worship Street Police Court, in which Victor Seymour and Alexander Murdan were charged with burglary and robbery, at 16, Summerford Road, Stoke Newington, it was stated that the son of the prosecutrix was threatened with violence by the prisoners, and he was so terrified by them that, though he had been dumb for years, he suddenly recovered the power of speech, and had since retained it. The prisoners were remanded.

Erratum.—In the Journal of November 13th, p 797, col. 2, line 5c, for "House-Surgeon", read "Honorary Surgeon".

Fees for Certificates.

Sir,—In reply to the communication of "Fidelis" in the Journal for November 20th, as to what is the "custom" about fees for certificates of death to insurance offices, I beg to say that, for every such certificate, I charge a guinea. For years past, I have done so invariably; and, within the last ten days, I have received two such fees from the solicitors who applied for the certificates. I enclose my card; and remain, yours, etc.,
M.D.

L[t] M. D. Plain speaking on sexual subjects may be desirable; but we are disposed to regard the subject suggested as one bordering on obscenity, and unfit for discussion.

Treatment of Ringworm.

Sir,—Allow me to inform "Fleet-Surgeon" that a well known Bombay firm of chemists, in 1871 or prior to that date, presented chrysophanic acid to the notice of the medical profession as the active principle of goa powder, and proposed it as a substitute. Doubtless, since that time, many Bombay Presidency practitioners and others have used it for the cure of tropical ringworm. I have invariably done so when I could get it, and have always looked upon its employment as a dermal parasiticide as being its original and most legitimate mode of use.

A Malay remedy is probably as effective as chrysophanic acid. I refer to the leaves of the "Cassia Alata" —a shrub which grows all over Penang, Malacca, and Singapore, and in some districts of India. It is mentioned in Waring's *Bazaar Remedies*. The leaves may be pounded in an iron mortar, with the addition of a few drops of spirits of wine or acetic acid, and the pulpy juice rubbed in two or three times daily. The native sometimes soaks the unbruised leaf in rum, kafala, or shamshoo, and applies. The curative effect of the former mode of application is almost immediate.

In default of being able to lay hold of these remedies, a solution of bichloride of mercury in water, from two to six grains per ounce (the weaker in the neighbourhood of the scrotum) will be much more rapidly curative than iodine caustic or iodide of sulphur. Boracic acid, or carbolic acid, in glycerine and water, are much more beneficial than these latter substances.

The disease, named on the West Coast of India "Malabar itch"; in other wet districts of India, "Dhobie washerman's itch"; in Burmah, "Burmese ringworm"; in Penang, Malacca, and Singapore, "Straits ringworm"; and in Hong Kong, "Chinese ringworm"; is one and the same, viz., tropical ringworm; and it would be a convenience if dermatologists would decide whether the scientific name of this disease is to be "tinea circinata" or "tinea imbricata".—Yours faithfully,

Forbes Dick, M.D., Surgeon Major A.M.D.

Sir,—Your correspondent advocates the treatment of ringworm by chrysophanic acid. No doubt it is a valuable remedy for tropical ringworm (a more luxurious plant than that generally seen in England), and I have used it myself in several such cases from Burmah, etc. I have also used it for the severer forms of ringworm, kerion, and especially for favus, which latter disease requires a strong irritant to overcome it. But I think in the ordinary cases of ringworm in England, it is too vesicant an application, and for children especially.—I am, sir, yours truly,

17, Sackville Street, W., November 17th, 1880.
James Startin.

A Member. Dr. H. M. Kingsley on *Oral Deformities*. Published by H. K. Lewis, London; price 16s.

Treatment of Sea-Sickness.

Sir,—A great deal has been written on the treatment of the above troublesome complaint; but, so far as I can see, no writer seems to have hit the real point. Dr. Whittle has recommended the recumbent posture; here, I think, he is quite right, but he stops short of naming the proper position, to which I will refer shortly. In my opinion, the stomach is simply obliged to reject its contents from an irritated pneumogastric nerve. The cause of the whole malady seems to me to be a temporary withdrawal of blood from the medulla oblongata. Keep the circulation through the brain properly maintained, and no fainting or subsequent sickness will occur. When a student, I had occasion to cross from Newhaven to Dieppe. The sea was very rough; and, feeling queer, I went below into the saloon and lay down, but on first putting my head on the cushion, I let it hang down slightly below the level of the body, in that position I was at once relieved, and remained so to the end of the voyage. The moment I raised my head above the level of the under shoulder, all the bad sensations returned. Last summer, I crossed with my wife from Dover to Calais in one of the cockney boats. There was a good sea on, but we were not sick. I, and all of us at one time, my wife beginning to feel very faint and sick, I made her lie down on the sofa on her side, with the head resting on the seat, and, of course, at an angle to the axis of the body. She at once felt perfectly well; and I could not help contrasting the natural bright colour of her face with the poor pale spectres that were sitting and lying about me. A gentleman passing by thought my wife seemed to be lying in a very uncomfortable position, and suggested my putting my small bag as a pillow for her head. Here was the very essence of mistake. If a lady lie down on deck, she is sure almost to be on her back, or on her side, with her head nicely raised against a trunk or some article, and looking a very corpse. It would present rather a curious appearance; but I would suggest that a certain number of the seats, both on deck and below, should be inclined planes. By this means, a small pillow could be arranged for the head at the bottom of the incline, so obviating the somewhat irksome position of resting the head on the seat itself. If any member is likely to be crossing the Channel shortly, and will follow the above directions, and kindly communicate the results, I shall be extremely obliged to him.—Your obedient servant,

Frederick Long, L.R.C.P.Lond.

Wells-next-the-Sea, November 16th, 1880.

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BOOKS, etc., RECEIVED.

Surgical Enquiries. By Furneaux Jordan, F.R.C.S. Second edition. London: J. and A. Churchill. 1880.

Clinical Lectures and Cases, with Commentaries. By Henry Thompson, M.D., M.A., F.R.C.P. London: J. and A. Churchill. 1880.

Historical Sketches of the Progress of Pharmacy. By Jacob Bell. London: Pharmaceutical Society. 1880.

Ringworm: its Diagnosis and Treatment. By Alder Smith, M.B., F.R.C.S. London: H. K. Lewis. 1880.

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REMARKS

ON

ANEURISM OF COMMON FEMORAL ARTERY, EXTENDING INTO THE ILIAC FOSSA

SIMULTANEOUS LIGATURE OF THE EXTERNAL ILIAC, SUPERFICIAL FEMORAL, AND PROFUNDA ARTERIES: CURE.

By GEORGE BUCHANAN,

Professor of Clinical Surgery in the University of Glasgow.

CASES of inguinal aneurism, in which ligature of the main trunk above, and the two subdivisions below, is necessary, or at least has been followed by cure, are rare. I was induced to adopt the practice, in the patient here referred to, in consequence of the ultimate result of a case I had a year ago, in which ligature of the external iliac was accomplished with perfect success, so far as the operation was concerned; cicatrisation took place in a week; but pulsation returned in the sac, which burst into the thigh, the blood infiltrating all the tissues; and the issue was instantaneous exhaustion, and death in forty-eight hours after the rupture. At that time I determined, if a similar case should come before me, to ligature below as well as above the aneurism—instead of waiting till return of pulsation in the sac should show this to be necessary, then, probably, being too late.

William McV., aged 48, a carpet-weaver, had used his right leg to drive a heavy treadle, for ten hours a day, during more than twenty years. In March 1880, he fell and strained his right knee. This confined him to bed; and, in about three weeks, he discovered a small lump in the right groin. This continued to grow till the middle of May, when he was admitted to Paisley Infirmary. He was kept at perfect rest, had his diet regulated, and had iodide of potassium administered. When he went to Paisley Infirmary, there was a soft pulsating tumour, occupying Scarpa's space, and extending along and beneath Poupart's ligament almost its whole length. Subsequently to his admission, a pulsating swelling appeared above Poupart's ligament, occupying the iliac fossa. From the middle of May till the beginning of July, both these swellings increased in size; but the pulsation continued stationary, and not augmented. I saw him in Paisley, with Dr. Donald, who requested me to take him into the Glasgow Western Infirmary, where he was admitted on July 13th, 1880.

On admission, his state was described as follows. He was a spare man, of feeble appearance, and this he attributed to want of appetite and restricted diet, as well as to want of rest from pain in the limb. Scarpa's triangle was occupied by an elastic swelling, ovoid, with a broad fusiform, firmer projection, extending below Poupart's ligament to near the spine of the ilium. Above Poupart's ligament, there was a large ovoid elastic swelling, occupying the anterior half of the iliac fossa, and extending as far towards the middle line, as to completely overlap the iliac artery. All these different prominent parts of the swelling pulsated synchronously with the arteries in the limb—the pulsation being eccentric, and in all parts. A thrill was communicated to the finger-point, and a *bruit* was heard by the stethoscope at all points of the tumour. The parts above and below Poupart's ligament, which extended externally, are firmer than that over the site of the artery; which gave the impression that they are partially occupied by clot, or were surrounded by inflammatory effusion, which was not unlikely to be present after such long-continued pressure and irritation, caused by the presence of the aneurism.

The operation was performed on July 16th. I made an incision in the integument over the ovoid protrusion in Scarpa's space, and extended it downwards to beyond the apex of the triangle. With a little careful dissection, in the usual way, I exposed the trunk of the superficial femoral artery, an inch below where it left the aneurismal sac. To this I applied a catgut ligature, and effectually checked the flow of blood backwards into the sac; but, of course, without any influence on its size or motion. I next extended the incision in the integument upwards, to an inch above Poupart's ligament, and carefully divided the deeper structures, on a director, with a probe-pointed knife. I now found that the aneurismal sac, which had forced its way up underneath Poupart's ligament, was resting on the trunk of the external iliac artery; but, by having the bulging sac-wall held aside by a broad retractor, I got a view of the vessel, and applied a catgut ligature to it. Pulsation was now completely arrested in the aneurism and its prolongations. But, remembering the result of my last case, and reflecting that the profunda was between the two ligatures already applied, I determined to tie it also. But the whole of Scarpa's space was plugged up by the bulk of the aneurism, so that there was some difficulty in reaching the profunda. I resolved to lay open the sac, turn out the clots, search for the opening of the vessel in the bottom of the sac, pass a large bougie into the vessel, and use that as a guide to enable me to reach it. When I had split open the pouch, and turned out the soft clots mixed with fluid blood, I found at the back some which were tougher than the former, and which would need a good deal of pulling to extract. They were so placed that they interfered with my getting my finger-point into the orifice for which I was searching. But I then learned that the inner wall of the sac was much thicker and stronger than the outer, which latter had at one part given way, so as to make the aneurism a diffused one—the diffused blood having formed the ovoid external projections described. The nearly emptied sac could now be pulled steadily by its strong inner wall, so as to leave the internal half of Scarpa's triangle free. Getting an assistant to pull the sac and artery well forward and outward, by a little manipulation with the handle of a knife I succeeded in exposing the trunk of the profunda, behind the sac, and I applied a catgut ligature, about half an inch from the aneurism. During this latter manipulation reflux of blood from the profunda into the aneurism, was prevented by a plug of carbolised lint pressed into the bottom of the sac. The only bleeding points which required ligature were the divided ends of the circumflex ilii, at Poupart's ligament, which I tied at the time of cutting it, in the dissection to expose the external iliac.

The whole of the proceedings were conducted under carbolised spray, and the wound was dressed with antiseptic precautions.

It is unnecessary to give detailed reports of the after-treatment. The circulation was established in the limb very rapidly, so that artificial heat was discontinued in a week. The wound, which remained antiseptic throughout, was a long time in healing, owing to the disintegration and discharge of a quantity of the clot, which had been disturbed, but not entirely removed. Probably the delay in cicatrisation partly depended on an obstinate attack of diarrhœa; but, ultimately, the diarrhœa was overcome, and the cure was complete.

ANEURISM OF THE AORTA AND INNOMINATE ARTERY:

SUCCESSFUL SIMULTANEOUS LIGATURE OF RIGHT SUBCLAVIAN AND RIGHT COMMON CAROTID ARTERIES.*

By J. MANSERGH PALMER, F.R.C.S.I.,

Surgeon to the Armagh County Infirmary.

JANE M'KELVIE, a widow, aged 50 (one child living), was sent to me by my friend Dr. Gray, supposed to be suffering from aneurism of the arteria innominata. She was admitted to the Armagh Infirmary on February 10th of the present year. The following is a short history of her case. On November 2nd, 1879, she was brought to hospital suffering from violent vomiting, brought on by swallowing an irritant poison, supposed to be strong ammonia, in a liniment which she had taken by mistake. I wished her to remain in hospital; but she would not do so, as she was a woman of violent temper, and would not take any advice. She had been a patient in hospital for a week in the previous September, labouring under a slight bronchial affection; and I was obliged to discharge her for insubordination. She had always had good health. A short time after the accident described above, she first noticed a slight swelling, which gradually increased in size until it attained its present dimension, which was that of a small melon or cricket-ball. It was situated at and below the right sterno-clavicular articulation, with well-marked eccentric pulsation. She did not think anything of it at first; but latterly it had become much larger, with, as she very well described, a "beating" in it that frightened her. On placing the hand over it, it seemed to have pushed through the upper bone of the sternum, and was apparently covered only with skin. She complained of having suffered for some months from great difficulty in breathing and in swallowing food, particularly solid. She had a constant short cough, from which she was never free day or night. There was no history of syphilis.

When admitted, she presented the following appearance. She was a pale, delicate, worn-looking woman, with an anxious expression and slightly cyanotic condition of face. At and a little below the right sterno-clavicular articulation, a pulsating tumour about the size of a cricket-ball, apparently covered only with skin, was seen. On auscultation, a distinct *bruit* was audible over the whole tumour, and extend-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

ing along the course of the right subclavian and right common carotid arteries; there was no *bruit* on the left side. She had no indication of lung-disease, except slight *râles* over the upper part of the right lung. On comparing the radial pulses, the right was weaker than the left, and more compressible. Pulse 86. Pulsation in the right carotid artery was much weaker than the left. She complained constantly of great pain at the back of the right ear, as well as of cough, difficulty of breathing, and great difficulty in swallowing; in fact, she could not eat any solid food. She was ordered to be kept quiet in bed, and to take a tablespoonful of the following mixture three times a day.

℞ Iodidi potassii ʒiij; spiritus ammoniæ aromat. ʒij; spiritus chloroformi ʒi; aquam ad ʒvi.

The diet was beef-tea and milk. On the following day, she was seen and examined by Dr. John Moore of Belfast.

On the night of February 12th, at 11.45, two days after admission, I was summoned by the night-nurse to see her, as she had been taken suddenly ill, and was unable to speak. On arriving at her bedside, I found her suffering from great difficulty of breathing, stridulous respiration, with lividity of the face and neck, a turgid state of the vessels, coldness of the extremities; and apparently she was moribund. I told her the only chance was an operation, and that it might be fatal. However, she did not seem to notice or care what I did, but made a sign to me to do what I wished. I had her removed to the operation-room; and, after a hurried consultation with Drs. Frazer and Gray, she was placed upon the table, in the horizontal position, with her shoulders raised on a pillow, the face turned to the left side, and the head thrown back, while the arm was held down as much as possible. I commenced, after chloroform was administered by Dr. Fraser, by making a linear incision along the anterior border of the sterno-mastoid, about two inches above the clavicle, and tied the carotid artery with a hemp ligature. After this, the tumour did not seem to decrease, and pulsation continued. I next made an incision, about four inches in length, along the upper border of the middle of the clavicle; and, in cutting down, I divided the branch of communication between the anterior and external jugular veins, but it did not give rise to much trouble. After dividing the platysma and deep cervical fascia (the external jugular being held aside by Dr. Gray), I exposed the anterior scalenus muscle, after dividing some fibres of the clavicular attachments of the sterno-mastoid. I then felt for the tubercle on the first rib, but even then I had great difficulty in exposing the artery, as the clavicle was pushed forwards and upwards, the vessel being very deep; but, after careful dissection, using sometimes the finger and the handle of the scalpel, I exposed the artery, and then passed the aneurism-needle around the vessel as it emerged from between the scaleni muscles, and tied it with a hempen thread also. Immediately on the artery being secured, the tumour collapsed in a marked degree, my attention being drawn to it by those present; but pulsation still continued. After the edges of the wounds had been brought together by two points of carbolised catgut suture, and dressed by carbolic acid and glycerine, the chloroform was discontinued. The patient, on recovering from the chloroform, expressed herself as greatly relieved, and able to talk to us. She was removed to bed, and hot jars kept to her arm, which was elevated; afterwards, it was rolled up in flannel and wadding. A hypodermic injection of half a grain of morphia, with one-sixtieth of a grain of salicylate of atropia, was then given.

February 13th, 8.15 A.M. She slept about two hours during last night. She complained of the right arm being cold. There was no pulse at the right wrist; pulse at left wrist 98.

February 14th. She was going on well; the arm was not so cold. Pulse 100.

February 15th. She had a good night; coughed only a few times. 8.30 A.M. She had no pain anywhere; took a little light nourishment. Pulse 102.

February 16th. She said she was much better this morning. At 8.30 A.M., the arm was something warmer, but she complained of want of power. The wounds were dressed with carbolic acid ointment; there was a slight discharge of healthier pus from carotid wound. Pulse 108.

February 17th. Pulse 102. The wounds were dressed; both were discharging healthy pus.

February 18th. She took nourishment well.

February 27th. No change of any consequence has occurred since the 18th. She was seen and very carefully examined by Mr. Young, Surgeon to the Monaghan County Infirmary.

February 29th. The carotid ligature came away. The wounds were dressed.

March 2nd. The subclavian ligature came away to-day.

March 28th. The patient continued to take food well, and commenced to walk about the ward till about 7 o'clock P.M. on this day, when about two ounces of arterial hæmorrhage took place from the carotid wound, which were checked before I saw her, by pressure.

April 2nd. The subclavian wound was quite healed.

April 14th. The carotid wound was almost closed.

April 27th. She was discharged at her own request, although I did all I could to persuade her not to go out, telling her what the consequences would be, if she made any exertion. Both wounds were quite healed. She said she was anxious to go to her work, as she had a brother to support. There was still some slight pulsation in the tumour, which was greatly decreased in size; the wall appeared thick and strong. About a week after her discharge, she was seen and examined by Surgeon-Major Weir, A.M.D., who was greatly pleased with the result of the operation.

June 5th. She was seen by Dr. Gray, at her residence, on this date, when he found her suffering from a feverish cold—caught, as she informed him, by exposing herself, when heated with the exertion of having washed her brother's clothes, in a draught of cold air. He advised her immediate return to the infirmary, which, however, she deferred to the 8th. On attending there, on that day, she was at once readmitted. She certainly seemed to have caught cold, as indicated by coryza, cough, and great difficulty of breathing.

June 8th. She was suffering from cough and great difficulty of breathing. There was not much change in the tumour since the discharge. She was ordered rest, with a mixture containing morphia.

June 12th. The cough was rather worse; she refused to take medicine.

June 14th, 9.40 A.M. There was a sudden gush of dark-coloured blood from an old cicatrix in the neck, over the carotid vessel; great prostration; slight hæmoptysis.

June 15th. There was slight hæmorrhage from the old cicatrix, and sharp hæmoptysis, for which she was ordered gallic acid and ergot; but would not take the medicine. The blood in this instance also was dark.

June 16th. She had profuse hæmoptysis, similar in character to that on the 14th. She had had a convulsion and died, having lived one hundred and twenty-five days after the operation. No pulse was perceptible at the right wrist from the time of the operation.

I made a *post mortem* examination, assisted by Drs. Frazer and Gray. The lungs, heart, great vessels of the neck, both clavicles, and the sternum were removed. On raising the sternum, a solid tumour about

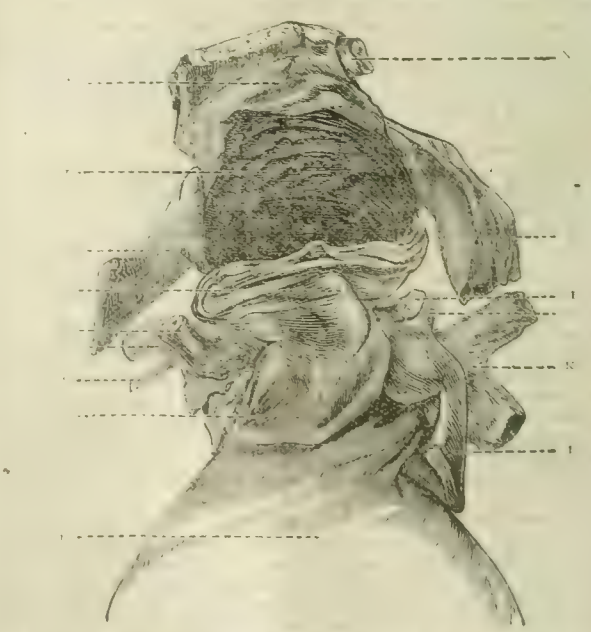


Fig. 1.—A represents the Sternum raised up, showing the under surface, which formed the anterior boundary of the Aneurism; B, the Cartilages; C, the Clavicle; D, the Anterior Wall of the transverse portion of the Arch of Aorta drawn down; E, the Innominate Artery; F, the Common Carotid Artery, drawn down; G, the Right Subclavian Artery; H, the Innominata, Vena Innominata, and Trachea; I, Base of Heart; J, Left Carotid Artery; K, Left Subclavian Artery; L, Trachea; M, Descending Portion of Aorta; N, Ascending Portion of Arch of Aorta; O, Cartilage of Third Rib.

the size of a large orange was found fixed in it, which could not be separated from it by dissection; in short, the sternum formed the anterior wall of the tumour. The upper bone of the sternum was eroded

from the pressure of the tumour, and had scarcely half its normal thickness. The necropsy had to be performed hastily and under difficulties, as the friends were very hostile to anything of the kind. The specimen was sent to the museum of the Royal College of Surgeons in Ireland; and on Thursday, August 10th, assisted by Mr. F. Alcock Nixon, one of the surgeons to Mercer's Hospital, I made a further examination of it. I found that the aneurism, for which I had ligatured the carotid and subclavian vessels, involved not only the anterior innominata, but also the arch of the aorta itself; and that its sac was filled with firm hard laminæ of fibrin, showing the great repair which



Fig. 3.—Tumour formed by clot of fibrin coagula in layers.

had taken place. At the posterior and left side of the arteria innominata was an oval opening, with its long measurement from above downwards filled with fibrin, communicating with the left vena innominata, which latter vessel communicated with the trachea at one point, and at another opened into the right lung; both these openings also being filled with firm coagula. This accounts for the dark-coloured hæmorrhage reported on the 14th, 15th, and 16th of June.

ANEURYSM OF THE ARCH OF THE AORTA: LIGATURE OF THE CAROTID AND SUBCLAVIAN ARTERIES.

By HENRY A. LEDIARD, F.R.C.S., M.D.,
Surgeon to the Cumberland Infirmary; late Medical Superintendent to the Central London Sick Asylum, Cleveland Street.

G. A., AGED 42, was admitted into the Cleveland Street Infirmary on February 2nd, 1880, complaining of dyspnœa. He stated that he was in the Horse Artillery for twelve years, and was discharged from the army two years ago, for shortness of breath and inability to carry heavy weights. He had never had syphilis, but had been a free beer-drinker; he knew no cause for the breakdown of his health, having always been well up to two years ago. Since leaving the service, he had been employed as a carriage-cleaner. His father died of gout at sixty-four years, and his mother was old, but had no particular complaint, as far as he knew. There were four children in the family, and all were living. The patient had never had rheumatism, and never met with any injury.

On examination, the patient was a stoutly built, strong-looking man, of healthy aspect and calm expression; and, but for some undue pulsation of the carotids, nothing at first sight seemed wrong. The chest was well-formed, and expanded freely; and, but for some bronchitis, the lungs were very healthy. Over the first intercostal space on the right side, and close to the manubrium sterni, was a prominence, with some heaving pulsation both seen and felt over it. This area, of the size of the top of a small teacup, was, moreover, somewhat dull on percussion. Over this region, a double murmur (of soft character) was heard. The heart was hypertrophied, the apex-beat being much external to the nipple, and in one space lower than normal; the double murmur was heard generally over the heart, but with the greatest distinctness up and down the sternum. There were fulness of the veins on the right side of the neck, and pain in the right shoulder and up the right side of the neck. There was a husky cough, and some frothy sputa in small quantity. The urine contained one-sixth albumen, but was freely and plentifully passed. The patient was kept strictly in bed, and lay at first upon his back; but, as his symptoms became worse, he gradually turned over to the left side, and at night suffered from "horrible dreams".

About a month after admission, he was much worse; his cough altered in character, from huskiness to a tracheal ring, but the voice was unaltered; he suffered from increased pain in the upper part of the chest; and the aneurysm, showing a slight tendency only to increase forwards, appeared to be growing backwards in the direction of the trachea. There was at no time any difference between the radial pulses, but the pupils were always remarkably unequal, the right being apparently contracted. There was no dysphagia.

During the first week in March, he began to suffer from some signs of laryngeal pressure, coming on at intervals, with a degree of spasm, which varied in intensity, until it began to give him anxiety, as shown by his face, which had a very distressed look. Laryngoscopic examination failed to find evidence of the direct pressure upon the wall of the trachea, for the epiglottis was folded in a leaf-like manner over the larynx. The cough became more urgent, and caused a shooting pain up the right side of the neck.

Up to this time, absolute rest, a nutritious diet, and medicines to relieve symptoms only, constituted the treatment employed; and it now became the question if this aneurysm, which apparently was becoming larger each day, could be checked by any surgical treatment. I think I never watched so rapid a growth before, and so rapid a development of grave symptoms. The percussion-note over the heaving area was not absolutely dull at any time, and there was clearly no sign of extension forwards, except that the right sterno-clavicular articulation began to take the centre of the pulsating area. There was not at this time any very marked pulsation in the episternal notch; and, as far as could be determined, the aneurysm sprang from the arch of the aorta at the origin of the innominate trunk; and, this being the case, I turned over in my mind the prospect which ligature of the carotid and subclavian arteries on the right side would hold out. I consulted with my friend Mr. R. W. Lyell, who agreed with me that, in spite of the incompetence of the aortic valves which existed, it would be well to try the effect of such an operation, seeing that the patient's condition was growing more alarming each day, and rupture of the aneurysm into the trachea threatening. Accordingly, I explained the condition of things to the patient, who readily consented to anything thought likely to relieve him.

On the morning of Good Friday, March 26th, I wrote to Mr. Barwell for a piece of his flat ligature, which he kindly sent, expressing, at the same time, his desire to be present at the proposed operation. Accordingly, at 2 P.M., the patient was chloroformed by my former colleague Mr. Hopkins, and, with the kind assistance of Messrs. Lyell, Morris, and Barwell, I tied the carotid artery above the omo-hyoid on the right side, and then, through a single incision along the clavicle, I ligatured the right subclavian in its third part. The operations were completed within an hour, and the flat ligature was used according to Mr. Barwell's directions, the knot being so tightened as to simply do little more than check the current of blood in the vessels, no attempt being made to divide the arterial coats. The ends were cut short. There was no bleeding of any moment, and no difficulty was met with. The carotid incision was stitched up, but a small drainage-tube was put in the subclavian wound (the drainage-tube used was of the ordinary kind, it being decided not to use the decalcified bone-tubing). The dressing was antiseptic. In the evening, the patient complained of headache, and, during the night, of pain in the heart.

March 27th. His bowels had been moved once. There was sickness, pain in the heart, and palpitation. There was less impulse over the aneurysm; no return of pulsation in the radial or temporal arteries. Pulse 120. Drop-doses of solution of atropin ($=\frac{1}{120}$ gr.) were given frequently. The patient was easiest in the semi-propped up posture. Ophthalmoscopic examination at night showed the retinal arteries thready on both sides.

On the 28th and 29th, his condition was modified by the physiological action of the atropin, which was stopped as soon as the pupils were a little dilated. He was somewhat excitable and restless. The palpitation left him entirely, but he had a wild look, and required constant watching. (I regret to say that the notes of these two days have been mislaid.)

March 30th. The pupils were now nearer their natural size. There was less palpitation, but there was some troublesome bronchitis and frothy sputa. He sweated profusely, and had done so all along. The tongue was clean and moist. He took a fair quantity of milk, but there was no thirst. The last two nights had been passed without sleep. (Thirty grains of bromide of potassium were given every four hours.)

March 31st. Mr. Barwell and Dr. Pearson Irvine saw the patient to-day. His condition was not regarded as satisfactory; there was certainly some tendency to pneumonia about the right base. I now for the first time gave him brandy freely, and I was very gratified with

the result, for, although his pulse was very good, still his respiration was not so; and, looking to the fact of his having been a drinker, I was the more inclined to try the effect of alcohol. He began to improve directly. The temperature, which had risen to 102°, sank to 99° in fourteen hours, and never again rose to 100°, except on the morning of April 1st.

April 2nd. All stitches were now out, and the carotid wound had healed, whereas the subclavian one was inclined to suppurate. The cough was abating, and there were much less sputa. The skin over the sternum was shrunken somewhat, and the inclination to redness was less. The general condition was satisfactory, and mental excitement gone. He slept well last night, but he was sweating profusely, and this profuse diaphoresis had, I think, relieved the circulation.

April 3rd. He was doing well. He passed a good night, but sweated profusely. There was now some pulsation in the right neck behind the subclavian artery. The pupils were to-day as they were before the atropin was given. He had a fair appetite. The brandy was reduced.

April 4th. There was now no purulent sputa, and that which came up consisted of a little froth and mucus. He had less pain in the chest, and there was much less pulsation over the sternum. The cardiac impulse was less; pulse 112. The night-sweats continued.

April 5th. Constipation gave trouble. The amount of milk was lessened, and an aperient ordered. There was, perhaps, less dulness over the aneurysm. The subclavian wound was discharging less.

April 6th. The bowels were relieved. He passed a good night; had much less cough, and there was no huskiness with it. The skin was cool; the pulse quiet.

April 7th. The pupils were of almost equal size.

April 8th. There was some thickening felt in the neck, at the seat of the carotid ligature.

April 9th. Pulsation was easily felt in the right brachial artery. The sputa were diminishing.

April 10th. He had slight giddiness.

April 16th. The subclavian wound was superficial (seen after four days' absence from home). There was less cough. He slept sometimes on the back, and sometimes on the left side. The right radial artery gained strength daily.

April 18th. There was occasional irregularity in the heart's action. The pulsation over the aneurysm had a more consolidated feel. He was eating meat-diet.

April 23rd. There was some prominence to note to-day over the sternal end of the right clavicle, a heaving pulsation, and a double *bruit*. He had no pain, but a sensation of tightness. There were no symptoms of renewed pressure upon the trachea, but there was certainly increased pulsation beneath the origin of the sternal and clavicular fibres of the sterno-mastoid on the right side. He was ordered ten grains of iodide of potassium thrice daily.

April 24th. The swelling over the inner end of the right collar-bone fluctuated, and appeared to be effusion into the joint. There was now only a trace of albumen in the urine.

April 26th. The swelling over the inner end of the collar-bone was going down.

I now lost sight of my patient until May 24th, when I was much pleased to find him looking healthy and well in all respects. He was up, and had made a large patchwork quilt. The subclavian wound had scabbed over, and there was a depressed scar. There was no dyspnœa, cough, or pain. The aneurysm had not increased in any way, and was apparently much consolidated and shrunken. The tenderness to pressure [illegible] was in abeyance. The radial pulses were almost [illegible] strength, and the weakness in the right arm gone. The patient was much pleased with his condition, and was resting less than was thought desirable. The aortic valves were in the same condition, and the heart acting well, with no increased hypertrophy. There was no sign of aneurysm elsewhere.

[illegible] observation from the end of April; [illegible] on May 24th, I have not seen him again; but my former colleague Mr. John Hopkins, the present medical superintendent, writes to me thus.

"May 25th. Attack of dyspnœa, lasting two hours, relieved by chloroform and ether inhalation.

"May 29th. An attack of dyspnœa, one hour fifty minutes, relieved [illegible] of palpitation, some dyspnœa, and a rise [illegible]

"[illegible] up for four months, enjoying excellent [illegible] daily to the recreation-ground without any difficulty. During this time, he has had only slight attacks of palpitation. For the past week, he has been suffering from pains of shooting and stabbing character between the blade-bones. The heaving of the upper thoracic walls, which had become almost imperceptible, is now marked. Pulsation is strong in the first intercostal space of the right side. The sterno-clavicular articulation of the right side contains a little fluid again. He had a short attack of dyspnœa of a slight character a few nights ago; otherwise, is in good health."

This, then, is the condition of the patient at the present time, *i.e.*, nearly seven months after operation; and the testimony of a perfectly independent observer, to whom I am much indebted, and who will, I have no doubt, enable me to publish any sequel to the case that there may be.

I have little doubt in my own mind that life has been prolonged by the operation in this instance, the growth of the aneurysm checked, and the man's existence rendered far more tolerable. I do not think that very much was to be expected, seeing that there was disease of the aortic valves, a condition which Mr. Barwell considers unfavourable in treating thoracic aneurysm by ligature; and, therefore, I think the result all the more satisfactory. For the first few days after operation, there can be no question that the patient's life was in great jeopardy; so that it behoves the surgeon to select his case well, and to prepare his patient's mind for the serious nature of such an operation.

As to the flat ligature (as far as my experience in this case only goes), I think it will be found very useful, and I shall certainly use this material on the next occasion when I require to tie an artery in its continuity. Those surgeons who hold that the division of the internal coats of an artery is a necessary part of the deligation of a vessel, will be loth to try this method introduced by Mr. Barwell, seeing that, in using the flat ligature, it is only essential to tighten the knot, so as to check the circulation, or a little more.

It may be asked, And what becomes of the ligature? My answer to this would be simply, that it is never seen again, but that it unquestionably permanently constricts the vessel, as if it had been cut across with a knife.

I am aware that there is much that is unsatisfactory in the treatment of thoracic aneurysm; some put their trust in medicines, such as iodide of potassium; others are in favour of galvano-puncture. I do not at present advocate the indiscriminate use of the ligature. In recording this case, which I think is an encouraging one, I do so with a view of plainly stating what I have done, and the results that followed. The facts may be interpreted differently; but, were my patient to die to-morrow, I should hold that we had given him six months longer to live than if he had been let alone on March 26th, when the operation was performed.

Lastly, those interested in this subject will find much that is interesting and instructive in the little work *On Aneurism*, recently published by Mr. Barwell.

[I have no doubt that my friend Mr. Hopkins would enable any physician or surgeon in London to see the patient at the Infirmary in Cleveland Street, if desired.]

ANEURISM AT ROOT OF NECK: LIGATURE OF RIGHT CAROTID AND SUBCLAVIAN ARTERIES.

By KILBURNE KING, F.R.C.S.,

[illegible] Hull General Infirmary.

W. H., a labourer, aged 40, was admitted into the Hull General Infirmary on July 24th, 1880. The patient was born in Sheerness, and had worked all his life as a labourer on the river-side, lifting heavy weights, and doing other hard labour. For the last eleven years, he had resided in Hull, following similar employment. He had had [illegible] gonorrhœa, but no syphilis. His wife had had [illegible] one miscarriage.) The patient had had no previous illness since childhood, and never met with any accident. About eight months previous to admission, the [illegible] right [illegible] right side of the neck, with numbness of the arm and forearm of the same side. [illegible] irritable cough, [illegible] dyspnœa, he [illegible] Hull Dispensary, but without obtaining any relief. The symptoms increased; and he [illegible] to walk or to lie down in bed. On stooping down, he [illegible] The veins of the right side of the chest also enlarged very considerably.

On admission [illegible] the patient was fairly well nourished, but was much [illegible] the veins of the right side of the chest and neck were greatly [illegible] On the slightest exertion, he had dyspnœa. The cardiac apex-beat was felt two inches below and one to

the inner side of the nipple. The suprasternal notch was obliterated; and, on palpation, a strong pulsation was felt in it. The pulse in the left carotid artery was apparently somewhat more forcible than in the right. A further pulsation was felt in the right supraclavicular fossa. The radial pulses were apparently equal. Over the inner end of the right clavicle there was considerable tenderness on pressure. A rasping systolic *bruit* was heard in the right supraclavicular fossa; a very faint *bruit* being heard in the corresponding left.

The operation was performed on July 28th, antiseptically. The carotid artery was tied first, and then the subclavian. Both vessels were tied with carbolised silk. In tying the carotid, some delay took place, owing to the great venous distension, one of the thyroid veins, especially, bleeding quite fiercely. At one time during the operation (which was done under ether), the patient became extremely blue; but this disappeared, to a great extent, on raising the head. No very immediate effect followed the ligature, beyond a slight diminution in the pulsation above the sternum. The operation lasted about one hour, including the administration of ether. On the patient regaining consciousness, he stated that the pain in his right arm had quite disappeared. On the evening of the operation, the temperature ran up to 101°. The right arm remained decidedly cold for some hours, but by midnight the temperature of the two limbs was about equal.

July 29th. The patient slept well after taking twenty grains of bromide of potassium and twenty minims of tincture of opium every three hours.

July 30th. During the night, he passed a large quantity of dark fluid blood *per anum*. He had been complaining of pain in the abdomen for some hours previously.

July 31st. The antiseptic dressing was removed under the spray. The wounds were already healed by first intention. There was no blush, or signs of tension. The patient complained very much of the irksomeness of lying quiet, and of pain in the forehead. His eyesight had improved. The left pupil remained larger than the right, as it was previously to the operation. The right arm was rather cyanosed, but quite warm. There was no numbness.

August 31st. The carotid ligature came away.

September 4th. The subclavian ligature came away.

September 23rd. The patient left the hospital to-day, being free from pain. He is of a restless disposition, and was very averse to the confinement of the hospital.

The aneurysmal swelling is much diminished; and, as long as he remains at rest, he is free from dyspnœa, pain, or other uneasiness.

CASE OF AXILLARY ANEURISM CURED BY LIGATURE OF THE SUBCLAVIAN ARTERY.

By W. C. ARNISON, M.D.,
Surgeon to the Newcastle-on-Tyne Infirmary.

L. G., AGED 50, shoemaker, was admitted February 23rd, 1878. Two days before Christmas, he felt a sudden pain over the tip of the left shoulder; four days afterwards, he noticed a lump, about the size of a nut, below the middle of the left clavicle. This slowly enlarged, and "ticked like a clock". By the advice of a surgeon in Sunderland, he applied cold wet cloths, after which the "ticking" became less; but he then began to feel pain shooting down the arm, and numbness of the fingers.

On admission, there was a tumour, of the size of an orange, situated directly below the middle of the left clavicle; expansile pulsation was felt above and below the clavicle, and in the axilla; thrill was felt, most marked at the lower portion. The clavicle was arched upwards. The veins over the tumour and down the arm were engorged. The radial pulse was faintly perceptible. With the stethoscope, a loud aneurismal murmur was heard all over the tumour. There was also noted an apparent aortic systolic murmur, and slight intermitting action of the heart. The sphygmograph tracings, which Dr. Byrom Bramwell kindly took, showed, on the right side, a perpendicular up-stroke, terminating in a sharp point, with the down-stroke notched, as indicating atheromatous vessels; on the left side, a very short sloping up-stroke, forming a wide curve, with an unnotched down-stroke.

The patient was a thin spare man, looking older than his age, and with faint arcus senilis. For the last two months, he had been much out of work, and had been exposed to great privation. He was a free drinker when he could get it. He denied syphilis; but two or three depressed cicatrices were seen on the glans and corona.

For a fortnight, treatment was directed solely to his general condition. During that time, his health and appetite improved, but the tumour increased. An attempt was then made to apply pressure by means of a wedge of wood, with the thin end rounded and padded with India-rubber. Chloroform was given, and anæsthesia was then kept up by ether. I was assisted by Mr. Dixon, House-Surgeon, and Mr. Dodd, a student. The brachial artery was first compressed, so as to fill the aneurism, and pressure was then applied above the clavicle; but we found it impossible to control the pulsation so completely as to allow a clot to form, and, after nearly two hours' pressure, during which cold was applied by ice-bags, and occasionally ether-spray, the tumour was scarcely at all either smaller or firmer, and in a day or two it was as large as before. The patient was now transferred, for a time, to the care of Dr. Bramwell, who tried the effect of iodide of potassium in half-drachm doses, three times a day, with rest; no effect was produced. The aneurism was increasing in size, and pressure-signs were fully developed. He had œdema of the hand, and complete paralysis of motion, without much pain, in the whole arm and hand; sensation was not impaired.

On April 3rd, he left the hospital, refusing any operation.

On April 10th, he was readmitted, the tumour having in the interval enlarged considerably; the skin over its inner side visibly thinning, and the clavicle being more arched.

The patient now gave a reluctant consent to operation, and on April 15th, after consultation with my colleagues, a ligature was placed on the subclavian. The patient was placed under the influence of chloroform, as it was found, on the former occasion, that ether kept up a continued cough. An incision was made over the clavicle, dividing the skin, platysma, and the external jugular and a cutaneous vein, which could not be avoided. After a little careful dissection, the posterior belly of the omo-hyoid muscle was seen and held aside; and, much more readily than I had expected, the artery was reached. The cords of the brachial plexus were held aside, the sheath was opened, and an aneurism-needle passed carefully round the vessel. An attempt was made to tie the vessel with catgut, but the ligature broke twice. Carbolised silk was therefore used, and held firmly, and the vessel was secured with a double-knotted silk ligature and two single-knotted catgut ligatures. The divided veins were then tied at both ends, sutures were applied, and a drainage-tube inserted. The operation and dressing were done antiseptically, and under a steam spray.

The following morning, April 16th, the radial pulse was faintly but distinctly felt. He had passed a good night. Œdema had nearly disappeared, but paralysis continued.

On April 17th, the radial pulse was more distinctly felt. The limb was warm; the cotton-wool covering was removed.

Up to the 21st, the case progressed favourably. The wound healed rapidly; but the radial pulse became fainter, though the limb remained warm.

On the 22nd, the temperature rose, and redness and œdema appeared over the tumour, which had increased in size, without pulsation or pain.

On the 23rd, the sac was evidently suppurating; and in the evening it burst through the wound, discharging about three ounces of pus and blood-clot; but no hæmorrhage took place. Discharge continued, with relief to the feverish symptoms, until the 27th, when the tumour appeared to be pointing at the part where the skin was thinning before the operation. An incision was made into it, giving exit to a quantity of most offensive pus and blood-clot; the sac was well washed out with carbolised water; and a drainage-tube inserted. From this time, his recovery was rapid. By the 8th May, the wounds were healed, and he was walking about; and he is now, as regards the aneurism, perfectly well; but, unfortunately, the whole arm remains paralysed, with atrophy of the whole of the muscles. The supposed aortic systolic murmur has disappeared.

REMARKS.—There is nothing in the case calling for special remark, except the kind of ligature employed. The thick catgut twice broke, compelling me to use silk; but the result was not in any way influenced. The silk, equally with the two partially secured knots of catgut, were inclosed in the healing wound, and caused no trouble.

I must, in conclusion, express my great obligation to Mr. J. D. Dixon, M.B., House-Surgeon, for the anxious and watchful care which he bestowed upon the case.

BEQUESTS.—The late Miss Jessie Landseer, sister of the late Sir Edwin Landseer, R.A., has bequeathed £100 each to the British Home for Incurables, Clapham Rise; the Royal Hospital for Incurables, Putney; St. Mary's Hospital; the Brompton Consumption Hospital; the Middlesex Hospital; the Metropolitan Free Hospital; and £50 each to the Hospital for Sick Children, Great Ormond Street; the Blind School; the Home Teaching Society for the Blind; the West London Hospital; the Westminster Hospital; the London Fever Hospital; and the National Hospital for the Paralysed and Epileptic.

MEDICATED LOZENGES.*

By PROSSER JAMES, M.D.,

Lecturer on Materia Medica at the London Hospital; Physician to the Royal Hospital for Diseases of the Throat and Chest.

SOME of the lozenges of the *British Pharmacopœia* are only of use for their constitutional effects; they are, in fact, merely dosed general remedies. Others, however, are most valuable for their local action. It is obvious that these two qualities may often be combined. For special topical use, lozenges should possess the following qualities: 1. They should dissolve slowly in the mouth, so that the resulting solution of the medicament may remain as long as possible in contact with the mucous membrane; 2. They should possess a certain degree of softness, so as not to hurt the diseased surface mechanically; 3. For the same reason, their shape should be without corners; 4. Their flavour should be agreeable, or as little distasteful as possible; 5. They should keep without change for an indefinite period, as they cannot be advantageously made in small quantities.

The lozenges of the *B.P.* are most defective, on account of their hardness. They irritate the mucous surface; and the sharp corners of some shapes in common use, or of the broken pieces of others, may enlarge ulcers, tear congested membrane, or do other injury. Of course, when used for their constitutional effect, these objections may scarcely apply. A softer consistence has been attained by the employment of fruit-paste, as in the favourite black currant lozenges; and this substance has been more extensively used of late years. Extract of liquorice, as in "Pontefract cakes" and gelatine, have also been utilised. A more recent innovation is the efflorescent base introduced by Mr. Cooper, which, for some purposes, is of special value. The French, so famous for all kinds of confectionery, have given us the *pâté de Guimauve;* but the defect of this is that it does not keep well. We owe to them also our best jujubes, a sweetmeat first made with the juice of the *Rhamnus zizyphus*, but now never containing that agreeable fruit. Experimental experience, extending over more than a quarter of a century, leads me to conclude that a *pâté de jujube* of the best French method of manufacture will be found most generally useful as a base. It fulfils all the indications required; it can be variously flavoured and coloured, divided into lozenges of any size or shape, and medicated with the most suitable remedies. It does not excite nausea or cause indigestion, and does not change too much after months of exposure. It is, therefore, adapted for lozenges prescribed for their topical influence, and is equally available for those given for their effects on the system. Specimens, made in accordance with my views, were exhibited at the annual museum at Cambridge by Messrs. Allen and Hanburys. Lozenges are more extensively used than could have been supposed, when the London and Dublin pharmacopœias rejected them. Everyone who remembers that time will know that, in spite of that discouragement, every large pharmacy was obliged to keep a considerable number. I have a list of upwards of 150 tried formulæ in use at that date. It comprises nearly all in common use now. Rhatany, an excellent astringent, still extensively prescribed for local purposes, is in that list, and was known long before. So with cubeb lozenges, which have lately been forced into extensive sale by a vendor who vaunts them as "bronchial troches". We have, in fact, few new lozenges. Red gum has been introduced; so, too, has carbolic acid; chloroform can scarcely be counted, being only morphia disguised; superior glycerine-jujubes may be had at any leading pharmacy, or of inferior quality as an advertised panacea.

The lozenges comprised in the long list alluded to might be classified according to their therapeutical uses, *e.g.*, astringents, demulcents, sedatives, special stimulants, etc. It will suffice, however, to refer to the specimens exhibited at Cambridge. They were made from the writer's formulæ by Messrs. Allen and Hanburys, who were applied to as the owners of the latest patent in this kind of manufacture, and have so far carried out my views. These specimens are, therefore, offered as a distinct advance in medicated lozenges.

As [illegible] have become associated with the harder lozenges, as jujubes seem to savour too much of sweetmeats, and as these are distinctly medicinal agents, it is proposed to call them pastils, an old English word more familiar in the French *pastilles*, and derived from the Latin *pastillus*, which was used by Celsus for such a [illegible]; pastille will, therefore, be an appropriate name in prescription.

Doses and Therapeutical Uses.—With regard to dosage, those pastilles which are intended to replace the *B.P.* lozenges have been made of similar strength, as it was considered advisable not to burden the prescriber's memory too much. This is specially the case with the pastilles of morphia, those of morphia and ipecacuanha, and those of opium; in each of these, the pastille may be regarded as an agreeable substitute for the lozenge. So, too, with the simple ipecacuanha pastille, which will be found much more popular with children than the lozenge. The same remark applies to *pastilli ferri*. Each pastillus aconiti may be considered equivalent to half a minim of *B.P.* tincture, and prescribed accordingly. The pastillus expectorans, or morphiæ et ipecacuanhæ compositus, is a combination of the simple one with other expectorants, and will be found most serviceable in bronchitis, chronic coughs, etc. The chlorate of potash pastilles are not so strong as the lozenges, and may be taken in twice the usual doses; they are, however, very efficacious, and the disagreeable flavour is so successfully concealed that few can detect it. If large quantities are needed, other modes of administration may be tried. The pastillus sodæ chloratis I introduced as an efficacious and potent substitute for the potash salt. The lithia pastille contains a grain of the carbonate, and is valuable for both its local and remote effects. The benzoated pastille will be found the most agreeable of all mild voice-lozenges, and may be taken shortly before speaking, reading, singing, preaching, etc., to give tone to the vocal apparatus. In obstinate or chronic cases, the camphorated pastille is a still more powerful voice-lozenge, but, unfortunately, its flavour is not nearly so agreeable. This is, in fact, the only one of the series that can be considered unpalatable.

ADMINISTRATION OF ANÆSTHETICS.

By WOODHOUSE BRAINE, F.R.C.S.

I FEEL sure that a few cases of anæsthesia, the anæsthetic being given by the method I adopt, will lead Mr. Williams to qualify the opinions expressed in his letter published in the JOURNAL of November 13th.

When Dr. Joy Jeffries came to England, and demonstrated the fact that ether could produce anæsthesia as perfectly, and almost as quickly, as chloroform, his custom was to "crowd on" the ether; and, having his patients forcibly held by assistants, to render them insensible, *citè, tutè*, but most assuredly not *jucundè*.

If the patient be made to inhale a small amount of ether rapidly, the nerve-centres are very quickly brought under subjection, and the patient recovers rapidly; and with much less of that haziness and sluggishness of intellect which always takes place when they are a long time becoming unconscious. I think Mr. Williams will agree with me in this proposition—viz.: that, given the same amount of insensibility for any definite time, the smaller the quantity of ether inhaled the better. Let this point be conceded; he will then find that the quickest, and, in my opinion, the best, method of giving ether is to administer nitrous oxide till the patient is completely anæsthetised, and then to change the face-piece without allowing the inhalation of any air whatever. During the first few respirations, the larynx resents the ether-vapour, and they are somewhat jerky and spasmodic; but the larynx soon becomes accustomed to the irritant, the breathing becomes full, easy, and regular, and there is a complete absence of struggling. When the struggling does occur, the movements are generally referable to dreams which the patient is having; and, when he wishes to alter the position of his limbs, or to sit up, in pursuance of the nature of his dream, forcible prevention only makes him struggle more violently to accomplish his object, which, if effected in the first place, would have had no practical result, and he would have dropped back into the former recumbent position of his own accord. Should this struggling take place, no attempt should be made to hold the patient in any one position; his limbs should be allowed to move about freely, and he should be permitted to sit up, if he desire to do so—only preventing him from pulling off the face-piece.

But, in addition to the trouble saved by not having to hold a patient, the risk of a fatal result, especially when administering chloroform, is much less; for, if the patient be allowed to move freely, the heart has comparatively little work to do, compared with the strain on it which exists when it has to drive a column of blood through vessels which have rigid muscles on each side of them; and, again, this very struggling increases the venous flow, and tends to gorge the heart with venous blood.

There is one other point in the discussion that does not seem to have attracted the attention that, I think, it deserves; and that is, the time in the day at which the operation is performed. I feel convinced that

all patients take anæsthetics better the earlier in the day they are given; and I look on from 8 A.M. to 9.30 A.M. as the best time—for then the patient's stomach is empty, digestion having been performed when the patient has been asleep, and the patient has not been awake long enough to become very nervous, and to feel the want of food, and so be faint. In a very nervous patient, who did not sleep the previous night, I have known food vomited in exactly the same condition in which it has been swallowed twenty-eight hours previously.

CLINICAL MEMORANDA.

AMŒBOID MOVEMENTS IN LEUKÆMIA.

I AM sorry I overlooked Dr. Bastian's observations on the sluggishness of amœboid movements in leukæmia; they entirely escaped, not only my own observation, but that of all the most recent writers on the subject, as Mosler, Neumann, and Gowers; nor were they alluded to by any speaker during the debate on leukæmia at the Pathological Society in 1878. I think a sufficient explanation of the oversight is furnished by Dr. Bastian's own references to the publication of his observations. The first of these (*Path. Trans.*, vol. xx, p. 14) occurs towards the end of a communication, entitled, "On the Plugging of Minute Vessels in the Grey Matter of the Brain as a Cause of the Delirium and Stupor in Severe Febrile Diseases, and on other Symptoms of the Typhoid State". After stating that, in certain conditions, the colourless corpuscles are "stimulated into revolutionary action", he goes on to say: "The mere increase in quantity of white corpuscles in the blood we meet with in leucocythæmia, and in other morbid conditions, in which their presence is less hurtful and comparatively free from risks of this kind, partly because there is no febrile elevation of temperature in these diseases, whilst, at the same time, we may presume that no special conditions of blood exist which tend to arouse the excitability of the white corpuscles." The reference to leukæmia, then, is merely incidental in a paper concerned with other matters; and I must confess that I myself should not have understood the passage above quoted in the sense which Dr. Bastian now tells us it should bear, but rather as implying the absence of "revolutionary action", and therefore, presumably, a normal condition.

Dr. Bastian's second reference is to a statement which is more explicit, although still not quite so definite as I could have wished. It occurs in his *Beginnings of Life* (vol. i, p. 226), a work whose title would hardly lead us to expect an observation on the Beginnings of Death; but it is quite sufficient to establish the priority over Dr. Laking which is claimed by Dr. Bastian. The words he quotes occur as a footnote to the following statement in the text: "The corpuscles which were about $\frac{1}{3500}''$ in diameter, as well as all those that were of smaller size.....exhibiting very slow amœboid variations in shape." It would seem, therefore, from the context, that Dr. Bastian never found amœboid movements completely absent, as Dr. Laking and I did in the great majority of the corpuscles. I believe that is the point of importance; and that general statements as to presence or absence or sluggishness of amœboid movements do not help us much; what is wanted is a series of detailed observations, such as those contained in my paper, as I think, for the first time.

Dr. Pye-Smith's remarks were made at the Pathological Society, in the course of the discussion on leukæmia, but not as a separate communication, and are therefore not reported in the *Transactions;* they will be found in the journals published at the time (1878).

JOHN CAVAFY, Upper Berkeley Street, W.

THE BLOOD-CELLS OF ANÆMIA.

IN the discussion upon Dr. Cavafy's paper at the Royal Medical and Chirurgical Society, Dr. Silver stated that he had examined the blood from two cases of anæmia, with a view to finding blood-cells of the shapes described and figured by Dr. Finny in the JOURNAL some months ago; and in neither case were any such oddly shaped red corpuscles found. It would be interesting to know, however, how long the anæmia had existed in these cases; for last week I had the opportunity of examining blood from three anæmic girls, sent to me for the purpose by Dr. Clifford Allbutt; and in two of them the corpuscles, though of very various sizes, were not misshapen. Both these cases were of recent date—within six months. The third was of at least two years' duration, and was very marked, the patient being unable to hurry in the least; indeed, even gentle exercise caused dyspnœa. She was also of marble whiteness. The blood-corpuscles in this case were of extraordinary shapes; some being ovoid; others flask-like, tapering to a hooked point; in others, the point was not hooked, but a small spherical knob was attached to it; one cell was observed to be bluntly crescentic. With reference to the question of amœboid movements, I may say that the blood was in each case very rapidly carried from the finger to the microscope; and I was surprised to see distinct alterations of shape occurring in what appeared to be red corpuscles (at all events, they were not leucocytes), though not in those which were already greatly misshapen. Some of these—I cannot say they were the very same globules—afterwards became crenated in the ordinary way.

T. CHURTON, M.D., Physician to the Leeds Infirmary.

THERAPEUTIC MEMORANDA.

LOCAL MERCURIAL FUMIGATIONS.

I HAVE seen, in a recent number of the JOURNAL, a short article on local mercurial fumigations of the mouth and throat, with an especial reference to a method, invented by Dr. F. B. Kane, for carrying out this treatment. In answer to the question, "Is anything known of this method here?" I would call attention to a similar method which was noticed in the BRITISH MEDICAL JOURNAL of April 13th, 1872, describing a "Local Calomel Fumigating Apparatus", devised by Surgeon Moffitt. This consists of a metallic cup, which fits on the top of Mr. Henry Lee's lamp. To this cup, in which from three to five grains of calomel are volatilised, are attached an afferent flexible tube, having an India-rubber ball at its end, and an efferent tube for directing the vapour on the part to be fumigated.

This paper states, as the advantage of such a method, that "the calomel fumes, instead of rising by their own lightness, are forced along a tube by air from a hand-bellows, and thus can be conducted quickly without being deposited on the sides of the tube, and directed with the greatest precision on any point, either in the mouth, fauces, nasal cavities, or skin".

I have used this apparatus occasionally, from the date of the notice referred to, with some advantage in syphilitic ulcerations of the pharynx; and have applied it to the larynx as well, not, however, with much advantage, by means of a laryngeal tube adapted for me by Messrs. Blaise and Co., who made the fumigator for Surgeon Moffitt. Some little habit is required to propel the vapour at the exact moment, so that, on the one hand, the dry calomel be not blown out upon the ulcer; and, on the other, the mercurial fumes be not allowed to deposit upon the tube by undue delay in pumping the air through the chamber. For this reason, I should think the glass tube invented by Dr. Kane would be preferable to the closed metallic cup.

W. MACNEILL WHISTLER, M.D.

IN the JOURNAL of October 23rd, a description of Dr. F. B. Kane's little apparatus for this purpose is wound up by asking the question, "Is anything known of this method here?" I have used a similar but less elegant contrivance for several years with considerable success. My first apparatus consisted of a wide-mouthed glass flask, through the cork of which were fitted two glass tubes—one drawn out to a nozzle, and the other fitted with a double-valved elastic ball (Fig. 1). The calomel was placed in the flask, and sublimed by the

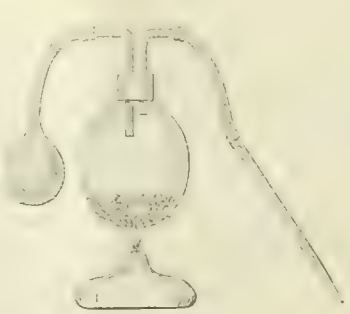


Fig. 1.

application of a spirit-lamp. My object in constructing this apparatus was to fumigate with freshly sublimed sulphur; and, as I believe the local action of sulphur to be due entirely to free sulphurous acid, which it contains as an impurity, I hoped to increase the acidity of the sulphur by passing blasts of air (oxygen) through the flask during the process of sublimation, as well as to force the vapour through the nozzle in the direction I wished. I soon found, however, that a still simpler apparatus would suffice for the local application of calomel, as heat was not

necessary. Anyone who can bend a glass tube in a gas-jet can construct an apparatus of this kind for himself. It consists of a small wide-mouthed bottle fitted with a good cork, and two pieces of glass tube, four or six inches in length, according to the size of the bottle and the accessibility of the parts to which the calomel is to be applied. One of the glass tubes is passed just through the cork, bent at right angles, and drawn out to a fine nozzle; the other tube is passed through the cork to the bottom of the bottle, and the projecting portion bent at right angles, and fitted with an elastic tube and double-valved ball (Fig. 2). Some calomel is placed in the bottle, and, when the appa-



Fig. 2.

ratus is in use, a blast of air is driven through the calomel, causing the finest particles to fly up as dust, and to be driven out of the nozzle in a pure and quite invisible spray or powder, which forms a fine coating on a damp or rough surface on the skin or mucous membrane on which it is directed, the extent of the coating being influenced by the position in which the nozzle is held. As the calomel supplied by the druggist is sublimed, I do not think there is any necessity for resubliming it at the moment of application; and, practically, one method seems to answer quite as well as the other. In applying calomel to the whole surface of the body, it is necessary to adopt Mr. Henry Lee's method, because no other means is possible, and not because newly sublimed calomel is more active than the ordinary preparation. It will be seen, of course, that the little apparatus I have described is adapted for the application of other powders (than the preparations of mercury) to the throat, nose, ears, eyes, and vagina, or indeed to any locality of the surface of the body. The late Messrs. Blaise and Co., surgical instrument makers, of St. James Street, made me a vulcanite tube, containing the two tubes arranged as I have described them (Fig. 3), which

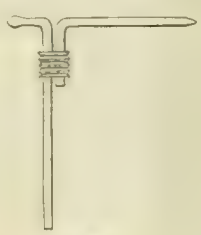


Fig. 3.

could be screwed through the centre of a cork in a wide-mouthed bottle, and thus save the small trouble of shaping the glass tubes; and I think they tried to call the attention of the profession to them, but I do not know with what success. Two or three years ago, I saw in Paris a very rude instrument of this kind, which had been constructed (and patented!) for applying flower of sulphur to vines and other trees and plants, to destroy animal and vegetable parasites.

CHARLES ROBERTS, Bolton Row, Mayfair.

THE General commanding the Allahabad Division, has issued a brigade order touching the death of Surgeon-Major Hannah, of the B-4th Battery R.A., and Captain Goodridge, of the 35th N.I., both of this station, who lost their lives the other day in the terrible landslip at Nani Tal. The order includes the following passage:—"From personal knowledge the Brigadier-General commanding can testify to the great loss sustained by the death of Surgeon-Major Hannah, whose unsparing exertions during the late cholera epidemic will still be fresh in the minds of many. He is sure that Dr. Hannah will be sincerely regretted by every officer and soldier who has had occasion to know him in his professional capacity, while many will lament the loss of a friend taken thus suddenly in the prime of life and usefulness."

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. THOMAS'S HOSPITAL.

MEDICAL CASES.

(Under the care of Dr. ORD.)

[From Notes by Mr. H. P. BUTLER, House-Physician.]

CASE 1. *Enteric Fever: Primary Attack of some severity; Severe Relapse, with High Temperature; Baths; Recovery.*—A. P., a girl aged 16, was admitted to Lydia Ward, under the care of Dr. Ord, on September 9th, 1880. Her family history was good. She had had scarlatina, measles, and whooping-cough, when young; but no other illnesses. The present illness began about fourteen days ago, with giddiness, headache, and shivering. Diarrhœa began on the 2nd instant. She left off her work on Saturday, the 3rd. No other people were affected in the same house or street.

State on Admission.—She was a fairly well nourished girl, with flushed cheeks and dull look; complaining of diarrhœa and pain in her abdomen and thighs. On examination, the abdomen was not distended. There was pain, with tenderness on pressure, in the right iliac fossa; also gurgling. One or two spots were noticed on the abdomen, slightly raised, of a pink colour, disappearing on pressure. The liver-dulness began at the sixth rib, and extended to the margin of the ribs. The spleen was enlarged, and could be felt. The expansion of the chest was good; resonance was everywhere normal; the breath-sounds were harsh on both sides, and accompanied by an occasional *râle* and rhonchus both in front and posteriorly. The heart-sounds were normal; the pulse full, regular, 120. The tongue was small, pink at the tip and edges, and coated down the centre with a thick white fur; appetite bad. The bowels were open twice, very slightly, in the night; the motions were loose, watery, of a greenish colour, and very offensive. Temperature 105 deg. last night; this morning 102.8 deg. The urine was of specific gravity 1020, non-albuminous.

September 11th. The temperature rose to 104.7 deg. last night; about an hour afterwards it was 104 deg., and this morning was 103.5 deg. The bowels were open this morning, when there was a characteristic typhoid motion. The patient had been delirious during the night, and tried to get out of bed. More spots were noticed this morning. The pulse was 114, full, regular, compressible. She was ordered five grains of sulphate of quinine three times a day.

September 12th. The patient had been wandering, more or less, all night. The temperature was 99.8 deg.; pulse 96. She was more sensible. The bowels had been open twice during the night; once this morning.

September 13th. The bowels were open this morning. The patient had passed her urine in the bed during the night. On the whole, she seemed better. The temperature at 8 A.M. was 98 deg. The quinine was discontinued.

September 14th. The bowels having been open seven times since the last note, she was ordered enema opii (mxx), and five grains of sulphate of quinine twice daily. She slept well last night. Temperature to-day 103.6 deg. More spots were noticed.

September 15th. She seemed better. More spots were noticed.

September 16th. One or two fresh spots were found. She had had delusions during the night, saying that nurse gave her "ice-creams".

September 21st. She had been improving. The temperature had decreased to normal. The bowels had not been open since the 18th, after the administration of the enema opii. She took her food well; and was ordered a simple enema.

September 23rd. The temperature rose to 100.2 deg. yesterday at 8 P.M. The bowels had been open on the 21st, after the enema.

September 24th. The temperature, which had been again rising, was now 102 deg. The bowels had not been open, and a simple enema was ordered.

September 25th. The temperature had been gradually rising for the last two days; at 4 A.M., it was 104.6 deg. The bowels were open yesterday after the enema; the motion was solid. She had no pain, and no more spots had been noticed. There was no delirium. The skin was very hot; the pulse rapid, 126.

September 28th. The patient's temperature remaining high, it was deemed necessary to give a graduated bath. The temperature before the bath was 105 deg.; afterwards it fell to 99 0 deg. The bath-tem-

perature began at 95 deg., and was lowered gradually in twenty minutes to 75 deg. The temperature of the body going up again after the bath; in about five hours the bath was repeated. The temperature, before the bath, being again 105 deg., was brought down to 100 deg. The patient was slightly delirious before the bath, sensible after it, and implored that it might not be repeated.

September 29th. The temperature was still very high, 103.8 deg. Some spots were noticed in the axillæ.

September 30th. The bowels were open five times yesterday, and twice this morning; the patient had vomited twice. She had been talking a good deal in her sleep the last two nights, but was quieter now. No more spots had been found. The temperature last night was 103.2 deg. An enema opii was ordered.

October 1st. The bowels were open five times yesterday. Another enema opii was ordered. She wandered much during her sleep, and between her sleep was very drowsy. She took nourishment well.

October 2nd. The bowels were open four times yesterday. The opium enema was repeated. The pulse was weak, dicrotic, 120. Temperature, 101.6 deg. this morning; 104 deg. last night.

October 3rd. The patient's condition remained about the same; she was slightly delirious. The temperature was slightly higher. Pulse more feeble, running, 120. She was ordered four ounces of brandy.

October 4th. She was about the same; rather wandering; had no pain. The bowels were open twice this morning; one of the motions was formed. She felt very faint at 5 A.M.; took her nourishment well, but was very drowsy, and passed her urine in the bed last night. Temperature 103.8 deg. at 12 last night, 101.6 deg. at 8 A.M. to-day.

October 6th. The patient was much better. The temperature was going down; this morning it was 98.5 deg. This was the thirty-ninth day of the illness.

October 7th. The bowels were open twice yesterday, the motions being loose and yellow; once this morning. The pulse was irregular, dicrotic, 96. She did not seem so well, was wandering slightly. The hands and tongue were very tremulous. There was a thick fur down the tongue.

October 8th. The bowels were open once. The patient was very drowsy; the temperature was subnormal; the pulse 84, feeble. She was ordered some more brandy, six ounces altogether in the twenty-four hours.

October 11th. The patient was much better. Temperature 96.6 deg. The bowels not having been open since the 8th instant, a simple enema was ordered.

October 12th. The temperature was very low last night, 95 deg.; and the patient felt cold. It was higher again this morning; and the patient felt "quite well". The pulse was 78, full, regular.

October 14th. The patient was much better; the temperature subnormal. The bowels were open only with an enema every third day. The brandy was reduced to four ounces; bread and butter were ordered, as the temperature had been down for a week.

October 16th. The patient was going on very well; the temperature subnormal. The brandy was lessened to two ounces. She was ordered fish and eggs.

October 22nd. The patient was well; she was up; was rather weak, but still felt quite well.

October 26th. She was presented "quite well", having been forty-seven days in the hospital.

The diet had consisted of milk one part, beef-tea two parts, given throughout at intervals of three hours, in such quantities as the patient was able to take.

CASE II. *Enteric Fever; High Temperature; Baths; Perforation; Death.*—A. E., a young man, aged 21, was admitted to George Ward, under the care of Dr. Ord, September 23rd, 1880. His father and mother had both died of "rheumatism"; three brothers and one sister were healthy. He himself had always hitherto enjoyed good health. His present illness had begun on the 16th instant, when he had headache and shivering; then lost his appetite, and suffered from thirst. He had not been sick, or had any diarrhœa; he could not sleep, owing to headache. He thought he had caught cold before being taken ill. No one else in the house was affected, and the drains were not known to be out of order.

On admission, he appeared to be a fairly well-nourished young man; he had a flushed face, and dull look, and complained of headache and giddiness. On examination, his temperature was found to be 102.8 deg. The abdomen was not distended; there was no tenderness; some suspicious spots were noticed on it, and also on the chest and back—raised, rosy in colour, and disappearing on pressure. There was no gurgling in the iliac fossa, nor pain. The liver-dulness commenced at the lower border of the sixth rib, and extended to just below the margin of the ribs. The liver was to be felt. The spleen was enlarged, and easily felt. The tongue was pink at the tip and edges, and covered down the centre with a brownish-white fur. The bowels were not open; the appetite was bad. The chest was anteriorly resonant; the breath-sounds were harsh, otherwise normal. Posteriorly, there was natural resonance all over, with some crepitation at both bases. The cardiac sounds were normal. The specific gravity of the urine was 1020; it contained no albumen. He slept badly; had no delirium.

September 25th. Gurgling was to be felt in the right iliac fossa. The bowels were not open. Some more spots were noticed. The pulse was 96, full, regular, compressible. The temperature to-day was 101 deg.; last night, it was 103.8 deg.

September 29th. He was going on very well until yesterday afternoon; the temperature then rising to 104.8 deg. A bath was about to be given; but the temperature decreased to 104 deg., and this morning was 102.5 deg. The bowels were open yesterday, after a simple enema. He was complaining now of his headache being very severe. The hands were very tremulous. There were sordes on the lips and teeth. There was no tenderness on pressure in the abdomen. No more spots were visible.

September 30th. Last night, the temperature going up to 105 deg., it was thought advisable to give the patient a graduated bath; one was accordingly given, commencing at a temperature of 95 deg., and cooled down to 75 deg. in twenty minutes. The patient's temperature in the mouth before the bath was 104.7 deg; after the bath it was 98 deg. The pulse was 120 before, and 100 after, the bath. The temperature fell very gradually during the bath.

October 1st. Last night, the temperature going up again, the patient had another bath, which brought his temperature down from 105 deg. to 97 deg. It immediately afterwards went up again (this sudden rise so soon after the bath might be accounted for by the patient having had some hot bottles applied). The patient was now ordered sponging with tepid water, *i.e.*, at a temperature of 80 deg.; with the effect of bringing down the temperature slightly, and it afterwards remained below 104 deg.

October 2nd. He had a slight cough. The hands were more tremulous. The pulse was fairly strong, 108. There were *râles* and rhonchi all over the chest. The bowels were open, the motions loose and pale.

October 4th. The bowels had not been open in the last twenty-four hours. In the previous twenty-four hours, they had been open three times; twice a little blood was noticed. There was some cough, with a little blood-stained expectoration. The temperature was not above 103.6 deg. last night; and down to 102.4 this morning.

October 6th. There was still some cough, with expectoration, stained with blood. The bowels were open yesterday; the motions were loose, pale in colour, small in quantity, and contained no blood. The temperature still remained high, between 103 deg. and 104 deg. He was in a very drowsy condition, from which, however, he was easily roused. The tongue was red at the tip and edges, with a brown fur in the centre.

October 7th. There were *râles* and rhonchi all over the chest; on the right side, about on a level with the nipple, there was fine crepitation. The tremors in the arms and lips were more marked. He had deafness. He was ordered three ounces of brandy, on account of the weak condition of his pulse.

October 8th. He was rather weaker, and more tremulous. He had been moaning a good deal during the night. The temperature was 103 deg. this morning; last night it was 104 deg. The pulse was 108, weak, compressible.

October 9th. He was very sleepy and torpid, but quite sensible. Sordes existed on the lips and teeth. The breath was very offensive. The bowels were open this morning; the motions loose and pale.

October 10th. He seemed rather better, but was still very drowsy; complained of his cough. There was no blood in the sputa; no pain in the abdomen. The temperature was still high, 104 deg. The brandy was increased to four ounces.

October 11th. His general condition was about the same. The temperature was 102.7 deg.; the pulse 102. The respirations were laboured and wheezing. The bowels were not open. He seemed very deaf. He was sponged last night and this morning, but with little effect on the temperature. The tremors were more marked. He had had some delirium the last two nights. This was the twenty-fifth day of the disease.

October 12th. He was delirious. The sordes were more marked. The bowels were open yesterday without an enema; the motion was pale and solid, and contained a small clot of blood. The pulse was 102, full. The urine had a specific gravity of 1024, and contained no albumen.

October 13th. He was not so well. His speech was very incoherent.

The teeth and lips were covered with sordes. There were rhonchi and *râles* all over the chest, anteriorly; posteriorly, he was not examined. The cough was very troublesome; the sputa were streaked with blood. The bowels were open, the motions loose and pale. The tremors were a little less marked. The deafness had increased. He had passed his water in bed during the night. He was sponged again last night, and his temperature then fell one degree; it was again as high this morning. The temperature was varying between 103 deg. and 104 deg.

October 14th. His general condition seemed to be improved, though the temperature was still high. The tremors, however, were more marked. The bowels were not open. He had not again passed water in bed. There was some delirium.

October 15th. He was about the same. The bowels were open; the motions, which were passed in bed, contained a slight trace of blood. The pulse was 120, weak. He was sponged again last night.

October 16th. He was worse this morning; there was a good deal of picking at the bedclothes; he was very delirious; the tremors were also very marked. He was ordered brandy, six ounces.

October 18th. He was very weak. The abdomen was tympanitic, but he was in no pain. The bowels were open twice yesterday; the stools were dark, but contained no blood. Pulse 120. Temperature 103.4 deg.

October 19th. He seemed better; a little more sensible; but was rather drowsy. Temperature 100 deg.

October 20th. His condition was certainly worse. The temperature last night was 105.2 deg. He was sponged again. There was some pain in the hypogastric and right lumbar regions, with tympanites. He was moaning a good deal. An ice-bag was ordered to be applied to the abdomen. The temperature had dropped this morning from 102 deg. to 98 deg. He was passing his motions in bed. The pulse was small, and running. He seemed more rational; his features were pinched. The patient passed later into an unconscious state, and died in the afternoon.

Post Mortem Examination.—Perforation was found to have taken place at the lower part of the ileum. Ulceration was limited to the lower part. There was general peritonitis. There was one ulcer in the large intestine. The lungs were congested. The spleen was greatly enlarged. The kidneys were normal.

REMARKS.—The bath was used in both cases as part of expectant treatment. In the first, it was used in relapse, to meet high temperature with delirium. Here it certainly appeared to check decisively a dangerous upward rush of the thermometer, and to exercise a notable calmative influence on the delirium. It certainly had no injurious effect upon the respiratory organs. The bath used was the graduated bath, not the cold bath; the temperature not at any time falling below 70 deg.

In the second case, the bath, used at the end of the second week of fever, had less beneficial influence than might have been expected. The patient had, so far, gone on well. Then, with the access of tremors and delirium, the temperature became high. According to a rule laid down in regard to enteric patients under Dr. Ord's care, the bath was given when the temperature, having reached 105 deg., was still rising. The administration of the bath was followed by considerable prostration. Hot bottles and hot flannels were applied with, perhaps, too much energy. Indeed, they would appear to have in part neutralised the effect of the bath. After the second bath, and under the repeated use of tepid sponging, the temperature, though not much reduced, was restrained below the dangerous limit. But the general symptoms of the typhoid condition remained; hypostatic congestion of the lungs set in, and rapidly increased, and the diarrhœa was severe at times. Notwithstanding, there was great hope that the patient would survive. The symptoms did not seem severe enough to show that he would die of fever directly, or of lung-affection, or of diarrhœa. Then came the signs of perforation, and a speedy death.

One strong argument in favour of the systematic early use of baths is the great probability that they control the intestinal lesions. Baths used late in the disease cannot be expected to alter lesions already existing—at all events, to restore to life necrosed tissues. Admitting this, we must admit that the late use of baths is attended with this very serious limitation of their efficiency. They come in here, then, chiefly to oppose conditions and effects of hyperpyrexia, and particularly those states of the nervous system which experience shows to be connected with hyperpyrexia. The reduction of the later days of fever again limits their use, independently of their possible efficiency in this direction. The reference is that they should be used early—at least, when the indications of necessity of fever are present; but it must be remembered that they are directed as weapons against the deadly invasion of hyperpyrexia. The less they are called on, the more readily and better.

CASE III. *Empyema; Paracentesis; Suppuration in the Peritoneum; Discharge through the Umbilicus: Recovery.*—A. Y., a girl aged 6, was admitted to Charity Ward, under the care of Dr. Ord, on July 20th, 1880. The child belonged to an unhealthy family. Although her father and mother were alive, and reported to be healthy, she had lost three sisters of phthisis; and the only remaining child of her generation was a brother aged 4 years, reported healthy. A maternal aunt had died of phthisis. The patient had been healthy in babyhood; had had measles, scarlatina, chicken-pox, and several attacks of bronchitis. Her present illness began five months ago with "inflammation of the bowels", followed by inflammation of the lungs, which left a cough and weakness.

On admission, she was a wasted, sallow, dark-haired child, complaining of a bad cough, and suffering from an abundant purulent discharge from the navel. The abdomen was neither distended nor tender. The discharge from the navel was somewhat transparent, viscid, green pus, free from the odour of putrefaction. On pressing the lower part of the abdomen, the flow was increased; and there was some dulness above Poupart's ligament on each side, more on the left than the right. There was no fluctuation in the abdomen. The liver was of average size; the spleen enlarged, not tender, The right lung and pleura appeared to be healthy, except for a few *râles*. The left lung was over-resonant at the apex; and there were clear evidences of the presence of fluid in the left pleura, occupying its lower half. Measurement at the level of the nipples on the right side was 10½ inches: on the left, 11¾ inches. The heart was displaced to the right; its dulness and impulse existing on the right border of the sternum, and pulsation in the epigastrium. The tongue was coated with a white fur, and was red at the tip and edges. The bowels were confined. The appetite was poor; but there was no nausea or vomiting. The cough was troublesome; the expectoration frothy, without blood or pus. Pulse 104, small; temperature 100.1 deg. The urine was of specific gravity 1020, and contained no albumen.

Before coming to a conclusion as to the cause of the discharge from the umbilicus, Dr. Ord resolved to ascertain what kind of fluid occupied the pleura, the expectation being that it would be found to be purulent. Half a pint of pus was evacuated by the aspirator, with immediate relief to the patient; with the last drops of pus came some blood. The umbilical discharge was watched narrowly after this for traces of blood. It was now evident that there was pus both in the left pleura and the abdomen; and the question arose, whether both collections were the result of independent inflammations, or whether any communication existed between the pleura and the abdominal cavity, through which pus might be finding its way. It was at least a singular coincidence that, for nearly twenty-four hours after the puncture of the pleura, the umbilical discharge diminished almost to disappearance. The discharge again became abundant for a few days, but after that again intermittent. Presently it became more watery, and the patient suffered from diarrhœa. On August 9th, there being signs of fresh accumulation of fluid in the left pleura, the aspirator was again used. It was first introduced at the same point as before; no pus flowing, it was withdrawn, and introduced a space lower. Pus now flowed, but not in large quantity; and two drachms of a strong neutral, or rather feebly ammoniacal, solution of carmine were injected into the cavity. This was done in the hope that if any communication should exist between the two cavities, tinted pus would be observed at the umbilicus. No tint was seen; but, as the microscope was unfortunately not used, the absence of tinted corpuscles could not be proved. Improvement now occurred at both points; the umbilical discharge, after many intermissions, ceased entirely; the left pleura and lung cleared up; and the heart returned to its normal position. The patient was discharged apparently quite well, on September 21st, 1880, having gained nearly a stone and a half in weight.

REMARKS.—As far as could be seen, the two suppurations—in the pleura and in the peritoneum—were distinct, and were the result of simultaneous inflammation in the two cavities. The child appeared to have recovered with good feeding and rest, and the evacuation of the fluid from the two cavities, from one by operation, from the other by "effort of nature". She took iodide of iron with cod-liver oil throughout her stay in the hospital, and was liberally fed.

ODDFELLOWS' SOCIETY: MUNSTER LODGE.—Dr. Golding was, at a recent special meeting, elected medical officer, in the room of Dr. Cremen, resigned. The following resolution was adopted: "That we receive with great regret the resignation of Dr. Cremen, and that we convey to him our warmest appreciation of the able and successful manner in which he performed his duties as our medical officer for the last seven years."

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 26TH, 1880.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

A Case of Hydro-Encephalocele.—Dr. CARRINGTON read notes of this case. The patient was brought under the notice of the author by Mr. Fortescue Ingram of the Chelsea Infirmary, to whom he was indebted for such of the history as it had been possible to obtain. The case was exhibited at one of the later meetings of the previous session; but it was not possible to read the notes on that occasion, from stress of time. The boy, A. T., was seven years old, and had been an inmate of the infirmary for the past three years. The family history was unimportant. The mother, who was alive and healthy, stated that the delivery was instrumental. Nothing was observed until the patient was two years of age, when the back of the head began to protrude. It slowly increased in size; but how long it had been stationary was doubtful. It had certainly not markedly increased from the time of admission up to that on which the first note was taken, although it was at times more tense than at others. Measurements were taken seven months ago, and it had certainly since been stationary. The boy had no other malformation. His general health was good. Intellectually, he was sharp and cunning, always cheerful, and kept up an incessant prattle, which, however, was rational enough. At three years of age, he was knocked down by a cab; and since that time, and not before—according to the mother's account—had suffered from fits. These had been, for the most part, short and transitory, although there was complete unconsciousness in them. On two occasions, however, prior to seven months ago, they had been of long duration, lasting some hours. At the upper and back part of the boy's cranium was a large tumour, measuring 14½ inches in circumference at the base, and 7½ inches over its vertex from side to side. It was completely sessile, with a broad base, soft and fluctuating, non-pulsatile, and not translucent. Compression produced no effect at all; indeed, at one time the boy frequently stood upon his head without any ill effects. The tumour apparently sprang from a large deficiency in the cranium involving the parietal bones, especially the left, along the sagittal suture, and the posterior part of the left side of the frontal bone. The only symptoms were: epileptiform fits, which, in the last seven months, had become much more frequent, and of longer duration; weakness of the right arm and leg; a peculiar mode of moving the arm, resembling that of athetosis; and a moderate amount of talipes varus. The changes that had taken place within the last seven months had been an increase of the paresis, with wasting to a slight extent of the arm and leg; the convulsions had become more frequent, and lasted longer; and the boy had developed a lateral curvature of the spine, the left shoulder projecting more than the right. There was no optic neuritis.—Mr. HOWARD MARSH asked if Dr. Carrington intended to attempt treatment of the tumour by means of the fine aspirating needle introduced by Dr. Southey.—Dr. CARRINGTON replied that he thought this treatment the right one to be pursued. The case, however, was not his own.

Varicocele, and its Effects on the Testicle.—Mr. PEARCE GOULD exhibited two men to the Society, each presenting a large left varicocele, with the testicle on the same side much smaller than its fellow, but retaining its usual firmness, outline, and testicular sense. The one man, aged 18, had noticed the swelling in the scrotum accidentally four or five months ago. The other, aged 17, had noticed the varix for six or seven years. In neither case was there any pain or disturbance to be traced to the varicocele. Neither patient had suffered from inflammation of the testicle or any injury to the scrotum. They were both well-made, robust, healthy-looking men. Mr. Gould quoted the views of Sir James Paget and Mr. Curling, as illustrating the opposing doctrines on the question whether varicocele did or did not cause wasting of the testicle. After enumerating a list of authors who supported Curling in his opinion that atrophy of the testicle did result from varicocele, he observed that many of the cases cited in support of this assertion must be excluded on account of the traumatic origin of the varicocele; wherever there was a history of injury or inflammation, it was impossible to say that the change in the testicle was not the direct result of such injury or inflammation. Again, cases where there was no mention made of the presence or absence of these conditions were also of doubtful value. With these reservations, the alleged cases of atrophy were of three kinds; first, cases of arrested development of the testicle, illustrated by the cases shown; second, cases of very slight lessening of the size of the testicle, said by many authors to be very common: a condition of which it was difficult to be certain. Mr. Gould had never seen the left testicle larger than the right—its normal relation—when there was a large varicocele on the same side. Thirdly, there were cases of morbid and extreme softening and wasting. Although cases of this kind were recorded by Curling, Richter, Landouzy, and others, no mention had been made of the absence of previous injury or inflammation of the testicle; and they were not entirely free from doubt on that account. There was strong reason to think that varicocele might produce such wasting of the gland. Referring to the frequency of varicocele on the left side, Mr. Gould argued that neither the greater length of the spermatic vein on that side, nor its lying beneath the sigmoid flexure, nor the mode of entrance into the left renal vein, was sufficient explanation. It was maintained that the use of the valve at the mouth of the spermatic vein was to convert the direct opening into an oblique aperture, and, by lessening its size, cause the flow of blood over it to exert an aspirating effect. Many differences between varicocele and other external varices were pointed out; and the opinion was advanced, that many cases of varicocele were nævoid in character—a primary abnormal development of the veins. Mr. Gould intended to practise, in the two cases shown, the operation for radical cure of varicocele described by him in the *Lancet* of this year.—Mr. BRYANT was inclined to believe that varicocele was consequent on developmental changes at puberty. In one instance he remembered a tumour in a child aged 7, which had been termed a hydrocele, but was in reality a perfect varicocele. He had seen three or four instances of the complaint under the age of puberty, all being on the left side. Notwithstanding, however, some of the worst cases he had seen had been on the right side. The cause was obscure, and he thought the Society should be grateful to Mr. Gould for the explanation contained in his paper. The effect produced by the disease on the organ was not fully understood. Arrest of development undoubtedly occurred, and it was remarkable how the testicle redeveloped after recovery from the operation for varicocele. Mr. Bryant related the case of a gentleman, in whom, after the operation, the testicle increased in size 50 per cent., and the patient married. He was disposed to agree with Mr. Gould that arrest of growth, and not atrophy, distinguished the condition of the organ. Hæmatocele did sometimes occur, but it was always consequent on some injury, slight though it might be. The whole subject required elucidation, and he was glad the Society had taken its consideration in hand.—Dr. WALSHAM referred to the position of the valve, as described by Mr. Gould.—Mr. GOULD explained that the existence of the valve maintained a constant stagnation in circulation. A young man, he said, was exhibited that evening, in whom varicocele existed without evidence of atrophy of the testicle.

A Case of Ulceration, with Hypertrophy and Dilatation of the Colon, ending in Perforation, in a Girl aged 17.—Dr. GOODHART gave notes of this case. The patient was admitted into Guy's Hospital for enlargement of the stomach and diarrhœa. She had been ill for eight months, during which time the abdomen had been gradually enlarging, and she had been failing in health. The bowels had been irregular; sometimes constipated, sometimes loose. When admitted, she was extremely ill, very anæmic, with a distended tympanitic abdomen, in which the intestinal cells could be plainly seen and felt to be rapidly contracting. She passed, and continued to pass, frequent stools of a loose consistence, black colour, and offensive odour. The case was considered to be one of tabes mesenterica associated with adhesion, shortening of the mesentery, or twists around enlarged glands, with obstruction. Death occurred shortly after her admission, and the transverse and descending colons were found to be enormously dilated and hypertrophied, with chronic ulceration of the rectum and sigmoid flexure. The questions proposed for discussion were: 1. Whether the evident considerable hypertrophy of the bowel in some parts, and the absence of pain, which were noticed as peculiar, would be sufficient, if occurring in any future case, to prevent a mistake in diagnosis? 2. What was the primary disease? Was it a primary ulceration of the colon, followed by spasm of the sphincters, and slow accumulation; or might one suppose that there was some paralytic distension of the bowel, which might find a parallel in certain cases of dilated stomach in young persons? 3. Was there any evidence in the stomach or elsewhere to show that such an amount of hypertrophy and dilatation as existed in the colon in this case was recoverable under appropriate treatment?—Dr. HORROCKS, who had made the *post mortem* examination, described the case as one presenting much obscurity at first. The bowel was found progressively enlarged from the hepatic flexure to the rectum, and it was distinctly hypertrophied. There was no constriction. There was no evidence that straining had occurred in the life of the patient; and, for this reason, Dr. Horrocks could not wholly agree with Dr. Goodhart, that the hypertrophy was due to atony.—Mr. BRYANT suggested that the condition of the gut might be secondary to chronic intestinal obstruction, and similar to those examples of obstruction in which ulceration followed the irritation

of accumulated fæces. He detailed the history of a man who, born with imperforate anus, was successfully operated on, and had little trouble until he began to neglect the observance of hygienic rules of cleanliness, etc. At twenty-six, he died; and, on *post mortem* examination, the intestines were found to be enormously hypertrophied, the consequence of a lifelong effort to push on the accumulation of fæces. The walls were gangrenous in this case. Mr. Bryant thought Dr. Goodhart's might be a similar case. In another case, he examined a hysterical girl, who had been colotomised for a stricture which had no existence, and in whom a lumbar fistula persisted. He introduced his hand into the rectum, and found it enormously distended, hysterical constipation being the cause of the enlargement.—Dr. HENRY GREEN said he should have thought the intestine would be paralysed in tabes mesenterica. It was difficult to explain the existence of hypertrophy in chronic constipation, and he inclined to attribute this latter rather to loss of tone in the walls of the intestines.—Dr. GOODHART thought Dr. Green had misunderstood him. He did not assert that hypertrophy was a common occurrence in tabes, but increased peristaltic action was noticeable. In Mr. Bryant's case of hysteria, there was, he urged, no proof of hypertrophy offered, but only of distension. The existence of scybala was an important factor in determining the nature of the disease, since these never occurred above the stricture in intestinal obstruction.

Right Hemiplegia after Scarlatina: Embolism of the Middle Cerebral Artery: Destruction of Broca's Convolution without Aphasia: and Death from Diphtheria.—Dr. F. TAYLOR read notes of this case. The patient was aged 5, and was seized, two weeks after an attack of scarlatina, with hemiplegia of the right side. There was no aphasia; but the boy answered questions intelligently, and in long connected sentences. There was sensation in the leg, but not at first in the arm: and there were occasional attacks, apparently of the nature of convulsions. Two or three weeks later, sloughs occurred on the back of the hand and fingers; later still, the right arm and leg became œdematous; and the urine was subsequently found to be albuminous. About nine weeks after the onset of his illness, he was attacked with nasal and pharyngeal diphtheria, of which he died in a few days. At the *post mortem* examination, there was found embolism of the left middle cerebral artery, with extensive softening of the left hemisphere, involving the posterior portions of the second and third frontal convolutions, the lower parts of the ascending frontal and parietal and supramarginal convolutions, the island of Reil, the corpus striatum, and the anterior part of the inner capsule. The heart showed a few minute vegetations on the mitral valve: it was not dilated. The right kidney had two large embolic infarcts; and the right hand presented, over the abductor indicis, one large irregular ulcer as a result of sloughing, and three smaller sloughs on the fingers. Dr. Taylor called attention to the frequent occurrence of attacks of cerebral hemiplegia in connection with exanthems in children, in many of which no opportunity was afforded for demonstrating the exact manner in which the paralysis was brought about. Thrombosis of the cerebral vessels was considered to be a frequent cause; but this case showed that obstruction of the vessels might also arise from embolism as a result of an acute disorder of the heart. In relation to the persistence of the faculty of speech, it appeared, from the history, that the child had been left-handed in consequence of some enfeebled condition of the right arm, which was noticed from birth. This placed the case in the category of those which appeared to show that the speech-centre tended to be located on that side of the brain which was most educated for muscular movements. A third point of interest with the case was the occurrence of diphtheria; its late appearance rendered it probable that it was independent of the previous infection of scarlatina.—Dr. MAHOMED thought such cases were to be explained as due to dilatation of the heart, with or without adhesion. He had recently been investigating the question; and, in his own practice, a patient lately died of diphtheria, in whom dilatation existed with embolism. There was no hemiplegia; but this might have occurred.—Dr. ALTHAUS said that thrombosis and embolism were the most frequent causes of hemiplegia. He thought Dr. Taylor's case might be taken as the exception, proving the rule, that disease of Broca's convolution preceded aphasia.—The PRESIDENT remarked that the paralysis in the case under discussion differed from that after typhoid. It was due to embolism, and consequent on dilatation of the heart. He had seen [illegible] cases of scarlet fever succeeded by diphtheria.—Dr. TAYLOR said the heart in his case showed no signs of dilatation at a late period of the illness, and endocarditis also was only evident in a very slight degree. He had brought the case forward merely to illustrate the possible sequelæ to exanthems.

Professor [illegible] has been succeeded by Professor Lorenz as Rector of the University of Vienna.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

WEDNESDAY, NOVEMBER 17TH, 1880.

W. A. N. CATTLIN, F.R.C.S., President, in the Chair.

Serous Cysts.—The PRESIDENT described a somewhat uncommon case of two separate serous cysts, complicated with an alveolar abscess, all in different parts of the superior maxillary bone, and each unconnected with the antrum. The palate on the right side was enlarged, and the first right upper molar, and the right and left upper lateral incisors, had been removed. Over this latter spot were two small openings in the alveolar process, through which flowed a clear serous fluid, very much resembling glycerine. On examining the two incisors, it was found that they had both been stopped with gold, and that their roots were more or less diseased; and, at the end of one of them, a dark concretion resembling tartar had been deposited. The molar tooth had a moderately large cavity in it, with the pulp exposed. The patient, aged 16, of delicate constitution, applied for advice on account of an alveolar abscess on the right side, near the first upper molar, which had an amalgam stopping; and the symptoms indicated that the stopping was pressing upon the sensitive pulp, as proved to be the case. The stopping was removed, and the pulp treated with arsenious acid with complete success; but the enlargement of the palate still continued, and the tooth was consequently extracted. The antrum was carefully examined, and a probe passed, when it was found, as is frequently the case, that the palatine fang had penetrated through the floor; but no discharge of any kind followed, and the part readily healing supported the diagnosis that no disease existed in the antrum. On pressure of the right side of the palate, the bone was felt to yield, and a glairy fluid passed from an opening in the alveolus above the right upper lateral incisor, and a similar discharge from an opening over the left one; but pressure upon the palate did not increase the flow as on the right side. On the right side, a probe could be freely passed for about an inch upwards and downwards, and the cyst appeared to lie partly on the external plate of the superior maxilla, and between the plates of the palatine process. On injecting warm water, it merely filled the cyst, and could not be forced into the antrum; nor, reversely, would any pass by the opening made in the floor by the palatine fang of the first molar. On the left side, water was similarly injected, and proved that the cyst was separate from that on the right side, and also unconnected with the antrum. The patient being about to leave England, his friends wished Sir James Paget's opinion to be taken, who pronounced it to be an extremely rare example of cystic disease, and recommended that the two upper lateral incisors should be extracted, and further treatment deferred until the patient's return. The President did not remember ever having seen a case in which the discharge from the cyst passed by a pulsating movement in jerks, as it did on both sides in this particular instance.

Cases of Neuralgia dependent upon non-erupted Teeth.—Mr. AUGUSTUS WINTERBOTTOM stated that the diagnosis of the true seat of nerve-pain was sometimes attended with extreme difficulty, and often, notwithstanding our utmost endeavours, its real cause remained buried in obscurity. He narrated particulars of three cases of facial neuralgia as bearing upon the subject. CASE I. A young woman, aged 21, consulted him for severe neuralgic paroxysms, affecting principally the left side of the face. On examination, a second bicuspid tooth was found affected with caries, which was extracted. He saw her next twelve months afterwards, looking wretchedly thin and ill; and she stated that she had suffered continuously more or less since the operation. On inspection, a small fistulous opening, situated in the position lately occupied by the second bicuspid, was found. On exploration with a probe, the sinus appeared to be about an inch and a quarter in depth, with a substance closely resembling dead bone at the bottom. The sequestrum, however, did not appear movable, but an offensive, thin, sanious fluid could be pressed out from the antrum, which was slightly distended on the affected side. The foreign body not being loose, he determined to attempt its solution by painting the exposed gum-bone with sulphuric acid, whilst tonics were administered, and change of air recommended. The patient's health did not improve, and an operation was rendered imperative. Under the influence of ether, he introduced into the sinus a long, narrow-bladed pair of forceps, and, after some manipulation, grasped a small roughened semi-detached fragment; and was surprised, on withdrawing it, to find what he considered to be the partially developed germ of the second premolar tooth. The wound healed rapidly, and the pain never returned. In this case, it seemed probable that periosteal mischief commenced around the fang of the decayed second bicuspid, and was from thence transmitted by continuity of tissue to the sac of the non-erupted premolar. That structure once becoming affected with destructive inflam-

mation, the germ within it perished, and became a source of irritation. —CASE II. A lady, about forty years of age, complained of severe and almost constant neuralgia, affecting the left upper jaw between the centrals and bicuspids, which commenced three years prior to consulting him, and had then noticed that the left upper central incisor was loose. On examination, the left upper central was found raised in the socket, movable, and the gum congested. The tooth was removed, and the pain subsided. She returned in about eighteen months, having been free from suffering in the interim, but annoyed by a continual discharge of purulent fœtid fluid proceeding from a small fistulous orifice over where the tooth had been extracted. On probing, a piece of exposed and apparently carious bone could be detected, seemingly immovable. This, by the aid of elevators and strong stump-forceps, he eventually succeeded in dislodging, when it was found to be an upper canine, carious, with the pulp-cavity freely exposed. The wound readily healed, and the patient recovered her health.—CASE III. This case was of far greater severity than the two previous ones, and demonstrated the fact that discovery and removal of the first cause did not always permanently cure the disease. A man, aged 40, was admitted into St. George's Hospital, suffering from intermittent facial neuralgia. He was first under the care of Dr. Barclay; but, medical treatment failing, it was determined to try the effect of nerve-stretching; and Mr. Pollock was consulted, who considered it desirable, before resorting to such severe measures, to have the man's mouth examined by a dental surgeon. He found the patient in a truly pitiable condition, intense neuralgic paroxysms coming on regularly every five minutes. The attacks always commenced at one spot, nearly opposite the canine eminence, and from thence spread over the right side of the face and head; his eyes streamed with tears, his face became flushed and congested, and his features assumed an expression of hopeless agony, quite painful to behold. He stated that the disease had been active for twelve years, during which time he had undergone all kinds of treatment, and had latterly been compelled to throw up his employment, had lost all appetite, and was unable to sleep. On examining the mouth, nothing abnormal presented itself; the upper jaw was edentulous, and the gums were firm and healthy. He had parted with all his teeth in the hope of obtaining relief; and, on closer inspection with a magnifying mirror, a small fistulous orifice, no larger than a pin's head, was discovered opposite the position of the right central incisor. On pressure, a little glairy fluid could be squeezed out; and on probing the sinus, about half an inch long, a small smooth round body could be felt. Mr. Winterbottom made an incision about an inch in length, extending from a point corresponding to the left upper central to the right canine socket. The tissues were freely divided to the bone, and, with a strong pair of cutting forceps, a small portion of the alveolar process was excised; and, after some difficulty, the rounded object was grasped and dislodged, which, on examination, proved to be a canine tooth, partly disorganised. It was lying with its long axis parallel to the lower margin of the upper jaw, and, with the exception of a small part of its crown, was completely imbedded in the alveolar process. The abnormality of its position fully accounted for non-eruption, and its nearness to the surface was due to the absorption of process following the extraction of the teeth. At the end of three weeks, the patient was discharged "cured", and for nine months remained free from pain. He again entered St. George's Hospital, one year from the date of his previous admission, and medical treatment was again, but ineffectually, resorted to; and the surgeons, after consultation, determined to excise a portion of his upper jaw. He was placed under ether, and Mr. Pollock removed a piece of bone from the superior maxilla, comprising that portion corresponding to the interval between the left central and canine teeth inclusive. The attached gum and periosteum were at the same time swept away, leaving a chasm in the mouth about an inch and a half long, half an inch wide, with its deeper portion opening up the floor of the nares and interior of the antrum. The excised mass revealed nothing abnormal. The poor man's condition was in no way improved, but rather impaired, the neuralgic paroxysms becoming more frequent and severe, being excited by every change of temperature. At this stage, Mr. Winterbottom was again requested to see the patient, and he determined to thoroughly explore the unmutilated portions of the superior maxilla. The patient being under an anæsthetic, he made deep perforations at close regular intervals all around the untouched alveolar margins, but no resisting material was met with at all resembling enamel. The next step consisted in an operation for nerve-stretching performed by Mr. Pollock, who cut down upon the second division of the fifth in the position of its emergence from the upper jaw; and, having seized the main trunk, applied to it considerable traction. This treatment was followed by no improvement, and eventually the patient returned home in a worse plight than when he set out, and he had since been unable to gather any further particulars. The deductions to be drawn from these cases were, that careful microscopical examination should be always made of the mouth and gums; and that the presence of diseased bone alone did not usually produce persistent neuralgia; and that, when a sinus was found in the mouth leading down to exposed roughened material (coincident with continually recurring neuralgic paroxysms), it was the surgeon's duty to cut down upon and investigate the true state of affairs.—The PRESIDENT thanked Mr. Winterbottom for his paper. He narrated a case somewhat similar to that described by Mr. Winterbottom, of a lady, aged 40, the mischief being caused by a non-erupted healthy upper central incisor, the removal of which caused all cessation of neuralgic pain. He always, in such cases, used trephines of various sizes, in preference to cutting-forceps, with the teeth made comparatively large to cut quickly.—A discussion followed, in which Mr. Hamilton Cartwright, Mr. Edgelow, Mr. Bartlett, and Mr. Keene took part.

The PRESIDENT brought forward a remarkable case of serous cysts.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, NOVEMBER 19TH.

JOHN S. BRISTOWE, M.D., President, in the Chair.

On the Action of Disinfectants on Sewage and the Living Organisms contained therein.—Dr. J. W. TRIPE began a paper on this subject, by explaining that he used the term "disinfectant" in the popular sense. The first set of experiments were made in the spring of 1880, by adding 2 per cent. of the disinfectant employed to 4,000 grains of offensive sewage, teeming with bacterioid and infusorial life. In the second set, which were commenced near the latter end of October, the same quantity was employed; but one drachm of fresh beef, finely shred, was put into each 4,000 grains of sewage, and taken out at the end of three days. In the third set, which was begun about three weeks since, unmixed sewage only was employed. The disinfectants used were those ordinarily sold. The second set of experiments were made by the addition, at first, of one four-hundredth part of the disinfectant; and, when it was found that this amount did not remove the offensive smell, or destroy the living organisms, additional quantities were added until the proportion of one of the disinfectant to one hundred of sewage was reached—this being the strongest mixture likely to be found in drains or sewers when disinfected. As a result of the effect of heat on sewage, infusoria became more lively as the sewage warmed; but, at 90° Fahr., their movements became slower; at 95°, several ceased to move; at 110°, all had died. The bacteria were not affected until 115° Fahr. was reached, when the bacilli and vibrios became sluggish; at 125°, all these had ceased to move; at 130°, the smaller bacteria were sluggish; and, at 140°, had ceased to move. On the fourth day, a very few of the smaller bacteria were seen to be active; but none of the bacilli, vibrios, or spirilla. The chemical disinfectants used were: carbolic acid, No. 5; Burnett's fluid; chlorine water *(P.B.)*; solution of chlorinated lime *(P.B.)*; euchlorine; sporokton; hydrochloric acid; chloralum; sanitas; and Condy's fluid. Sanitas and carbolic acid powder were also experimented on. The first seven were used in the first set of experiments: whilst chloralum, sanitas, and Condy's fluid were selected instead of chlorine and chlorinated lime solutions. The experiments were made at different times, but each set was carried out simultaneously, so as to be comparable. When carbolic acid, No. 5, was mixed in the proportion of 2 per cent., all smell was removed, and all living organisms destroyed. As long as twenty-one days afterwards, there was no return of smell or of bacterial life. When ten parts of carbolic acid were added to a mixture of sewage and beef, the infusoria, but not the bacteria, were destroyed, and the smell removed. When Burnett's fluid was mixed in the proportion of 2 per cent., the same result followed as in carbolic acid; in the other proportion, the effect was less marked. Euchlorine, when added to sewage in the proportion of 2 per cent., removed offensive smell, and destroyed infusoria. In the second set of experiments with sewage and beef solution, a mixture of 10 parts to 4,000 had but little effect. When sporokton was added in the proportion of 2 per cent., no living organism was detected. In the second experiment, the smell was but little altered by a strength of 10 parts in 4,000 of the sewage and beef solution; but, when the sporokton was increased in strength to 1 in 300, the infusoria died, but the bacteria were as active as ever. Solution of chlorine *(P.B.)* and solution of chlorinated lime *(P.B.)* did not appear to have much action. Chloralum, when added in the proportion of 10 to 4,000, did not materially affect the smell; but, on the second day, there were fewer living organisms than in any other solution, except in those of carbolic, and hydrochloric acid, and Burnett's fluid. Condy's fluid, when added in the proportion of 20 parts to 4,000 of sewage, completely failed to remove smell or destroy infusoria. In the proportion of 1 in 50, the offensive smell was removed, and the movement of the bacteria-germs was stopped. Sanitas, added

in the proportion of 10 to 2,000 of sewage and beef, produced but little alteration in the smell; with 1 per cent. of sanitas, the smell was much abated; but the living organisms were more abundant than even in the Condy's fluid of the same strength. Sanitas powder was more energetic in its action than sanitas fluid.—In the discussion which followed, Dr. BUCHANAN BAXTER, Dr. BUCHANAN, Dr. ALFRED CARPENTER, and Mr. WYNTER BLYTH took part.

REVIEWS AND NOTICES.

TRAITÉ D'ANESTHÉSIE CHIRURGICALE; CONTENANT LA DESCRIPTION ET LES APPLICATIONS DE LA MÉTHODE ANESTHÉSIQUE DE M. PAUL BERT. Par le Docteur J. B. ROTTENSTEIN. Paris: Germer Baillière. 1880.

Dr. ROTTENSTEIN is already favourably known in this country by his excellent treatise on *Caries of the Teeth*, in conjunction with Leber, which has been translated by the American Chandler, and is accepted as a valuable standard research on the subject, as well as by his practical work on the subject of the *Composition and Character of Dentifrices*, favourably received at the Odontological Society of Great Britain and elsewhere. The subject of surgical anæsthesia has always been one especially interesting to dentists, probably because they, among professional men, are especially called upon to perform many times in a day a minor surgical operation which is one of a very painful character, and in which people in general are especially glad to have the advantage of anæsthesia. Dentists have played a large part in the practical history of anæsthetics. Horace Wells, now generally recognised as the real inventor of anæsthesia by ether, was a dentist; and it is to dentists that we owe the introduction of protoxide of nitrogen as a surgical anæsthetic. Dr. Rottenstein may claim, therefore, for his profession a large part in the development of this extremely important subject, and he is following in the useful path in producing this important monograph.

The subject is dealt with very completely. The first chapter includes a thorough investigation of existing chemical views on the principle of anæsthetic agents; protoxide of nitrogen especially is fully considered, and its action on the circulation and general physiological action on the economy is elaborately discussed, including the most recent researches of Golstein and Zuntz, conducted in the laboratory of Pflüger. They have shown that a complete narcosis is only produced and maintained with protoxide of nitrogen in the absence of oxygen; that is to say, it is the combination of asphyxia with the respiration that produces complete narcosis; and they have shown that the pressure of blood, and the frequency of blood and the heart-beat, change under the influence of the respiration of protoxide of nitrogen in the same manner as under the frequency of asphyxia by suffocation. M. Paul Bert has, however, in his well-known researches, laid before the Academy of Sciences, on the influences of respiration under considerable atmospheric pressure, succeeded, by making the patient breathe in an apparatus where the pressure is carried as high as two atmospheres, in enabling him to respire a mixture of protoxide and oxygen under such pressure as enables him to obtain complete anæsthesia, while maintaining in the blood the normal quantity of oxygen. To enable a sufficient quantity of the gas to penetrate into the organism to produce a complete insensibility, it is, according to M. Bert, indispensable that the tension of the gas be equal to one atmosphere. It is sufficient to augment the pressure under which respiration of the gas is carried on by one-fifth of an atmosphere, and to cause the patient to inspire a mixture of five-sixths of protoxide of nitrogen and one-sixth of oxygen, to obtain complete anæsthesia without asphyxia. For this purpose, as is known, a special apparatus has been constructed, which is formed of a diving-bell, under which operations are carried on with this method of mixed anæsthesia for prolonged periods of an hour or more—the operator, the patient, and his assistant being all enclosed in the pressure-chamber. M. Péan, M. Labbé, and other surgeons, have, during the last season, performed a considerable number of operations by the method of M. Paul Bert; and Dr. Rottenstein, who, has given great attention to this subject, describes it at great length, and gives his own practical experience in the matter. These parts of his book are especially new and full, and will be read with great interest by English readers, to whom the subject is but little known. The other chapters, on the application of surgical anæsthesia to ocular, dental, and obstetrical surgery, the examination of malingerers, the employment of combinations of ether and chloroform, the methods of local anæsthesia, and a discussion of the accidents produced by anæsthetics, are all dealt with very carefully, and with a thorough investigation of available modern authorities. This treatise is the most complete which has yet been published on the subject. It is thoroughly scientific in its conception, and thoroughly practical in its execution; and Dr. Rottenstein is to be congratulated on having produced a monograph which has no rival of its kind, and is likely to remain of permanent value in the history of the subject.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

DUROLEUM (HARD OIL).

WE have received from Messrs. Ferris and Co., of Bristol, specimens of duroleum (hard oil), a neutral solid hydrocarbon, manufactured from petroleum; and of duroleum combined with a variety of medicinal preparations, such as carbolic acid, belladonna, boracic acid, calomel, chalk, galls, galls and opium resin, sabine, sulphur, turpentine, zinc, etc.

From an examination of duroleum, and the compounds thereof, we are disposed to recommend it strongly to the notice of the profession, as it is free from taste and smell, does not turn rancid, and can confidently be relied on as a base for ointments of all kinds. In one way, it is preferable to vaseline, as it does not possess that peculiar viscidity which makes the latter objectionable. Messrs. Ferris and Co. are prepared to supply duroleum in combination at the prices usually charged for *B.P.* ointments.

THE THERMHYDRIC VENTILATING HOT WATER OPEN FIRE-GRATE.

THIS invention of Mr. H. Saxon Snell consists of an open fire-grate, surrounded on three sides and on top by a wrought-iron chamber containing water, which, when warmed by the fire, circulates through upright coils of pipes placed on each side. The hearth is made of iron, and the whole space below the grate and pipes is formed into a chamber for the admission and collection of air from the outside. The outer fresh air thus admitted passes upwards, and, impinging against the sides of the hot-water chamber and pipes, becomes thoroughly heated, without being burnt, before entering the room. The whole is enclosed with a handsome case, surmounted by a vase containing water, and is so designed as to be easily adapted either for hospitals, infirmaries, drawing-rooms, dining-rooms, entrance-halls, large public rooms, or churches; but architects may have casings and urns constructed in accordance with their own designs. Cases are not, however, essential, and, when dispensed with, the apparatus is less expensive. The obvious advantage possessed by this grate is that, unlike all other such inventions, the air cannot be burnt or be heated above the temperature of boiling water; and that the water contained in the vase being slightly warmed, it evaporates, and thus keeps the air of the room moist. The heating power of these grates is enormous, and their first cost is thus likely to be soon repaid by the annual saving of fuel. When used in infirmaries, they are made with fires back to back, and with descending flues, so as to stand in the centres of the wards. These grates burn the anthracite smokeless coal. They are supplied by Messrs. Potter and Sons, 298, Oxford Street, London, W.

WEST BROMWICH. The state of affairs described by Mr. Manley in his last annual report as existing in this district is hardly satisfactory; and it is surprising that the mortality statistics of the place have not long ago roused the local authority from its sanitary apathy. The death-rate for 1879 was 23.3 per 1,000, against 23.0 in 1878 and 21.6 in 1877. Of the total number of 1,251 deaths, 669, or no less than 53 per cent., occurred in children under one year of age: a proportion which Mr. Manley is hardly justified in describing as a "result, with our surroundings, satisfactory", or in passing over without some attempt at explanation. As no tables are given in the report, it is impossible to guess the causes which have contributed to so terrible a sacrifice of infant life; but the subject is clearly one for close and sustained local investigation. The total number of deaths recorded from zymotic disease was 223, against 269 in 1878. The high rate (4.1 per 1,000) is reported as entirely owing to an epidemic of scarlatina and whooping-cough in the earlier months of the year. West Bromwich can hardly hope to present a more favourable bill of mortality whilst it has no infectious hospital accommodation, no mortuary, and no disinfecting character; whilst its main drainage is uncompleted, and pure water is unprovided; whilst buildings continue to be built on insanitary sites, and the model by-laws are not yet adopted.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 4TH, 1880.

RECENT STUDIES IN THERAPEUTICS.

VII. JABORANDI AND PILOCARPINE.

THE word Jaborandi, or Jamborandi, is used in Brazil to denote any tree or shrub possessing active sudorific and dialagogue properties; and is applied to several plants having very different affinities: a species of pepper—*Piper Jaborandi*—being especially so designated. Practically, we now employ the term Jaborandi to denote the leaves and young shoots of *Pilocarpus pinnatifolius*, a member of the rue family, and a native of Brazil. It is a shrub about four or five feet high, flowering in spring and early summer. It was first found in the southern provinces of Mato Grosso and St. Paulo, and is now obtained chiefly from the neighbourhood of Pernambuco, where it is found in the forest clearings, and on the slopes of the hills. It has long been employed by the natives as a remedy for snake-bite, and in fevers of all kinds. It was introduced to the notice of the medical profession in Europe by Dr. Coutinho of Pernambuco, who gave specimens of the drug to the late Professor Gubler, by whom it was tried at the Beaujon Hospital in Paris. This was in the early part of 1874, and since then its properties—clinical and physiological—have been fully investigated by Ringer, Gould, Burdon-Sanderson, Vulpian, Murrell, Langley, and others. The alkaloid pilocarpine was extracted almost simultaneously by Martindale, Gerrard, Hardy, and Byasson. It is an amorphous body; but is capable of forming, with acids, crystalline salts soluble in water, alcohol, and chloroform. The nitrate and hydrochlorate of pilocarpine are now more commonly employed than the drug itself. Besides the alkaloid, jaborandi contains a volatile oil, various salts, and other substances of little or no importance. It is possible that there may be another active principle, but as yet it has not been isolated.

When an infusion of from a drachm to a drachm and a half of jaborandi is given to an adult, the face, ears, and neck, become in a few minutes deeply flushed, and soon drops of perspiration break out over the whole body, whilst at the same time the mouth waters. The perspiration rapidly increases, the sweat running down the body and soaking the clothes; whilst the salivation becomes profuse, the saliva pouring from the mouth in an almost continuous stream. This condition continues for from two to five hours. These effects are induced with much greater certainty by putting the patient to bed between the blankets, and giving him a hypodermic injection of half a grain of either the nitrate or the hydrochlorate of pilocarpine, the sweating usually commencing in from three to five minutes. Jaborandi promotes other secretions, as the lacrymal, nasal, bronchial, and intestinal, though to a far less extent than the salivary and cutaneous. The eyes water slightly, and sometimes there is a little running at the nose, and a slight loose cough. Nausea and vomiting are of common occurrence; but they are rarely distressing, and may usually be obviated by directing the patient not to swallow the saliva. Sometimes there is a little depression, but it is very transitory. It is often said that jaborandi is a diuretic, but this is not the case; it is true that, after the administration of a full dose, the patient almost invariably experiences a desire to pass urine, but this is due to contraction of the bladder, and not to increased action of the kidneys. It is said, too, that jaborandi relaxes the bowels, but this is rarely observed. There is not unfrequently a little frontal headache, but this soon passes off, and then the patient becomes drowsy and falls comfortably asleep. After a full dose the sight is a little dim, though without any alteration in the size of the pupil. It is probable that jaborandi stimulates the pancreas, but of this we have no positive evidence. There is reason, too, to believe that jaborandi increases the flow of milk, but here again it is difficult to speak with absolute certainty. Pilicier noted in a dog with a gastric fistula a great increase of the gastric juices. Rutherford's recent experiments have shown that jaborandi is a feeble hepatic stimulant.

Occasionally there is little or no perspiration; and more frequently salivation is absent; but when the drug fails to cause perspiration, it acts more powerfully on the salivary apparatus, and *vice versâ*. Tincture of jaborandi in two-drachm doses was given by Ringer and Murrell to sixty-eight patients, who took it at their own homes at bed-time. In fifty-nine of these cases, both perspiration and salivation occurred; in five, perspiration without salivation; and in four, salivation with perspiration. In by far the greater number of observations both perspiration and salivation were profuse, but sometimes the perspiration or salivation, or both, were slight. It was found, too, that the effects were less marked in those exposed to cold, than when the perspiration was promoted by warm blankets, etc. When administered on a full stomach the drug is more slowly absorbed and the effects are less constant.

The sweat produced by jaborandi is often enormous in quantity, amounting to a half a pint or more. Usually, the chlorides are in excess, the carbonates and phosphates are present in very minute quantities, whilst urea is found in more than five times its normal proportion, the amount eliminated in a sweating being estimated at from ten to fifteen grains. The saliva secreted may measure a pint or even a pint and a half. It has been shown by Luchsinger, Marmé, and Nawrocki, that pilocarpine produces sweating by its action on the peripheral nervous apparatus, and not by its influence on the sweat-centres in the cord; and Langley finds that the salivation is the result of a direct action on the salivary gland itself, or its nerve-peripheries, as it is produced even after section of all the salivary nerves. The influence on the temperature is comparatively slight; it is stated by some observers that there is a primary rise of from one to two degrees, but more commonly there is a slight fall, probably due to the heat lost by increased evaporation and radiation. There is generally quickening of the pulse, often of forty or fifty beats in the minute, accompanied by a slight falling off in strength. The flushing of the face resulting from jaborandi is due to dilatation of the arterioles; and the increased rapidity of the heart's action is probably owing to the same cause. In frogs, curiously enough, jaborandi does not quicken the heart, but first retards it and then arrests it in diastole. Langley has shown that in all probability it stimulates the intracardiac inhibitory apparatus. The subcutaneous injection of pilocarpine produces in frogs powerful tetanic symptoms, comparable to those resulting from strychnia. Tweedy, as the result of a large number of observations, found that jaborandi, or pilocarpine, locally applied, caused contraction of the pupil, tension of the accommodative apparatus, with approximation of the nearest and farthest points of distinct vision; and amblyopic impairment, from diminished sensibility of the retina. These effects are of short duration; the approximation of the near and far points becoming apparent in about a quarter of an hour, and reaching its maximum in forty minutes. It then gradually subsides and entirely passes off, the eye resuming its normal condition in about an hour and a half. These statements are fully confirmed by the independent observations of Macnaughton Jones. Pilocarpine is now not unfrequently employed as a substitute for eserine.

It is a noteworthy fact that children are far less readily affected by jaborandi than are adults; and they take comparatively large doses before perspiring or becoming salivated.

A very marked antagonism exists between atropia and jaborandi. Atropia dilates the pupil, jaborandi contracts it; atropia dries the skin and mouth, whilst jaborandi induces salivation and perspiration. An

hypodermic injection of a hundredth of a grain of atropia will immediately stop the perspiration and salivation of jaborandi. The antagonism can be readily demonstrated on the frog's heart. The animal having been pithed and the heart exposed, the addition of a few drops of a solution of pilocarpine first retards and then arrests it in diastole. If, now, a drop or two of atropia solution be applied, the action almost immediately recommences, and continues with unabated vigour. It is to be noted that in some respects there is in man not only no antagonism between atropia and jaborandi, but that they actually correspond. Thus, both produce flushing of the face, frontal headache, and a desire to pass urine; and both affect children less than adults. Atropia removes not only the antagonistic effects of pilocarpine, but likewise the symptoms common to both. We give jaborandi to patients with perfect confidence, knowing that at any moment, by the injection of a minute dose of atropia, all the symptoms may be immediately arrested.

It has been shown by Ringer and Murrell that duboisia, pituri, and muscaria, all antagonise the effect of jaborandi on the frog's heart.

THE INFLUENCE OF MUSIC ON THE CIRCULATION.

A CORRESPONDENT writes:—Music has in all ages played an important part in the social, domestic, and military history of nations. From the earliest times, it has been employed to "minister to a mind diseased". David was employed to remove the mental derangement of Saul by the power of his harp. Aristotle regarded music as one of the most powerful means of education. Plato regarded it as necessary that three years (thirteenth to sixteenth) should be devoted to acquiring a knowledge of music. Theophrastus and Pythagoras recommend music for the cure of many diseases other than those of purely nervous origin. Everyone knows the effect of martial and national music. It has remained for modern physiology to investigate the effects of musical sounds from a scientific standpoint. It is well known that stimulation of any organ of sense, or sensory nerve, profoundly influences the nervous system, and, through this, the respiratory, circulatory, and other systems of the body. Couty and Charpentier, under Vulpian's direction, investigated the effect of stimulation of the organs of touch, taste, hearing, and smell, on the vascular system. These experiments were made on curarised dogs. They found that the heart's action was sometimes retarded, at others quickened, whilst the blood-pressure was always raised six to eight *millimètres*. J. Dogiel has recently experimented on the effects of music on the vascular system of animals (dog, cat, rabbit) and man. The animals were curarised, and the blood-pressure was measured by a mercurial manometer placed in connection with the carotid artery. The terminations of the auditory nerves were excited by a tuning-fork of known pitch, a corresponding resonator being placed in the ear of the animal. In other cases, certain notes or distinct melodies were played on a violin, clarionette, or piccolo-flute. Dogiel found that the number of heart-beats was increased, and that this was more obvious when the animal was slightly poisoned with strychnia. The effect varied with the breed of dog employed. As regards the blood-pressure, it varies with the pitch and loudness of the note; and it rose in some cases to twice the normal amount. The experiments on man were made by placing an arm in a modified Mosso's plethysmograph—an instrument which measures the amount of blood in a part by the amount of fluid displaced. With this instrument, it is easy to write off the changes of volume of an organ. The effects produced were well marked. The higher the pitch, the greater the effect; though the effect also varied with the *timbre* of the note or music. Marked effects were also produced on the number, force, and rhythm of the respirations. The following are the conclusions drawn by Dogiel as the result of his experiments.

1. Music has an influence on the circulation, both of men and of animals. 2. The blood-pressure rises at one time and falls at another. These variations depend chiefly on the influence of the auditory stimulation on the medulla oblongata, which seems to have a connection with the auditory nerve. 3. The action of musical sounds and whistling on animals and man is chiefly expressed by acceleration of the cardiac contractions; hence the automatic cardiac ganglia act more energetically. 4. The variations in the circulation coincide with the changes in the respiration, although they may be observed to take place independently of the variations in the respiration. 5. Strychnine increases the action of auditory impressions on the circulation; while curare, chloral-hydrate, alcohol, and morphia (in a certain stage of the narcosis) diminish it. 6. The variations in the circulation are dependent on the pitch and loudness of the tone, and also on its *timbre;* but they depend, also, on the individual constitution of men and animals; and, in the case of the former, the nationality plays an important part.

These results are just what might have been expected from a consideration of our knowledge of the effects of stimulation of other sensory nerves. These facts confirm the truth of the views of Aristotle, Plato, and Pythagoras as to the necessity of the cultivation of music by children; and they indicate that music may be useful as well as injurious in certain diseased conditions in man.

SCHOOL-SHIPS FOR BOYS OF THE UPPER AND MIDDLE CLASSES.

THERE are in this country, and especially in our large towns, a considerable number of children belonging to the upper and middle classes of society, who are of scrofulous and nervous constitution, and who break down from time to time, particularly when they are subjected to any educational pressure. For such children, it would seem that a genuine ocean-climate, not the mixed sea-air that is to be obtained in our coasts—although that, too, is often eminently beneficial—but the singularly invigorating atmosphere that is to be found at a distance of not less than thirty miles from land, is what is most likely to re-establish health. The experience of innumerable invalids, who now take long voyages in search of restorative influences, puts it beyond doubt that ocean-life does work remedial effects that are not otherwise to be secured. The entire change of scene, and the facilities for being much in the open air, which life on ship-board affords; the great equability of the temperature at sea; the habitual respiration, when on deck, of air free from organic and inorganic impurities, such as floating particles of dust and carbon, but saturated with saline constituents; together with the sedative influence of a comparatively humid atmosphere, with high barometric pressure, and the bracing effects of sea-breezes and of changes of climate in passing through different latitudes, exert marvellous effects in arresting the progress of various maladies, and in giving tone to the system generally. These advantages might, we think, be obtained for children of the tendencies we have indicated, and for those who are threatened with phthisis, or who are recovering from pneumonia, pleurisy, joint-disease, and nervous affections; while, at the same time, education might be carried on, at least to a moderate extent. Were an approved and commodious ship fitted up in a suitable manner, and officered, not only with a navigating contingent, but with medical officers of experience and character, with teachers of ability and judgment, and with competent matrons and nurses, an opportunity would be afforded of sending delicate children on sea-voyages, from which they would reap incalculable advantage. The visibly admirable effects of a few cruises in school-ships of the kind we have suggested, would soon establish the system in public favour. School-ships might be made practically as safe as our public schools on land—that is to say, as regards danger to life from misadventure; for, of course, as regards the more subtle dangers of disease, they would be far safer than any public school can possibly be. Medical men would consider it a boon to have a school-ship, under thoroughly trustworthy management, to recommend to the parents of their little patients; and would confidently expect to see one voyage work wonders in judiciously selected cases. Many who went away sickly and debilitated, would come back hardy and robust. Perhaps some one of our great shipping firms may think it worth while to try the experiment of establishing a school-ship for boys of the upper and middle classes.

FILARIA DISEASE.

THE parasitic theory of the causation of elephantiasis has been subjected during the last two years to a considerable amount of criticism, favourable and unfavourable. It has been accepted by some, and those the best acquainted with tropical disease, as supplying the key of what before was mysterious and a sealed book; others, again, have suspended judgment in the matter, considering the evidence not yet complete; while a third section, including eminent pathologists, such as the late Dr. Tilbury Fox, deny it altogether. In the eighteenth issue of the valuable half-yearly medical reports of the Chinese Imperial Maritime Customs, just received from Shanghai, Dr. Manson of Amoy, who is well-known as one of the most earnest workers in this field of pathology, gives a very striking account of his further researches into the question. Perhaps the most remarkable of his results has been the discovery of the periodicity observed by the embryo of Filaria Bancrofti in the blood.

He observes that it had always seemed strange to him that the filaria sanguinis hominis had escaped observation in the blood, until Lewis found it there in 1872. "One would think there were hundreds of workers in India, and in different parts of the tropical world, who must have searched the human blood in the aggregate thousands of times; and, notwithstanding this, the parasite, which in some places is present in every tenth individual, was overlooked, or never found for so many years". The explanation of this Dr. Manson now offers. Most workers with the microscope pursue their investigations during the hours when the light is good, *i.e.*, during the day. Dr. Manson shows that this is the wrong time to search for filariæ. Finding that different results were obtained by his assistants according as they worked during the day or after dark, he made a systematic examination every four hours of several patients, with the view of ascertaining if this periodicity was maintained in every case. Examination of the patients in this way showed that, unless there is some disturbance, as fever, interfering with the physiological rhythm of the body, filaria embryos invariably begin to appear in the circulation at sunset, and their numbers gradually increase till about midnight; during the morning they become fewer by degrees, and by nine or ten o'clock in the forenoon it is a very rare thing to find one in the blood. Until sunset they appear to have completely deserted the circulation, but with the evening they come again, to disappear in the morning, and so on with the utmost regularity every day, and from day to day. The circle is completed every twenty-four hours, and there are no longer spells of absence than from morning to evening. For the meaning of this, Dr. Manson thinks we have not far to look. "The nocturnal habits of filaria sanguinis hominis are adapted to the nocturnal habits of the mosquito, its intermediary host, and is only another of the many wonderful instances of adaptation so constantly met with in nature".

The conclusions at which Dr. Manson arrives, after his study of the subject, are the following, which deserve serious attention. The parent filariæ live in the lymphatics. This is proved by their young and ova being found there even when absent from the blood. They do not live in the glands, but in the lymphatic trunks on the distal side of the glands. (Lewis and Bancroft found them in tissues some distance from any glands.) They are oviparous. The eggs are carried by the lymph-current to the glands; and, being too large to pass ($\frac{1}{150}'' \times \frac{1}{750}''$), they are arrested there till hatched. After hatching, the free embryo passes along the lymph-vessels and enters the general circulation. Resting in some organ during the day, it circulates with the blood during the night; whence the mosquito abstracts it, and acts as its intermediary host. In certain cases, the ova or embryos produce obstruction of the lymph-circulation through the glands, either directly by their size, or indirectly by causing inflammation. If the obstruction be partial, varicosity of glands and of afferent lymphatics result; but by means of the anastomoses the lymph-circulation is continued, carrying the embryos with it into the blood. Lymph-scrotum, or chyluria, or varicose groin-glands, with hæmatozoa, are therefore the symptoms of partial obstruction of the lymphatics. If the obstruction be complete, one or other of two things happens. *a*. The accumulating lymph so distends the vessels that they rupture, and a lymphorrhagia results, which is more or less permanent. In this case, the lymph does not quite stagnate; but, being able to circulate, though in a retrograde manner, it remains fluid. The symptoms of this form of obstruction are, therefore, lymphorrhagia from scrotum or leg, varicose glands, and filaria-embryos in glands, and perhaps in discharged lymph, *but none in the blood*. *b*. If the lymphatics fail to rupture, there is a complete stasis of lymph, and excessive accumulation in the tissues on the distal side of the glands; solidification of the glands and tissues, and elephantiasis, result. No embryos are found in the blood, as none can pass the glands; and the parent worm or worms probably die choked, so to speak, by the stagnant and organising lymph and their own young. Consequently, in pure elephantiasis, as a rule, no embryos can possibly be found in the blood or in the lymph of the glands.

DR. ALFRED CARPENTER will deliver his lecture on Fog and Smoke at the Society of Arts on Thursday next, at 8 P.M.

PROFESSOR VON ARLT has been elected President of the Imperial and Royal Medical Society of Vienna.

INTELLIGENCE reaches us of an epidemic of enteric fever, due to infected milk, at Worthing, of which we trust next week to be able to report particulars.

THERE is much sickness in Rome. An applicant to a community of French sisters, who attend the sick, for a nurse, was informed that every sister was already engaged.

A COMMITTEE is being formed in Paris, to present M. Henri Milne-Edwards, the celebrated naturalist, with a gold medal. M. Edwards attained his eightieth year last month, having been born at Bruges on the 23rd October, 1800.

THE Royal Albert Hall Amateur Orchestral Society will, on December 18th, give a concert for the benefit of the French Hospital and Dispensary, at which the President of the Society, the Duke of Edinburgh, will assist as one of the executants; and the Prince of Wales is also expected to be present.

DR. DUMREICHER, Professor of Practical and Clinical Surgery in the University of Vienna, died last month at his estate in Croatia. His remains were interred at Gratz on the 19th ult., being followed to the grave by a large concourse of his friends and colleagues, together with the members of the Faculty of Medicine at Gratz, headed by their dean, Professor von Schroff.

THE Open Spaces Committee of the Hackney District Board of Works have received an intimation from the Lord of the Manor of Hackney, Mr. Tyssen-Amherst, of his willingness to transfer to the public use Shacklewell Green, and another little plot of open space close by, on the Metropolitan Board of Works undertaking to maintain them in good order. Shacklewell Green is not in the scheme by which the Metropolitan Board of Works are acquiring the open spaces of Hackney, but no objection is offered to its being included.

OBJECTIONS having been raised to the exclusion, by the Sheffield coroner, of the press, from an inquest now being held in a supposed poisoning case, the Home Secretary has been interrogated as to his power to do so. The Home Secretary refers the inquirer to Burn's *Justice*, edition xxx, vol. i, p. 1,221, title "Coroner", in which it is stated, on the authority of Garnett v. Ferrand, 6 B and C 611, that the coroner has the power of excluding from the inquest not only particular individuals, but the public generally.

SCARLATINA AT CHRIST'S HOSPITAL.

SOME cases of scarlatina having occurred among the boys in the Bluecoat School, Newgate Street, the authorities of the institution deemed it desirable to issue notices to the parents and friends, at the latter part of last week, authorising them to remove the boys prior to the Christmas vacation, should they desire to do so. In consequence, a large number of the pupils have left for their respective homes in different parts of the kingdom.

THE INVENTION OF SPECTACLES.

DR. GORI recently presented to the Institute of France a printed bill of D. Chorez, spectacle-maker of Paris, dated 1625, in which he describes binocular spectacles, of which he offers a pair to the king. Hitherto, the invention of binocular spectacles has been attributed to Antoine-Marie Schyrle, a Bohemian capuchin friar, born in 1597, and who died at Ravenna in 1660.

THE GENERAL LYING-IN HOSPITAL.

THE result of the inquiry which has been held at the General Lying-in Hospital, Lambeth Road, has been, that the board has resolved to adopt the recommendations of a report signed by Mr. Lister, Dr. Robert Barnes, and Mr. Ernest Hart, recommending that the physicians should henceforth act as vote-members of the board; that the resident physician should have rooms allotted to him, so as to live in the hospital, and should have control over the nursing staff. A further recommendation as to the matron has been modified, so as to allow her remaining in office being dependent upon the report of the medical staff, who may be elected after three months' trial. Meantime, however, the hospital is without a medical staff, owing to the acceptance by the board of the resignations of their late physicians, on the ground of administrative complaints, which has been followed by the above administrative reforms, brought about by their complaints; and the board have resolved to postpone asking for candidates until the result is known of an investigation now proceeding, by the Council of the Metropolitan Counties Branch.

DEATH OF SIR BENJAMIN C. BRODIE.

SIR BENJAMIN COLLINS BRODIE, the second baronet of that name, late Professor of Chemistry in the University of Oxford, died on the 24th ult. at Torquay, Devon, in the 64th year of his age. The eldest son of the late eminent surgeon, and some time president of the Royal Society, by his marriage with Anne, third daughter of Mr. Serjeant Sellon, he was born in the year 1817, and was educated at Harrow under Dr. Longley, and afterwards took his Bachelor's degree at Balliol College, Oxford, in 1839. He proceeded M.A. in 1842, and was created a D.C.L. in 1872. Sir Benjamin was appointed to the Professorship of Chemistry in the University of Oxford in 1855, and elected President of the Chemical Society in 1859 and 1860. He has contributed papers on scientific subjects to the *Philosophical Transactions*, and the *Journal of the Chemical Society*.

SMALL-POX IN THE EAST OF LONDON.

MR. ANDREW WENTZELL, the Hackney representative of the Metropolitan Asylums Board, has reported to the Hackney Guardians an alarming increase of small-pox, there being in the hospitals, under the [illegible] Board, 2[illegible] cases, [illegible] an increase of 76 during the past fortnight. The Homerton Hospital had 137 patients, but it was certified for only 102. The East of London had contributed most of the cases: Hackney sending 44, Bethnal Green 48, Stepney 11, and Mile End Old-town 9. The Local Government Board had specially called [illegible] the Asylums Board to the necessity of the case, and the latter Board were, in consequence, seeking for further accommodation for East-End cases. If the small-pox continued to spread, as the medical superintendent of the hospitals feared, the Metropolitan Asylums Board would [illegible] a building near Upton Park, which was available for the purpose, of course with a view to tide over the [illegible] by the inevitable increase of East-End cases. As the Homerton Hospital was overfull, the Union officers were instructed to send any fresh cases to the Deptford Hospital. The Asylums Board, Mr. Wentzell assured the Guardians, was thoroughly alive to the importance of the case, and was preparing for the possibility of the disease still further extending.

METROPOLITAN HOSPITALS.

THE Hospital Saturday Fund may assist to produce unexpected results. At a meeting held at Hammersmith, in connection with the Fund, on Monday last, representations were made condemnatory of the existing hospital arrangements of the metropolis. It was decided to call a special meeting to consider the administration of the principal hospitals of London, their working, and deficiencies of accommodation. It was suggested that the hospital accommodation of London was imperfectly distributed, and, in many districts, altogether inadequate; that the want of organisation and co-operation materially impairs their usefulness; and that, having in view the large and growing revenues of the endowed hospitals, a Royal Commission should be appointed to collect information as to them, and to rearrange the areas over which their usefulness should extend. It was stated that, within one mile and a half of Charing Cross, there are about 3,500 beds available; viz., Guy's, 700; St. Bartholomew's, 676; St. Thomas's, 600; Charing Cross, 180; King's College, 205; Westminster, 200; St. George's, 353; University College, 160; Royal Free, 102; Middlesex, 310; whilst in North London, there are only 33 beds; in East London, 810; in West London, 250—or a total of 4,579 beds. It was agreed to present a memorial to the Council of the Hospital Saturday Fund, with a view of securing consideration and inquiry.

OPEN SPACES IN THE METROPOLIS.

IT is intended to introduce into Parliament, next session, a Bill to amend, extend, and enlarge, the provisions of the Metropolitan Open Spaces Act, 1877, and to enable the Metropolitan Board of Works, and any vestry or other parochial or local authority, and the Corporation of the City of London, to purchase or otherwise acquire the soil of, or any limited estate or interest in, or the control over, any open spaces within the limits of the metropolis, to devote them to public recreation, and to apply funds, rates, or revenue to their purchase, etc. The Bill will also enable agreements to be made with the owners, trustees, and others interested, with respect to the objects contemplated; and will provide that disused churchyards, burial grounds, and cemeteries, shall, subject to such ecclesiastical sanction as the Bill shall provide, be treated as open spaces.

THE RETENTION OF CORPSES BEFORE INTERMENT.

THE letter of a country clergyman to the *Times*, with reference to a case in which a body lay unburied in his parish for ten days, raises the question of the appointment of a maximum period within which the dead must be interred. It is singular that, whilst in American cities the imposition of a limit on the length of time during which bodies may be kept before burial is one of the commonest of regulations, no attempt has been made in this country to enforce a similar restriction. It is true that, as long ago as 1842, a clause was inserted in the Public Health Bill of that year proposing to enact that, "if any body shall continue unburied between the first day of May and the thirty-first day of October, both days inclusive, more than —— hours, or between the first day of November and the thirtieth day of April, both days inclusive, more than —— hours, the executors or administrators to the estate and effects of such deceased person, or the friends or relatives of the same, or any one of such friends or relatives present at the burial, or the occupier of the house from which such dead body shall be removed to be buried, shall forfeit the sum of twenty shillings for every twenty-four hours after the expiration of such respective periods". Nothing, however, came of this; and the subject has not again been seriously discussed in Parliament. At New York, however, Section 158 of the local sanitary code enacts that "no person shall retain, or allow to be retained unburied, the dead body of any human being for a longer time than four days after the death of such person, without

a permit from the department, which permit shall specify the length of time during which such body may be retained unburied". At Brooklyn, there is a similar regulation (No. 150), with the addition that a person who has died of a contagious disease must not be kept longer than twenty-four hours; and the body must, immediately after death, "be disinfected in such manner as may be directed by the Board of Health, and enclosed in a tightly sealed coffin, which shall not thereafter be opened; and the funeral of such person shall be strictly private; and in the removal thereof, for burial or otherwise, hearses only shall be employed". At New Orleans, moreover, every person in whose house a death occurs must, under a penalty of a hundred dollars, have the corpse buried within forty-eight hours after death. These examples, from a country which is supposed to be *par excellence* the home of liberty, will show the restraints that are imposed upon individual preference in this matter (as in others), without serious opposition being made to them. No doubt, a proposal to appoint in England a maximum time for the burial of the dead would meet with considerable opposition from the more bigoted classes, as an undue interference with the feelings and susceptibilities of mourners. That it is eminently desirable and important from a sanitary point of view, the experience of many a medical man will, however, testify; and we are not without hope that some such a regulation will find a place in the next Public Health Act.

OBSTETRICAL SOCIETY.

THE following were, on Wednesday last, nominated by the Council officers for the ensuing year, *President*, Dr. Matthews Duncan; *Treasurer*, Dr. Gervis; *Honorary Secretaries*, Drs. Godson and Galabin; *Honorary Librarian*, Dr. Herman; *Council*, Drs. Fancourt Barnes, Henry Bennet, Carter, Champneys, Cory, Cross, Stephenson, Malins, Lloyd Roberts, Salzmann, Brodie Sewell, Wallace, Ord, Thane, Andrews, Slyman, Pierce, Yarrow. Drs. Percy Boulton and John Williams were appointed referees of papers.

GUY'S HOSPITAL.

THE following is the reply of Dr. S. O. Habershon and Mr. Cooper Forster to the address tendered them by the members of the East Kent District of the South-Eastern Branch of the British Medical Association, on the 18th ult., at Canterbury, a notice of which appeared in page 856 of our last week's issue.

To the Members of the East Kent District of the South-Eastern Branch of the British Medical Association.

November 22nd, 1880.

Gentlemen,—We sincerely thank you for the warm expression of sympathy contained in the resolution passed at the meeting of November 18th, respecting the painful position in which we have been placed at Guy's Hospital. As seniors on the staff of a large metropolitan hospital, and members of a learned profession, we could no longer submit to the indignity that was put upon us without the sacrifice of professional honour. We greatly value the confidence and the sympathy of our professional brethren.—We are, gentlemen, yours very faithfully, S. O. HABERSHON, M.D., 70, Brook Street; J. COOPER FORSTER, 29, Upper Grosvenor Street.

THE CASE OF MR. O'BRIEN JONES.

MANY of our readers will probably remember the history, given in the JOURNAL of April 24th (page 630), of the painful circumstances in which Mr. O'Brien Jones was placed some time ago, in consequence of events connected with the performance of his duty as medical officer of Epsom College. The successive appeals to the courts of law made by the plaintiff ended favourably to the professional reputation of Mr. Jones; but, at the same time, involved him in serious legal expenses, causing him a loss of £500. A committee, consisting of the president and several leading members of the Metropolitan Counties Branch, with other gentlemen, was thereon formed, for the purpose of raising a sum of money to indemnify Mr. Jones for the loss sustained by him. A limited number of circulars have been issued, with the result, so far, of raising about half the sum required; and the lists of subscribers have, on three occasions within the last few months, been acknowledged in the columns of the JOURNAL. A further appeal is, we are informed, now being made by circular; and we desire to call the attention of our associates to the fact, and to express the earnest hope that they will at once enable the Committee to present Mr. Jones with the sum required to make good his loss, and that they will do so in sufficient numbers to show him that he has—which he deserves—the sympathy of his brethren. The Committee, we are asked to say, would be more glad to receive a large number of comparatively small sums—five or ten shillings—than a smaller number of large contributions. Subscriptions should be sent to the Treasurer of the Fund, Dr. E. Hart Vinen, 17, Chepstow Villas, Bayswater, W.

PROFESSOR LISTER.

AT the annual meeting of the Royal Society, this week, the President, in his address, said: "One Royal Medal has been awarded to Professor Joseph Lister, F.R.S. Mr. Lister's claims to the honour of a Royal Medal are based upon his numerous and valuable contributions to physiological and biological science during the last thirty years. Condensed into a single sentence, the merit of Mr. Lister consists in the generalisation to living matter of the results obtained by Schwann and Pasteur with dead matter. He began with cases of compound fracture and with abscesses. In simple fracture, the wound is internal, the uninjured skin forming a protecting envelope. Here nature works the cure after the proper setting of the injured parts. In compound fracture, on the other hand, the wound extends to the surface, where it comes into contact with the air; and here the operator can never be sure that the most consummate skill will not be neutralised by subsequent putrefaction. In the earliest of his published communications, Mr. Lister clearly enunciates, and illustrates by cases of a very impressive character, the scientific principles upon which the antiseptic system rests. He refers to the researches of Pasteur, and shows their bearing upon surgery. He points to the representative fact, then known, but unexplained, that, when a lung is wounded by a fractured rib, though the blood is copiously mixed with air, no inflammatory disturbance supervenes; while an external wound penetrating the chest, if it remains open, infallibly causes dangerous suppurative pleurisy. In the latter case, the blood and serum are decomposed by the microscopic progeny of the germs which enter with the air; in the former case, the air is filtered in the bronchial tubes, and all solid particles are arrested. Three years subsequently, this inference of Professor Lister was shown to be capable of experimental demonstration."

SMALL-POX IN LONDON.

THE fatal cases of small-pox in London, which had been 17 and 10 in the two preceding weeks, rose to 19 last week, of which 16 were recorded in the Metropolitan Asylum Small-pox Hospitals, one in the Highgate Small-pox Hospital, and 2 in private dwelling-houses. No fewer than 16 of the 19 deceased small-pox patients had resided in East London, including 8 in Bethnal Green, 4 in Stepney, 2 in St. George-in-the-East, and 2 in Mile End Old Town. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had increased in the four preceding weeks from 77 to 182, further rose last week to 210, a higher number than has been under treatment in these hospitals since the end of July last. The new cases of small-pox admitted to these hospitals, which had been 31 and 99 in the two preceding weeks, were 57 last week. The Highgate Small-pox Hospital contained 17 patients on Saturday last.

SEA-WATER FOR LONDON.

IN the ensuing session of Parliament, leave will be asked to bring in a Bill for the incorporation of a company, with powers to construct conduits, reservoirs, a pumping station, and other works, between Lancing, in Sussex, and London. Powers are asked to enable the company to take and supply sea-water for public and private purposes, to connect by branch pipes the property they may acquire for selling and distributing the water along or adjacent to the lines of conduits mentioned, to erect stand-pipes or other apparatus, in the roads or streets along which the conduits are situated, and to construct all necessary conveniences and

works for collecting, filtering, storing, and distributing sea-water. Further powers were asked to enable the company to purchase the property required, by compulsion or otherwise; to supply sea-water by meter; to demand and recover rates, etc.; to make special provision for protecting the works, preventing frauds, and imposing penalties; to incorporate certain provisions of general Acts; and to make agreements with sanitary and other authorities. The places referred to in the notice as being affected by the projected works are—Lancing, Combes, Sompting, Botolphs, Bramber, Steyning, Ashurst, West Grinstead, Shipley, Horsham, Warnham, and Rusper, in Sussex; Capel, Dorking, Mickleham, Leatherhead, Malden, Chessington, Kingston-upon-Thames, Norbiton, Putney, Wimbledon, Wandsworth, and St. Mary, Battersea, and the shore and bed of the Thames, in Surrey; and Fulham, St. Peter and St. Paul, Hammersmith, Chelsea, St. Mary Abbot, Kensington and St. Margaret and St. John the Evangelist, Westminster, and St. George, Hanover Square, and the shore and bed of the Thames, in Middlesex.

DEATH OF MR. ROBERT CEELY, OF AYLESBURY.

WE deeply regret to record the death of one of the most venerable and distinguished patriarchs of the medical profession, Mr. Robert Ceely, F.R.C.S., of Aylesbury, who breathed his last on Sunday last, at the great age of eighty-three. Mr. Ceely was apparently in his usual health in the early part of this year; in fact, the great intellectual vigour with which he took part in the debates on Animal Vaccination at the Conference held in December of last year at the rooms of the Medical Society, and the energy and clearness with which he explained his beautiful drawings of the vaccine eruptions at the Cambridge meeting of the Association, were generally remarked. Since then, we have more than once had the pleasure of seeing him and discussing matters of public health with him at the office of the JOURNAL. But, at his age, the bonds that link the spirit to life are easily snapped; and though every member of the profession will be shocked, few will be surprised to hear of Mr. Ceely's death. Born before the beginning of the century, he was in practice as early as 1819; and for more than sixty years was actively engaged in professional duties in the Vale of Aylesbury, where he has long been a central and well known figure. His contributions to the literature of vaccination have been of the most important kind; and his knowledge of the natural history of vaccinia was unequalled in this or any other country. His "Observations on the Variola Vaccina, with an account of some recent experiments", presented to this Association forty years ago, and published in its *Transactions*, have been universally recognised as a model of painstaking and intelligent research. Though it will be chiefly in connection with vaccination that Mr. Ceely's name will be remembered, he devoted much careful thought to other subjects connected with his profession, especially to the Public Health Acts, in which he took much interest. His death removes from our midst one of the oldest and most revered members of the profession, and as kind and sound-hearted a man as ever lived.

SMALL-POX AND VACCINATION.

DR. JOSEPH OAKMAN, the medical officer of health for West Battersea, records forty-eight deaths from small-pox in his district, during the year 1879. He notes that they all took place in adults, with the exception of a child five years of age, not vaccinated; and takes occasion to remark that it will indeed be deplorable, if persons can purchase immunity from having their children vaccinated by the payment of a nominal fine. He is of opinion that nothing can be more positive than the evidence in favour of the saving effects of vaccination against this most loathsome of all diseases.

WHOOPING-COUGH AND GAS-WORKS.

IN a valuable report, just presented to the French Academy of Medicine by its president, M. Henri Roger, the question as to the efficacy of the emanations from gas-works in checking or moderating whooping-cough, receives exhaustive consideration. M. Roger has examined, with much care, the various statistics which have been published in France on the subject, and thinks that this method is far from having any therapeutical merits superior to those of the other remedies in whooping-cough. It certainly modifies in quality and quantity the bronchial secretions; it can for a given day assuage the numerous and variable symptoms of the pyrexia; but it has no real abortive or specific action. Nor are the emanations from gas-works a specific remedy for the disease; in fact, there is no such remedy. But if the physician has no power over the incubation of the disease, nor even over its issue, at least, observed M. Roger, he can diminish, by isolation of the cases, the propagation of the infection; he can soften the violence of certain symptoms; prevent or modify complications; assist nature; and in short, by the rational employment of hygienic and therapeutic resources, lead to cure in the majority of cases.

THE SEWERAGE OF THE LOWER THAMES VALLEY.

THE long-deferred decision of the Local Government Board on the much vexed question of the sewerage of the Lower Thames Valley has been made known, and is, much to the chagrin of the Joint Board, against their proposed scheme. It will be remembered that, in 1879 the Joint Board applied to Parliament for powers to carry out Colonel Haywood's scheme of drainage by irrigation; but, failing in their endeavours, they sought this year to obtain the same powers through a provisional order of the Local Government Board, enabling them to purchase and take lands otherwise than by agreement. A protracted inquiry into the subject, lasting altogether forty-five days, was held by Mr. J. Thornhill Harrison, C.E., assisted by Captain Hildegard; and on the voluminous evidence submitted to him, Mr. Harrison has arrived at the conclusion, that neither irrigation nor chemical treatment seems, under the circumstances of the district, to be feasible; he therefore recommends that the Joint Board should arrange for the total diversion of their sewage into the sewers of the West Kent Sewerage Board, as suggested by Sir Joseph Bazalgette. If land could have been obtained within the district, free from opposition of adjoining owners and residents, so as to concentrate the sewage at one or more places, and deal with it by the best chemical process, such a scheme would have many advantages; but, in view of the strenuous opposition which it would be sure to evoke, would probably be found impracticable. There seems therefore to be no choice for the Joint Board but to accept the suggestion of Mr. Harrison, backed up, as it has been, by the Local Government Board. They seem, however, to regard this course with no strong liking; for, relying upon the recent suspension till 1883 of the penalties for allowing the flow of sewage into the Thames, they have resolved to defer the consideration of the whole question, so that no proceedings can now be taken in Parliament until 1882.

MEDICAL CERTIFICATES FOR FRIENDLY SOCIETIES.

A CORRESPONDENT states the following case, and asks for information as to the state of the law on the subject. On the death of a child-patient, the medical practitioner was requested by the parent to write three certificates of the cause of death for friendly societies, in addition to the usual certificate supplied for registration purposes. These three additional certificates were written on ordinary note-paper; and, a few days afterwards, the medical practitioner received a note from the registrar, requesting that the practice of writing certificates for friendly societies might be discontinued, as it was illegal. Our correspondent asks, first, whether registered medical practitioners have not an undoubted right to write certificates of the cause of death, when requested by the relations of their patients; and, secondly, whether friendly societies are justified in refusing to accept such certificates, signed by a registered medical practitioner. There is undoubtedly no illegality in a registered medical practitioner writing any number of certificates of the cause of death of a patient, but there are certain provisions of the Friendly Societies Acts which render medical certificates *per se* useless for the purpose of obtaining payment of monies due from friendly societies. One of the main objects of the Friendly Society Act of 1876 was to impose some kind of check upon the over-insurance of children

and, with this object in view, the following provisions were enacted. No friendly society shall pay any sum of money upon the death of a member or any other person whose death is, or ought to be, entered in any death-register, except upon the production of a certificate of such death under the hand of the registrar of deaths, or other person having the care of the death-register in which such death is, or ought to be, entered. This section applies to the deaths of all members of friendly societies, without any limitations as to age. With reference to the insurance of children, the before-mentioned Act, in the twenty-eighth section, enacts that: "No society shall insure or pay, on the death of a child under five years of age, any sum of money which, added to any amount payable on the death of such child by any other society, exceeds £6; or, on the death of a child under ten years of age, any sum of money which, added to any amount payable on the death of such child by any other society, exceeds £10." In order to facilitate the carrying out of this provision, the societies are forbidden to pay any sum of money upon the death of a member, without the production of a certificate of registration; and it is further provided, that no registrar shall give any one or more certificates of death, for the payment in the whole of any sum of money exceeding £6, on the death of a child under five years; or for the payment in the whole of a sum exceeding £10, on the death of a child under ten years. It is evident, therefore, that any friendly society accepting a medical certificate as authority for payment of money on the decease of a member, would not only be acting illegally, but would render itself liable to a penalty. Such being the state of the law, it is most clearly undesirable that medical practitioners should, even at the request of parents of deceased and insured children, grant medical certificates for friendly society purposes. In the case referred to by our correspondent, the deceased child would appear to have been insured in three societies; and, if the provisions of the Friendly Societies Acts had been evaded, there would have been no security that only the legal amount would be paid upon the death of the child.

TYPHOID FEVER AT MELTON MOWBRAY.

It is to be hoped that some means may speedily be found of relieving the deadlock to which we referred in the JOURNAL of November 13th (p. 797), as occurring through the resolve of a combination of authorities in Leicestershire to offer a totally inadequate salary to the officer of health succeeding Dr. Elgar Buck. The question is still *in statu quo*, and is now further complicated by the existence of a somewhat serious outbreak of typhoid fever at Melton Mowbray, one of the constituent districts. Already three deaths are reported; and the outbreak has excited such alarm, that the Local Board have had temporarily to appoint a local medical man to inquire into the cases. It would, perhaps, be too much to say that this outbreak might have been absolutely averted if there had been a properly appointed officer of health working in the district; but, if the sanitary supervision had been worth anything at all, the subsequent extension of the disease might at least have been prevented, and much suffering and mortality thereby saved. The money loss to the combined area, through attacks of infectious disease occurring during the interregnum, must represent much more than the difference of salary which has left the district without an officer of health for at least six months.

ACCIDENT OR DISEASE.

A CURIOUS point of law, involving a question of medical interest, was decided in the Court of Appeal this week, in the case of Winspear *v.* the Accident Insurance Company, in which the defendants appealed from a judgment by the late Lord Chief Baron and Mr. Baron Huddlestone. The plaintiff's husband, who had insured his life for £1,000, was crossing a shallow stream, when, being seized with a fit, he fell into the water and was drowned. The company refused to pay, on the ground that death was not occasioned by personal injury caused by accident; but the judges of the Exchequer Division gave judgment for the plaintiff, and from this decision the company now appealed. They contended that the insured was drowned because he could not raise his head above water from exhaustion caused by the fit; and that, therefore, the company was exempted from liability under the provisoes of their policies made to meet such cases. The court, however, affirmed the decision of the court below. Lord Coleridge said death resulted from an accident, which was drowning.

POETICAL LICENCE.

IN another column, we quote a poem of Mr. Tennyson's, issued in his new volume, entitled *Ballads and other Poems*, published this week. This poem is likely to attract great attention, because it deeply wounds the profession which poets and orators alike have commonly agreed to decorate with the palm due to self-denying virtues, pitying kindness, self-devotion, and untiring charity. Unless distinguished by these virtues, the medical profession is false to its mission, and belies its history. That all its members should alike be patterns of these virtues is hardly to be expected, and cannot be predicated. It cannot be too deeply deplored that the laureate poet of our present time should devote his genius to embalm, though in language of singular beauty and touching pathos, a figure which we venture to say is unknown as a type in any of our hospitals; and that he has preferred to embalm in his verse a current and cruel slander, rather than to glorify the living type which may be found in every hospital in Great Britain, and which belies the standard which Tennyson's verse seems to aim at establishing. It would be an evil day for humanity if that slander which his lines embody were true; and if there were, indeed, to be found in any children's hospital, in any civilised country, a surgeon "with coarse red hair, big face, big chest, big merciless hand, happier in using the knife than in trying to save the limb". Not only does he hold up this type as that of the surgeon in the children's hospital, but he endorses it by adding:

> "That I can well believe; for he looked so coarse and so red,
> I could think he was one of those who would break their jests on the dead,
> And mangle the living dog that had loved him, and fawned at his knee,
> Drench'd with the hellish oorali—that ever such things should be."

A verse more ungenerously contrived to insult a profession, and to hold up to execration a class who, more than any other, have devoted their lives to the service of humanity, and their labours to its solace, was never written. Medical men will feel bitterly the insult which is offered, and the injustice which has been done; but, fortunately, their work and their character speaks for itself, as it has spoken through centuries; and not even the angry words of one of the most accomplished of modern poets will do more than raise a passing feeling of pain and bitter regret that the character and motive of medical work should be so shockingly misrepresented.

INFECTED RAGS.

THE local board at Maidstone have decided to petition the Home Secretary, praying him to adopt precautions against the danger to the public health arising from the importation of rags which may contain the germs of disease. In Kent, and especially in and near Maidstone, rags are largely used in the manufacture of paper, and considerable quantities are obtained from abroad. Lately, some cases of disease, notably of small-pox, have been traced in Maidstone among rag-sorters, who have to handle these rags. Hence the action of the authorities, who point out that, no precautions being taken, an epidemic may break out at any time. Besides memorialising Sir W. Harcourt, the local manufacturers are to be asked to submit all rags to an intense heat before using them, as the medical officer asserts that all chances of infection may thus be avoided.

THE VALUE OF ISOLATION HOSPITALS.

A RECENT report by Mr. W. S. Wade, the health-officer of Wakefield, affords another striking illustration of the great value of hospitals for infectious diseases, both in checking epidemics and in warding off a fatal issue in the persons attacked. Three cases of scarlatina, recently isolated in the Borough Hospital, all made a good recovery, none of them being followed by the usual sequelæ; and no more cases occurred in the neighbourhoods from which they were removed. This is the more satisfactory, inasmuch as the last case admitted was one of the

worst cases that the health-officer had seen for years: so severe, in fact, that Mr. Wade has no hesitation in saying that the case would almost certainly have died if it had been treated at home, where there was only one sleeping-room for the sufferer, his father and mother, and two other children. Facts such as these ought to shake the popular prejudice against fever-hospitals, which undoubtedly exists, but of which by far too much is made in certain quarters.

THE HEALTH OF PRISONS.

THE recently issued Blue-Book of the Commissioners of Prisons contains some very interesting notes by Mr. R. M. Gover, the Medical Inspector of the Department, on the health-statistics of the prisoners for the year ended the 31st of March last. From these, it appears that the death-rate for last year, while less than the average of the years before the prisons came under the control of the Commissioners, was slightly higher than the rate for the year ended 31st March 1879. The number of deaths from natural causes last year was 178, giving a rate per 1,000 of 8.9, against a rate of 8.4 in the preceding year. Considering the exceptional severity of the past two winters, it is somewhat remarkable that the mortality in the prisons generally, during the two years 1878-79 and 1879-80, should compare favourably with that of previous years; and the more so, inasmuch as the comparatively low death-rate of those years cannot be ascribed to a participation in a reduction of the general death-rate of the kingdom. The numerous measures, having a direct bearing upon the health of the prisoners, adopted and put into force at different times by the Commissioners, have been severely tested; and the result, as gauged by sickness and mortality, cannot, in the opinion of Mr. Gover, be regarded as otherwise than highly satisfactory. During the year ended 31st March 1879, the deaths from phthisis and hæmoptysis were 47 in number, or 28.5 per cent. of the total number of deaths from natural causes; but, during the past year, the number of deaths from these causes was 42, or a decrease of five. Deaths returned under the heading of "phthisis and hæmoptysis" may be practically regarded as deaths from pulmonary consumption. The fact, that only 42 deaths from this cause should have occurred in twelve months, in the whole of the local prisons of England and Wales, deserves attention; and is one on which the Commissioners and the public may alike be congratulated. There was no case of typhus fever in any prison during the year under report, and the occurrence of such a case in prison is so rare as to be phenomenal. Of enteric fever, there were only three fatal cases, all of them believed to have been imported; and there were but two fatal cases of the other continued fevers. As a further indication of the sanitary condition of the prisoners, it may be mentioned that there was not a single death from erysipelas or scarlet fever. An examination of the death-rate in prisons, with reference to their size, confirmed the discovery made in 1879, that, taking one prison with another, the greatest number of deaths, proportionally to population, occurs in the small prisons. The difference is, perhaps, partially explained by the superior organisation of large prisons, as compared with that of prisons of very small populations—inasmuch as that superiority tells in the management and treatment of the sick, as well as in all other departments of prison administration. Mr. Gover adduces from the figures the proposition, that, if the whole prison population could be housed in large prisons, small prisons being abolished, the annual number of deaths would be reduced by as much as 2 or 3 per 1,000. The results already attained are certainly encouraging; and do not forbid the hope that Mr. Gover's expectation may in fact be, before long, realised.

AN ANTHROPOLOGICAL SOCIETY AT WASHINGTON.

THE accumulation of material at Washington, illustrative of the several branches of Anthropology, has drawn together a large number of specialists in Comparative Anatomy, Archæology, Ethnology, Linguistics, and Sociology. For mutual improvement a number of these gentlemen have organised the above named society, with Major J. W. Powell as President, Dr. Elmer R. Reynolds as Secretary, and Professor Otis T. Mason as Corresponding Secretary. The facilities which the Army Medical Museum and the Smithsonian Institution, with its Bureau of Ethnology, furnish for the preservation of valuable papers, obviate the necessity for a voluminous journal of the society. The weekly *American Journal of Science* has made arrangements to present abstracts of communications and discussions on the week succeeding the meetings, which take place on the first and the third Tuesdays of each month.

THE MADRAS HOSPITALS AND DISPENSARIES.

THE report for 1878, on the administration of the local hospitals and dispensaries of the Madras Presidency, has only just been published, under circumstances explained by Surgeon-General Smith. It appears that at the close of 1877, there were 165 institutions at work, and five new dispensaries were opened in 1878, making a total of 170. Of this number, no fewer than 151 are maintained by municipal and local fund grants; and there is abundant evidence to show that the necessary funds are, generally speaking, cheerfully voted, and the institutions highly appreciated; as usual, the demands for medical men to open new dispensaries were in excess of the supply; and, although the medical college and auxiliary school are working up to the highest point of their capacity, they can never meet in full the increasing requisitions. The number of beds available in 1878 for in-patients in the several institutions was 3167, viz: 1946 for males, and 1221 for females. In contradistinction to Dr. A. J. Payne, whose opinions on Indian dispensaries we recently quoted (see p. 566), Dr. Smith observes that "the dispensary system, as now existing and progressing, is one of the happiest results of British rule in India: as not only does it place the advantages of European medicine within the reach of the poor, but also creates a desire for their extension. As yet it is but in its infancy; and to secure its full development, and meet what is becoming a national want, medical education must be extended *pari passu*." In 1878, a total of 65,649 in-patients, and 1,074,575 out-patients were treated at the institutions; a decrease in the former, and an increase in the latter class of cases being observable as compared with the figures of 1877. The death-rate among in-patients was 132 per 1000, and amongst out-patient 1.6 per 1000, ; the corresponding figures for 1877 being 199 and 0.7 per 1000.

DIPHTHERIA AS A SEPTIC DISEASE.

DRS. H. C. WOOD AND H. F. FORMAD have just reported to the United States National Board of Health the results of an inquiry which had been confided to them by the Board, as to the possibility of producing diphtheria in the lower animals by the inoculation of the exudations from diseased human subjects. The report is not very conclusive on the particular subject of reference; but it contains an important and striking suggestion as to diphtheria being in point of fact a septic disease. A general view of the results of five series of experiments on the lower animals by inoculating them (1) with diphtheritic matter subcutaneously and in the mucous membrane of the mouth; (2) with foreign bodies subcutaneously; (3) with diphtheritic matter in the trachea; (4) with ammonia in the trachea; and (5) with foreign bodies, pus, etc., in the trachea, seems to the reporters to indicate that the contagious material of diphtheria is really of the nature of a septic poison, which is also locally very irritant to the mucous membrane; so that, when brought into contact with the mucous membrane of the mouth and nose, it produces an intense inflammation, without absorption, by a local action. Whilst absorption is not necessary for the production of the angina, it is very possible that the poison may act locally, after absorption, by being carried in the blood to the mucous membrane. Further, it is possible that the poison of diphtheria may cause an angina which shall remain a purely local disorder; or a simply local trachitis may produce the septic material, the absorption of which shall cause blood-poisoning; the case ending as one of adynamic diphtheria. Some such explanation as this seems, to them, to reconcile the antagonistic opinions concerning the value of local treatment in diphtheria. One more important clinical feature of the disorder, under other views of the dis-

ease, seems inexplicable, but by the aid of the present theory, is easily explained. Diphtheria differs from the exanthemata, by the fact that one attack in no way protects against a second. The theories now put forward remove the affection entirely from any relation with exanthemata; placing it rather with septic diseases, which, as is well known, may recur indefinitely. The reporters admit that these ideas are no more than suggestions. They think, however, that there are two pathways clearly open which, if carefully followed, must lead to important positive or negative results. The first of these consists in the making of careful culture experiments, to determine whether there is or is not any difference between the bacteria of ammonia and of diphtheritic false membranes; the second, the study of the induction of epidemics of pseudo-membranous angina and trachitis in the lower animals, and the relation to these of the cases of rapid death produced in the lower animals by diphtheritic inoculation.

DENGUE FEVER IN CAIRO.

DR. NERONTSOO BEY, the President of the General Board of Health of Egypt, reports the epidemic prevalence there of an outbreak of true dengue fever, which began at Cairo, and soon spread over the whole country. In Cairo, more than half the population were attacked, although the mortality was small. A Reuter's telegram from Cairo, on November 26th, announces that a declaration, signed by the sanitary authorities, has been officially published, stating that the dengue fever lately prevalent in that city, which was at no time of a dangerous character, may now be considered to have quite disappeared.

ALCOHOLISM.

THE physiological antidote of alcoholism is strychnine; and there is a direct antagonism between the effects of the two. Strychnine opposes stimulation to alcoholic inertia, and repairs its regressive changes. The sulphate of strychnine is the excito-motor *par excellence* of the nervous centres, restoring normal activity to the languishing vitality and to the functions of organic life. Dr. Luton (*Bulletin de Thérapeutique*, September 30th) urges, therefore, a more general use of strychnine in alcoholism; and he thinks it is given, at present, with too much timidity. The researches of M. Richet appearing to establish that the danger is less due to the poisoning of the nerve-centres, than to too direct an action on the respiratory laryngeal muscles, which are maintained in a condition of tonic spasm, it follows that the principal remedy for strychnine-poisoning is artificial respiration. In delirium tremens, hypodermic injections of strychnine may be continued almost to the commencement of tetanic action. In imminent alcoholism, a few drops of the tincture may be given at the commencement of meals. Dr. Luton has no doubt of the preventive action of preparations of strychnine.

LARYNGOLOGY AT THE INTERNATIONAL CONGRESS IN 1881.

IN reply to communications addressed to the Executive Committee, asking for a separate section for Laryngology, or for reception of laryngological papers in the full sections of Medicine or Surgery, a reply has been sent to the effect that the Executive Committee are of opinion that it will be most conducive to the full consideration of laryngeal subjects to regard that speciality as inseparable from the general study of medicine; and that it is also the opinion of the Committee that its importance and utility will be most plainly indicated by the institution of a subsection for Laryngology, distinct, but not separate, from the section of Medicine.

PHYSICIANS IN CONSTANTINOPLE.

THE *Freie Presse* states that the European physicians in Constantinople may be divided into two classes. The first dates from the time of the late Sultan Abdul Aziz, and the second from the time of the late war. The former have great Turkish practice, and are, comparatively speaking, well off; their prosperity being due to the extravagant living of the wealthy Turks. The second class formed, so to say, a part of the Turkish Army; and their only reward is their feeling of having done their duty on the battle-field and in the hospitals; for, up to this day, the Government owe them their salaries. Their services not having been rewarded, the gallant disciples of science have now to watch at the most crowded spots of the town for grateful clients. One can see them taking their position, like sentinels, in front of the doors of the chemists; and they almost look with disfavour on any passer by with sound limbs. "Why is there no one to break his leg on this dreadful pavement of the town? Certainly, there occur many robberies, burglaries, and assassinations in Constantinople; but it is only by chance that one of these outrages is perpetrated in the neighbourhood of a chemist; and, if it occur, the foreign physician is sure to be found in a beer-tavern twenty yards distant; and some Greek or Armenian physician, who is also on the look-out for clients, but never takes beer, has hastened to the spot before the chemist's apprentice had had time to fetch the friend of the house from the beer-table." This is rather a bitter caricature, no doubt; but there must be some foundation even for so coarse a sketch.

A FŒTUS IN ADIPOCERE.

THE correspondent of the *Cincinnati Lancet and Clinic*, writes that, of the many brilliant and rare operations that Billroth has performed this winter, one or two especially deserve more than passing notice. The first was the removal of the fruit of an extra-uterine pregnancy, which, as the result showed, had been converted into perfect adipocere, while still retaining quite distinctly the outline of every part and feature. The woman—a multipara—had, two years before the operation, presented symptoms which induced the physicians in charge to diagnose an extra-uterine pregnancy,—a diagnosis confirmed by Professor Braun, of the obstetric department of the university. Not satisfied with either of the answers, she left Vienna, and was not again heard from until recently, when she presented herself at the surgical clinic and demanded to have the tumour removed, as the sense of weight, pain, and disturbances of digestion from which she suffered, had made her life a burden; in addition, she had had repeated attacks of peritonitis. As she persisted in this demand, despite a most unfavourable prognosis, the operation was finally decided upon, and a confirmation of the previous diagnosis made two years before was the result. As is easily imagined, the adhesions of the sac containing the degenerated fœtus to surrounding viscera were very extensive, and a number of ligatures had to be applied; the hæmorrhage was slight and quickly controlled, and the sac removed *in toto*. It was composed of dense fibrous tissue, doubtless the result of an inflammation, and upon its inner surface contained an abundance of cholesterin crystals, with a thin coating of the same yellowish, fatty material into which the fœtus had become converted. Of the fœtus itself, the soft parts had all undergone this change, and many of the bones, particularly at their epiphyses, were similarly affected. The woman had no fever, and did very well after the operation. The fœtus, very well preserved, had, to judge from its size, evidently reached maturity before its death and subsequent degeneration; probably, had it remained longer in the abdominal cavity, it would have become infiltrated with calcareous salts and resulted in the formation of a perfect so-called stone-child, or lithopædion. The rarity of such cases of extra-uterine pregnancy in and of themselves, the history of the subsequent operation, and the conditions there found, attach to this case quite a peculiar interest. The patient has done well.

THE MODIFICATION OF MORBID POISONS.

THE recent announcement by M. Pasteur, that he had discovered a method by which he could modify the virulence of the virus in the disease called "the cholera of fowls", has excited great interest, both in France and in other countries. The statement that it was possible so to modify a virus of great intensity as to produce a virus of feeble intensity, inoculation with which protected the animal against any results from subsequent inoculation with the stronger poison, was so immediately suggestive of the relations of vaccine to variola, that much curiosity was excited regarding the method by which this remarkable modification was attained. That M. Pasteur had very good reasons for withholding, for a time, the publication of the details of his method

is now evident enough; because, as it turns out, time is one of the elements that enter into the method. The eminent experimenter announced, at a late meeting of the Academy of Medicine, that the organised virus, which constitutes the active agent in the disease, diminishes in intensity if the products of cultivation be allowed to remain for a considerable time exposed to the atmospheric air. M. Pasteur cultivated the bacterium in chicken-broth. When the chicken-broth, charged with the specific organisms, was kept in closed tubes, and so freed from contact with the air, the poison retained its virulence unimpaired for ten months; whilst with free admission of air, in periods of from three to eight months, the virus had become so weakened, that few animals inoculated with it died. Some of the applications of this remarkable fact are evident. To use M. Pasteur's own words: "There is, probably, here more than an isolated fact; we appear to have got hold of a principle. It may be expected that an inherent influence of the atmospheric oxygen, a natural force everywhere present, will show itself equally efficacious in the case of other viruses. The generalisation of this method of attenuating the strength of a virus, due to an agent everywhere present, is an idea of the highest interest. May we not henceforth presume that it is to this influence, in the present and in the past, that the limitation and subsidence of great epidemics have been due?" M. Chauveau also read a paper on a cognate subject: an experimental study of the action of the organism of sheep, more or less refractory to splenic fever, on the infectious agent; and the ultimate disposal of specific microbia introduced directly into the circulation by large transfusions of anthracoid blood. He found that, after such transfusion into animals whose resistance to the disease is considerable, and strengthened by preventive inoculation, the bacterian rods soon disappear from the blood; and, in fact, in a few hours cannot be found. They are not destroyed, however, but are arrested in the capillary system of the lungs and of other parenchymatous organs, where they may be found with retained vitality when the transfusion has been rapidly fatal. When the animal survives more than three days, the bacteria disappear from the lung and the spleen, and also from the blood, and health may be regained. One region alone proves favourable to the maintenance and development of the bacterian life, viz., the pia mater; and the development there has quite special characters, viz., elongation and inflexion of the rods and appearance of spores, resembling those which belong to artificial cultivations. The infectious activity of these bacteria of the pia mater is considerable.

LENGTHENED INCUBATION OF A CASE OF RABIES.

At the meeting of the Paris Académie de Médicine, on November 2nd, M. Colin read a paper on a remarkable case of rabies; remarkable in that the disease did not show itself until four years and a half after the patient was bitten. The facts relate to a non-commissioned officer in the French artillery, who, after having been first treated at the military infirmary belonging to his corps, was successively transferred to the military hospital at Vincennes, and thence to the hospital at Val-de-Grâce, where he died in a few hours. He had been bitten by a mad dog on November 2nd, 1874, and showed no symptoms of rabies for four years and a half, when the disease of which he died manifested itself. The military authorities consulted M. Colin as to whether death in this case had resulted from the consequences of the bite; and he made a most searching inquiry into the circumstances, which led him to the following conclusions. The dog by which the victim had been bitten in Algeria was indubitably mad, since the comrade in assisting whom he was bitten, died, forty days afterwards, of rabies. Since the inoculation in November 1874, the patient had not suffered from any accident; his antecedents, the symptoms observed, and the nature of the lesions, remove any presumption of alcoholism. M. Colin has, therefore, felt himself in a position to give a certificate of the death of the man from hydrophobia, and of the relation of the final accidents with the bites received five years before. M. Bouillaud said that the case related by M. Colin was of the very greatest interest, and the most remarkable case of rabies hitherto published.

LITHOTOMY AT CANTON.

Dr. Fleming Carrow has published, in the Chinese Customs Medical Reports, some statistics showing the results of 140 cases of stone in the bladder operated upon by him at the Native Hospital in Canton. It appears that, in the Kwangtong province, calculus of the bladder is very frequently met with, though the reasons of this prevalence have not been satisfactorily determined. But one of the causes is that the rivers in the south of China flow through districts rich in lime, and that the water used by the natives holds a considerable quantity of lime in solution. A large majority of the cases cited are those of boatmen and farmers, or farm-labourers—those who use the river-water in cooking and as a drink. It may also be caused by a condition of the system which prevents the proper assimilation of the food, and thus allows certain chemical constituents of the nourishment taken to be deposited from the urine, either in the form of lithic or of phosphatic gravel. The existence of these exceptional conditions of the system in Southern China may, perhaps, be explained by peculiarity of climate or malarial influence, or may depend upon the articles of food used by the natives—the latter most probably, as it has not been found that foreigners have the disease developed, even after a long residence. Dr. Carrow is inclined to think that all these influences exist, and tend to develope the disease, especially since there are many points in which the climate of Southern China resembles that of Kentucky and Tennessee, where calculous disorders largely prevail. The Chinese do not apply for operation until they have tried for a long time their own doctors (who for this disease use the moxa, and apply the actual cautery in different ways to the abdomen); so that, when they come into hospital, the system is generally broken down, there is much inflammation of the bladder, and a discharge of mucus containing a considerable quantity of pus. Added to this, many of the patients are opium smokers, and are very anæmic. There are thus grave obstacles to be overcome before the patient is in a condition to stand the operation. Dr. Carrow's mode of operating has been by the ordinary lateral incision; but some of the stones have been so large that he had to crush them through the incision, and thus remove them piecemeal. In this way, the rectum was in one case ruptured by the sharp edge of a piece of stone, and a vesico-rectal fistula was the result; the patient recovered, but the urine ever after escaped by the anus. The history of the cases (all but eight of which had a successful issue) presented no unusual character; those that recovered followed the usual course, and the few that died took on inflammation, which proved fatal. The outer wound heals very quickly, as a rule. After operation, Dr. Carrow has been in the habit of allowing patients only a milk-diet, and on this they make very rapid recoveries.

"BREAK-BONE" FEVER AT CHARLESTON.

Dr. F. P. Porcher has recently furnished the United States National Board of Health with an account of the epidemic of "break-bone" fever which has lately been prevailing at Charleston, South Carolina. Some cases of the disease appear to have been seen as early as the end of June, but it was not generally recognised till about the middle of August. The symptoms of the disease—the outbreak of which is referred to "general and wide-prevailing atmospheric influences"—are stated to have varied exceedingly, some being present, and some absent. The attack generally began with a feeling of coldness, or with a chill, followed by fever. This, with a temperature varying from 100° to 105°, generally lasted from twenty-four to forty-eight hours, sometimes extending to four or five days, and even in rare cases to seven. Occasional relapses occurred, specially in those who went out too early. Headache—generally frontal—was frequent from the beginning. Miliary eruptions, sometimes elevated and red, like measles, broke out; and sudamina over the face, neck, and body were occasionally present. Sometimes the eruptions were confined to the body, and endured for days after recovery. Some examples of slight branny desquamation were observed. The sweating was profuse in many persons, though often absent. Pain in the bones, back, and limbs was the most con-

stant symptom—hence the name "break-bone" fever. There was often great restlessness during the fever, and in some cases a feeling of lightness or congestion about the throat, with, in a few cases, bleeding. Catarrhal symptoms were rarely present, although cough occasionally existed. The weakness and prostration were very decided, but not nearly to such an extent as in previous epidemics. The disease does not affect all the members of a household, sometimes only one or two being seized, though six cases in one house were recorded. The number who suffered cannot be calculated, as in many cases a physician was not called in; but two or three thousand approximates, Dr. Porcher thinks, the number. The most curious part of the outbreak is that not a single death occurred from the disease. Very little active treatment was used, and several persons recovered without any treatment whatever.

THE EQUALISATION OF PHARMACOPŒIAL DOSES.

DR. OSCAR OLDBERG, Medical Purveyor, United States Marine Hospital Service, makes a proposal (*New Remedies*) which, considering its obvious convenience, is worthy of attention. The medicinal agents prescribed by physicians number about a thousand, and their average adult doses range from about 1-300th of a troy grain to several troy ounces; from less than a minim to more than one fluid ounce. The doses of the commoner remedies the prescriber carries in his memory; those of substances which he is less in the habit of using he obtains from books as he needs them. But how greatly would his labour be lightened, and safety and convenience in prescribing be ensured, if the posological strength of all preparations of the same kind were alike. Thus, Dr. Oldberg suggests that the tinctures of potent drugs should be weak tinctures, those of less active remedies strong tinctures, in such a way as to make the doses of tinctures uniform; and so with other preparations. The proportion of active constituent to diluent or menstruum should be in inverse ratio to the posological potency of that active constituent. Most drugs and preparations can be diluted, or concentrated, or prepared in such a way that uniformity of dose could easily be secured. For such substances as opium, morphia, strychnia, podophyllin, etc., the author proposes a class of preparations named *lactosa*, in which the ordinary dose of these substances is diluted with as much sugar of milk as will make the quantity up to the usual dose of the *lactosa*. This involves, of course, the adoption of a hypothetical average dose of each drug; but there is nothing that is really objectionable in this; and, as a matter of fact, this has been already done in the *British Pharmacopœia*. It is not intended to say arbitrarily that, for instance, the dose of opium is one grain, and not a particle more or less; but for the purpose of making preparations, the name of which shall indicate their dose, it is convenient to assume that such is the case. The elasticity of a dose, or the freedom with which the practitioner may give more or less of a drug, is not abridged in any way; while the advantage of knowing at once the dose of every substance prepared in this way is obvious. Dr. Oldberg also shows that the adoption of this plan would carry with it substantial advantages to the pharmacist as well as to the prescriber.

THE CARTWRIGHT LECTURES IN NEW YORK.

THE late Mr. Cartwright, of Newark, New Jersey, bequeathed to the Alumni Association of the College of Physicians and Surgeons of New York ten thousand dollars, a portion of the income from which is to be devoted to a biennial prize of five hundred dollars, open to the profession, to be awarded to the best essay involving original research, upon a subject duly announced by a committee; while the remainder is to pay the expenses of an annual course of lectures. The first of the Cartwright Lectures was given on November 4th, at the College, by Dr. Roberts Bartholow, Professor of Materia Medica and Therapeutics in the Jefferson Medical College, Philadelphia. Dr. Bartholow selected for his subject the Physiological Antagonism between Medicines and between Remedies and Diseases. The lecture-room was crowded to excess. A general invitation had been issued to the students of the three large medical schools; and a large number attended, nearly filling the hall, to the exclusion of many members of the profession. The lecturer was introduced by Dr. R. F. Weir, President of the Alumni Association. After a graceful introduction, the lecturer gave a *résumé* of the various theories which have prevailed in therapeutics from the time of Hippocrates down to the present day. He then alluded to a number of the antagonisms between medicines which have been proved to exist, in the order of their discovery; and showed that there were striking analogies to such antagonisms in the mechanism of the functions of the brain, heart, and other organs of the human economy, in physics, and in chemistry. He also spoke of the brilliant achievements of Bichat, Magendie, and their followers in experimental physiology, and dwelt particularly on Magendie's researches in regard to strychnia, by means of which its therapeutical properties had been brought to light, and especially its antagonism for paralysis. Finally, he took up in detail the subject of the antagonism between opium and belladonna; and, in the course of his remarks, showed the fallacies of Brown-Séquard and other observers, who had attempted to prove experimentally that no such antagonism existed between the drugs. The course consists of six lectures, to be delivered on successive Tuesday evenings. This is the first instance in the United States of the endowment of a course of lectures analogous to the Gulstonian, Croonian, Hunterian, and other courses of the kind in England.

SCOTLAND.

THE Leith Destitute Sick Society has, during the last year, relieved 809 persons suffering from disease and in indigent circumstances. The expenditure for the year was £136, and the income £221.

LORD RECTORSHIP OF ST. ANDREW'S UNIVERSITY.

ON November 25th, by a majority of 45 votes in a total poll of 181, Sir Theodore Martin was elected Lord Rector of St. Andrew's University, in preference to Mr. Freeman, the eminent historian. The contest, unlike those that have preceded it in the other three Scotch colleges, was not fought on political, but on literary grounds.

GLASGOW SCIENCE LECTURES.

THE second of the present series of the Glasgow Science Lectures was delivered, on November 25th, by Professor J. Bell Pettigrew, the subject being "Flight: Natural and Artificial". There was a large audience; and, on the motion of Professor McKendrick, a hearty vote of thanks was awarded to Professor Pettigrew for his very interesting lecture.

CHEMICAL SOCIETY OF EDINBURGH UNIVERSITY.

THE opening lecture of the winter session of the Edinburgh University Chemical Society was delivered last week by Professor Crum Brown. He took as his subject the "Ideal Chemistry of Sir B. C. Brodie", as published in the *Transactions of the Royal Society* of London. He showed that there was nothing necessarily absurd in the use of algebraic formulæ to express the composition of bodies—the chemistry to which Sir Benjamin Brodie's symbolism applied being restricted to the composition of bodies, not to the constitution of them—and proceeded to explain the algebraical operations which were applicable to chemistry, and how far they were so applicable. Professor Crum Brown will resume the subject on a future occasion.

MEDICAL MISSIONS.

THE annual meeting of the Medical Missionary Society of Edinburgh was held at the Royal Hotel. The report read, stated that, during the year, the work in the Livingstone Medical Mission Memorial Institute in Cowgate had been carried on with much success. There had been 10,362 cases in all, made up as follows: 3141 patients visited in their

own homes, 6,565 treated at the hospital, 354 midwifery cases attended, and 302 vaccination cases. Of the nineteen students in connection with the society during the past winter session, four graduated in August, and had received appointments; and, with one exception, all the students had done well. The medical mission at Nazareth was prospering, and it was hoped that the sum of £3,000 necessary to finish the new buildings would soon be raised. The mission buildings in Japan were recently burned in the conflagration which reduced three fourths of the town of Niigata to ashes; and the society had to ask for contributions to reconstruct them. The treasurer's statement showed that the year had been commenced with a balance of £13, and there had been received as subscriptions, £2,989, and as legacies £1,099, making, with other small receipts, an income of £4,468. The expenditure had been—On students, £840; other expenditure in connection with the Cowgate Mission, £1339; general missionary expenditure, £1,015; expenses of management, £515; and investments, £600—leaving a favourable balance of about £60. Dr. Husband, United Presbyterian Church missionary at Rajpootana, moved the adoption of the report, saying that in Rajpootana there was a population of ten million persons, among whom four medical, besides thirteen other missionaries, laboured. Dr. Van Someren, of Madras, seconded the motion, which was passed unanimously. The Rev. Dr. Sartan, medical missionary at Nazareth, and others, afterwards addressed the meeting.

ARBROATH INFIRMARY.

AT a meeting of the Directors of the Arbroath Infirmary, held on Monday, it was intimated that the late Rev. Mr. Lowson of Carlisle had bequeathed £500 to the Infirmary. Miss Kate Liberty, of the General Hospital, Nottingham, was, at the same meeting, unanimously appointed Lady-Superintendent of the Infirmary.

GLASGOW WESTERN INFIRMARY.

THE sixth annual general meeting of the above institution was held on November 25th. The report, which was read and adopted, showed that the number of patients during the past year was: Out-door, 12,782; and in-door, 2,245—making a total of 15,027. The average daily number of patients in hospital during the year was 199.5, and the average period of residence of each was thirty-six days. The number of deaths was 153, or 7.38 per cent. of all the cases treated to a termination. Of these, 27 were of such a hopeless character when taken in that the patients died within twenty-four hours after admission—thus reducing the death-rate to 6.2 per cent., the lowest in any year since the opening of the institution. The ordinary income was £10,420, and the ordinary expenditure £11,0[illegible] showing a deficiency of £585, which was made up from the supplementary fund. The ordinary income showed an increase over that of the previous year of £1,111. The new wards will soon be ready for occupancy; but the managers have decided only to use them as they receive money to defray the expenses which will be thereby occasioned.

GLASGOW ASSOCIATION FOR PROVIDING TRAINED NURSES.

THE fifth annual meeting of the above association was held on November 25th. From the annual report and statement brought forward, it was clear that the work of the association has been carried out with great success during the past year. The staff of the association, which, at its commencement, consisted of eighteen nurses and six probationers, has now been increased to thirty-five nurses and four probationers. There has been a steady increase in the gratuitous or district nursing, which is one of the special objects of the association. Eight district nurses and four assistants are now employed, against five nurses in the preceding year. During the past year, they attended to 962 cases, and paid 12,945 visits, against 100 cases and 3,000 visits in 1879. The demand for nurses, by private families able to pay for their services, has been very great; and arrangements have been made to considerably augment the staff. The income of the year was £1,738, and the ordinary expenditure £1,690; while the stock account at October 31st was £1,400.

REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General, for the week ending November 20th, it appears that the death-rate in the eight principal towns was 20.9 per 1,000 of estimated population. This rate is 1.1 above that for the corresponding week of last year, but 2.9 below that for the previous week of the present year. The lowest mortality was recorded in Perth—viz., 13.6 per 1,000; and the highest in Greenock—viz., 29.5 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.7 per 1,000—being a decrease of 1.3, as compared with last week. Scarlatina continues rather prevalent in Edinburgh and Leith. Acute diseases of the chest caused 137 deaths, being 17 fewer than the number recorded for the previous week. The mean temperature was 32.4°, being 13.2° below that of the week immediately preceding, and 12.7° below that for the corresponding week of last year.

IRELAND.

FEVER is rather prevalent in Cork at present, a large proportion of the cases being typhus. In the Workhouse Hospital, there were last week 94 patients—76 in fever, and 18 convalescent; while, in the North Fever Hospital, the number, according to the last report, was between 50 and 60.

THE LATE DR. HUDSON.

RESOLUTIONS of condolence with the widow of Dr. Hudson have been passed by the Directors of the City of Dublin Hospital, to which institution he was Consulting Physician; the Professors of the School of Physic; the Obstetrical Society of Dublin; and by the Council of the Dublin Branch of the Association.

SURGICAL SOCIETY OF IRELAND.

THE first meeting of the session took place, last week, in the Albert Hall of the Royal College of Surgeons. The President of the College, and, *ex officio*, of the Society (Dr. McClintock), delivered an address.

OBSTETRICAL SOCIETY OF DUBLIN.

THE forty-third annual session of this Society was inaugurated on Saturday last by an address from the retiring President, Sir Edward Sinclair, M.D. The following officers for the ensuing year were elected: *President*, Dr. John A. Byrne; *Vice-Presidents*, Dr. Dill, and Dr. Macan; *Treasurer*, Dr. Cranny; *Secretary*, Dr. Roe: *Committee*, Dr. Denham, Dr. Kidd, Dr. J. R. Kirkpatrick, Dr. M'Clintock, and Dr. Churchill. The President of the Royal College of Surgeons moved, and the President of the King and Queen's College of Physicians seconded, a vote of thanks to Sir Edward Sinclair, for the dignified and able manner in which he had discharged the duties of President of the Society during the past two sessions. The resolution also stated that the Society took the opportunity of publicly offering Sir E. Sinclair its warm congratulations upon the honour he had recently received from the Sovereign, and expressed the hope that he might long enjoy it. The Obstetrical Society of Dublin is now in a flourishing condition, and is about to publish its *Transactions* in a separate volume. The President, in his address, and some of the subsequent speakers, referred with satisfaction to the high position obstetric medicine and surgery now occupied; and to the fact that the Presidents of both the Irish Colleges were members and ex-Presidents of the Society, and obstetric practitioners.

THE ST. JOHN'S AMBULANCE ASSOCIATION.

THE first public meeting of this society in Ireland was held, under the auspices of the Dublin Central Branch, in the theatre of the Royal Dublin Society, on Saturday last. The Right Hon. the Lord Mayor occupied the chair, and distributed certificates to those awarded them at examinations recently held by Surgeon-Major Jackson, C.B. Mr. Arthur Benson, Honorary Secretary of the Dublin Branch, informed the meeting that, during the past session, seven classes had been

formed. These had been attended by 108 men and 129 women, making a total of 237 pupils. At the examinations held, 31 men and 58 women were awarded certificates. One of the classes was for members of the metropolitan police, many of whom received certificates. Subsequently, Major F. Duncan, R.A., D.C.L., Director of the Ambulance Department, delivered an address explanatory of the society's objects and workings.

PRACTICAL TEACHING *versus* LECTURES.

THE curriculum of the Royal College of Surgeons in Ireland requires attendance on *three* winter courses of systematic lectures on practical anatomy, anatomy and physiology, and surgery, respectively. A very natural result of such a regulation is, that Irish students, the majority of whom take the licence of the College, are practically required to attend the same course three times over. In March 1877, an application to the Council of the College was made by a lecturer on physiology in a private school, that attendance on his practical three months' course of physiology, then about to begin, might be substituted for one of the three systematic courses of nine months. After a year's consideration, the matter having been referred to the Inspection Committee to report on, the Council definitely decided not to accept such a course. It is to be noted, that a course of operative surgery had nevertheless been occasionally allowed to be substituted for one of the three winter courses. This matter was commented on by us in the JOURNAL of April 6th, 1878, p. 495. After this, on April 10th, 1878, the Educational Committee of the College reported that, in their opinion, it was advisable to do away with the third course in both physiology and surgery, and to substitute for these a course of practical physiology and operative surgery respectively. The adoption of this report was, however, for reasons it is unnecessary to refer to, postponed again and again, until finally, after a lapse of more than two years and a half, it was approved and adopted by the College on the 25th ult. We are glad that we may now congratulate the College on having at last become sufficiently enlightened and independent enough to accept views which have long been held as necessities of the improved teaching of the present day.

CORK DISPENSARY COMMITTEE.

AT a meeting of the Committee held last week, the medical officers of the union reported as to the existence of fever in their districts, and the number of cases they had sent to the Union Hospital. Dr. Budds reported that, of eight cases of fever (typhus), seven had been admitted to the North Fever Hospital, as they refused to go to the Workhouse Hospital; and Dr. Crowley gave somewhat similar evidence; and wished to know whether he could compel all who sent for him by ticket, and suffering from contagious disease, to go to the union. The guardians, it may be mentioned, are anxious that the Union Fever Hospital should be utilised to the fullest extent, as the cost of those treated there is divided between the landlord and tenant; while, in the North Fever Hospital, the citizens have to pay all the expenses incurred; and a resolution was adopted requesting the medical officers, for the future, to send all cases of infectious disease to the Union Fever Hospital. As regards compulsory removal to hospital of infectious cases, last session compulsory power was given for the removal of patients suffering from contagious disease, provided there is not accommodation for them in their own homes.

STIMULANTS IN WORKHOUSES.

WE recently referred to the consumption of stimulants in the Cork Workhouse, and the action taken by a deputation from the ratepayers and the guardians on the subject; and published the report of the medical officers of the workhouse, in which they stated that they never prescribed them unless when absolutely necessary. This, however, did not satisfy the guardians; and the memorial on the subject was again referred to the medical staff, for explicit answers on the question of using stimulants in the workhouse, and also for an explanation as to the large increase in their use during the past few weeks. The medical officers last week forwarded the following report in reference to this matter. "In reply to a recent order of the Board, we beg to observe that in the medicinal use of these agents we are entirely guided by the symptoms exhibited by each individual patient confided to our charge in the hospitals; and, as these symptoms frequently present almost diurnal variations, so, also, as a necessary consequence, must the amount of stimulants ordered to each individual fluctuate. But we deem it right, in justice to ourselves, again to positively assert that we never resort to this line of practice unless when such a mode of treatment seems to us to be imperatively required in the interests of the sick. With regard to the increased consumption of stimulants in the hospital during the months of August and September 1880, as compared with the corresponding period last year, the only 'explicit' answer we can give is that the patients under treatment this year were, in the aggregate, afflicted with diseases of a more serious type; and, therefore, in our opinion, required a larger amount of alcoholic stimulants. Lastly, in explanation of the recently increased quantity of stimulants ordered by us, we regret to have to state that such is entirely due to the sudden augmentation in the number of cases of typhus fever admitted into the Fever Hospital (which is now nearly full); and the majority of those affected with this formidable disease are in such a prostrate condition as to urgently require a liberal allowance of stimulants.—John Wall, M.D.; R. Callaghan, M.D.; H. R. Townsend, M.D."

DR. FAUSSETT OF CLONTARF.

WE recently drew attention to the unjust manner in which this gentleman was treated by his Board of Guardians, in reference to the superannuation allowance granted him, as late Medical Officer of Clontarf and Howth Dispensary District. We showed that £106 was the allowance to which he was entitled, after upwards of forty years' service in the Union, instead of £50—the sum awarded by the Guardians. The resolution granting this latter sum was, however, rescinded at a subsequent meeting; and, last week, a motion was unanimously adopted allowing Dr. Faussett the full retiring allowance of £106 6s. 3d. We regret to have to state that Dr. Faussett died at his residence, Moyville, Clontarf, on last Monday, in his seventieth year; and that it is believed that the opposition shown, by a portion of the Board of Guardians, to the retiring pension he so well deserved, may have had some effect in hastening the fatal issue. The deceased was a Graduate in Medicine of the University of Dublin, and a Fellow of the Royal College of Surgeons in Ireland.

THE SURGICAL AID SOCIETY.

AT the last meeting of the Council of the Charity Organisation Society, the Rev. R. J. Simpson stated that the Committee of the Surgical Aid Society had taken steps to ascertain the opinion of its subscribers upon the present system of begging for letters on each case. The result had been a large majority against the existing practice; and there was reason to hope that, at their next meeting, it would be decided that in future a letter of recommendation would be sufficient to bring a case to the notice of the society; and that the necessary assistance would thereupon be forthcoming, so far as funds would permit. We need not say that our opinion entirely supports the action of Mr. Simpson in this matter; and that we shall gladly welcome and heartily assist any means for putting an end to the cruel abuse by which mutilated persons are sent begging for letters round to the doors of numerous subscribers, to make up "the value in letters" of the apparatus ordered by the surgeons, under the plea that it is good for the charity that the emotions of subscribers should be thus excited by personal applications from the objects of the charity.

POISONOUS GASES IN UNFLUSHED SEWERS.—A coroner's jury, who have been inquiring into the death of a labourer who was poisoned by gas while working in a sewer at Birkenhead, last week censured the corporation of that borough for allowing such an accumulation of mud in the sewer. The borough surveyor said there were no means of clearing the sewers of gas except by flushing them, and this was a very expensive process; to which the coroner replied that it would have to be done.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting will be held at the Greyhound Hotel, Croydon, Thursday, December 9th, 1880, at 4 P.M.; ALFRED CARPENTER, Esq., M.D., J.P., President of the Council of the British Medical Association, in the Chair.

Dinner will be provided at 6 P.M. precisely; charge, six shillings (exclusive of wine).

The following papers and communications will be read:

1. Mr. Christopher Heath: On Colotomy.
2. Dr. J. Milner Fothergill: On Cardiac Debility.
3. Dr. D. W. Charles Hood: Notes on a Case of Ulceration of the Stomach (with a specimen).
4. Dr. T. Rutherford Adams; A Case of Interest.
5. Dr. W. A. Duncan: On the Value of Early and Repeated Tapping in the Ascites due to Cirrhosis of the Liver.
6. Dr. H. J. Strong will exhibit and describe Dr. Sempell Anderson's New Instrument for determining Astigmatism.
7. Dr. J. Herbert Stowers: Observations on the Treatment of Infantile Eczema.

J. HERBERT STOWERS, M.D., *Hon. Sec.*

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE third meeting of the session will be held in the Medical Institute, New Edmund Street, on Thursday, December 9th, 1880. The Chair will be taken by the President, Mr. R. PROSSER, at 3 P.M.

The following papers are promised:

1. Mr. Lloyd Owen: On Colour-Blindness.
2. Mr. J. F. West: On the Treatment of Empyema by Excision of a Portion of a Rib.

Members are invited to exhibit Patients, Pathological Specimens, New Drugs, Instruments, or Appliances, at the commencement of the meeting.

F. MALINS, M.B., E. RICKARDS, M.B., *Hon. Secs.*

December 1st, 1880.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.

THE next ordinary meeting of this district will be held at the George Hotel, Portsmouth, on Wednesday, December 8th, 1880, at 4.15 P.M. At this meeting, short notes on various cases will be read and discussed.

Gentlemen who are desirous of introducing patients, exhibiting Pathological Specimens, or making communications, are requested to signify their intention at once to the Honorary Secretary.

Dinner will be provided at 6.30 P.M.; charge, five shillings (exclusive of wine, etc.)

Members intending to be present at the dinner are requested to send their names on or before Monday, December 6th, 1880.

J. WARD COUSINS, *Hon. Sec.*

BATH AND BRISTOL BRANCH.

THE next ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday, December 9th, at 7.30 P.M.; ALEX. WAUGH, Esq., President.

K. S. FOWLER, E. MARKHAM SKERRITT, *Hon. Secs.*

Bath, November, 1880.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

THE [illegible] meeting of the session was held at the Medical Institute, [illegible], on Thursday, November 11th. Mr. R. PROSSER occupied the chair; [illegible] were present.

New Member.—Dr. F. A. de T. Mouillot was elected a member of the Association and Branch.

[illegible] The following communications were read.

1. Mr. [illegible] exhibited a large Sarcomatous Tumour, which he had removed [illegible] from the uterus. The patient had passed [illegible] years, and the tumour was growing rapidly, so that [illegible] was of a malignant character.

2. Mr. [illegible] exhibited a patient from whom, seven months ago, he had removed the Ovaries on account of Menorrhagia of extreme extent and wholly uncontrollable. The ovaries were down behind a very large tumour, which he had to pull through an incision, nine inches long, to get at them. She recovered completely, had not lost a drop of blood since, and was in perfect health. The line of incision had shrunk to seven and a half inches, and the tumour did not reach to more than the middle point of the incision, so that it was being absorbed, and was now probably not more than one-third of the size it had been at the time of the operation.

3. Mr. Eales showed a patient, aged 63, who had received a Blow on the Eye two months previously. A small pigmented cicatrix was seen in the sclerotic, about a quarter of an inch from and parallel to the corneo-sclerotic junction, and between the attachments of the upper and outer recti. Ophthalmoscopically, opposite to this a rent was found in the choroid and retina, similar in direction but much longer. The upper and outer part of the iris was lost in the ciliary region, the lens was absent, and the retina detached.

4. Mr. Tait read a paper entitled An Account of Seventy-six Abdominal Sections performed within the last nine months. In this series, there were fifty-one ovariotomies, with two deaths, and twenty-three other ovarian operations, with three deaths. Detailed accounts of the cases were given.—Dr. Tibbits, Mr. Yates, and Dr. T. Baker made some remarks; and Mr. Tait replied.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

A MEETING of this District was held at the Kent and Canterbury Hospital, on Thursday, November 18th, at three o'clock; Mr. REID, F.R.C.S., in the chair.

Guy's Hospital.—Before proceeding to the ordinary business of the meeting, the President presented addresses expressing sympathy with Dr. Habershon and Mr. Cooper Forster; and recognising the high principles that actuated them in the resignation of the offices they held. They were unanimously accepted by the meeting, in appreciation of the action taken by the senior physician and surgeon at Guy's Hospital.

Papers.—The following papers were read.

1. Mr. Brian Rigden: Three Cases of Tetanus.
2. Mr. Dring: Three Cases of Stricture of Urethra.
3. Mr. Schön: A Case of Stricture of Intestine.
4. Mr. Whitehead Reid showed a patient from whom he had excised the entire oscalus with success nine months previously.

Messrs. Millikin and Down exhibited the latest novelties in surgical instruments.

Dinner.—The members dined together at the Fleur-de-Lis.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE first meeting of the third session of the above District was held on November 18th, 1880, at the Hackney Town Hall; Dr. HABERSHON, President of the Branch, in the chair. There were present twenty-one members and nine visitors.

Papers.—The following papers were read.

1. Dr. Stephen Mackenzie read a paper on Case of Hæmatochyluria; and exhibited specimens of the filaria sanguinis hominis.
2. Dr. Bate read a paper on the Sanitary Arrangements of Dwelling-Houses.

Guy's Hospital.—The following resolution was proposed by Dr. DALY, and seconded by Dr. HERMAN: "That, taking into consideration the general question of hospital management, as brought out by the disastrous events that have occurred at Guy's Hospital, we, the members of the East London and South Essex District, suggest to the Council of the Metropolitan Counties Branch the propriety of holding a general meeting, with especial reference to presenting a petition to Parliament on the subject." This was carried unanimously.

A hearty vote of thanks to the chairman concluded the meeting.

SOUTH OF IRELAND BRANCH: ANNUAL MEETING.

THE seventh annual meeting of the Branch was held in the Royal Cork Institution on Wednesday, November 17th; the President, Dr. D. B. O'FLYNN, in the chair.

Report.—The Honorary Secretary read the annual report, which was unanimously adopted.

Officers and Council.—The following officers and Council were unanimously elected for the ensuing session. *President*: N. J. Hosier, M.D. *Vice-Presidents*: T. J. Crimen, M.D. *Vice-Presidents*: J. A. Fines, M.D.; D. B. O'Flynn, M.D. *Council*: Ringrose Atkins, M.D.; H. Macnaughton Jones, M.D.; M. O'Keefe, M.D.; J. G. Curtis, M.D.; W. Jackson Cummins, M.D.; J. P. Golding, M.D.; A. O'Connor;

M.D.; J. R. Hayes, M.D.; Parsons Berry, Esq.; R. O'Reilly, L.K.Q.C.P.; N. Grattan, Esq.; C. A. Harvey, M.D.; H. Corley, M.D.; D. Donovan, Esq.; R. Burke, M.D.; and J. Bull, Esq. *Honorary Secretary and Treasurer:* T. Gelston Atkins, M.D.

Dinner.—In the evening, twenty members and their friends dined at Lloyd's Hotel.

SPECIAL CORRESPONDENCE.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Balloon Accident.—Dosimetric Medicine—Use of Sulphuric Acid for Murder and Suicide.

AN inquiry was held as to the cause of the terrible balloon accident reported in my note of November 6th; and the death of the unfortunate victim, which, as suggested by me, must have taken place before he fell to the ground, was attributed to asphyxia produced by the escape of the hot air from the interior of the balloon. To this explanation I should demur, as the surrounding atmosphere was sufficiently cold and pure to counteract the ill effects of the heated air from the balloon, of which he had scarcely time to take in a sufficient quantity to produce asphyxia. Congestion of the brain was more likely the cause, as the man drank three glasses of absinthe just before the ascent. This, combined with the action of the cold air in the upper regions, must have rendered him insensible, if not lifeless. However, whatever may have been the cause of death, the nature of the accident is horrible to contemplate; and I think it high time that those in power should put a stop to such dangerous practices. It is simply cruel to induce anybody, man, woman, or child, to undertake such perilous performances, merely for the gratification of an abnormal desire on the part of the public for something sensational, and often for a mere nominal remuneration, as in the case of the acrobat under notice, who was to receive only £2. Such ascents are dangerous even with the ordinary balloons, which are filled with hydrogen, and so arranged that the descent could be effected almost at will by gradually giving vent to the gas; whereas the "Montgolfiers" are inflated with heated air; and their descent takes place by the escape or cooling of that air, which may occur slowly or rapidly, according to the temperature of the surrounding atmosphere. Moreover, the Montgolfiers are not generally provided with cars or boats.

The annual meeting of the Society of "La Médecine Dosimétrique" took place on November 4th, under the presidentship of Professor Burggraeve of Ghent, the founder of the so-called new system of therapeutics. At the same meeting, the opening of a new branch was announced, to be called the "Institut Libre de Médecine Dosimétrique", the object of which is to encourage a free intercourse between the adherents of the new society and the regular ordinary members of the old one, and to facilitate scientific researches and experiments with the dosimetric medicaments. Periodical meetings will be held, at which all are invited to make known the results of their experiments, to bring with them their clinical observations, and discuss the relative value of the dosimetric and of the other methods employed in therapeutics. The adherents of the new institute need not belong to the orthodox portion of the society; but Dr. Burggraeve hopes that, by holding out these advantages to all practitioners, those who still hesitate will, sooner or later, become converted to his ideas. Dr. Burggraeve's opening address was a most excellent one; and, although he enunciated nothing but what is already known about the system he fervently patronises, yet, according to his own report, dosimetry has made considerable progress, and is accepted in many parts of Europe and America as an established and rational system of medicine. In a commercial point of view, I have grounds for stating that it is a great success. The granular form of drugs, or rather of their alkaloids, is found so convenient, that it is being more generally adopted. Many excellent papers by members were read at the meeting, giving detailed cases in support of the alleged superiority of dosimetry. One of the members present suggested that full instructions should be published on the subject, as very serious or even fatal results may be produced by the administration of such active medicines. To this Dr. Burggraeve replied, that there can be no posology with such active medicines; and, as the dose is influenced by varied circumstances, the action of the drug must be closely watched, and its use stopped as soon as the effect desired is produced. The number of granules will not be attended with any danger, provided they are administered, not in one dose, but at intervals of ten or fifteen minutes, or at longer intervals after the first few doses. He asserts that he has never heard of a case of poisoning by his granules; that they may be administered even during pregnancy without any risk to the fœtus, as there is no direct communication between the latter and the mother!

In reference to the increase of crime in France, I suggested in my letter on the subject that, in murders and suicides, the victims or perpetrators were generally influenced by the means mostly in vogue; but, of those employed up till now, nothing has been so terrible, though not always fatal in its results, as pure sulphuric acid. This is generally thrown on the face, not with the view of killing the victim, but of disfiguring him or her in the most indelible manner, and is usually adopted by the "weaker" sex to avenge some rival, real or imaginary. Madame Gros, a woman of the *demi-monde*, was, I believe, the first on the records of the Criminal Court who used the corrosive liquid as a weapon for such purposes; and it will be remembered that her trial, about three or four years ago, caused a great sensation. The victim, who was her own paramour, had his face burnt, with one eye partially and the other totally destroyed; and this diabolical act was committed in the dead of the night, with the aid of an accomplice, a former *amant*. Both the culprits were condemned to transportation with hard labour—the woman for twenty years, and the man for ten. Several cases have occurred since; and during the present year there have been, to my knowledge, at least four; all the culprits, with one exception, being females. The exception referred to was a man who, to avenge himself on his mistress for having left him, waylaid the young woman, and threw the destructive liquid at her; but fortunately she escaped with only her clothes burnt. Nevertheless, the wretched man was arrested, and is now awaiting his trial.

CORRESPONDENCE.

GUY'S HOSPITAL.

SIR,—I beg to inform your readers, if you will kindly print this, that a Committee is formed, in Southwark, for the reform of the government of Guy's Hospital. The first step will be to increase the Committee, and then immediately to hold a public meeting at the Bridge House Hotel. Mr. Alexander Hawkins, jun., our member of School Board, is the Honorary Secretary. I hope members of our profession, favourable to this movement, will send their names for this Committee, directed to Mr. Hawkins, Vestry Hall, Borough Road, Southwark.—I am, sir, your obedient servant, W. RENDLE, F.R.C.S.

Town Hall Chambers, High Street, Southwark, S.E.,
December 1st, 1880.

SIR,—If the staff of Guy's Hospital are really anxious to resign, and to resent the treatment they have received, no scruples about injuring the medical school need deter them.

Some few years ago, when St. George's Hospital was completely closed for painting and repairs, its students were invited to attend the practice of the other metropolitan hospitals. At least, I know they were allowed the run of St. Bartholomew's Hospital; and many of them availed themselves of the offer. The business of the medical school of St. George's was carried on during the whole time in their school-building.

Now, why should not the staff of Guy's obtain some suitable premises near Guy's Hospital, and open an "extramural medical school"? All the ordinary lectures, demonstrations, and dissections might be carried on. The dressing and clinical case-taking of their students might, for the present at least, be provided for in the other metropolitan hospitals. The out-patient teaching might soon be resumed by the staff opening an "extramural out-patient department of Guy's Hospital", charging each patient one shilling, which would soon pay for the drugs and other incidental expenses. The old out-patient department of Guy's would soon be transferred to the new institution, directly the public knew that there they would have the services of some of the best medical men in London; while, if they went to the hospital, they would either be attended by incompetent nurses or medical men of very inferior standing, of whom a new staff at Guy's would unquestionably consist, if any staff at all could be obtained.—I am, sir, yours truly,

ST. BART'S.

CREMATION.

SIR,—As a constant reader of the JOURNAL, though not at present a member of the British Medical Association, I would like my name added to those on the memorial in favour of cremation about to be presented to the Home Secretary.

Last evening, I read a paper on the subject to a debating society here, concluding with a resolution that it was desirable, in the interests of sanitary science, that the present mode of interment be superseded by cremation. To my surprise, the resolution was carried; and some of those who voted against me would have given their votes in favour, had I worded my resolution so as to make cremation permissive only, which is really all I claimed in the paper read. I think this result shows that the idea is making way among the educated laity, as among medical men.—Faithfully yours, HERBERT J. ILOTT, M.D.

Bromley, Kent, November 30th, 1880.

PATHOLOGICAL DEMONSTRATIONS.

SIR,—In your article on Pathological Demonstrations, in the BRITISH MEDICAL JOURNAL of November 13th, you criticise, in terms of disparagement, the new *post mortem* room at Guy's Hospital. It is not, on our part, entirely a matter of regret that you have done so. Your notice may attract visitors; and previous experience has told us that those who come will go away well pleased. Your two chief points of objection are, first, that the students stand instead of being comfortably seated; and, second, that the room is imperfectly heated. I know not who may be your informant upon the latter point; but the fact is that the heat generated by the warming apparatus is ample; and that several times it has been so excessive as to be disagreeable. Upon the question, whether the students should stand or sit, there is something to be said on both sides; and there is room for a difference of opinion. I do not think, with you, that comfortable seats are suitable for *post mortem* demonstrations, as conducted in most of the English medical schools. The shape and accommodation of our theatre were planned by our architect and Dr. Hilton Fagge, who, besides bringing to bear upon the question a considerable knowledge of the arrangements in vogue in the continental schools, made it his business—in conjunction with the treasurer of the hospital, Mr. Lushington—to see and learn all that was possible of the *post mortem* rooms in London; and the especial objects advocated by you, we think, are attained: that the student should be not too far removed from the specimens demonstrated; and that he should have opportunities of handling them for himself.

I have no doubt whatever that Professor Virchow's class-rooms are admirably suited to their purpose. I have also no doubt that, good as our new room is, it might have been better. But it is my conviction that the arrangements adopted in some of the continental schools are not, as yet, suitable for those of England. It will be admitted that the function of a medical school is to do equal justice to all its pupils; and, as far as possible, to ensure that no one finishes his course of study with an inadequate acquaintance with any of the ordained branches of professional knowledge—to turn out, in fact, the largest possible number of our students competent medical men. The question, therefore, in any branch of instruction, is: What is the plan which will do the greatest good to the greatest number? The medical student of to-day is already so crammed with classes, that, I feel sure, any such plan as that you propose would fail in its object. We should do more good to a few, perhaps; we should do far less good to the many. Our *post mortem* room is open all the afternoon on most days of the year; the demonstrator gathers round him, in the front spaces, those students who are prepared to see the demonstration through; while, by the open arrangement of rails behind, free access is afforded, without inconvenience to the demonstrator and those immediately around him, to those who are unable to do more than come and go for the few minutes of leisure allowed them by other duties.

By this plan, facilities are afforded, both to those who wish to go thoroughly through with their cases, and to those who, either from necessity or inclination, take their information by instalments; and, in the course of four years, an amount of experience is obtained by most of our students which would be impossible if it were to be compressed into class-teaching. But, in addition, short demonstrations are given twice a week, such as you advocate, though without the seats, and trays, and rails. Recent and histological specimens are exhibited, handled, discussed; and to these come any student so minded. These arrangements are, of course, quite distinct from the course of lectures on pathology, and the class for instruction in morbid histology.

Taken as a whole, I venture to maintain that this plan, though not perhaps *perfectly*, is well suited to its purpose, and adapted to the circumstances out of which it has grown. It may be hoped that, year by year, it will improve upon the same lines; but it is not by any means clear to me that the comfort of our students would be increased, or that more knowledge would be gained, were we to discard a system which has always worked well at Guy's, to experiment with another, because it, too, has been successful in its own sphere.—I am, sir, your obedient servant, JAMES F. GOODHART.

*** Our correspondent, on reading the article again, will see that the object was not to criticise disparagingly the *post mortem* room at Guy's Hospital, but to show how very deficient the arrangements are for pathological demonstrations in the London schools generally. With this object, we examined the arrangements in the school where, of all others in the metropolis, they are most complete, which happens to be at Guy's Hospital. The statement, that the heating of the *post mortem* room at Guy's is imperfect, is confirmed by Dr. Goodhart, when he says, "that several times it (the heat) has been so excessive as to be disagreeable"; that sometimes also, at least, the room is very cold. If Dr. Goodhart should have an opportunity to visit Professor Virchow's Institute, and see the manner in which the demonstrations are conducted, his theoretical objections to the plan would cease. He would find that the greater number are benefited by the plan, and the teaching is rendered much more effective. Professor Virchow's demonstration room is precisely arranged on the principle, that those students who wish to attend the whole demonstration, can arrange themselves in the front spaces; while those who can only be present during a part of the demonstration, can take their seats behind, and go out without disturbing any one.

OBITUARY.

WILLIAM LAUDER LINDSAY, M.D., F.R.S.E., F.L.S., EDINBURGH.

WE regret to record the death of this much esteemed physician, which took place at 3, Hartington Gardens, Edinburgh, on November 24th, at the age of fifty. Dr. Lindsay was a talented and apt scholar at the Royal High School in 1845 and 1846, where he carried off six medals and other honours. He was appointed medical officer to Murray's Royal Institution for the Insane at Perth in 1854, which appointment he held for a quarter of a century. He took his degree in medicine at the University of Edinburgh in 1852, where he obtained many honours; he was also a Thesis Medallist.

Dr. Lindsay was a keen botanist, and collected a valuable and rare herbarium, lichens being his favourite study. Geological research was only second to that of botany. He held medals from the Edinburgh University for botanical dissections in 1848 and 1849. Among the honours Dr. Lindsay obtained after his graduation, we may mention First Neill prize of the Royal Society of Edinburgh, 1859, a gold medal from the London International Exhibition of Fine Arts, a medal from the New Zealand Exhibition, 1865, and a medal from the Royal Society for eminence in natural history. His popular *History of British Lichens* was his first published work, in 1870; it was followed by *The Superannuation of Officers in British Hospitals*, in 1875; and his last and best effort was published in 1879, namely, *Mind in the Lower Animals, in Health and Disease*.

Dr. Lindsay's pen was seldom idle, as we find a long series of articles on Cholera, Glycerine, Insanity, Toxicology, Therapeutics, and Hygiene, published in the BRITISH MEDICAL JOURNAL, as also in the *Medical Times* and *Lancet*.

In consequence of enfeebled health, he resigned his duties at Perth in November 1879. He suffered from severe dyspepsia, and could eat little food. Various remedies were tried, and several changes of climate were advised; but to no purpose. His health gradually declined during this year, and he died from absolute exhaustion of mind and body.

In private, Dr. Lindsay was most unobtrusive and retiring; in every case, he shunned company, even that of his oldest friends. He shrank from any ostentation, and left orders that his body was either to be cremated, or buried in a plain deal coffin. At all times unwilling to trouble anyone, he was nevertheless deeply sensitive to the kindness of his medical brethren.

Dr. Lindsay had been a widower for seventeen years, and has left one daughter. His only brother is Dr. Murray Lindsay, physician to the Derby County Asylum.

VENTILATION OF SEWERS.—The Local Board of Maidstone has expended £50,000 in providing for the drainage of the district—only to find, apparently, that they have effectually provided for the propagation of disease. The sewers are ventilated by means of air-shafts and man-holes, placed at short distances apart in the public streets; and to the noxious vapours emanating from these ventilators are attributed two cases of typhoid fever which have been reported, one of which has proved fatal.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

BARTON, ECCLES, WINTON, AND MONTON.—The last report on the district containing these townships is for the two years 1878 and 1879. Dr. Carrington records a death-rate of 19.5 per 1,000 in 1878, and one of 17.3 in 1879. No serious epidemic occurred in either year, though scarlatina still lingers in the district in a mild form. The zymotic death-rate was 2.7 per 1,000 in 1878, and 1.2 per 1,000 in 1879—figures which must be considered satisfactory, when the unusual depression of trade, and consequent anxiety and want, are taken into consideration. Houses are rapidly springing up in all parts of the district, and great care will be necessary to see that they properly fulfil sanitary requirements before they are allowed to be occupied. The main drainage is proceeding as rapidly as possible; but the question of the ultimate disposal of the sewage seems still unsettled. Dr. Carrington chronicles the opening of a new cemetery, and suggests that Eccles churchyard, which has been in use for eight hundred years, and the surface of which is now several feet above the level of the adjacent land, should now be closed. In view of the terrible mortality among children in the district, he suggests the establishment of a *crèche* similar to that which has been used for some time with conspicuous success in the neighbouring district of Patricroft; and he also invites attention to the need for a public swimming-bath. In 1878, 776 births, and in 1879, 793 births, were registered, equal to rates of 34.0 and 34.7 per 1,000. In the same periods, 443 and 396 deaths were registered, or 19.4 and 17.3 per 1,000. To these must, however, be added the deaths occurring in the workhouse, and belonging to the district. The mortality amongst children is still excessive, although less than in some previous years. In 1876, the deaths under five years amounted to 50 per cent. of the total mortality; in 1877, to 40 per cent.; and in 1878 and 1879, to 44.2 and 43.8 per cent. The zymotic deaths numbered 68 in 1878, and 28 in 1879. The mortality from diseases of the lungs (including phthisis) is enormously great, amounting in 1878 to 31.3 per cent., and in 1879 to 42.7, of the total deaths.

BARMOUTH.—During 1879, 51 births and 19 deaths were registered at this popular watering-place, which has of late come in for a considerable share of abuse. Although most healthily situated, numerous sanitary defects seem to have been allowed to arise, and the need for a proper system of sewerage is getting to be especially urgent. The district appears to have been during 1879 almost free from any infectious disease. There were two or three mild cases of measles during the summer months among children of visitors, and one death (that of a visitor) was registered from diphtheria. Deducting the four deaths amongst visitors, the mortality rate is given by Dr. Jones as a little over 8 per 1,000.

POOLE.—Mr. Lawton's report on this district is characterised by unusually plain speaking—a quality which we miss too much in reports of health-officers. It needs, however, unusual courage and self-denial for such an officer to say exactly what he thinks, since Mr. Lawton has now shared the fate of many of those who have acted like him, in being ousted from his appointment. The report seems to show that a good deal of work has been done by the health-officer, though he has clearly not been seconded by the Town Council as closely as is desirable. The water-supply and the sewerage of the town seem especially to deserve early attention. The births and deaths registered during the year numbered 406 and 238 respectively, or rates of 35.46 and 20.79 per 1,000. The death-rate amongst infants was unduly high, and would seem to be fostered by the system of the insurance of infant lives. Observing that "a very large proportion of young children are insured", Mr. Lawton goes on to say that, from his own observation and experience, he cannot but think that the present system of infant life assurance is one fraught with very great danger. "Among the working and pseudo-working classes at Poole there are many who either will not or cannot pay for the services of a skilled medical man, and who content themselves either with practising upon their own children or allowing others equally ignorant to do so for them, calling in the services of a medical man when it is too late, only as a last resource, and in order to get the necessary death-certificate. It is quite useless to point out that the services of a medical man can be procured by applying to the relieving officer; for one is at once met with the rejoinder, 'Oh! then we should lose our vote!'"—the loss of a child thus appearing to be considered of light weight when compared with a vote!

WALKER.—Throughout 1879 there was a great amount of privation in this district, entailing much sickness amongst the working classes. Though the deaths among the poor were fewer, the number of new cases of sickness was 135, against 92 in 1878. There was, however, no exceptional manifestation of infectious disease; scarlatina, which was very prevalent and fatal in 1878, being credited with only 6 deaths; and a complete absence of fatal typhoid being recorded. The total births and deaths numbered 347 and 139 respectively, or 43.3 and 17.3 per 1,000 of the (roughly) estimated population of 8,000. Mr. Hurst complains, and with reason, of the difficulty of getting the excremental and house refuse of the district removed at proper intervals.

KING'S NORTON RURAL DISTRICT.—An unsatisfactory feature in the death-returns for this district is the large mortality amongst infants under one year of age, and children under five years. Dr. Hollingshead appreciates the importance of this mortality; but he observes that many of the deaths depend not so much on insanitary conditions as the gross ignorance of the poorer portion of the community. Many mothers, either from ignorance or utter carelessness, or both, improperly feed and clothe their children, and unduly expose them out of doors. Moreover, children are often left during the day to the care of young girls, who have no idea of infant requirements; so that they are fed, at irregular periods, with improperly prepared food, and are often left to lie about on the damp or wet ground while their child-nurses are at play. It is not, therefore, surprising that the chief ailments that prove so destructive to infant-life in the district are wasting and general debility, bronchitis, and congestion of the lungs. Much can be done to reduce the excessive number of deaths in this class by educating mothers in the management of their offspring; and Mr. Hollingshead is quite right in suggesting the establishment of "day-nurseries", where children can be taken care of during the absence of their mothers at work. The general death-rate during the year was 17.54 per 1,000, and the birth-rate 43.84 per 1,000. Thirty-six of the deaths occurred from zymotic disease, and twenty-seven from phthisis. There was an increase in the deaths from scarlet fever, and a decrease in the deaths from diarrhœa. The most populous parts of the district were drained during the year; but the water-supply is chiefly derived from wells which, in view of their proximity to dwellings, cannot but be looked upon with suspicion.

TOTTENHAM.—Mainly by the efforts of the energetic little Sanitary Association at Tottenham, which has now reached its seventh year of existence, the manifold sanitary defects in the district, which were exposed by Mr. Netten Radcliffe's inspection of ten years ago, have to a great extent been remedied. During 1871, 1872, and 1873, the sewers were unventilated; the excellent water-supply from the deep wells was supplemented by water drawn from shallow land-springs; and, for want of proper sewerage, the streams and water-courses had become to a great extent little better than open sewers. Throughout 1877-8-9, Tottenham enjoyed the advantages of a good water-supply, of sewer-ventilation, and of streams restored to comparative purity. Although the population increased between the two periods by considerably more than one-third, the total number of deaths from the seven principal zymotic diseases fell from 340 during 1871-2-3 to 240 during 1877-8-9. The deaths by fever fell from 99 to 29, by diarrhœa from 86 to 57, and by diphtheria from 40 to 17. The mean death-rate from the seven zymotic diseases has fallen from 4.7 per 1,000 during 1871-2-3 to 2.38 per 1,000 during 1877-8-9. Dr. Tyndale Watson, in his report for 1879, says that, even since his annual report for 1878, "great changes have taken place in the parish of Tottenham. Fields are rapidly disappearing, and building is going on in every direction." An idea of the rapid development of the place may be gathered from the fact that, from February 1875 to February 1880, plans have been approved by the Local Board for about 15,500 houses: an addition that would, supposing all the houses to be occupied, bring the population of Tottenham to more than 140,000. During last year, there were 1,348 births and 616 deaths in the district, against 1,160 and 590 in the previous year. Of the deaths, 166 were of children under one year; but Dr. Watson's single table does not permit of the number of deaths under five years being stated. The general death-rate was 17.6, about the same as in 1878 (according to the Sanitary Association's estimate of the population, it was 16.9); and the zymotic rate 2.2, against 2.8 in 1878. One death occurred from confluent small-pox, four deaths from measles (all in July and August), fifteen deaths from scarlatina (some of a malignant type), four from diphtheria, twenty-two from whooping-cough, eighteen from diarrhœa, and twelve from typhoid fever. The circumstances of these latter deaths might with advantage have been stated in greater detail.

WATFORD.—Dr. Brett reports the health of this district to have been very good during 1879; the zymotic death-rate being only 1.4 per 1,000, against 2.7 in the year 1878. Rheumatic fever was rather more prevalent; but infectious diseases (measles, scarlatina, and whooping-cough) were much less frequent. A small outbreak of real typhus is reported, the infection having been imported by a tramp. The man who attended to the tramp-ward of the infirmary, whither the man was removed, the head-porter, who often visited it, and the head-nurse, all caught the disease; and one of the four died. A case of typhoid fever, contracted on the Continent, was also fatal at Watford during the year. The total number of births was 344, and of corrected deaths 193, equal to rates of 34.4 and 19.3 on the (very roughly calculated) estimated population of 10,000. Thirty-seven of the deaths occurred in children under one year, and eighty-two persons had reached the age of sixty and upwards at death. Fourteen deaths occurred from zymotic disease, including two each from typhoid fever, scarlet fever, diphtheria, croup, and puerperal fever. Watford seems to be in many respects sadly in need of improvement. The water-supply, sewer-ventilation, and house-accommodation in the courts and alleys, are all adversely reported on.

WATER-SUPPLY OF CROMER.

SIR,—For some time past, Cromer, as a health-resort, has been the subject of comment in this and other papers; and, as usual, the public has raised the cry of "Wolf, Wolf", which in some measure has been prejudicial to the place. That we have been alive to the necessities of the age is shown by the fact that, a few years ago, we re-drained the town, at a cost of £4,000; and concurrently with this we started a waterworks company, but from continued engineering difficulties the company was obliged to wind up its affairs. The liquidator and former chairman—Mr. Priest—convinced of the practicability of the scheme, made two more trials; and, to our joy, success has crowned his efforts. The water is obtained from the chalk, and is not only plentiful, but good.—I remain, sir, your obedient servant,

R. MCKELVIE, M.D.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his Examination in the Science and Practice of Medicine, and received certificate to practise, on Thursday, November 18th, 1880.

Pratt, Reginald, Billesdon, Leicestershire.

The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 25th.

Beresford, Charles William, Royal Infirmary, Isle of Wight.
Daly, Edwin Owen, Coleshill Street, Eaton Square.
Flood, Francis Pulteney, Guy's Hospital.
Mortimer, John Desmond Ernest, Westminster Hospital.
Oulton, Henry William, Ballickmoyler, Queen's County.
Robinson, Charles William, North Shields.
Shelley, Robert Williamson, Sunderland.
Willey, Charles Henry, Leicester.

The following gentlemen also on the same days passed their Primary Professional Examination.

Bathe, Vachell Lee, St. Bartholomew's Hospital.
Braga, James Francis, Jr., King's College.
Clarke, Albert Bleckly, Charing Cross Hospital.
Squires, Charles N., St. Bartholomew's Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ASYLUM FOR IDIOTS, Earlswood, Redhill.—Assistant Medical Officer. Salary, £— per annum, with board and washing. Applications, with testimonials, to the Secretary, not before December 25th.

BATH HOSPITAL, Hartgate.—Secretary and Dispenser. Applications, with testimonials, to the Secretary, before January 6th, 1881.

*BELLINGHAM (UNION).—Medical Officer and Public Vaccinator for No. 3 District (Otterburn). Salary, £— per annum. Applications, with testimonials, on or before December 11th.

CARLOW DISTRICT LUNATIC ASYLUM.—Visiting Physician, at a salary of £— per annum. Applications to be addressed to Chairman of Board, to 15th instant.

CLONAKILTY UNION.—Medical Officer for Rosscarbery Dispensary District. Salary, £— per annum, with £— yearly as Medical Officer of Health, registration and vaccination fees. Election on the 7th instant.

DARLINGTON HOSPITAL.—Assistant House-Surgeon. Salary, £— per annum. Applications, with testimonials, at once.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Medical Tutor. Salary, £— per annum. Applications to be sent before December 11th.

DERBY HILL GENERAL INFIRMARY.—House-Surgeon. Salary, £— for [illegible], £— annually up to £—, with apartments, board, and [illegible], with testimonials, to the Secretary, not later than De[illegible]

*DORSET COUNTY ASYLUM—House-Surgeon. Salary, £70 per annum, and £10 additional as Secretary. Applications, with testimonials, to the Chairman, on or before January 12th, 1881.

EVELINA HOSPITAL FOR SICK CHILDREN—Registrar and Chloroformist. Salary, £30 per annum, with an additional £20 if the post be held for twelve months. Applications, with testimonials, not later than December 7th.

FRENCH HOSPITAL AND DISPENSARY, Leicester Square, W.—Resident Medical Officer. Salary, £— per annum, with board, furnished apartments, and attendance. Applications as early as possible, with testimonials, to the Assistant Secretary.

HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, Golden Square.—House-Surgeon. Honorarium, £50 per annum, with board, furnished apartments, and attendance. Applications, with testimonials, to the Secretary, on or before December 10th.

HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, Golden Square.—Surgeon to the Southern District (Newington Butts). Applications to the Secretary on or before December 10th.

*HOSPITAL FOR SICK CHILDREN, Great Ormond Street.—Ophthalmic Surgeon. Applications, with testimonials, on or before December 16th.

*KING'S COLLEGE, London.—Curator of the Anatomical Museum. Applications to the Secretary.

LEICESTER INFIRMARY AND FEVER HOSPITAL.—House-Surgeon and Apothecary. Testimonials, addressed to the Secretary's Office, 24, Friar Lane, on or before Monday, December 13th.

LISNASKEA UNION—Medical Officer for Brookeborough Dispensary District. Salary, £115 per annum, with £15 as Medical Officer of Health, registration and vaccination fees. Applications received to 14th proximo, when a day will be appointed for election.

LISNASKEA UNION—Medical Officer for Workhouse, at a salary of £45 per annum; and Consulting Sanitary Officer, at a fee of £2 for each consultation. Election on the 4th December.

*LIVERPOOL NORTHERN HOSPITAL—Assistant House-Surgeon. Salary, £70 per annum, with board and residence. Applications, with testimonials, not later than December 11th.

MITCHELSTOWN UNION—Medical Officer for Galbally Dispensary District. Salary, £— per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 13th instant.

MOUNTMELLICK UNION—Medical Officer for Cooham Dispensary District. Salary, £— per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 13th instant.

*NOTTINGHAM DISPENSARY—Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 20th; election January 3rd, 1881.

RADCLIFFE INFIRMARY, Oxford.—Junior Resident Medical Officer. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, before December 18th.

ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon. Applications on or before December 30th.

ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon. Salary, £25 per annum, with board, lodging, and washing. Applications, with testimonials, on or before December 6th.

ST. BARTHOLOMEW'S HOSPITAL—Casualty Physician. Applications, with testimonials, on or before December 6th.

ST. BARTHOLOMEW'S HOSPITAL, Chatham.—Assistant House Surgeon. Salary, £80 per annum, with board, lodging, washing, etc. Applications, with testimonials, on or before December 14th.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM.—Assistant Physician. Applications to the Honorary Secretary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BENNETT, Storer, L.R.C.P.Lond., M.R.C.S.Eng., L.D.S.Eng., appointed Assistant Dental Surgeon to the Dental Hospital of London.

DUKE, Alexander, M.K.Q.C.P.I., appointed Gynæcologist to Dr. Steevens' Hospital, Dublin.

[illegible], Percival L., L.R.C.P.Lond., appointed Lay Assistant to the London (Diocesan) Deaconess Institution, Bow Road, E.

K[illegible], F. W. [illegible], L.S.A., appointed Resident Obstetric Assistant to St. Luke's Hospital.

P[illegible], Francis C., M.B., appointed Obstetric Assistant to University College Hospital.—A. L. Barlow, M.B., resigned.

PHIPPS, P. V. A., M.R.C.S.E., appointed Resident Clinical Assistant to St. Luke's Hospital.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

P[illegible], C. H. Wood, M.R.C.S., L.S.A., appointed Medical Officer of Health for the Wimborne and Cranborne Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

BUCKNALL.—On November 27th, at West Street, Buckingham, the wife of W. L'Heureux Blenkarne, Surgeon—a son (Edgar James).

BYRNE.—On the 30th ultimo, at 4, Lombard Terrace, Garstang Road, Preston, the wife of J. J. Byrne, L.R.C.P., Surgeon, of a son.

*SKERRITT.—On November 30th, at Thornton Villa, Leighton Hill, Clifton, the wife of F. Markham Skerritt, M.D.Lond., M.R.C.P., of a daughter.

MARRIAGE.

PHILLOTS—SHARPE.—On the 24th instant, at St. Pride's Church, by the Rev. J. Scott Ramsay, M.A. (cousin of the bride), Harris Phillotts, M.D., of Tavistock, Devon, to Wilhelmina Mina, eldest daughter of William Sharpe, 5, Huskisson Street, Liverpool, formerly of Stafford and Manchester, banker.

DEATHS.

BUSH.—On July 6th, at Marshfield, Charles Arthur Bush, M.R.C.S., L.S.A., aged 36.

LINDSAY.—At 3, Hill's Gardens, Edinburgh, on the 24th November, William Lauder Lindsay, M.D., F.R.S.E., F.L.S.

DURING the past eight weeks of the current quarter, the metropolitan death-rate has averaged 21.4 per 1,000, against 21.5 and 21.9 in the corresponding periods of 1878 and 1879.

AT a meeting of the Ormskirk Rural Sanitary Authority last week, it was stated that over twenty cases of scarlet fever had broken out at Southport. In all the cases, the milk consumed was supplied by one and the same person.

ANOTHER medical officer of health has just been made the victim of the honesty of his opinions. Mr. A. H. Haines, the health-officer for the Urban District of Sutton Bridge, acts also in a similar capacity for the Port of Wisbech. On a recent occasion, when the choice of a suitable site for a hospital for infectious disease was under consideration, Mr. Haines felt it his duty to oppose the views of the Sutton Bridge Local Board, which appear to have been at variance with those of the Wisbech Port Authority. The matter seems to have been allowed to sleep for some months, but was brought up again on the 17th ult., when Mr. Haines's reappointment came up for consideration, with the result of his being ousted from office by the will of a majority of the board. No language is too strong to describe the petty spite and shortsightedness of local boards who thus reward honesty of action on the part of their officers.

PUBLIC HEALTH.—During last week, being the forty-seventh week of this year, 5,545 births and 3,787 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 23 deaths annually in every 1,000 persons living. The annual death-rate was 22 in Edinburgh, 25 in Glasgow, and 38 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bradford, 17; Portsmouth, 17; Brighton, 18; Leeds, 18; Birmingham, 19; Sheffield, 19; Norwich, 19; Leicester, 20; Newcastle-upon-Tyne, 21; London, 22; Hull, 22; Bristol, 24; Oldham, 24; Manchester, 25; Salford, 25; Plymouth, 26; Sunderland, 26; Nottingham, 26; Liverpool, 29; and the highest rate, 30, in Wolverhampton. The annual death-rate from the seven principal zymotic diseases averaged 2.8 per 1,000 in the twenty towns, and ranged from 0.7 and 1.1 in Plymouth and Birmingham, to 5.6 and 7.6 in Salford and Sunderland. Scarlet fever showed the largest proportional fatality in Sunderland and Nottingham; and measles in Salford and Leicester. The 17 deaths from diphtheria included 11 in London and 3 in Portsmouth. The highest death-rates from enteric fever occurred in Salford, Sunderland, Portsmouth, and Liverpool. Small-pox caused 21 more deaths in London and its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. In London, 1,521 deaths were registered, which were as many as 221 below the average, and gave an annual death-rate of 21.7. The 1,521 deaths included 19 from small-pox, 37 from measles, 83 from scarlet fever, 11 from diphtheria, 15 from whooping-cough, 15 from different forms of fever, and 18 from diarrhœa—being altogether 198 zymotic deaths, which were 49 below the average, and were equal to an annual rate of 2.8 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 421 and 332 in the two preceding weeks, were 367 last week, and no fewer than 116 below the average; 222 were attributed to bronchitis, and 104 to pneumonia. Different forms of violence caused 46 deaths; 37 were the result of negligence or accident, including 14 from fractures and contusions, 6 from burns and scalds, 4 from drowning, and 10 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 42.4°, and 1.4° below the average. On Monday the mean was only 29.4°, and showed a deficiency of 11.7°; whereas on Friday it rose to 50.7°, and was 9.0° above the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 16.7 miles per hour, which was 4.3 above the average. Rain fell on five days of the week, to the aggregate amount of 0.46 of an inch. The duration of registered bright sunshine in the week was equal to 29 per cent. of its possible duration. The recorded amount of ozone showed an excess during the latter part of the week.

OPERATION DAYS AT THE HOSPITALS.

MONDAY..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.3

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 2; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Dickie will exhibit a patient suffering from Tabes Dorsalis, with Anomalous Symptoms. Dr. Broadbent will read a paper on Pleuritic Effusion.—Odontological Society of Great Britain, 8 P.M. Casual communications from the President, Mr. George Lydden, and Dr. Walker. The President will introduce for discussion the subject of Extraction or Retention of First Permanent Molars. Mr. F. Canton will introduce the subject of Plastic Fillings.

TUESDAY.—Pathological Society of London, 8.30 P.M. Discussion on "Rickets" continued by Dr. Norman Moore, Mr. Warrington Haward, Dr. Dickinson, Mr. Parker, Dr. Longhurst, Dr. Baxter, and Mr. Lucas. Dr. Barlow, "Case of so-called 'Fœtal Rickets'"; Mr. Shattock, "Osseous Lesion in the Fœtus"; Dr. F. C. Turner, Anatomical and Microscopical Specimens of Ricketty Bones; Dr. Norman Moore, Cancer of Prostate (recent specimen); The President, Card Specimens.

WEDNESDAY.—Hunterian Society, 7.30 P.M., Council Meeting. 8 P.M., Dr. Charlwood Turner, "A Case of Intussusception"; Mr. Waren Tay, "A Case of Colotomy performed six years ago for supposed Vesical Stricture"; Mr. Gilbert, "Notes on Cases in General Practice".—Royal Microscopical Society, 8 P.M. Dr. Hudson, "Flosculariatrifolium n. sp."; Mr. C. Stewart, "Some Structural Features of Echinometridæ"; Notes on the movements of Diatoms, the construction of Object Glasses, Swinging Substages, etc.

THURSDAY.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Dr. Hughlings Jackson, "The Eye-Symptoms in Locomotor Ataxy"; Mr. Higgens, "Hyposcleral Cyclotomy"; Mr. Critchett, "Peritomy in Partial Pannus"; Dr. A. D. Davidson, "Detachment of Retina after Albuminuric Retinitis". Living specimens (at 8 o'clock): Mr. J. E. Adams, Peculiar Opacities in Vitreous Humour following Injury; Dr. S. Mackenzie (1) A Case of Scurvy, with Retinal Hæmorrhages; (2) A Case of Idiopathic Anæmia, with Retinal Hæmorrhages; Dr. A. D. Davidson, Congenital Absence of One Eyeball.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

A. C. M. can have the numbers of the JOURNAL containing Mr. Hart's article on "The Doctor in the Kitchen" from Dr. C. P. Coombs, Castle Cary.

IMPULSIVE EVIDENCE.

WE have received copies of the *Liverpool Mercury* of Friday, November 1st, containing some remarkable evidence from Dr. O'Connor, in the course of an inquest, in which he appears to have made some very insulting observations on the evidence of the house-surgeon of the Northern Hospital, saying: "He spoke like a child, a woman, or a fool". It is much to be regretted that such a scene should take place; the jury, however, appear to have taken a just and proper course, and rebuked Dr. O'Connor for his conduct in court.

MERCURIALISATION.

SIR,—"Pruritus" asks a question which it is difficult to answer. I have used calomel in the form of ointment, and also strong mercurial ointment, and citrine ointment, for long periods; and I have not met with a case of salivation. I have not met with one from the use of corrosive sublimate, although applied in the form of lotion and ointment in cases of itch in every stage. Whilst I say so, I strongly condemn the use of the alcoholic solution in ringworm to children's scalps.

Dr. Pereira was a great advocate of calomel in the form of ointment in various skin-affections; and Dr. Tournie adopted the following plan in the treatment of pruritus ani. "First, if the parts are covered with scales or dry crusts, emollient cataplasms and baths are employed until these are removed. An ointment, composed of four to six parts of calomel and thirty of lard, is applied twice daily; and after each application, the parts are sprinkled with a powder composed of one part of camphor and five of starch." "Experience", he says, "shows that the ointment alone is inefficacious; and the camphorated starch, singly, allays the itching, but does not effect the cure."

Of course, "Pruritus" must watch for any symptoms of mercurialisation. I can not find any record of salivation following the use of calomel inunction in pruritus ani. Experience teaches that, in some, salivation may be looked upon as a contingency; but if the calomel be not too long persevered in, and a careful watch kept during its employment, there is little risk of mercurialisation setting in. Various strengths of the ointment are used. Pereira's formula was one drachm to one ounce of lard; the strength given by "Pruritus" (eighty grains to one ounce of lard) is the formula of the *British Pharmacopœia*; and Dr. McCall Anderson uses one drachm of calomel with one ounce of simple ointment, two drachms of ammoniated mercury ointment, and one drachm of glycerine, in some skin-affections. Whilst I have said I cannot find any account of the ill effects of calomel in pruritus ani recorded, Gibert declares that calomel inunction is often followed by salivation in psoriasis. Royer, however, says that salivation is never produced by it.

The best thing "Pruritus" can do is to watch the effect, and not persevere too long; for if, in a week or so, the symptoms are not considerably abated, it is useless to trust to the calomel.—I am, etc.,

HENRY BROWN.

Northallerton, November 24th, 1880.

THE ONE PORTAL SYSTEM.

SIR,—I have read with much pleasure the suggestion of Mr. Gilruth on the one portal system. Having entertained similar views, I beg to send you a few remarks on the same subject.

1. Let the present colleges and halls be incorporated into one grand "Royal University of Medicine", with power to grant degrees in medicine and surgery (say M.B. and Ch.B., M.D. and Ch.D.). 2. The present corporations would thus constitute the colleges and halls of the new university, and hold to it much the same relation which the colleges at Oxford and Cambridge hold to these universities. 3. The halls of the present corporations could be used as places for examinations, as convenient. 4. The examinations should be conducted by conjoint boards, with the aid of Government inspectors, who should sign all diplomas.

The above proposal would have the effect of reducing the licensing bodies from nineteen to eleven; which, instead of being, as now, antagonistic, would be co-operative. But it is not, I conceive, one entrance (portal) to the medical profession so much as one standard of proficiency which is required, accompanied, of course, with equal rank and title for equal examinations, etc. Under this plan, the students of our great medical colleges would have equal facilities for obtaining university degrees (without the expense and trouble of residence) with the students of the Scotch universities. The membership and fellowship of the colleges should be granted, not upon examination, but by election as rewards to those who might have attained to some distinction in the profession. Present fellows and members of the [illegible] be admitted in the university to the degree of doctor or master [illegible]; present L.R.C.P. and M.R.C.S. might be named "graduates in medicine and surgery". A possible objection of the present university graduate to the use of the [illegible] graduate by the L.R.C.P. is removed by remembering that licentiate in [illegible] the name of one of the old degrees, and that the diplomates of Royal [illegible] Physicians or Surgeons are already recognised by Act 41 & 42 Vict., cap. [illegible] section 18, as graduates.—Yours very truly,

JAMES GAGE PARSONS, M.D.

Cotton House, Stokes Croft Road, Bristol, November 22nd, 1880.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

TYPHOID FEVER.

SIR,—If many medical men act as in the following case, may it not partly account for the spread of typhoid fever? A man came under my charge in hospital a few days ago, with very marked symptoms of typhoid fever. For ten days previously, he was under the charge of a medical man, who has been about thirty years in practice, and complained to him of thirst, heat of skin, profuse diarrhœa (six or eight motions in the twenty-four hours), and pain in the abdomen, all of which symptoms began in a rigor and a general feeling of "being out of sorts". He was visited day by day, and his pulse felt; his temperature was not taken; the colour or character of his motions not inquired into; but daily he was ordered to take ice, spring water, and beef-tea. To stop the diarrhœa, he got an astringent mixture. The diarrhœa did not diminish during this time, the fever and weakness increased, and yet no hint was given that the motions were to be disinfected, and his nurse threw them out as they were passed—the smell being very offensive—on to the common shore, in the immediate vicinity of overcrowded houses, and quite near a "public convenience" largely used by almost all the people in the neighbourhood. After the case came into hospital, the medical attendant confessed it was typhoid fever.

About three years ago, this same medical man attended marked typhoid fever cases, in a district where the houses are small and from fifty to a hundred yards apart, and gave no orders to disinfect the "motions". The fever spread to such an extent that the public school was at that time closed in consequence.

I have complained to those in authority here about this carelessness, but have been told that a medical man cannot be compelled to take precautions to prevent the spread of any fever. As I think this must be a mistake, I should be glad to hear further on the matter. I enclose my card.—I am, sir, yours, etc.,

A MEMBER.

ADVERTISING MEDICAL CIRCULARS.

SIR,—I enclose a circular which seems to have been pretty freely distributed about here. I merely ask if such things and such advertisements are calculated to uphold the dignity of the profession? and if they tend to cause the people generally to respect its members? My own ideas are that it is very shoppy. I sign my name, and give my address, but not for publication.—I am, etc.,

X.

"The Priory, Cheltenham, Oct. 30th, 1880. Dr. Wilson begs to intimate to the public that he has removed from the above address to those central premises, No. 13, Cambray, where he may be consulted from 9 till 11 A.M., 2 till 3 P.M., 6 till 8 P.M.; Sundays: 9 till 10 A.M., 5 till 6 P.M. Charges strictly moderate. Advice from 2s. Visits from 5s. Patients can have their medicine if desired. Messages for visits will be received and attended to at all hours. J. Wilson, M.B., C.M., Physician and Surgeon, Edin. Univ."

THE TREATMENT OF SEA-SICKNESS.

SIR,—Dr. Sansome's letter in the JOURNAL of November 20th, as to the pathology of sea-sickness, is, although ingenious, eminently fallacious. Granting the fact of the blood being in tubes, and consequently possessing its own *vis inertiæ*; how does he reconcile the facts of the same blood and *vis* causing the nausea in the first few days of a voyage, with the absence of the symptoms, "which should be persistent if his view be correct", at the middle or end of a cruise of several months? Again, old sailors seldom suffer from the complaint, even when leaving port, unless their portal circulation and digestive powers have been disarranged by shore-living. Within a few months of twenty years ago, I made different voyages to Australia, as surgeon to one of Dunbar's liners; and I must say that I never, during that time, saw a case of sea-sickness which did not yield to an alterative for the liver and an occasional drop of creasote.—I am, etc.,

ROBERT COOKE, M.R.C.S.E., L.S.A.Lond.

Newport, Mon., November 24th, 1880.

SIR,—For the first thirty-five years of my life, I was always either sick or felt very squeamish and uncomfortable when I travelled by steamer on the sea. For the last nineteen years, I have never been sea-sick, nor have I felt disposed to be so, although I have made much longer voyages than I had before. This change is due, in my opinion, to the use of laudanum. I had noticed that I was generally half sick before I went on board, from the remembrance of past voyages; and it occurred to me that, if I took a dose of laudanum before I went on board, I should probably become indifferent as to whether I was sick or not. I accordingly took twenty minims of laudanum about one hour before I went on board. When I reached the steamer, I did not care whether I was sick or not; and I was not in the slightest degree sick, nor did I feel in the least inclined to be so. And this has been my experience ever since. After a few years, I reduced the dose to ten minims; and, a few years later, I ceased to take laudanum or anything else. Two years ago, I went to New York and back; and the two voyages were the most pleasant part of my trip. The sea was not, indeed, very rough for the Atlantic; but, in former days, I should probably have been sick most of the time. I have since crossed the Channel from Calais in a small steamer, when it was so rough that even the sailors could do nothing more than crawl about, clinging to the bulwarks or whatever they could lay hold of; but I felt perfectly well, enjoyed the rough sea, and crawled about like the sailors.

In conclusion, I may say that I was never at any time sick in a small boat, even when the sea was rough (and I have been in very rough seas in a small boat); and this fact is opposed to Dr. Whittle's notion that sea-sickness is due to the jumbling up of the contents of the stomach; for where could they be more jumbled up than in a small boat?—Yours, etc.,

F. CHANCE, M.B. Cantab., F.R.C.P.

Sydenham Hill, November 15th.

SIR,—The theory advanced by Mr. Sansome I have twice seen described before. It seems to me that the variation in the arterial current produced by the rise and fall of the ship can scarcely be sufficiently great to occasion the phenomena attributed to it.—I am, yours, etc.,

GLYNN WHITTLE, M.D.T.C.D.

Caius College, Cambridge, November 20th, 1880.

FALLACY OF CLINICAL HISTORY.

SIR,—A case that recently occurred here, and which, in an interesting way, illustrates the fallacy of history, may perhaps be thought worth publication.

A few evenings ago, one of our workmen sent to say that he was seriously ill with a rupture he could not replace. The messenger added that he had had this rupture four months, and had been able to reduce it till that night; that it had been well bathed with hot water for the previous two hours without effect; and that the patient was very sick; also that he had not felt well for some hours, though at work

all day. As there was no one to look after him at home, he was brought across to the hospital, when he added these details to his history. Four months ago, he had strained himself lifting a heavy ladder, and soon afterwards noticed a swelling at the right external ring, which was pronounced by a druggist to be a rupture; he purchased a truss, and had worn it daily since, in spite of its discomfort: the swelling had gradually increased, and descended into the scrotum; at first, it was reducible, but lately he had been unable to put it up for more than a few minutes. On examination, he appeared between forty and fifty years of age, pale, and nervous, but not much pinched. In the right half of the scrotum was an oval tumour, of circumscribed character, and firmly elastic; in front of the cord, and with no extension up to the external ring, which was somewhat dilated, it was translucent, and evidently a hydrocele of the cord. On aspiration, it yielded about half an ounce of fluid, limpid and straw coloured; the tumour disappeared; the man returned home, and has worked as usual since, but no longer wears a truss.—I am, etc.,

B. J. Masseth.

Barnes Convalescent Hospital, Cheadle, near Manchester, Nov. 24th, 1880.

IN THE CHILDREN'S HOSPITAL.—EMMIE.

Our doctor had call'd in another; I never had seen him before,
But he sent a chill to my heart when I saw him come in at the door.
Fresh from the surgery—Schools of France and of other lands—
Harsh red hair, big voice, big chest, big merciless hands!
Wonderful cures he had done; O, yes; but they said, too, of him
He was happier using the knife than in trying to save the limb;
And that I can well believe, for he looked so coarse and so red,
I could think he was one of those who would break their jests on the dead.
And mangle the living dog that had loved him and fawn'd at his knee
Drench'd with the hellish Orfali—that ever such things should be!

Here was a boy—I am sure that some of our children would die
But for the voice of love and the smile and the comforting eye—
Here was a boy in the ward, every bone seem'd out of its place—
Caught in a mill and crush'd—it was all but a hopeless case;
And he handled him gently enough, but his voice and his face were not kind.
And it was but a hopeless case; he had seen it, and made up his mind.
And he said to me roughly, "The lad will need little more of your care."
"All the more need", I told him, "to seek the Lord Jesus in prayer;
They are all His children here, and I pray for them all as my own"
But he turned to me, "Ay, good woman, can prayer set a broken bone?"
Then he mutter'd half to himself, but I know that I heard him say,
"All very well but the good Lord Jesus has had His day."

And she lay with a flower in one hand, and her thin hands crost on her breast
Wan, but as pretty as heart can desire, and we thought her at rest,
Quietly sleeping—so quiet our doctor said, "Poor little dear!
Nurse, I must do it to-morrow, she'll never live through it, I fear."
I walk'd with our kindly old doctor as far as the head of the stair,
Then I return'd to the ward. The child didn't see I was there.

Never since I was nurse had I been so grieved and so vext!
Emmie had heard him; softly she called from her cot to the next,
"He says I shall never live through it; oh, Annie, what shall I do?"

My sleep was broken besides with dreams of the dreadful knife.
And fears for our delicate Emmie, who scarce would escape with her life.
Then, in the grey of the morning, it seem'd she stood by me and smiled:
And the doctor came at his hour, and we went to see the child.
He had brought his ghastly tools; we believed her asleep again—
Her dear, long, lean, little arms lying out on the counterpane;
Say that His day is done! Ah, why should we care what they say?
The Lord of the children had heard her, and Emmie had past away.

Alfred Tennyson.

ANTI-TANT CLARS.

SIR,—With reference to the inquiry "Anti-Tant" in your last issue relative to an "Ambulance chair", I shall be happy to forward "A. B." (if he will send me his name and address) an illustrated pamphlet containing full particulars as to the "St. John Two-Wheeled Litter", which would appear to fully answer his requirements. This litter—the invention of the celebrated Neuss, of Berlin—has been improved and patented by the Order of St. John of Jerusalem in England. Large numbers have been supplied to the Metropolitan police stations, and to many public and private establishments; and most favourable reports are constantly received with regard to its excellence and utility.—I am, sir, your obedient servant,

EDMUND A. H. LECHMERE, Secretary and Receiver, Order of St. John.

St. John's Gate, Clerkenwell, E.C., November 27th, 1880.

SUGGESTER.

SIR,—With reference to Dr. Potter's remarks on the medical men of the future at the Northern District meeting of the Metropolitan Counties Branch, let the different licensing bodies pass a by-law that no one holding their diplomas residing within half a mile in London and the suburbs, and one mile in the country, from a pharmaceutical chemist, shall be allowed to prescribe and dispense medicines. The public would then be obliged to get their medicines at the chemist's, to which they now frequently object.

To prevent unfair use of prescriptions, let the surgeon or physician state on the prescription for how many days it is to be in force; and let the Pharmaceutical Society make it contrary to their regulations, or illegal, to dispense a prescription beyond the date specified, without being re-dated and re-signed by the original writer. This would also lessen the practice of lending prescriptions to friends.—I am, etc.,

SUGGESTER.

F. C. You had better communicate with Mr. Nelson Hardy, The Grove, Dulwich, S.E.; and Mr. R. H. Carpenter, 109, Stockwell Road, S.W.

PARISH NURSE.

SIR,—We have a parish nurse in the country village of Hagley. She has been trained at Guy's and Queen Charlotte's hospitals, and is a certified midwife. She has a fixed salary of £45 a year, with cottage and coals, but she finds her own food. She visits ordinary cases of illness, and sits up for a night occasionally without making any charge; for confinements, a fee of 2s. 6d. is charged, which fee goes to a sick fund for the poor. If she is not very busy, she is allowed to help occasionally in nursing the rich people in the parish; but she is not allowed to take money from them, as whatever money they choose to give goes into the sick fund for the poor. This plan seems to work well.—Yours faithfully, GEORGE BIRT, M.B.Lond.

Stourbridge, November 18th, 1880.

THE USE OF SPIDERS IN THE TREATMENT OF AGUE.

S. quotes the following passage in Sir Thomas Watson's *Practice of Physic*, on the treatment of ague.

"Another curious remedy, said to be very successful, is the *owl of the black spider*, which inhabits barns, stables, and cellars. This substance has been tried on a tolerably large scale, and the testimony to its influence in curing agues is very strong. Dr. Craigie has given this account of it: 'In the year 1760, a number of prisoners from the vanquished squadron of Thurot having been landed in the Isle of Man, Dr. Gillespie, who was practising there, found that many of the agues which prevailed, both among these prisoners and the inhabitants of the island, obstinately resisted bark and such other remedies as he had recourse to. He was informed, by an old French physician belonging to the squadron, of the alleged efficacy of cobweb in certain forms of the disease. He, therefore, made trial of the cobweb, and found it to answer admirably. He was successful with it in more than sixty cases of different types, in the Isle of Man; and he had further experience of its utility subsequently in Ayrshire'. After this, the same remedy was tested in the West Indies by Dr. Jackson, to whom Dr. Gillespie had recommended it. Dr. Jackson's observations were made in the hospital of the army depôt in the West Indies in 1801. Several cases of ague, on which bark, arsenic, or mercury, singly or alternately, had made either a very temporary impression or none at all, were selected for experiment. In four of these cases, two pills, containing each five grains of cobweb, were given at intervals of two hours, commencing six hours before the expected time of recurrence of the paroxysm. The fit did not return. On subsequent trials, it was found not only to arrest the course of agues, but to remove various symptoms, such as pain, delirium, vomiting, griping in ague and in continued fever, when these symptoms were unconnected with inflammation."

MR. N. W. ALLT (Wittenham) and Mr. E. NOCK (London) have also called our attention to Sir Thomas Watson's remarks on the subject.

MR. C. DAVIDSON (Hackney) directs attention to the fact that not only is this remedy mentioned by Sir Thomas Watson, but *tela aranceæ* is suggested in the *United States Dispensatory* as a remedy in intermittent fever. A case in which this remedy was used with apparent success is reported by Dr. L. M. Jones in the *Cincinnati Lancet and Observer*, 1877; and some details of the mode of treatment adopted are given in Napheys' *Medical Therapeutics*, sixth edition, p. 424. In Moquin-Tandon's *Medical Zoology*, it is stated that spider's web was formerly used as a cataplasm in hysteria. It was administered internally, in the form of pills, in fever. The celebrated "Montpellier drops" were obtained from it by distillation, and were recommended as a preventative to apoplexy.

DR. L. LEWIS (Albert Street) has been assured by a patient, many years resident in China, that he has repeatedly cut short an attack of ague by the use of the spiders' web, rolled into pills; and he still employs it here, when threatened with his old complaint.

DR. W. T. FERNIE (Great Malvern) writes that the spider and its web have been prescribed for ague in England on most respectable authority, throughout many years. The *Pharmacopœia Londinensis* of 1690, edited by Dr. Wm. Salmon, says: "The spider, being made into a plaster, and laid to the wrists and temples, cures agues, chiefly quartans"; and "of the spider's web, some use it outwardly against agues, others adventure to give it inwardly". "The oyl of spiders is made by infusion or boyling the bruised spiders in oyl olive." "It is an ingredient in the antifebritick plaster." Again, in 1730, Dr. John Quincey ordered, in his *Compleat English Dispensatory*, as an "emplastrum febrifugum", "two ounces of Cyprus turpentine melted in a copper pan, with fifteen live spiders stirred in until so small as to disappear in the mixture". A sufficient quantity of cobwebs was to be after wards added to make into a due consistence for a plaster. Dr. Fuller, M.D.Cantab. about the same date, in his *Body of Practicke*, prescribed a "cataplasm of webs for the ague", and directed that "to drive an ague this should be tied about the wrists so as to make it bear hard upon the pulses two hours before the fit". Likewise, in *Notes and Queries* (vol. ii. p. 250), mention is made of a lady in the South of Ireland, famous far and near amongst her poorer neighbours for the cure of ague in the present century. "Her universal remedy was a large house-spider alive and enveloped in treacle or preserve." And Cuthbert Bede, B.A., says, in the same publication (vol. ix): "From my own knowledge, I can speak of another charm for the ague, in which the fen-people put great faith; viz., a spider, covered with dough, and taken as a pill".

We may supplement these interesting notes by observing that Dr. Waring, in his *Bibliotheca Therapeutica*, vol. I (Sydenham Society, 1878), refers to several writers on the use of spiders' web in intermittent fever, and says that Dr. J. Donaldson, of the Indian Medical Service, attempted to reintroduce it into practice in 1860. Dr. Waring says that "the evidence of its action as an antiperiodic and sedative rests upon respectable authority".

PAPIER-MÂCHÉ SPLINTS.

MR. JOHN GLAISTER (Glasgow) writes that, in addition to the advantages of paraffin (solid) for splints enumerated by Dr. Haughton, others might be added; for instance, its lightness, and its readiness for use, besides the ease with which it can be recovered from old splints, and utilised again. He says, however, that it is not a new invention. Dr. Macewen, of the Glasgow Royal Infirmary, has used it in hospital practice for some years; and in an article in the *Lancet* of August 31st, 1878, first drew the attention of the profession to paraffin splints. Mr. Glaister also published an article on the subject in the *Glasgow Medical Journal* for August 1880. Dr. Macewen primarily advocated the use of gauze bandages, into the meshes of which the liquid paraffin was brushed; but later on, he dipped the gauze bandages into the melted material till saturated, and applied when the heat could readily be borne; he then experimented with a variety of substances, as hay, straw, newspaper, oakum, flannel, cotton, and latterly cotton-wool, which last, in layers, he has found most suitable for the formation of splints, in combination with the paraffin. He now uses unbleached cotton-wool for splints in simple and compound fractures; in the treatment of the latter, cutting a window opposite the wound; and for Sayre's jackets. Mr. Glaister has frequently used paraffin splints in his own private practice; and during the winter of 1878-79, put up two or three Colles' fractures, with admirable results. He has also used them to produce immobility in joints. The following is the manner of making a splint of paraffin and cotton-wool; for, *e.g.*, a simple fracture of the bones of the leg. Unbleached cotton-wool, in the form of a layer, is cut to the requisite length, so as to fix both knee- and ankle-joints, its breadth being sufficient to envelop the limb. The paraffin (having a melting-point of 130° F.), is sliced in sufficient quantity into a tin vessel, which is placed inside a larger one containing water not much below the boiling point. The cotton-wool is rolled into a form sufficiently small to enable it to pass into the paraffin-vessel; having been put there, it quickly becomes saturated. One or two

layers of carbolised or plain gauze bandage are applied around the fractured limb. These equalise the pressure on the blood-vessels, and enable the limb better to withstand the heat of the paraffin. The paraffin-saturated cotton-wool is removed, unrolled to its original state, and when its heat will permit the back of your hand to be applied to it without discomfort, it is applied to the limb, when its pliable condition will allow its fitting the shape of the leg and foot. Over this, another layer or two of gauze bandage is applied, to express the superfluous paraffin, and cause the splint to fit comfortably. The splint is now made. The setting may be hastened by pouring cold water over it, or by wrapping towels wrung out of the same fluid round it, when the setting will be accomplished in a few minutes. Any particular disposition of the limb can easily be attained by holding the limb in the desired position while the paraffin is setting. The splint can be left on the limb till the fracture be thoroughly united, or it can be cut up the side, and laced; this is better done before the setting has taken place. Sayre's jackets are made after the same principle, cotton-wool being substituted for the bandages.

F. T. T. We admit fully the good intentions of our correspondent, but think it would be better to avoid the advertisement of private clubs, by printed slips of rules, as such a course is sure to lead to the issue of similar documents by other practitioners, and ultimately to a lowering of professional status in the district. Printed rules and other circulars are tolerated by the profession only in the case of hospitals, dispensaries, and clubs, where there is a responsible committee of management, and where the vacancies in the medical staff are open to competition.

SUPPLEMENTARY MAMMÆ.

SIR,—The description of a third mamma of a woman may be interesting to anatomists. As I see no mention of such in Gray's *Anatomy*, it must be of a very rare occurrence.

On the third day after the delivery of a primipara, she complained of a pain caused by a little black hard lump under her left breast, which the person had always regarded as a mole. On carefully looking at this lump, it presented a little nipple; a dark areola surrounded it, and a globular swelling beyond that. On squeezing the swelling towards the centre—the nipple—milk exuded freely. I told the woman not to suckle this, but to keep the child to the normal breast above. Since the child has sucked this breast, the third or supplementary mamma has become empty, and gives no pain or uneasiness. In the event of a stoppage to the secretion of milk in the left normal breast at a subsequent confinement, this third or supplementary mamma would perhaps become very useful for lactation.—I am, etc.,

Preston, November 30th, 1880. JOHN E. GARNER.

* The occasional occurrence of supernumerary breasts is referred to in Quain's *Anatomy*, 8th edition, vol. ii, p. 488: "An additional mamma is sometimes met with, and even four or five have been observed to co-exist: the supernumerary glands being most frequently near the ordinary pair, but sometimes in a distant part of the body."

DR. HIME (Sheffield).—Shall have early insertion, with others on the like topic.

QUERY (Warrington) does not give his name and address; no notice, therefore, can be taken of his communication.

GLOVES FOR WET WEATHER.

A. F. recommends a pair of the ordinary worsted ringwood gloves, over which a large pair of dogskin gloves is drawn.

DR. C. P. COOMBS (Castle Cary) recommends thick knitted gloves for wet weather; while for cold weather he finds nothing so good as a pair of black fur gloves lined with lambs'-wool. A pair of these, costing five or six shillings, will last three or four winters.

WANTED, A SITUATION.

SIR,—Would any of your readers kindly inform me as to the position a medical man holds as medical officer to a Friendly Societies' Association in England? what the duties are? and if such an appointment is hard to obtain? Any hints on the above will oblige.—Yours truly,

M. B.

J. C. M. (Scotland).—We think it extremely unlikely that the Association would undertake any enterprise of the sort, which is foreign to its objects; but any communication on the subject should be addressed to the Committee of Council, of which Dr. Alfred Carpenter, of Croydon, is chairman.

GENERAL PRACTITIONERS AND PREVENTIVE MEDICINE.

SIR,—Since the publication of my letter on the above-named subject, I have learned for the first time that a similar suggestion was made to the British Medical Association by Dr. Ogle, of Dublin, in 1870, and repeated by him at the meeting of the Sanitary Institute in 1880. Naturally was I not aware that such a proposal had ever been made, but I was agreeably surprised to learn, from the letter of Dr. de Wolf, that the favourite objection of stolid conservatism to every reform—that of impracticability—is in this instance already forestalled by the actual success of the system in the colony of Newfoundland. The fact that I, in common with others unknown to me, have independently arrived at the views advanced in my letter is, I think, a striking confirmation of the truth and value of the principle contended for. My suggestion differs, however, in at least one important respect from that of Dr. Ogle. He would charge the extra fees for extraordinary visits; I would base the extra remuneration on extraordinary work, or in other words, on the nature of the services rendered, and not on the circumstances of the visit. This distinction between ordinary and extraordinary work is, I think, more definite and tangible than that proposed by Dr. Ogle, while it has the additional recommendation of being already in daily and successful use in clubs in all parts of the country. The reform now called for is simply and in brief the extension of the club system to those classes of society whose members can afford to pay us adequately for our services, with this addition, that the medical attendant should be retained, and regarded as the constant adviser on all matters that pertain to the maintenance of health.

I cannot anticipate any active opposition by the profession to a scheme so obviously beneficial and so reasonable; nor can I hope for its unanimous adoption for some time to come. The trammels of professional custom are too strong to permit spontaneous change on the part of the mass; but the resistance will be overcome by time. Like the dog to Jedburgh, it comes to me, it is but a matter of days before the public, and they will soon demand the change. Some underbred, cad, lay medical man will step in, and the great majority will gradually follow.—I am, etc.,

W. F. PHILLIPS.

STUDENT.—The income of the Apothecaries' Society gives no right to the title of [illegible] M.R.C.S. [illegible] F.R.C.S.

TREATMENT OF PRURITUS SCROTI.

SIR,—In your JOURNAL of (I think) 1875. I drew attention to the fact that the ointment of salicylic acid, properly prepared, was a specific for pruritus scroti. This fact I have subsequently verified in many cases; and in the East and in the Red Sea, I found it equally as efficacious as in colder climates. I may also mention that it is a specific for prickly heat. I prepare it with oleum thrombromæ, cetaceam, and oleum amygdalæ dulcis; and, when made correctly, one ounce by weight should rather more than fill a two-ounce pot. The proportion of acid varies from forty to sixty grains to the ounce.—I am, sir, etc.,

35, Elgin Crescent, Notting Hill, W., November 29th, 1880. PERCY WELLS.

ERRATA.—In the JOURNAL for November 27th, p. 841, col. 2, line 39, *for* "rings and", *read* "region or"; and in the last line but one of the same paragraph, *for* "temperance" *read* "teetotal". At line 10 from bottom, *for* "test", *read* "rest"; p. 842, col. 2, line 4 from bottom, *omit* "and" before "made", and *insert* "and" before "sixteen".

IF E. J. T. will forward us a copy of the rules and the accompanying document, we will submit it to a good authority on the subject.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. W. F. Phillips, Liscard; Mr. John C. Garner, Preston; Mr. Percy Wells, London; Mr. W. Parkinson, Wimborne; Dr. John Alexander, Glasgow; Only a Doctor; Mr. Christopher Heath, London; Dr. E. Meeres, Plymouth; Dr. T. B. Bott, Lytham; Dr. Brown-Séquard, Paris; Mr. G. Budd, Clifton; Dr. Poulain, London; Mr. E. V. S. Phipps, London; Sir E. A. Lechmere, London; Dr. J. Edmunds, London; Dr. G. H. Philipson, Newcastle-on-Tyne; Dr. Geo. Birt, Stourbridge; Dr. John Cavafy, London; Dr. W. E. Steavenson, London; M.D.; Mr. Storer Bennett, London; Mr. R. C. Gage, Monaghan; Mr. John Glaister, Glasgow; Dr. G. W. Grabham, Surrey; Dr. E. M. Skerritt, Clifton; Dr. S. White, St. Leonard's-on-Sea; Dr. W. J. Mackenna, London; Dr. R. Jeffreys, Chesterfield; Dr. Herbert J. Ilott, Bromley; Dr. C. Holman, Reigate; Our Glasgow Correspondent; A. F.; Dr. T. W. Hime, Sheffield; Mr. P. Squire, London; Dr. T. Daniels, Amsterdam; Mr. R. W. Dunn, London; Messrs. T. Cook and Son, London; Dr. C. P. Coombs, Castle Cary; Dr. H. W. Larkin, Bilston; A Wiltshire County Doctor; Mr. Greenwood, London; Dr. C. Creighton, Cambridge; Dr. A. Duke, Dublin; Mr. R. Clement Lucas, London; Mr. T. Canton, London; Mr. W. W. Reeves, London; Dr. J. C. Hall, Scotstown, Monaghan; Dr. T. B. Partridge, London; Dr. Buzzard, London; Mr. Warrington Haward, London; Dr. D. W. Finlay, London; Dr. Waters, Liverpool; Mr. W. Bowman, London; Mr. A. Willett, London; Mr. G. Cowell, London; Mr. Gamgee, Birmingham; Mr. T. W. Reid, Canterbury; Dr. Theodore Williams, London; Mr. E. Bellamy, London; Mr. Nettleship, London; Dr. Grainger Stewart, Edinburgh; Mr. W. Whitehead, Manchester; Dr. B. Foster, Birmingham; Dr. G. Buchanan, Glasgow; Mr. Francis Mason, London; Mr. Furneaux Jordan, Birmingham; Mr. Thomas Smith, London; Dr. Handfield Jones, London; Dr. Edis, London; Dr. J. Ross, Manchester; Mr. John Wood, London; Dr. F. T. Roberts, London; Mr. Annandale, Edinburgh; Dr. Symes Thompson, London; Dr. F. C. Turner, London; Dr. Bradbury, Cambridge; Dr. Warner, London; Mr. A. T. Norton, London; Mr. Sydney Jones, London; Dr. Clouston, Edinburgh; Mr. C. Macnamara, London; Dr. R. Liveing, London; Dr. Sawyer, Birmingham; Mr. Morrant Baker, London; Mr. John J. Harrison, Dublin; Dr. Penny, Oakham; E. T. T.; Dr. C. Kelly, Worthing; Mr. W. Stokes, Dublin; Dr. Allchin, London; Our Dublin Correspondent; Mr. P. J. Hayes, Dublin; Our Edinburgh Correspondent; Mr. W. Rendle, London; Dr. T. Trollope, St. Leonard's-on-Sea; Dr. W. Farr, London; Dr. Cobbold, Colney Hatch; Dr. W. Munro, Manchester; Dr. H. C. Pope, London; etc.

BOOKS, ETC., RECEIVED.

A Text Book of Practical Medicine. By Dr. Felix Von Niemeyer. Translated from the German Edition (by special permission of the Author) by George H. Humphreys, M.D., and Charles E. Hackley, M.D. Two vols. Revised edition. London: H. K. Lewis. 1880.

A Treatise on the Practice of Medicine, for the Use of Students and Practitioners. By Roberts Bartholow, M.A., M.D., LL.D. London: H. K. Lewis. 1880.

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SUGGESTIONS FOR THE MAKING OF PATHOLOGICAL CATALOGUES.

Presented to the Pathological Section of the Association at Cambridge.

By SIR JAMES PAGET, Bart., F.R.S.,
Consulting Surgeon to St. Bartholomew's Hospital; President of the Section; etc.

WHILE writing the Catalogue of the Pathological Museum of the Royal College of Surgeons, and the first two volumes of the Catalogue of the Museum of St. Bartholomew's Hospital, I had many occasions for studying how, with the help of catalogues, museums of pathological anatomy may be made most useful. More lately, my attention has been recalled to the same subject in the revision of the College Catalogue; and I venture to think it may be useful if some of the rules which seem good in such work be made generally known.

It is said, indeed, by some—but chiefly, I think, by those who desire to find reasons for not studying—that specimens of diseased structures are so altered in their preparation for a museum, that they are quite unfit for the teaching or the study of pathology. The same objection might be made to the study of botanical specimens in an herbarium. In both cases alike, the changes produced by preparation are so far uniform that anyone accustomed to recent specimens (and no others should study either herbaria or pathological museums) can allow for them, or "discount" them. Just as an anatomist can discern, in a recent specimen of disease, the healthy structure, so, but often much more clearly, can the pathologist or any careful student discern, in the prepared specimen, the chief characteristics of the disease. Or, as none know better the use of dissecting dead and decaying bodies than those who operate on the living, so may all find, when they are studying at the bedside, the most potent help in their memories of what they have seen in the museum. Or, even without argument, it may suffice to answer to those who depreciate pathological museums and catalogues, that they who study in them carefully do find them very useful.

The best purpose for a pathological catalogue to fulfil, and that within which many other purposes may be served, is, that it should enable a student to study in the museum a complete series of illustrations of both general and special pathology. As he might read and see in a book with abundant plates, so, with more advantage, he should be enabled, catalogue in hand, to study regular series of described specimens of the effects of injury and disease. He should be as little as possible disturbed by the necessity of moving from one part of the museum to another, or of consulting an index, or of searching among confused groups of letters or numbers.

Of museums generally, I need to speak only in relation to the arrangement; for this and the catalogue of each must, of course, be in accord.

If the museum be sufficiently large and various, it should have, in a first division, some well selected specimens illustrating general pathology; and, in a second and much larger division, those illustrating special pathology. In small museums, all the specimens had better be in series arranged, as for special pathology, according to the organs specially affected.

The specimens for general pathology may be arranged in series corresponding with the sections or chapters of any of the books upon the subject which, at the time of making the catalogue, are of most authority or in most general use. Those for special pathology should be in series, whose order may be determined by that in which the several parts of the body are described in the most esteemed works on descriptive anatomy;* and in each of these series the specimens should be arranged after the same manner as those in the series for general pathology. But the order in which the series are placed is less important than that, whatever order be adopted, it should be, as closely as possible, adhered to; and that the order of the general series should be repeated in each of the special ones. If, for example, the order of part of the subjects in the general pathology be hypertrophy, atrophy, repair, and so on, then the order in each series of special pathology should show the same succession of changes; *e.g.*, hypertrophy, atrophy, repair, and so on, in bone, in muscle, and in each following part or organ. Thus arranged, the specimens may be studied in due order as, in some great book, all the subjects of both general and special pathology might be.

The arrangement of the catalogue should, of course, agree with that of the museum; but an exception must be made for some instances in which, for convenience of space, it is necessary to put in different parts of the museum the specimens of diseases of the same part. For instance, among the specimens of diseases and injuries of the bones, or of the joints, the greater part are kept "wet" in bottles placed on shelves; but some must be "dry", and these may need to be in cabinets far apart from the shelves. When this separation of specimens must be made, the descriptions in the catalogue should not be similarly separated; for, although a catalogue has its chief use in the museum, it is not, when printed, useless as a book of reference in libraries. For this method of reference, it is very inconvenient that the descriptions of different specimens of similar diseases should be placed in different volumes, or in different parts of one volume; and the inconvenience of the descriptions being all together, while the specimens may be far apart, can be amended by having, in the copies of the catalogue which are kept in the museum, marginal MS. notes telling where the separated "dry" specimens are to be found. Similarly, notes may be placed on the shelves, indicating the places of any specimens that cannot be put on them.*

There may be many opinions as to the best method of numbering specimens, and many reasons for each opinion. I think it certain that, on the whole, it is best to have only one series of numbers marked on the specimens or the bottles containing them. With these numbers, those in the catalogue must, of course, correspond; but, in the catalogue, there should be the division into series, which it is not necessary to repeat in the markings of the specimens. The plan may be the same as that of a book in which the pages are numbered in one continuous series, though its contents are divided into chapters and parts. The beginnings and the sequence of the chapters can be marked in an index, and can be found in the book at least as easily as if each page were marked with the number of the chapter and the page in that chapter to which it belongs. So, in the museum and its catalogue, the order and place of the several series can be marked as chapters in the index; the specimens, like pages, can be marked in one series of numbers; and the series may be indicated by labels on the shelves, as they are in the college museum.

With this, as with any other plan, there must be seeming confusion when, after the arrangement and the catalogue are complete, new specimens are added. Such confusion is inevitable. It is least when new specimens are put in places determined by the facts which they illustrate, and are marked with letters (A, B, C, etc.) added to the numbers of those next after which they stand. Manuscript descriptions of the new specimens must be put in interleaved or supplemental catalogues; and the constantly increasing disorder must be endured till a new catalogue can be made and the whole of the specimens can be renumbered.

In a catalogue thus planned, chiefly for those who wish to study the whole museum, as they might study an illustrated system of pathology, it is easy to introduce many things useful to others. Some desire to find as many specimens as possible of some one injury or disease, or of the pathology of one part, or even of one bone. Provision for these may be made by reference-notes or numbers, so planned that anyone having found, in their appropriate place, the chief or typical specimens of that which he wishes, may thence be directed to all the nearly allied specimens in all other parts of the museum. For example: if one wishes to study ulceration, the specimens illustrating it in its due place in the division of general pathology should suffice to show the general characters of the most important visible parts of the process. But many facts concerning ulceration would be illustrated in specimens showing its effects in different parts or organs. In order to make full use of these, anyone, having looked through the descriptions of specimens of ulceration in the division for general pathology, should find, at their end, an arranged list or index of all or, at least, of all the best, specimens of ulceration in other parts of the museum. Similarly, after the descriptions of hypertrophy or of abscess in the general series, there should be references to the best specimens of hypertrophy of bone, of muscle, of heart, etc., which are in the several special series devoted to those parts. And return-references should be made, after the de-

* In the College Museum, the special pathological series are arranged in the same order as the physiological; and in any similar great museum this plan may be the best.

* In the College Catalogue, a separate volume is devoted to "dry" specimens; but it is proposed to correct this error in the new edition. Of course, the number of specimens separated from the regular and continuous placing according to the numbering should be as small as possible.

scriptions of the special, to those of the general series; *e.g.*, if hypertrophy in the general series be illustrated by a heart or a bone, these should be referred to at the end of the descriptions of diseased hearts or bones in their proper special series.*

Again, if any one wishes to study even the diseases of articular portions of bones, he should find good specimens of them in an appropriate part of the series of diseases of the joints; and in the catalogue, after the descriptions of these specimens, or of all in that series, there should be references to all of similar kind included in the series of diseases of bones, or in that relating to general pathology, or in any other part of the museum. Similar cross-references may increase the utility of every series. A specimen among diseases of the urethra may illustrate some lesser or consequent disease of the bladder; or one of the bladder may illustrate the pathology of the urethra. Each of these should be referred to from the series in which the other is described. By such cross-references, the value of the museum may be increased nearly as much as it would be by the addition of as many specimens.

Nearly the same end may be gained by the insertion of a large general index to the whole catalogue, or to each volume. But I think that this is less convenient and less complete; unless, indeed, the indices can be as good and complete as are those of the St. George's Museum. And the use of cross-references does not exclude that of indices; some, indeed, are essential to the complete utility of the catalogue. There should be a general index at the beginning or the end, showing the titles and the order of the several series, or their divisions, and the numbers of the first and last specimens in each; and preceding the descriptions of each series should be an index showing the arrangement of the specimens in that series, and the numbers of those illustrating each chief fact or principle. Thus each series should have, at the beginning of its portion of the catalogue, an index to its own contents; and at the end, by the method of cross-references, an index to all the specimens illustrating its pathology in other parts of the museum.

With helps such as these, it should not be difficult for any one to ascertain quickly whether a museum contains specimens of any disease of any part that he may wish to study. The extent of each index must be determined chiefly by that of the museum and of its several parts. For a small museum, it may suffice if each principal disease of each part be indicated; for a large one, the references may need to be to every variety and stage of each disease, and to the several diseases of each bone or joint.

In a very large museum, it may be possible to make good series of specimens for the orderly illustration of the principal specific or constitutional diseases, such as scrofula, syphilis, gout, the eruptive or other fevers. But it is very difficult to make such series complete enough and typical enough to be instructive, and of some the illustrations would be too incomplete. In the absence of such series, the best thing seems to be to have in some part of the catalogue, either at the end of the general index or after the description of the illustrations of inflammation, an index to the specimens of specific inflammation or other changes which may be found in different parts of the museum.

Such are the chief general rules which I can recommend for the arrangement of a museum and its catalogue; and the arrangement should always be complete before the catalogue is printed or finally written.

Now, for the description of the specimens, it is hard to give rules; as hard as it might be to make many rules for the writing of story-books; yet I venture to mention some as chiefly to be observed for the purpose of making the catalogue useful to students.

As a general rule, the description of each specimen should state all the facts to which the attention of the observer should be directed, provided they are still to be seen in the specimen described. Statements as to what cannot now be seen, such as microscopic appearances or conditions observed when the specimens were fresh, should be added, if at all, in smaller type.

If there be many nearly similar specimens, the best one or two should be placed first, and fully described; for the rest, the conditions in which they differ from these, or the facts which they show more clearly, should be added to a statement of their general similarity.

The names given to the diseases shown in specimens should be those used by the chief pathologists of the time; but it is often advisable to give also, in either parenthesis or note, one or more of the names by which the disease was called at the time of obtaining the specimen, or by the person who obtained it.

The scientific and technical terms employed in the descriptions should be those generally used by the best authorities of the time; but, in some instances, in which the terms may be deemed transitional, or in which older terms are not commonly disused, one or more of these should be inserted as synonyms. This use of synonyms should be made clear. The same thing should not, without notice, be called by different names; *e.g.*, aortic valves should not be described in one place as ossified, in another as calcareous, in another as cretaceous.

The guarded use of synonyms in descriptions of some specimens may add to the value of museums by giving them an historic interest. Many of the Hunterian specimens in the College Museum have their value. One, which Hunter marked scrofula, and which is a soft cancerous mass, tells of the difficulties of diagnosis in his time. So, the tumours which Sir Astley Cooper called "chronic mammary"—a name now nearly forgotten—will still show what he meant, and will still make his clinical observations valuable. And so, in the Guy's Museum, are original specimens of "Bright's disease". The time will come when pathologists may ask, What was Bright's disease? for, generally, the use of a personal name for a disease tells of a very incomplete pathology; and, with advancing knowledge, the name recedes, and its meaning is forgotten or mistaken.

Important facts in the history and progress of medicine may thus be preserved in museums, giving additional value to specimens which are of deep interest as memorials of the men of renown in long-past times.

Lastly, concerning the addition of histories of cases to the descriptions of specimens in catalogues, it is even more difficult to give rules than for the descriptions themselves. It is useless to try to combine the pathological catalogue and the clinical case-book; in such a combination neither part is likely to be carefully read. As a general rule, it will suffice, I believe, if the cases added to the descriptions tell briefly, in addition to the sex, age, and occupation of the patient, the duration of the disease or of the consequences of the injury shown in each specimen, and those clinical facts which were in clear relation with the facts still seen in it. And, certainly, this may suffice, if a more complete record of the case can be found in any published work or journal, or in an accessible case-book, or in such a book of manuscript "Cases and Dissections" as should be kept in connection with every pathological museum. References to such records should, of course, be added to the descriptions of the specimens to which they relate.

Nearly every museum contains certain "mirabilia". To these, a more than usually liberal allowance of space in the catalogue may fairly be granted; but it does not seem desirable to deviate far from the general plan in order to draw attention to them. The wonder-seekers are not those to whom museums are most instructive.

* If there be not a division for general pathology, its place should be supplied by a systematic index referring to those cases in the special series by which the general principles of pathology may best be illustrated.

PERIPHERAL NEUROGANGLIOMA. — Dr. Axel Key of Stockholm describes, in the *Hygiea* for 1879 (*Nordiskt Medicin. Arkiv*, Band xii), the microscopic structure of a nerve-tumour removed from a journeyman tailor, aged 31, who was discharged cured after a stay of fourteen days in hospital. The tumour had commenced as a small knob in the soft parts in the neighbourhood of the left ala nasi, and had grown in the course of a year to the size of a plum. The extirpated tumour was encapsuled; it was not adherent either to the skin or to the subjacent bone; it was greyish-red in colour, homogeneous, and rather soft. After hardening in Müller's fluid, it appeared to be of tolerably firm consistence; it was sharply defined, with smooth round projections, and was of somewhat irregular flattened shape. To one of the projections were attached some shreds, like connective tissue. Macroscopically, it was like a sarcoma, and had been diagnosed as such in the hospital. The microscope, however, revealed an entirely different structure; namely, very large cells, which completely resembled ganglion-cells, and were enclosed in perfectly developed capsules, the interior of which had the same appearance as the capsules of ganglion-cells. The cells were apolar; and not only one, but two or three, or even more, were contained in the same capsule. In the shreds connected with the tumour was found a nerve broken up into fine fibres of unequal size, probably a portion of the infra-orbital. On examining these branches of nerve, it was clearly seen that the large ganglionic elements of the tumour were developed from the nerve-fibres. Thus there was in this case a true ganglioma, which throws light on the hitherto unsolved question, whether a tumour of this kind can be developed on a peripheral nerve. Only one case of ganglioma is described in medical literature, viz., by Loretz in Virchow's *Archiv;* but the tumour, which was of the size of an egg, had proceeded from a pre-existing ganglion, and was thus a simple hyperplastic new growth. The case reported by Professor Key renders it certain that a ganglioma may be developed from a peripheral nerve, altogether independently of preceding ganglionic formations; and hence, in order to avoid all misunderstanding, Dr. Key calls this 'new growth "neuroganglioma verum periphericum".

ON LITHOTRITY AT A SINGLE SITTING: WITH A RECORD OF FORTY-EIGHT CASES.*

By SIR H. THOMPSON, F.R.C.S.

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I PROPOSE to consider the method of removing vesical calculus of considerable size by crushing it, and removing the *débris* from the bladder at a single sitting.

Let me first make a very brief allusion to the title here employed to designate the operation thus described.

The first time a stone was systematically crushed by instruments within the bladder, so that the fragments might be expelled naturally through the urethra, and thus a cutting operation be avoided, was, as most of us know, in 1824, by Civiale of Paris. He named the process lithotrity, in contradistinction to lithotomy—crushing the stone, instead of cutting for the stone. The distinction is broad and clear.

Since that time, lithotomy, the outcome of centuries of experience and study, has not materially changed. The new operation, lithotrity, has been greatly modified during fifty or sixty years of practice, and is doubtless still on its way to perfection. It consisted, first, in perforating the stone with a drill, afterwards in crushing it; and, a little later, the *débris* were washed out, instead of being left to nature to expel. But the essential characteristic of the operation, as the name implies, has always been, and still is, the mechanical disintegration of the stone; this is the necessary preliminary to the removal of *débris*, which is a secondary process. These things being so, I believe you will feel with me that it is only logically consistent for us, while it renders only simple justice to the originator, to speak of the process still as lithotrity, and not to exchange this for any other term, so long as the primary element in the proceeding is still the crushing of the stone.

These remarks, however, bring me to a recent and important modification of the operation, proposed by a distinguished American surgeon, Professor Bigelow. Everybody now knows that he has advocated the practice of removing a stone of large size—however large, indeed, it may be—at one sitting, instead of by several, as had hitherto been the practice in such cases. Small stones, as a rule, and exceptionally stones of medium size, had long before this been so dealt with. But, in order to accomplish his idea, it became necessary, if not to use more powerful lithotrites, at least to use a larger evacuating catheter, and a more powerful aspirator than heretofore. The real change, the new principle in his teaching, is not necessarily associated with the use of the mechanical appliances which he proposed to employ, some of which, perhaps, it is not easy to regard as improvements. The value of his proposal—if it be valuable—consists in something higher than the form of an instrument, viz., in the enunciation of a principle; and an estimate of this can only be determined by the results of a large experience of its application to practice. My aim in this short memoir is to present a humble contribution towards elucidating the inquiry.

Bigelow's principle may be thus epitomised. Granted that much disturbance is produced by a prolonged sitting to crush a large and hard stone, less mischief will arise to the bladder thereby, provided all the fragments are removed, than by devoting three or four shorter but separate sittings to the work; since the presence of fragments in the bladder for a few days injures it more than the single prolonged operation.

The enunciation of this axiom threw light on a point of practice which I had myself long ago observed, and on several occasions had called special attention to. It is this: that, when cystitis occurs in the course of lithotrity, the most advantageous way of dealing with it is, not to treat the patient by the usual remedies for cystitis, but, without delay, to crush the remainder of the stone, and remove the whole by aspiration at once. This proceeding I have found very successful, and had strongly urged its adoption both at home and abroad, long before Professor Bigelow's proposal was announced. I name this merely to show a certain corroboration of his views from my antecedent experience, and not with the least idea of laying the slightest claim to forestall my American *confrère*. It was this conviction of mine, however, relative to the effect of removing fragments, which prepared me at once to believe that the principle of Bigelow's proposal would almost certainly prove to be well grounded. Hence I instantly closed with it, and tested it without delay; only the instruments which he had proposed, I could not accept—could not, indeed, as an old expert in such matters, do other than object to. I commenced "the one-sitting" system accordingly, now about a year and a half ago, and have, during a period of fifteen months, operated by it on 48 adult males with calculi of various sizes; the specimens are all here for your inspection, as well as the instruments employed. But, during the same period, I have also operated on 8 other male adults: on 6 by lateral lithotomy, and on 2 by multiple crushing of four and five sittings respectively, for reasons to be stated.

The particulars of 35 of the 48 "one-sitting" cases referred to, are recorded in the third edition of my work on *Lithotomy and Lithotrity*, which appeared about two months ago (see pp. 190-3). Since it went to press, I have had 13 more cases, making the 48, and with them two deaths, one of which is not fairly chargeable to the operation; but I have accepted both, and there have been no others. The details of all these cases, with references to those medical friends with whom I saw them in consultation, and who are acquainted with the results, are supplied in a schedule here, which I hand to our president, as time does not admit of my reading them.

Among the six cases of lateral lithotomy, there was only one death, a gentleman aged 74, whom I saw with my friend Mr. Goulden, at Maidenhead; the rest are living. Lastly, there are two exceptional cases of large calculus treated by multiple sittings, which are briefly as follows.

1. A Portuguese gentleman, aged 53, who came to me from Lisbon, where repeated attempts to remove his stone had been made. Ether was administered by Mr. Clover, who desired, as the lungs were emphysematous, not to prolong anæsthesia unduly. I removed, by lithotrite and aspirator, no less than 780 grains of hard calculus, mixed uric acid and phosphates, by five sittings in seventeen days.

March 10th,	in 18 minutes,	and removing	248	grains.
,, 15th ,,	15 ,,	,,	139	,,
,, 19th ,,	10 ,,	,,	98	,,
,, 23rd ,,	8 ,,	,,	75	,,
,, 27th ,,	8 ,,	,,	780	,,

This stone was, therefore, nearly two ounces in weight. Mr. Henry Smith of King's College was present at every sitting; the patient never had any fever, and made a rapid and excellent recovery.

2. A gentleman, aged 68, with a large oxalate of lime calculus. He was feeble, or I should have cut him, for he had a close undilatable urethra, a large prostate, and a bladder not very easy to work in. I therefore dealt with him as with the preceding cases, removing no less than 640 grains in four sittings. This is the largest oxalate of lime calculus I have ever attacked with the lithotrite; and it was a test for the light but powerful instrument which I have here, and the form of which particularly adapts it to deal with a large hard stone, without becoming clogged. He was brought to me by Dr. Harris of London, who, with Mr. Furner of Brighton, was present at each of the sittings. I saw him only three days ago, for the purpose of verifying his condition, which is extremely good.*

The total, then, of my adult male cases during this period of fifteen months, is fifty-six cases, with three deaths; two being cases of single-sitting lithotrity, and one of lateral lithotomy; a result which, I think, may be regarded as satisfactory. Such a number is, in my opinion, by no means sufficient to decide this question, but it may be taken as a contribution in that direction. The result indicates—and I may further add, that the general welldoing of the cases strengthens the indication—that the new proposal diminishes somewhat the risk, and leaves the bladder generally in a better condition afterwards. This latter result, however, is certainly not always to be reckoned on as an invariable one.

I need hardly say, that the cases of fifty-six individuals so recently treated, might furnish much interesting and instructive material for communication, but our prescribed limits forbid the attempt. I have, therefore, drawn up a few short and practical deductions, as the result of my experience in relation to the choice of operations for stone at present available.

1. It is more than ever important to diagnose carefully, before operating, the size and, if practicable—as it mostly is—the nature of the stone; so that the means employed to remove it may correspond thereto; for, when the stone is small or of medium size, as it is in the vast majority of cases, it is not only unwise, but dangerous, to employ large and unwieldly instruments to remove it. Small instruments are far easier to manipulate than large ones, and do less damage in the bladder and urethra. The latter should never be used, unless the work to be done renders them necessary; and this can only happen in a few exceptional cases. The adoption of the one-sitting principle does not

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cambridge.

* I have seen this patient (November, 1880), and he has not a single bad symptom of any kind: he enjoys excellent health, and is walking five miles a day

in the least degree render necessary the employment of any special form or kind of lithotrite and aspirator, but demands, for its most perfect development, the use of instruments best adapted for each individual case.

2. There is no doubt that a practised hand, thoroughly familiar with the details of lithotrity, is more necessary to the success of an operation which is to be completed at a single sitting, *when the stone is hard and not small*, than to that of an operation which consists of several sittings. In other words, the removal of a large hard stone at a single sitting is a more difficult proceeding, and demands more experience and facility in operating, than the old method of submitting the stone to several trials.

3. Speaking with caution, it appears to me that at present we are not justified in attempting to remove all stones by crushing, and certainly not by any one system of crushing. The new method renders lithotrity safer than before for stones already generally assigned to that process, and extends the crushing operation to some which are larger than those hitherto so operated on. But I still regard lateral lithotomy as an admirable procedure, not only for hard stones—say of about two ounces weight and upwards, as a rough general estimate—but also for smaller ones, in some cases where the urethra is not very large, or other circumstances seem to indicate it. And, in connection with such exceptional circumstances, it is not improbable that the high or suprapubic operation may be occasionally preferable. I have myself performed it twice when the lateral operation was inapplicable.

Further, I cannot doubt that many men, whose experience is necessarily small, would cut for a hard stone, weighing an ounce, more safely than they would crush it at a single sitting. Great and irretrievable damage may be easily inflicted by large lithotrites and evacuators in unpractised hands. For two of the fifty lithotrity cases I preferred multiple sittings, for the reasons given; and I strongly advise the exercise of an independent judgment in every case, and not the pursuit of any routine without reference to the very varied circumstances which calculous disease so largely presents.

The results of Bigelow's method in my hands has, thus far, been to give me a proportion of only six cases of lithotomy in fifty-six male adult cases, or one lithotomy to nearly nine lithotrity; whereas, taking my total of now nearly seven hundred cases, the proportion was about one lithotomy to five and a half lithotrity. And the result of those six cases of my present fifty-six, in which I rejected the crushing operation and performed lithotomy, is admirable; five at this moment enjoying good health—a condition which I believe would have been quite unattainable for those particular patients by any form of lithotrity. I think I am entitled to regard these facts as affording important illustration of the necessity for employing different modes of operating, and for the exercise of a sound judgment in selecting the most appropriate method for each individual case.

Cases of Lithotrity at one Sitting, continued from List of thirty-five Cases just published in last Edition of Lithotomy and Lithotrity.

CASE XXXVI.—A gentleman, aged 71. May 24th, 1880. Uric acid with phosphates, 76 grains; in seven minutes. Brought by Dr. Charles Mott of Walton, who was present at the operation. He had a large prostate, did not empty the bladder, and was taught to use a catheter twice a day. An excellent recovery.

CASE XXXVII.—A gentleman, aged 61. May 19th, 1880. Uric acid, weighing 78 grains. Mr. Furner of Brighton present. A somewhat slow but good recovery.

CASE XXXVIII.—A gentleman, aged 70. May 29th, 1880. Phosphatic, weighing 184 grains. He was seen by Mr. Lund of Manchester. He came to me greatly broken in health, with severe symptoms, which I at first regarded as chiefly renal, and did not suspect to be complicated with calculus. Finding one subsequently, I thought it right to remove it at one sitting; and this much relieved him; but he slowly sank about five weeks afterwards, with advanced pyelitis, dilated ureters, and purulent deposits in the kidney.

CASE XXXIX.—A gentleman, aged 67, from Hamburg. June 3rd, 1880. Uric acid and oxalate, weighing 142 grains. Mr. Lund of Manchester was present. He made a good recovery. He had some enlargement of the prostate, did not quite empty his bladder, and learned to do so with a catheter every night.

CASE XL.—A gentleman, aged 50. June 21st, 1880. Chiefly phosphatic, with little uric acid, weighing 105 grains. Dr. Harker of Lancaster, and Dr. Carpenter of New York, were present. He made a good recovery.

CASE XLI.—A gentleman, aged 70. June 21st, 1880. Weak physically and mentally, with a very large prostate, so that the calculus could only be sized with a curved blade. Uric acid, weighing 80 grains. Brought to me by Dr. Harker of Lancaster. There was at first no ground for anxiety; but in a few days he had fever and an attack of bronchitis, of which he died on July 5th.

CASE XLII.—A gentleman, aged 68. June 26th, 1880. Uric acid calculus, weighing 76 grains. Sent to me by Dr. James McCulloch of Dumfries. Made a rather slow recovery, from persisting chronic cystitis.

CASE XLIII.—A gentleman, aged 72. July 3rd, 1880. A phosphatic calculus, weighing 78 grains. Dr. Bainbridge of London, who brought him to me, and Dr. Weir of New York, were present. He had long passed all his urine by catheter from enlarged prostate, and of late with distressing frequency. He is now, four weeks afterwards, enjoying freedom from all pain. Clear urine, and retains it four hours.

CASE XLIV.—A gentleman, aged 77. July 10th, 1880. Uric acid, weighing 265 grains; in eighteen minutes. Professor Humphry of Cambridge was present. He is making an excellent recovery.

CASE XLV.—A gentleman, aged 46. July 10th, 1880. Uric acid, weighing 96 grains. Sent to me by Dr. Wynn Thomas of Birmingham. Professor Humphry of Cambridge was present. He has had a good deal of irritation; but it is gradually subsiding, and has, indeed, almost disappeared.

CASE XLVI.—A gentleman, aged 79, retired medical man. July 14th, 1880. Has passed no urine except by catheter for three years, from enlarged prostate. Phosphatic, weighing 128 grains. Mr. Eddowes of Shrewsbury was present. A rapid recovery.

CASE XLVII. A gentleman, aged 29. August 5th, 1880. Small oxalate of lime. Brought me by Mr. Furber of Kensington, who, with Dr. Joseph Warren of Boston and Mr. F. S. Edwards of Bartholomew's School, was present. He is already nearly well.

CASE XLVIII.—A gentleman, aged 55. August 9th, 1880. Uric acid. Brought to me by Mr. Harris of Mildenhall, who, with Dr. J. Warren, was present at the operation.

Six Cases in which Lateral Lithotomy was performed during the Period in which the "One-Sitting" Lithotrity was adopted as the Rule.

514. May 9th, 1879. A gentleman, aged 74. With Mr. Goolden of Maidenhead. Death.

533. February 11th, 1880. An Irish gentleman, aged 62. With Dr. G. Johnson of London. Successful.

539. May 21st, 1880. A gentleman from New Zealand, aged 33. Seen with Mr. Christopher Heath and others. Successful.

542. June 1st, 1880. An Irish gentleman, aged 52, sent to me by Dr. Thompson of Belfast. Successful.

5. June 10th, 1880. A gentleman, aged 58, sent to me by Mr. Curgenven of Derby. Successful.

July 13th, 1880. A gentleman, aged 62, brought to me by Dr. Bright of Forest Hill. Successful.

Two Cases of Multiple Lithotrity: one of four, the other of five sittings; one in March, one in April; described in the paper; successful.

[I think it right to say that, since the date of the last case (August 9th), I have operated on seventeen more cases by the "one-sitting system", and that there has not been a single death. Three very bad cases have been treated during the same period by lateral lithotomy, of which two have died.]

SHAM SPAYING.—The operation to perform, or pretending to perform, an operation, recently adopted by Herr Israel for the cure of hysteria, under the name of "sham spaying" *(Scheincastration)* turns out to be not so successful as was supposed. A patient who had undergone the somewhat farcical proceeding of a make believe, under anæsthetics, extirpation of both ovaries, has lately come under the care of Professor Hegar, to whom she has confessed that the vomiting and other symptoms were not relieved by the "operation"; but that she concealed the fact that they remained, and that they are, indeed, now as severe as before. Dr. Hegar has examined her, and finds a general perimetritis, which he considers to be the cause of her troubles. He says that it is not a matter of surprise that a sham operation has failed to relieve symptoms resulting from definite pathological conditions. As the case had been published as an example of the successful psychological effect of a sham operation upon the hysterical mind, it is interesting to find that it did not have its supposed effect. Professor Hegar, who believes in the efficacy of spaying in certain forms of dysmenorrhœa, has declined to accede to the request of the patient to extirpate, in real earnest, her ovaries, and bring discredit thereby on what he regards as an operation with a future before it, and full of blessings *(Segensreich)*.

ON STRUCTURAL DISEASES INDUCED THROUGH THE INFLUENCE OF THE NERVOUS SYSTEM.*

By JONATHAN HUTCHINSON, F.R.C.S.Eng.,
Senior Surgeon to the London Hospital, Professor of Surgery and Pathology in the Royal College of Surgeons of England.

THE discussion which I have been requested to open concerns questions of unusual difficulty. The determination of the share which the nervous system takes in the production of structural disease is difficult, partly on account of the extremely complex functions of the various parts of that system, and partly because nerve-tissue itself is liable to many and various forms of organic disorder. With diseases of the nervous system itself we have, on the present occasion, nothing to do; but, as I shall have to show before long, it is very easy to mistake, for a result of disturbance through nerves, certain symptoms which are probably produced by degeneration or inflammation of the nervous structure. Let me here say, I consider myself unusually fortunate in having to open this subject under the presidency of one to whom we owe some of the earliest and most suggestive teaching respecting it. It was from Sir James Paget's lectures at the College of Surgeons, twenty-five years ago, that my earliest interest in the subject dates; and I have no doubt that the same is the case with others present.

One of my chief difficulties consists in the very limited amount of time at my disposal, and I must urge this as my excuse if I pass hurriedly over many subjects well deserving of careful attention, and especially if I appear to speak with too much definiteness on some concerning which there is, as yet, much doubt. That I may not waste time with further preamble, I will proceed at once to the statement of certain general propositions which are in a certain sense preliminary.

We may, I think, consider that there are two schools of opinion in reference to this matter; one which holds, or did hold, that the phenomena are all to be explained by reference to the function of the vaso-motor nerve; and the other which believes this method inadequate, and teaches that the nervous force has a direct control over nutrition, in addition to that which it exerts by regulating the supply of blood. An advanced section of this school holds, with Samuel, that there exist special nerves having their own centres for the function of nutritional control, and gives to these the name trophic nerves. The hypothesis of trophic nerves is at first sight tempting, on account of its easy application to the phenomena. We have but to suppose that there exist, ready for action, certain nerves which, by virtue of their own endowments, can cause now a herpes vesicle, and now a patch of gangrene of the skin, which can make a bone brittle or induce an exostosis, cause the cornea to ulcerate in one case, or the iris to inflame in another—and without doubt our pathological labours become much lightened. Yet is there not something in this almost fatal facility of application which should induce us to receive the hypothesis with much scepticism? Can it, indeed, be said to explain anything? Does it not rather take everything for granted, giving no real explanation in any one direction? Surely we ought to wait until either the experiments of physiologists or bedside observations compel us to say that no other hypothesis is adequate, before we adopt that which, in such a free and easy manner, invites us to swallow camel and gnat together.

I by no means wish to be dogmatic, or in any way to invite you to prejudge the question; but it may be convenient here to admit that a main drift of the remarks which I am about to bring before you will be to try how far the various phenomena of disease which have been believed to support a theory of the direct influence of the nervous system upon nutrition may be explained in other ways. In doing this, it will be necessary to attribute much to the known functions of the vaso-motor nerve, but by no means all; and I shall have to make frequent reference to the probability that some of the conditions are to be counted as diseases of the peripheral nerve-structures, rather than as induced by central agency.

Amongst the facts which seem to me to discredit the hypothesis of trophic nerves, and of direct trophic influence as a nerve-function, are the following: The great rarity of some of the diseases which are supposed to illustrate it; the very peculiar features of some of them; their remarkable differences one from another; the close resemblances between most of them and certain other diseases which there is no reason to suspect of being of neurotic origin.

I will enumerate some of the principal disorders which have been supposed to be due to nerve-influence: Bed-sores in the paralysed; cystitis in the paralysed; ulceration of the cornea in paralysis of the fifth nerve; sympathetic ophthalmia and neurotic iritis; herpes zoster and other forms of herpes; glossy skin after injuries to nerves; arthritis after spinal disease or injury; digiti mortui and "symmetrical gangrene of the extremities"; morphœa and allied forms of scleriasis cutis; disorganisation of joints in locomotor ataxy; brittle bones (osteo-malacia) in the insane and in disorders of the nervous system; disturbances of nutrition of the skin and bones in leprosy.

Before it is possible for us to say whether or not the nervous system can take a direct share in disturbing the nutrition of distant organs or parts, it is necessary for us to determine, as clearly as we can, what are the limits of its power, in the exercise of those of its functions which are universally admitted.

Under this head, we must bear in mind the following facts.

That, apart from its functions in reference to ordinary motion and sensation, the nervous system can, in the most definite manner, regulate the supply of blood and influence secretion. In this regulation of the supply of nutriment to distant parts, the sensory nerves act as the incident excitors; and thus it may easily appear as if they possessed a direct control over the processes of nutrition. Let me refer to a drawing in Mr. Hilton's valuable *Lectures on Rest and Pain*, which shows the condition of the hand in a woman of whom the brachial artery was occluded, and the ulnar nerve irritated. You will see that the tips of the ring and little fingers have passed into dry gangrene, and that of the little a larger part is involved than of the other. Now, the ulnar nerve was in this case irritated by the pressure of an exostosis, and, at first sight, we might appear to have proof of the direct influence of the nerve in nutrition, and of its power when paralysed to cause gangrene. But there are other facts to be explained, and other suggestions to be made. The case was one in which the brachial artery was occluded, and thus the whole hand received a poor supply of blood. Under these circumstances, is it not easy of belief that the irritation of the ulnar nerve may have caused vaso-motor spasm, and thus added to the anæmia already existing in the two fingers concerned? That which ischæmia from nerve-irritation might be quite inadequate to produce under normal conditions, might become quite possible when the main artery was previously blocked.

I confess that I feel unwilling to admit that nerves possess any direct power over tissues which, by an influence transmitted peripherally, and without reference to blood-supply, can determine gangrene. Exactly the same suggested explanations may be given in the case of digiti mortui, of symmetrical gangrene of finger-tips, in which the nerves take an undoubted share in the production of the phenomena. I ask, then, that, in these and other instances, we may carefully keep in mind the power of sensory nerve-fibres as incident excitors, in their special special territories, of the vaso-motor filaments, and thus as the causes of ischæmia.

* Introduction to a discussion in the Section of Pathology at the Annual Meeting of the British Medical Association in Cambridge, August 1880.

REMARKS ON SOME OF THE PHYSIOLOGICAL AND PATHOLOGICAL INFLUENCES OF THE NERVOUS SYSTEM ON NUTRITION.

By C. E. BROWN-SÉQUARD, M.D., F.R.S.,
Professor of Medicine at the College of France, Paris.

LIKE Mr. Hutchinson, I also owe a great deal of my interest in this subject to Sir James Paget's lectures at the College of Surgeons. I had, however, some time before these admirable lectures were published, come to an opinion, which I still hold, and which is different from the two doctrines mentioned by Mr. Hutchinson. I believed then, as I do now, that the nervous system can, in various ways, either for good or harm, interfere with nutrition; but that its influence is not essential to nutrition, except in this indirect way, that the performance of the function of certain parts (such as contractile tissues) is useful to their nutrition, and that their function depends on the nervous system.

Being the originator of the vaso-motor doctrine, I naturally feel rather inclined to attribute to the vaso-motor nerves a large share in normal and altered nutrition. This, however, does not prevent my recognising that there are other influences of the nervous system on nutrition than mere contraction and dilatation of blood-vessels. Let us take gangrene as an instance of an effect of a nervous influence. There are clear, positive facts showing that, sometimes at least, this sloughing of tissues is caused by something else than a mere cessation of circulation due to vascular spasm or to any other cause. I have seen a bed-sore beginning on the sacrum of a dog, seven hours after having produced an inflammation of the spinal cord. The skin at that place was violet and completely gangrened the next day. Sir Benjamin

Brodie, Dr. R. Bright, and many other good observers, have seen gangrene appear one or two days after an injury to the spine. It is certainly impossible to admit that a cessation of circulation could suffice to produce gangrene in so short a time. It is not pressure or the irritation caused by urine which have accelerated the sloughing process in some of those cases. At least, it is not so in dogs; as, when there is paraplegia in a dog from an injury to the spinal cord, it falls on its belly, the hind limbs being separated one from the other, and pressing on the ground by their antero-internal surface. There is neither pressure nor the possibility of irritation by urine, on the sacrum. Thus the so-called bed-sore, in that case, does not appear where there is pressure, and does appear where there is none. Neither is it owing to the lack of a supposed trophic influence that gangrene supervenes then, as it does not appear if the spinal cord is completely destroyed, instead of being irritated. I have seen normal, regular development, *in length*, of the hind legs of two kittens which had had the dorso-lumbar enlargement of the spinal cord completely destroyed. There was no other alteration of nutrition in the limb, except lack of development *in breadth*.

Neither the perfectly well established influence of the vaso-motor nervous system, nor the influence of the supposed trophic nerves, can explain a large number of physiological and pathological facts. They require a completely different explanation. Some of them tend to establish the views that the nervous system can affect nutrition either in increasing the exchanges between tissues and blood, or in decreasing or arresting altogether those changes. Other facts establish the view that vital properties in nervous and muscular tissues can be changed considerably by a purely dynamic influence—*i. e.*, without the intervention of blood. I will only mention a few of the great many facts which have led me to these views.

As regards the arrest—the suspension—of exchanges between tissues and blood, it is made quite evident in that singular kind of death which takes place sometimes when the medulla oblongata is suddenly injured. In animals, especially, I have, in such cases, seen the temperature fall at once and rapidly, the blood reddish instead of black in veins, notwithstanding the cessation of breathing and a rather contracted state of blood-vessels. These effects are so clearly due to a nervous influence, that, if the spinal cord has been divided above the origin of the nerves of the hind limbs, the injury to the medulla oblongata only produces its effects in the head and the anterior parts of the body. If, as I found a year ago, the head of an animal is suddenly turned down so that the chin comes into contact with the chest, the movements of the heart and of respiration are at once considerably diminished, the temperature falls rapidly, and the venous blood becomes reddish. In this case, as I have proved, there is an irritation of the medulla oblongata and of the upper part of the spinal cord. This cause is so powerful, that, in a case of traumatic fever in a guinea-pig, I have quickly succeeded in obtaining a lowering of animal heat, so that, instead of fever-heat (99.7°), there was, for a long time, in the rectum, a temperature lower than the normal (87.5°).

As regards a purely dynamic change of properties of muscles and nervous tissues, I will simply state that, besides the well-known phenomena of inhibition, I have found a kind of facts absolutely opposite to those in which there is inhibition. I will, for instance, mention the production of hyperæsthesia, of increase of motor power in cerebral tissues, in nerves or in muscles—all occurring even when blood could not take a share in the rapid or sudden increase of power that certain irritations produce in parts quite distant from those irritated.

ON SUPRAPUBIC LUXATION OF THE FEMUR.

By WILLIAM STOKES, M.D., F.R.C.S.I.,
Professor of Surgery, Royal College of Surgeons of Ireland.

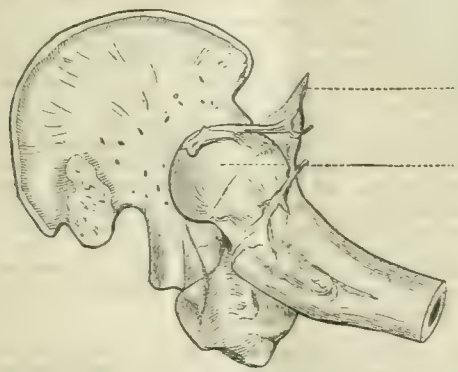
THE opportunities for examining the parts mainly concerned after pubic luxations of the femur, or "ilio-pubic luxations", as Malgaigne and Nélaton have, with perhaps greater accuracy, described them, occur with great rarity. This assertion can be verified by inspection of the chief pathological museums of this and other countries. The preparation which I venture to submit to the notice of this Section illustrates a rare form of this injury, and an inspection of it will doubtless be interesting to the members present. The peculiarity or exceptional character of the case consisted in the fact that the head of the femur was not displaced on the os pubis, or above or below the inferior spine of the ilium, as is the case in the few specimens of pubic luxation that are in four of the leading pathological museums of London, viz., those of the College of Surgeons, St. Bartholomew's, St. George's, and Guy's; but the head of the bone lay above the os pubis and within the pelvis. It did not, therefore, belong to any of the three forms of pubic luxation as described by Bigelow, viz., the supraspinous, the subspinous, or that on the os pubis. A twofold interest, accordingly is attached to this apparently exceptional position of the head of the bone: first, in its rarity, in the absence of one of the most characteristic signs of the injury, as described in Sir A. Cooper's work, and in all the surgical text-books, namely, the globular inguinal tumour formed by the head of the bone obliterating the natural fold of the groin; and, lastly, the fact that, in the suprapubic position of the bone, there is a physical impossibility of reducing this luxation by the adoption of any of the usual methods of extension or manipulation.

The following is a brief note of the case. A young man, aged 27, a muscular, well-nourished individual, a float-driver by occupation, was admitted into the Richmond Surgical Hospital on the 30th of last March, at 5 o'clock A.M. He was carried to the hospital by some fellow-workmen, one of whom gave the following account of the accident. He—the patient's companion—was sitting on the shaft of a heavily laden float, the patient occupying the corresponding shaft at the opposite side of the cart. The narrator stated that, while driving, he felt a sudden and violent jolt, and immediately afterwards heard a cry. He stopped the cart, and found his comrade lying on his face on the road. They lifted him up, and, finding that he was wholly unable to walk, brought him at once to the hospital. The patient stated that the cause of his having fallen off the cart was that he had dropped asleep. I found the middle and ring fingers of his left hand so crushed and lacerated, as to require immediate amputation. The slightest movement of the left lower extremity caused him intense pain. After the fingers were amputated, I directed my attention to the hip, where obviously an injury of a very serious character had been sustained. I found the left lower limb everted and greatly abducted. Owing to the great amount of swelling and infiltration in the neighbourhood of the hip, accurate comparative measurements were very difficult to make; but I determined eventually that there was shortening on the injured side to the extent of over an inch. There were much swelling and ecchymosis on the front and inside of the joint, a well-marked depression at the situation of the great trochanter, and a certain fulness in the groin over the pubes, but the head of the bone could not be felt. This circumstance, and the difficulty of making accurate measurements, for the reasons I have already given, were sources of perplexity in making the diagnosis. Eventually, however, I did satisfy myself of the suprapubic and intrapelvic position of the head of the bone, and arrived at a correct appreciation, as far as the displacement was concerned, of the injury.

On the occasion of the amputation of the fingers, the patient took the ether anæsthetic remarkably well, there being no sickness or other accident whatever; and, on the operation being completed, I made an attempt, which, however, was unsuccessful, to reduce the dislocation. In the afternoon of the same day, I visited the patient, and found him still suffering great pain in the region of the hip. He had completely recovered from the effects of the ether. I left him then, having ordered a large poultice on the joint, in order to relieve pain and relax the tissues, with a view to making another attempt next day to reduce the luxation. During the night, the patient became very delirious, and vomited frequently; and, next morning, I found that his pulse had risen to 120, and temperature to 100.6° Fahr., and there was much rapidity of respiration. Having regard to these symptoms, I made (assisted also by my colleagues) an examination of his lungs, and determined that there was evidence of pneumonia, chiefly over the posterior aspect of the left lung. The question then debated was, whether the risk of again putting the patient under the influence of ether would be justifiable. Ultimately, it was determined that the disease had not sufficiently advanced to contraindicate the anæsthetic. It was obvious that all the probabilities were opposed to the attempt at reduction being successful without it; and no local application could be applied to the back of the chest, where the physical signs of pneumonia were chiefly manifest, in the condition in which he was then, as any attempt to move him caused intense suffering at the injured hip; accordingly, it was administered. Before I succeeded in reducing the luxation, I tried various methods. The first was by extension. I applied my left heel in the perinæum, and extended the limb in a direction downwards and outwards. This was unsuccessful. Then I tried manipulation, first by the method recommended by Holmes and Pirrie, namely, by flexion, adduction, and rotation inwards. That failing, I abducted the limb, rotated outwards, extended, and rotated inwards. It then became sufficiently obvious that, owing to the peculiar position of the head of the bone above the os pubis, this method could not succeed. I then raised the head of the bone by first flexing the leg on the thigh, and then placing my left arm underneath his knee; and, making use of the leg as a lever, in that way I lifted up the head of the bone from the

pelvis. Then I strongly abducted the limb, and rotated it inwards. By this manœuvre, I succeeded in changing the position of the head of the bone from above the horizontal ramus of the os pubis into the thyroid foramen. Then I rotated outwards, and the bone slipped into the acetabulum. Thus far the operation was most satisfactory, but the result of the case was very tragical. A few minutes after the reduction had been so satisfactorily accomplished, the patient ceased to breathe; and, although every means at our disposal were employed to reanimate him, it was soon sufficiently obvious that life was extinct. Although I think the probabilities are that ether was primarily the cause of death in this case, it is quite possible that other circumstances may have had much to say in bringing about so disastrous a result; first the shock of the primary injury, then the subsequent ones produced by hæmorrhage, the amputations, and the two attempts to effect reduction. Lastly, there is the view as to the cause of death which was suggested to me by Dr. Hayden, namely, that it may have been caused by a pulmonary embolon. There was distinct evidence of phlebitic inflammation in the left femoral vein, and the large number of hæmorrhagic infarctions that were observed in the left lung was eminently suggestive of embolic pneumonia. A large thrombus was found in the femoral vein, and the sudden death may possibly have been due to pulmonary embolon. I regret much that no examination of the pulmonary artery or its branches was made, with a view of determining whether there was an embolic cause for the sudden cessation of the circulation. In truth, however, the available time for making this particular necropsy was, owing to circumstances needless to detail, extremely limited.

Coming to the lesion at the hip, I found the head of the bone in its normal situation. There was an extensive rent in the capsular ligament in the anterior and internal aspect of the joint. There was also a fracture of the horizontal ramus of the os pubis; and here a most interesting problem presents itself, namely, as to whether the fracture was produced by the wheel of the cart, or by the head of the bone striking the horizontal ramus in its passage over and above it; in other words,



Suprapubic Luxation of Femur.—A. Spiculum of Bone from Horizontal Ramus of Os Pubis. B. Head of Femur displaced above Os Pubis.

whether it was what the French surgeons term a *fracture par écrasement* or a *fracture par arrachement*. The former view was the one I at first held, having regard to the great amount of comminution—in truth, pulverisation of the bone. However, on closer consideration of the case, I cannot avoid rejecting my first theory, as the pulverisation of the fractured portion of the bone may have, to a great extent at all events, been caused by the attempts at effecting reduction of the luxation. By a singular coincidence, a second case of pubic luxation, very similar to this one, occurred last session in Dublin, in the practice of Professor Bennett. In it, also, there were pulmonary complications, which were not considered to contraindicate the administration of ether. The patient was on board a steamer, and fell from the gangway, a distance of about five feet. In this case, also, it was impossible to determine with anything like accuracy the position of the head of the bone. Professor Bennett was, as I was in my case, much perplexed to make out why it was that the head of the bone was so indistinct, while all the other phenomena of pubic luxation were present and well marked. When the patient was fully etherised, careful examination detected the position of it; and, by a manœuvre and manipulation similar to the one to which I have drawn attention, the head of the bone was elevated from within the pelvis, and reduction satisfactorily accomplished.

These cases are of much interest and importance, as showing how desirable it is, in the reduction of any of the forms of pubic luxation, to relax the ilio-femoral ligament, which can, as this specimen demonstrates, best be done by abduction of the limb. It was, therefore, a matter of some surprise to me to find, in some of the modern surgical text-books of authority, that adduction, not abduction, is recommended. The effect of this would certainly be not to relax, but to make tense, the ilio-femoral ligament, which, as Professor Bigelow has rightly observed, plays so important a *rôle* in everting and abducting the limb. The rule given in the text-books to which I have referred is: "Flex the leg on the thigh, and then adduct and rotate inwards." Having regard to the position of the limb, which is always, in pubic luxation, in a condition of abduction, this position should, in order to relax the tissues, be increased, not diminished. By following the rule I have quoted above, and the soundness of which I venture to question, a failure in the attempt at reduction would probably be the result. Flexion of the leg, abduction of the thigh, extension and rotation, first inwards and then outwards, should be the course adopted; and, in the variety of luxation to which I have drawn attention, and to which the term "suprapubic" is not, I think, inappropriate, elevation of the head of the bone in the manner I have described should be had recourse to, previously to rotation.

TUMOUR UNDER LEFT LOBE OF CEREBELLUM.

By D. FERRIER, M.D., F.R.S.,
Assistant Physician to King's College, and to the National Hospital for the Paralysed and Epileptic.

THE patient, the particulars of whose case are here recorded, first came under my observation at King's College Hospital, in August 1877, and continued so at intervals until his admission into the National Hospital for the Paralysed and Epileptic, where he died on August 21st, 1880.

The patient was Henry H., aged 42, a printer by occupation, married, with four children alive and well. His eldest child, a girl aged 17, died over a year ago from cerebral tumour, having become imbecile, blind, and deaf before death. He said he enjoyed good health up to two years ago. He never had syphilis. Two years ago, he began to feel giddy at times. During the last twelve months, this became more marked; and he began to "heave" to one side when walking. He "heaved" to the left, he thought; at least he felt as if he was losing his support on the left side. This tendency to "heave" was observed by others, and he was thought by those who observed him to be intoxicated. This gave him great annoyance and pain, as he was never given to intemperance. He next observed some dimness of vision, particularly in the left eye. He also, for the last six months, began to complain of pain in his head. He pointed to the occipital region as the principal seat of the pain, which, he said, was intensified when he lay on the left side in bed. He had also noticed that his speech had become rather thick during the last two or three months. He had never complained particularly of nausea or sickness since he first began to feel ill. He had gradually become deaf in the left ear.

Condition on Admission.—The patient was spare, somewhat hollow-cheeked, and with an anxious troubled expression. He answered questions very intelligently. He walked with a peculiar stiff gait, holding his head well back, and keeping his legs widely apart, the left straddling outwards more particularly. In his walk, he tended to bear to the right. When asked why he carried his body in this manner, he said he felt as if he was always going down on the left, and held himself towards the right to correct this. He could not stand still with his feet approximated, but staggered backwards and to one side, generally to the right. There was no marked difference in this respect whether his eyes were open or shut. He had no pains in the limbs, and no numbness in the feet. The movements of the arms and hands were in every way normal. The left side of the face acted less strongly than the right, and the left eye could not be closed so firmly as the right. The facial muscles of the left side reacted less energetically to faradisation than on the right. The sensibility of the left side of the face was very much blunted, both as regards tactile and painful stimuli. Speech was thick and slurring, the words running into each other. The movements of the tongue were free, but the left side of the tongue was more rounded in outline than the right and marked by teeth. The faradic contractility of the left side is also less marked than the right. The tactile sensibility of the left side of the tongue was considerably impaired, and taste was entirely abolished on the anterior two-thirds of the left side. Posteriorly, in the region of the glosso-pharangeal, taste was distinct on both sides. Hearing was entirely abolished in the left ear, both to aërial and cranial vibrations of the tuning-fork. Hearing was normal in the right ear. The movements of the eyeballs were normal in every direction. There was no nystagmus. Sight was fairly normal with both eyes, though it was said to be slightly hazy with the left eye. Ophthalmo-

scopic examination revealed indistinctness of the margins of both discs, and a fulness of the retinal veins, apparently equal on both sides.

At this time (*i. e.*, August 1877), the patient was still able to attend to his work, the chief trouble he experienced being a tendency to stumble against the machinery of the workshop. As this involved considerable danger, I advised him to give up his occupation as pressman, and obtain some different work, which he did. Attention was directed chiefly to general treatment and the relief of his headache, which was greatly ameliorated by iodide of potassium. His condition remained without marked alteration, with the exception of greater freedom from headache, for several weeks. At the end of November (1877), his general health was much improved, and he was quite free from headache and sickness. He still complained a good deal of giddiness, especially on getting up in the morning; and both standing and locomotion were very unsteady. The anæsthesia of the left side of the face had at this time almost entirely disappeared. There was still abolition of tactile and gustatory sensibility on the left half of the tongue, as before; and there was total deafness of the left ear.

On examination again, at the end of January 1878, he was very feeble, suffering from severe pain in the head, chiefly in the vertex, and occasional sickness. He was utterly unable to stand still with his feet approximated, staggering backwards, with a tendency to go down on the left side. In walking, he kept the feet wide apart, and his gait was reeling and insecure. He also complained of tremulousness of the left hand, and a feeling of needles and pins in the left hand and foot. Tactile sensibility was somewhat blunted down the whole of the left side, as well as in the left side of the face and tongue as before.

He was admitted into King's College Hospital in March 1879, complaining this time chiefly of the pain in his head, which was most marked on the left side. There was no marked difference otherwise in his condition, as compared with previous notes. He did not hear, however, so well with the right ear as formerly, continuing absolutely deaf in the left. Dimness of vision, in the left eye particularly, was complained of—intensified if he turned his head quickly to the left. Well-marked optic neuritis existed. He returned home after a month's stay in the hospital, considerably improved as regards his general health and headache, for which he was treated mainly by iodide of potassium, in large doses, with marked benefit. About August 1879, he became completely deaf also in the right ear—so that, from this time onwards, his sense of hearing was completely abolished. He still continued able to move about the room alone, very unsteadily, and with the support of the furniture; but, at the end of this year (1879), he became absolutely unable to do so, and could only stagger a little when firmly held up. In May 1880, his sight began to fail rapidly, and he became totally blind about a fortnight before admission into the National Hospital for the Paralysed and Epileptic, on June 21st, 1880.

June 21st, 1880.—The patient being totally blind and deaf, and in a condition of great mental hebetude, it was very difficult to communicate with him, or ascertain anything as regards his subjective state, except by inference.

With assistance, he could walk a little, with short steps, oscillating greatly, but utterly unable to maintain his balance unsupported. The movements of his hands and arms were free, though feeble, and also those of his lower limbs when he was lying in bed. The patellar tendon-reflex was abolished, and no cutaneous reflex could be obtained from the right foot, and only just from the left foot on repeated stimulation. The condition as to sensation was difficult to determine. Occasionally, he would wince when his face was pricked; but his arms and legs might be pricked deeply without causing them to be withdrawn. Though the patient lay in a state of great apathy, and required to be tended like a child, he could generally call for what he wanted, but occasionally he passed his excreta in bed. He frequently would pass his hands over the hands and clothes of those who tried to communicate with him, as if endeavouring to make out who they were by the sense of touch, which he thus appeared to possess. The cornea were somewhat opaque, from ophthalmia of comparatively recent date. The right pupil was larger than the left, but both were inactive to light. Indications of double optic neuritis were visible, but the opacity of the cornea somewhat interfered with the examination. Severe purulent ophthalmia came on shortly after admission, and proved very intractable.

On August 1st, he seemed to wake up a little from his apathetic condition, which had gradually been getting more pronounced; asked for some tea, and spoke somewhat more plainly than usual. He took hold of the attendant's hand, and asked who it was. He had, a day or two before, recognised his wife by her ring. After this, he had occasional apoplectiform seizures, lasting from twenty-four to thirty hours, in which he became quite unconscious, with stertorous respiration, full and soft pulse, and skin covered with perspiration, especially about the forehead. In one of these attacks, he died, on the evening of August 21st.

Post Mortem Examination (Head only).—The skull-cap was normal, and free from adhesion to the dura mater. On removal of the dura mater, several nodules, varying in size from a pea to a hazel-nut, were found attached to its under surface, and slightly indenting the cortex. Two of these, the smallest (not larger than peas), growing close together, were situated over the left antero-frontal region. A third was attached close to the falx, and indented the middle of the superior frontal convolution on the right hemisphere, close to the median fissure. A fourth, the largest—equal to a hazel-nut—was attached close to the falx, in the occipital region, and caused no visible indentation of the cortex. The convolutions were more or less flattened throughout. Posteriorly, the hemispheres diverged from each other, leaving a triangular space, with the apex at the posterior extremity of the corpus callosum. In this space, the cerebellum was visible, almost on a level with the occipital lobes, the left lateral lobe being somewhat higher than the right. The lobes were closely approximated, leaving only a central furrow in a line with the longitudinal fissure between the cerebral hemispheres. On removal of the brain, a tumour was found attached to the dura mater, and filling up the left posterior fossa of the skull. This required to be removed before the brain could be taken out. It only adhered at one point to the dura mater, and was merely lodged, without adhesion, underneath the left lobe of the cerebellum. A smaller tumour—to be described below—situated in the right posterior fossa, came away *in situ* with the brain. The under surface of the brain, when the parts were replaced *in situ*, exhibited a tumour, of the size and shape of a hen's egg, concealing the under surface of the left lobe of the cerebellum, and causing a divergence of the pons Varolii and medulla in a curve towards the right. The middle of the tumour, which lay with its long axis antero-posteriorly, lay on the left middle peduncle of the cerebellum; and the left lateral lobe was displaced upwards (so as to be visible between the hemispheres), and somewhat backwards, the tumour lying in contact with the under surface of the left occipital lobe.

On lifting the tumour, the left side of the pons was seen to be hollowed and compressed towards the right side, and the left middle cerebellar peduncle appeared flattened and drawn out, following the left lobe upwards and backwards. The region pressed on included the roots of the fifth nerve anteriorly. The sixth, slightly displaced, was free from compression, and visible at the inner margin of the tumour. The seventh, eighth, and ninth lay in the centre of the hollow made by the tumour, and were displaced upwards, but there was no solution of continuity of the nerves. The roots of the hypoglossal nerve were flattened against the olivary body and lateral tracts. Situated at the angle formed by the pons, medulla, and flocculus, and concealing the origins of the seventh and eighth nerves, was a smaller tumour, of the size of a cob-nut, which, however, had not caused any evident indentation of the parts on which it lay. The roots of the nerves were distinct. The fifth, sixth, and ninth nerves were entirely out of the region of pressure on this side. All the tumours had the characters and histological structure of the small spindle-celled sarcomata.

REMARKS.—It will be seen from the *post mortem* record that, in addition to the cerebellar tumours, the case is complicated to some extent by the occurrence of nodules also on the surface of the cerebral hemispheres. But though these, without doubt, played some part in the general symptomatology, yet their small size, and situation over cortical regions, lesions of which are usually latent, or not associated with special symptoms, render them unimportant as compared with the large tumour pressing on the left lobe of the cerebellum and adjoining structures. And as the tumours were all of the same nature, and their rate of growth presumably equal, we may reasonably suppose that the tumour of the left lobe had already attained a considerable size before the others had made their appearance.

The symptoms observable three years before the fatal termination were such as to lead me to diagnose an intracranial tumour affecting especially the left lobe of the cerebellum—a diagnosis justified by the result. The symptoms indicative of intracranial tumour, in general, apart from those indicating its position, were the persistent headache, sickness, and optic neuritis. Convulsions were conspicuously absent, however, throughout the whole course of the disease, whether clonic or tonic. There was no rigid retraction of the head or tonic spasm of the extremities, such as have been carefully described by Hughlings Jackson and Stephen Mackenzie in connection with tumours of the middle lobe of the cerebellum. This is a fact of some significance as to the pathogeny of such tonic spasm; and favours the view that it does not depend on the cerebellar lesion, as such, but on irritation of neighbouring or subjacent structures. Hughlings Jackson, however, has always considered this as a possible explanation of the phenomena in question. The situation of the tumour was determined both by symptoms proper to cerebellar

lesions, and by accessory symptoms not connected with the cerebellum as such, but dependent on the intracranial situation.

Among these latter, I attached considerable importance to the region to which the headache was more particularly referred, both spontaneously, and, of greater significance, on pressure and percussion of the head. Cerebellar tumours are most frequently, but not always, associated with occipital headache. I attribute this to the fact that, owing to the arrangement of the tentorium cerebelli, the tension of the membranes on which the pain depends is concentrated mainly in the posterior fossa, and therefore referred to the occiput. The pain, however, in some cases is diffused, and non-localisable; or it may be referred to the frontal region. But I have found often, in cases of intracranial disease where the symptoms have led me to suspect lesions—more especially meningo-cortical—that percussion over suspected regions often elicits pain which may not have been complained of spontaneously, and intensifies and concentrates pain, if it have been slight or more or less diffused. In this case, percussion of the head intensified the pain, more especially over the left occipital region; and this, taken with other facts, I regarded as of significance. As the disease progressed, the pain was not so limited, and was often most severe at the vertex—a fact which may find its explanation in the growth of the other smaller tumours described. Very important indications of the seat of the disease were also furnished by the evidences of compression of some of the cranial nerves on the left side. These were, first, the fifth nerve, the sensory functions of which were greatly impaired, as evidenced by the blunting of sensibility on the left side of the face and head; and more especially by the almost complete loss of tactile and gustatory sensibility of the left half of the tongue. Taste was abolished only in the anterior two-thirds of the tongue, the region supplied by the gustatory branch of the fifth; while the region of the glosso-pharyngeal still retained its functions. This, at least, was the condition in the earlier stages of the disease, of which alone I would speak positively. The motor division of the fifth was not perceptibly affected, so far at least as was to be judged by the ordinary movements of the jaws. The seventh cranial nerve was also affected, both in its portio dura and portio mollis. Comparatively speaking, the function of the portio mollis, or auditory nerve, was entirely abolished, and had been for some time before other symptoms had occurred; while the functions of the facial were only slightly affected. The facial movements, including those of the orbicularis oculi, were more feeble on the left side, and the faradic contractility was somewhat diminished. There were no evident symptoms of compression of the eighth cranial nerve. The hypoglossal was, however, distinctly implicated, though the tongue could be moved from side to side; yet the left half of the tongue was more flaccid than the right, and there was slight impairment of the faradic contractility. The delicate movements required for articulation were very evidently affected, and the speech was thick, like that of intoxication, to which the other symptoms bore some resemblance, to the great annoyance of the patient.

These symptoms all receive a satisfactory explanation by the *post mortem* examination. The tumour was so situated as to compress the left fifth, seventh, and ninth nerves. The eighth may have been affected, but the symptoms were not such as to declare themselves in affections of the cardiac or respiratory rhythm, or impairment of the functions of the glossopharyngeal. And if you will consider the position of these nerves, you will see that they may be carried upwards by a tumour pressing from below with less compression than would be exerted on the other nerves which come against the more resistant pons and medulla. It is just a question whether we might not ascribe some of the defects in articulation to compression of the medulla in the region of the olivary body. Those who look upon the olivary body as the centres of articulatory co-ordination, would at least have some grounds for regarding this case as in harmony with their hypothesis. Others again, as Jaccoud and Luys, might regard the affection of speech as a special cerebellar symptom; for which, however, I know of no satisfactory evidence. Another symptom which manifested itself at a later stage of the case, viz., the occurrence of total deafness also in the right ear, was one which I had some difficulty in satisfactorily explaining to myself. The case being presumably a tumour of the left lobe of the cerebellum, the difficulty was to account for a degree of pressure sufficient to annihilate the functions of both auditory nerves, without also having more evidences of compression of the pons and medulla oblongata than were perceptible in this case. This difficulty was completely solved *post mortem* by the occurrence of nodule, of the size of a nut, immediately underneath the roots of the seventh and eighth nerves on the right side. We see in the compression here, as on the left side, an illustration of the fact that the more specialised a function, the more it suffers from lesion of its nerves and nerve-centres. The highly specialised sense of hearing is abolished before the functions of the facial nerve are perceptibly impaired. This, of course, may also be explained by the more ready compression of the portio mollis than the portio dura of the seventh.

But again, the affection of the sensory functions of the fifth nerve was most marked in the more specialised sense of taste on the left half of the tongue. And the more delicate movements of the tongue in articulation were greatly impaired, in comparison with the larger movements of this organ in articulation.

In an advanced stage of the disease, there arose also indications of implication of the sensory strands for the left side of the body, evidenced by paræsthesia and blunted sensibility, not merely in the face, as before, but in the arm and leg. This cannot be looked upon as directly related to the cerebellum, but must be ascribed to interference with the sensory strands of the pons or medulla. Though the tumour lay more particularly on the left side of the pons, we cannot *à priori* determine where the pressure was more especially concentrated, or found on this any conclusions as to the position of the sensory strands. The pressure might either be direct, or by counterpressure from the opposite side of the skull; and therefore we may let the facts stand without building any particular theory on them.

Two symptoms specially characteristic of cerebellar disease were well marked in this case, viz., vertigo and unstable equilibration, both as regards station and locomotion. More correctly, perhaps, I ought to say vertigo *with* unstable equilibrium, instead of speaking of them as separate symptoms; for vertigo by itself may occur from many other causes than cerebellar disease. In combination, however, they may be regarded as of pathognomic significance. But neither in this case nor in other cases of cerebellar disease which I have seen, have I been able to determine any constant relationship between the feeling of vertigo and the disorders of equilibration. In this case, the vertigo was most pronounced in the morning. It also was more apt to occur on rapid turning to the left. But, at other times, it was not marked by the patient, though the defect of equilibration was always very pronounced. The patient could neither stand with his feet approximated, or even with a comparatively wide base, nor could he walk without reeling. There was not more than the usual difference observed in perfectly normal individuals in this respect with the eyes open or shut.

On the matter of cerebellar reel, I think we are in need of much more careful observation than it commonly receives. It is not enough to ascertain merely that the patient oscillates or staggers in his gait, for the direction in which the equilibrium tends more especially to be overthrown is a matter of some importance in a regional diagnostic point of view. No doubt it would seem sometimes that no order is discoverable, but my own observations lead me to believe it may be more frequently made out if more carefully looked for. In the present case, the phenomena were such as to induce me, apart from other evidence, to suspect affection of the left lobe of the cerebellum more particularly. The man stood and walked with his feet wide apart, the left leg straddling outwards relatively more than the right, accounted for by the feeling he constantly experienced, that he was going down on the left. In the same way is to be explained his tendency in walking to bear to the right, which we may regard as an over-compensation against this going down on the left. So also, in attempting to stand with the feet approximated, he generally staggered back and to the right; though later, he did sometimes actually go down on the left.

As well from facts of experiment, which I need not here discuss, as from anatomical and pathological research, it would appear that the cerebellar lobes are in relation especially with their own side of the body, and regulate the motor adjustments necessary for equilibration, more particularly on their own side. The case before us seems to me thoroughly in harmony with this view. No doubt cases have occurred in which the destruction of one lobe of the cerebellum has caused no marked or evident symptoms; but we are not entitled to conclude from this that the lateral lobes have not the functions we have assigned to them. Since it has been proved by experiment that one cerebral sensory centre may perform the work usually carried on by two, so we may argue that one cerebellar lobe may suffice for the work usually involving the co-operation of both. And it may be that, in this case, the general compression of the cerebellum rendered the also enfeebled right lobe unable to compensate sufficiently for the more serious damage sustained by the left. I am of opinion that the view advocated by Nothnagel and others, that the middle lobe only is concerned in equilibration, is not justified by the facts either of pathology or physiology.

Not to prolong my remarks on this case unduly, I would, in conclusion, urge the advisability, in the diagnosis of cerebellar disease, of testing the powers of equilibration in a more searching manner than is usually done. It is not enough merely to ask the patient to stand or walk. This may be quite sufficient when the disorders are already well marked; but a patient may walk fairly well, and yet have considerable impairment of equilibration. A patient with cerebellar dis-

ease has no ataxy proper. He may co-ordinate his limbs in locomotion without any evidence of ataxy, provided he be kept steady, and does do so in his continued efforts to preserve his equilibrium. Walking certainly requires equilibration; but equilibration—co-ordination in space—implies a great deal more than mere locomotion. I am in the habit of putting patients in whom I suspect cerebellar disease through a series of exercises calculated to test their equilibration, such as making them turn sharply, balance themselves now on one leg, now on the other, etc.; and my experience leads me to believe that deficiencies may thus be detected which otherwise might escape observation, and be put down in clinical records as non-existent.

THE IMMEDIATE CURE OF INGUINAL HERNIA BY A NEW INSTRUMENT.

By W. DUNNETT SPANTON, M.R.C.S.Eng.,
Surgeon to the North Staffordshire Infirmary.

When we consider for a moment the enormous number of cases of hernia met with in practice—those applying to the truss societies of London alone numbering over nine thousand a-year—it seems strange that so little comparatively has been accomplished in attempting to cure such cases permanently. Most surgeons seem to rest contented with some palliative measure, which, sooner or later, is tolerably certain to be found wanting at the critical moment, when strangulation is about to take place. The ancients were in their generation somewhat wiser; for, fifteen hundred years ago, the operation for radical cure was comparatively common; and long before that (about B.C. 400), Hippocrates described the operation, which, for aught we know, may have been practised even before his time.

The different methods which have been practised for the immediate or radical cure of hernia may be roughly classed under four heads, viz.: 1. Contraction of skin and sac by excision, cautery, or ligature; 2. Closure of the sac by adhesive inflammation; 3. Plugging the inguinal canal; 4. Bringing the walls of the canal together.

1. Among the old surgeons, the first method was the only one employed. Celsus says that, in his day, the surgeon opened the sac with a sharp instrument, took hold of it, and, after putting back the intestine, cut the sac, then tied the spermatic cord and removed the testicle. He then took away part of the scrotum, and reunited the lips of the wound, so as to form a firm cicatrix.

Paulus Ægineta followed Celsus, but ligatured the sac before cutting it, and sometimes applied the actual cautery also; and, in cases of bubonocele, he advocated cautery alone, applied to the skin sufficiently to penetrate the parts beneath—"being guided as to its extent", he says, "by a skilful conjecture".

Oil of vitriol used as a caustic, by being repeatedly applied over the inguinal ring until it penetrated all the soft tissues, was in vogue in the early part of last century, and was as barbarous as it was ineffectual.

Another plan, invented by Berault, was styled the *punctum aureum*. The rupture was reduced, the sac laid open, taken hold of with pincers, and a gold wire passed through it, which was then twisted and cut off. Other kinds of wire were subsequently employed by other surgeons. At the best, this operation could only convert a complete into an incomplete hernia; but it appears seldom to have effected even so much. About this period, a much more barbarous modification of this operation was in vogue among the Turks, which is fully described in Arnaud's work.

2. Of the second series, the best example is that of the seton. Various substances have been employed with the object of setting up inflammatory action in the interior of the sac, so as to cause the sides to adhere, and so prevent protrusion of the bowel. Silk threads, sponge, injection of irritant fluids of various kinds, were at different times employed for the purpose by various surgeons. The method, by whatever variety of practice carried out, appears to have been even less efficacious than the barbarous practice of the ancients, and almost, if not quite, as dangerous.

3. In the third class, Wurtzer's operation affords the best illustration; that of Gerdy being very similar. In the latter, the skin of the scrotum with the fundus of the sac is invaginated by the finger of the operator into the inguinal canal, and a curved needle armed with thread is passed through the skin of the groin on each side of the finger, and the skin retained in its place by means of the suture until it becomes adherent. Sometimes caustic ammonia was used, in order more certainly to obtain union between the two invaginated skin-surfaces. Wurtzer used, instead of the finger, a wooden plug, retained *in situ* by means of needles passed through the skin at its extremity, and fixed externally to a corresponding piece of wood, so placed as to produce sufficient compression of the intervening tissues as to secure their adhesion to each other. The records of successes after these measures are, I believe, comparatively few; and I have myself seen some instances in which the rupture has been made seriously worse by Wurtzer's operation.

4. The fourth plan differs materially from the foregoing, in providing the remedy which Sir W. Lawrence pointed out as being required to contract the tendinous opening (*Treatise on Ruptures*, by W. Lawrence, 1816, p. 94). The idea of bringing together the pillars of the inguinal ring in such a way as to restore the normal valve-like shape, is based on true anatomical principles, and to Mr. John Wood must be ascribed the great credit of having reduced these to valuable practical results. Wood's operation, however, consists not merely in approximating the pillars of the ring, but in the subcutaneous invagination of the tissues which are intended to fill up the abnormally expanded opening. Stress is laid by Mr. Wood on the fact that, "to ensure success, complete union must be established along the whole length of the canal" (*On Rupture*, by John Wood, p. 88). This statement first led me to consider how far it might be feasible to secure such a result with greater simplicity and certainty. It will be observed that, in using the wire sutures of Mr. Wood, as ordinarily applied, a hold is secured on the pillars of the ring at two points only, while the invaginated tissues are

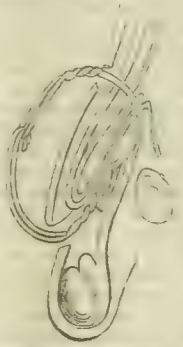


Fig. 1.—Copied by permission from Mr. Wood's work *On Rupture*, p. 113.

forcibly drawn up in such a way as, in some measure, to defeat the object the surgeon has in view, of approximating the sides of the canal as much as possible. By means of the operation I propose, you will see that these drawbacks are overcome. The points of



Fig. 2.

security are multiplied, and the invaginated plug, being rather cylindrical than conical, is retained in position in such a way as to permit the walls of the canal to come as close together as possible. The in-

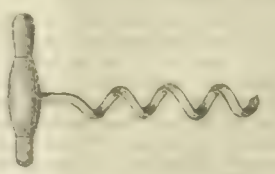


Fig. 3.

struments* required are very simple—a thin strong knife, like a tenotomy knife, for separating the skin from the subjacent tissues; and the screw instrument (Fig. 1), shaped like a corkscrew, with a flat point and

* These are made for me by Evans and Wormall, Stamford Street, Blackfriars.

movable handle, nickel-plated. The screw is made rather broader near the point, tapering somewhat towards the handle, and should be sufficiently strong not to break, but yet as thin as may be consistent with strength. The instruments in box are represented in Fig. 2.

The mode of performing the operation in a case of ordinary oblique inguinal hernia is as follows. The patient must be in good health, have an aperient the day before, and an enema on the morning of operation. If necessary, the pubes must be shaved. Under the influence of an anæsthetic, the hernia is carefully reduced, and not allowed to come down during the operation. An incision is made in the skin of the scrotum large enough to admit the forefinger easily, over the fundus of the hernial sac, generally about two inches below the spine of the os pubis; and the skin is separated from the parts beneath by means of the blade or handle of a narrow scalpel, to an extent determined by the size of the hernia, and that of the inguinal canal. The operator standing on the left-hand side of the patient, the forefinger of the left hand is passed up to the internal abdominal ring, invaginating the fascia and hernial sac to the same extent. A careful examination is now made of the surrounding structures, the position of the vessels clearly made out, the size and shape of the abdominal rings noted, as well as the length of the canal. This is necessary, in order to have an instrument of the proper size. The left forefinger being retained in the

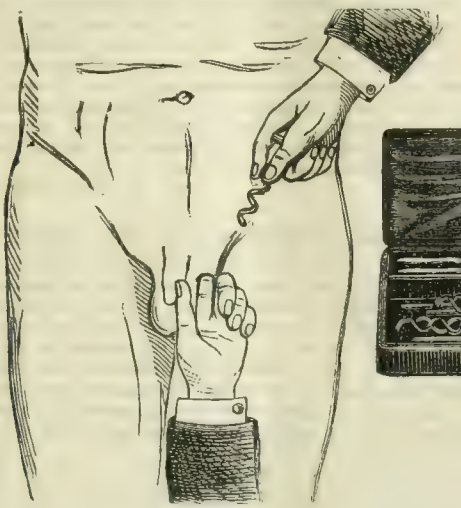


Fig. 3.

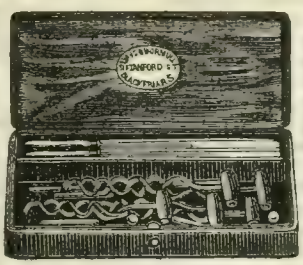


Fig. 2.

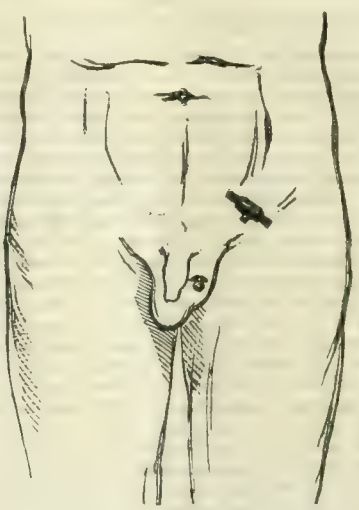


Fig. 4.

hernial canal, protecting the spermatic cord, and at the same time closing the internal ring, the screw instrument, previously dipped in carbolic oil, is, with the right hand, thrust through the skin of the groin so as to transfix the aponeurosis of the external oblique muscle, at a point somewhat above that at which it is intended to pass through the conjoined tendon. Having given the instrument one half-turn to the right, if a right inguinal, and a whole turn if it be a left hernia, it is next made to pierce subcutaneously the conjoined tendon of the internal oblique and transversalis muscles as high up as can safely be reached, the left forefinger carefully guarding the point, so as to avoid wounding the vessels or peritoneum. This part of the operation must be executed cautiously and deliberately. It will be then found that, as soon as a hold has been secured by the instruments the internal ring is practically closed. Another turn is now given to the screw, causing it to pass through the invaginated tissue—whether consisting of fascia or sac, or both—and it is again passed through the external pillar, and then across to the internal pillar of the external ring, and another turn given if possible, so as to bring the point out at the wound in the scrotum. The handle should then lie flatwise on the abdomen, and the point of the instrument be protected by a round piece of solid India-rubber, or by winding round it some carbolised gauze. A light pad is then placed over the part, and a bandage carefully applied.

The operation may be performed under Lister's antiseptic method, as in two of the cases (IV and VII) I have to record; but it is well then to leave the instrument *in situ* rather longer. The results are equally satisfactory if this precaution be observed, and there is, of course, less danger from any septic influence.

The subsequent treatment is very simple. After a period varying from a week to a fortnight, a certain amount of inflammatory action will be observed along the line of the inguinal canal where the instrument lies, and more or less discharge takes place from the wounds. The amount of induration excited will be the guide as to the time for removal of the instrument; but a week has been usually found sufficient. The removal of the instrument is easily effected, as the suppuration which takes place along its course serves to loosen it somewhat; and by keeping it well oiled from day to day, it is easily withdrawn. The wounds will readily heal under any simple dressing, with pad and bandage. A truss may be worn for a time, as the adhesions will of necessity not be very firm at first; but, in most of the cases I have operated on, this has been dispensed with without any ill results.

The aim of the operation is to bring together the pillars of the hernial canal, and at the same time to plug the opening in such a manner as to shut it off from the peritoneal cavity on the one hand, and, on the other, to form an impassable barrier against any further descent of the bowel. So long as the general peritoneal cavity is not interfered with, so far is danger averted; and, if the hernial canal be effectually closed throughout, so to the like extent is the cure complete.

The operation is simplicity itself to anyone accustomed to operative surgery; and, with regard to the danger attending it, I can only say that it has now been performed by myself and my colleagues in thirteen cases, in not one of which has any serious symptom been observed, the highest temperature recorded being 101.2° Fahr.; and, in eleven of the cases, the cure has been complete; in the remaining two, the patients have been greatly benefited. I think, therefore, I am justified in saying that it is a simple, a safe, and a very efficient method of curing suitable cases of hernia.

I append a record of all the cases in which the operation has been performed up to the time of writing this paper.

[*To be continued.*]

THE TREATMENT OF CARBUNCLE.

I BEG to corroborate Dr. Eade's good report of carbolic acid, locally applied, in the above complaint; but, in addition to this, I think iodine painted night and morning around the edge of the sore—with, of course, a linseed-poultice over all—materially contributes to the good effect. I have never known this plan to fail; although, in two of my cases, the carbuncle has been situated on the face, where it is reputed to be commonly fatal.

HERBERT L. SNOW, M.D.Lond., Bayswater.

ANÆSTHESIA BY RAPID BREATHING.

I WAS fortunate enough yesterday to have an opportunity of adopting the new method of analgesia (mentioned in the JOURNAL of October 16th), in cutting out a fatty tumour, of the size of a small walnut, from over the anterior upper fifth of the tibia. The leg, only grasped by a hand at the ankle, did not move throughout the dissection over the tender region of "the shin". The patient, who was nervous, very anæmic, and debilitated from the effects of severe ague, avers that "he felt nothing except the stitching"; and I could not have ventured to use chloroform, being alone; the patient's condition also rendering this anæsthetic unadvisable.

W. M. HARMAN, M.B.Univ.Dub., Surgeon-Major A.M.D.

Punjab, November 11th, 1880.

SURGICAL MEMORANDA.

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

As there has been a good deal of controversy on the above subject in the JOURNAL, the experience, however limited, of an army surgeon may be acceptable. I have operated twelve times on stricture of the urethra with Mr. Holt's dilator, and on no occasion did any ill effects follow. I used the instrument twice last year at Ferozepore, on men of the 18th Royal Irish; and twice at Allahabad in 1877, on men of the 5th Fusiliers. The other eight cases occurred at home. In two of the above-mentioned cases, the stricture was so hard and cartilaginous that considerable force had to be used in pushing the instrument through the stricture: yet no untoward symptoms followed. I look on the cure as permanent, if the precaution be taken of passing a catheter once a month after the operation.

THOMAS WRIGHT, Surgeon-Major A.M.D., Thull, Punjaub.

THERAPEUTIC MEMORANDA.

CHRYSOPHANIC ACID IN SKIN-DISEASE.

IT was in the columns of the BRITISH MEDICAL JOURNAL that I had the opportunity, several years ago, of submitting to the notice of the profession chrysophanic acid for the treatment of chronic skin-disease of various kinds. This remedy has been praised very warmly by many well-known authorities—for example, Professors Kaposi and Neumann of Vienna, and Dr. Besnier of Paris; and has taken its place as one of the most important of all means of treating skin-disease in every part of the world. When my first investigations were published, the price of the drug was ten shillings an ounce; and this was at the time the main drawback to its general adoption. In Vienna, its prohibitory price led Dr. Jarisch to seek a chemically allied and cheaper substance as a substitute for it; and this he thought (and really, as I think, with some cause) he had found in pyrogallic acid. At the time to which I refer, pyrogallic acid was at but a fraction of the cost of chrysophanic acid; and, if the "improvement" of Dr. Jarisch could have ranged itself as equal in efficacy and yet much cheaper in price, then chrysophanic acid would have been compelled to respect itself as only the suggestor of the still more valuable pyrogallic acid. The contest, of course, was at the time much against chrysophanic acid. If pyrogallic acid could only make itself out a fairly able rival of its much more costly chrysophanic relation, it would obliterate the latter, because pyrogallic acid was already a specially cheap article, owing to its extensive use in arts; whereas chrysophanic acid was a mere remedy of untried popularity as a healer of skin-disease, and never even up till now of any other use. I regard it as a kind of obligation on my part, for having "vaunted" (as an esteemed correspondent of the JOURNAL put it at the time really very justly) the properties of chrysophanic acid, to make good, after a sufficient lapse of time, the "vaunt". But I can claim this on two grounds; and the one of these very directly supports the other. I find, on consulting the lists of wholesale druggists, that the price of chrysophanic acid is now very definitely *below* the price of pyrogallic acid, notwithstanding that the use of chrysophanic acid is limited absolutely as an agent for the treatment of skin-disease; and yet I find, after very extensive and careful trial of pyrogallic acid as a substitute for chrysophanic acid in the treatment of skin-disease, that it falls very considerably behind as a remedy. I think I am not wrong in judging this question of the market as an evidence of a more conclusive kind as to the verdict of the profession between the two remedies.

BALMANNO SQUIRE.

OBSTETRIC MEMORANDA.

EXTRA-UTERINE FŒTATION.

CASES of abdominal pregnancy are of such rare occurrence, that I believe the following may interest those engaged in obstetric practice. The patient, aged 29, had given birth to one child at the full time about five years ago, and had miscarried twice since, about the third month of utero-gestation. She began to suffer from severe abdominal pain about three months ago, but did not come under treatment till a fortnight before her death. Her symptoms were those of subacute peritonitis, with loss of appetite, vomiting, intense anæmia, and great pain over the hypogastrium; this, however, was greatly relieved by the application of turpentine stupes, and the administration of twenty-five grains of chloral-hydrate and fifteen minims of liquor morphiæ every four hours. The patient was only confined to bed five days before death, which was the result of syncope from bursting of the cyst, and hæmorrhage into the abdominal cavity. A *post mortem* examination revealed the fact of an extra-uterine pregnancy, the cyst enclosing the fœtus being attached to the posterior surface of the uterus and left ovary. On removing about two pints of coagulated blood from the abdominal cavity, a placenta, with a fœtus about the third month of utero-gestation, was discovered in the pelvic cavity. The uterus was the seat of fibrous disease, and completely anteverted; the Fallopian tubes were pervious, and the ovaries apparently healthy.

EDWARD W. WITTEN, College Road, Brighton.

CLINICAL MEMORANDA.

RUPTURE OF HEART IN A WOMAN AGED THIRTY.

I WAS summoned on Tuesday morning, November 23rd, 1880, to see a woman who had been suddenly taken ill. When I arrived at the house, she was already dead. The only history obtainable was, that she was thirty years of age, had habitually indulged in the excessive use of stimulants, and was subject to occasional attacks of faintness. She had the previous night gone to bed in her usual state of health. At 6 A.M., she awoke suddenly, vomited, was purged, and broke out into a profuse perspiration. She then passed into a state of collapse, and died in about an hour from the commencement of the symptoms. On making a *post mortem* examination, I found the pericardium full of blood, and a rent of a quarter of an inch in length in the anterior wall of the right auricle. The muscular tissue of the whole heart was studded with patches of fatty degeneration, in the centre of one of which the laceration had taken place.

G. A. HERSCHELL, M.B.Lond.

ON RESTORING THE ACTION OF THE HEART WHEN IT HAS CEASED TO BEAT.

WHAT are the best and *immediate* remedies?—is a very serious question for a man standing before a patient who is to all appearance dead. How long may a heart cease to beat, and yet resume its action? Having *entirely* ceased to act, can the motion of the heart be ever restored? The fatal results from chloroform, etc., seem to demand renewed attention; and therefore I venture to make some suggestions as to what may, or ought, to be done for renewal of the heart's action, in the hope that my remarks may induce other and abler men to discover the most successful treatment.

Does chloroform, as now made, differ in any way in its composition? and is it more dangerous than when first introduced? It seems to be so. Perhaps chloroform requires further investigation by the chemist.

When the heart, under chloroform, has suddenly ceased to act, galvanism and electro-magnetism have been remedies; but now we are told that these do more harm than good. Judging by results, it appears to be very doubtful whether the heart is much influenced, one way or the other, by the electro-magnetic or the galvanic machine as at present used, when one considers the anatomical relations of the heart. I am open to correction; but apparently the current must reach the heart in a very roundabout way; and it looks as if it would be just as useful to pass, if possible, a current through the heart by applying one pole of the battery over a femoral and the other over a carotid artery.

I wish to call attention to two other methods for inducing the action of a suspended heart; viz., acupuncture and percussion.

First, as to acupuncture of the heart. We know that needles, etc., have traversed the body harmlessly in all directions, or have remained quiescent therein for many years, and ultimately have appeared at the surface of the body. I am not aware that acupuncture of the heart during a mishap from chloroform, etc., has ever been tried; and I cannot find anything about it in such books as are within my reach. It has occurred to my mind that acupuncture of the heart should be tried by practical physiologists, who have the appliances and the *lawful right* to put it to the test on animals. It may not be so dangerous to human beings as it looks, if done in the following manner; viz.: introduce a needle (with a handle to it like a cataract-needle; the needle to be of the usual size, but two or three times longer) between the ribs near the apex of the heart; prick the heart lightly, and instantly withdraw the point of the needle clear of any possible movement of the heart; watch the result, and repeat the act as often as may be judged necessary. Experiments on animals would soon prove whether this operation could be recommended or not for such desperate conditions.

There is another method of restoring a suspended heart's action,

which is simple, and, so far as I can judge, quite safe; viz., by percussion. Some time ago, a dentist, who had given bichloride of methylene, sent for me. I found a young and very healthy-looking woman lying back, insensible, in the dentist's chair. The pulse and respiration had ceased for so alarming an interval, that her case looked very bad indeed. Holding her wrist to feel her pulse, it occurred to me to give her one *sharp, very sudden* blow with my knuckles over the region of the apex of her heart. This appeared to produce the desired result: the patient gasped, drew a good inspiration, and a pulsation was at once felt at the wrist. But this is only one case; and, as one swallow is no proof of summer, it may not be a true instance of cause and effect after all; yet I feel sure that that sharp rapid blow over the apex of the heart saved the patient's life. I have had no chance of trying percussion to a dangerous case under chloroform; yet percussion seems worthy of further trial.

Similar means may be tried in cases of drowning—in conjunction, of course, with the methods at present used; also in desperate cases of syncope due to other causes.

FREDERICK W. P. JAGO, M.B.Lond., Plymouth.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

GUY'S HOSPITAL.

A CASE OF NEPHROLITHOTOMY.

(Under the care of Mr. GOLDING-BIRD.)

[From the report of Mr. ARTHUR STOKES.]

CHARLES B., aged 21, was admitted into Lazarus Ward, Guy's Hospital, under the care of Mr. Durham, on February 11th, 1879. His family history was good; his own was as follows. Four years before, he had first noticed a pain in the left lumbar region, and soon afterwards there was a marked frequency of micturition, and the urine became tinged with blood. This continued for two years, when, for about a month, the urine was normal; after which, blood, mucus, and gravel, again appeared. In 1877, the patient was in St. Thomas's Hospital for four months, where several pieces of gravel were passed. In December 1878, he became an out-door patient at Guy's. On the day previous to admission (10th), the patient had severe pain in the left loin, which, in the evening, shifted lower down; and, on micturating, two or three small pieces of stone came away, and he then felt another stone enter the urethra, and become lodged there. On February 11th, he came up to the surgery, and part of the impacted stone was removed; but, some remaining, he was admitted into the ward.

On admission, the patient, who was suffering from the pain of a distended bladder, was placed under chloroform, and the stone, lodged just behind the glans penis, was extracted, with some difficulty, by Mr. Durham: a catheter was then passed, and tied in. He was ordered a mixture with bromide of potassium and opium. The stone was phosphatic, measuring 1 in. × ¼ in.

February 14th. The catheter was removed last evening. The urine was bloody.

February 17th. He complained of sharp pain in the left lumbar region, and across the front of the hypogastrium. The urine contained blood and mucus, and was passed every fifteen minutes. Temperature 97.4°. Tincture of hyoscyamus and extract of pareira were added to the above mixture.

March 1st. The patient complained of feeling weaker. The pain in the left loin continued. The bladder was to be washed out with borax and thymol.

March 17th. No change had occurred since the last report until to-day. He now complained of pain in both loins. With the exception of two days, blood had continued to pass with the urine.

April 2nd. There was no change in the symptoms. The patient felt stronger. He left his bed for the first time to-day; and complained of not being able to hold his urine more than twenty minutes.

During the latter part of April, the patient, for many days together, passed no blood, and was free from pain in the loins, but complained of severe abdominal pain. This continued until April 21st, when the pain in the left loin reappeared, but without the passage of blood. The urine, however, contained much pus. This state of things continued till June, when the amount of pus decidedly diminished. On June 3rd, he complained of severe pain "right across the small of the back". Temperature 101.6°. The next day (4th) a swelling appeared in the left loin; and, on June 7th, it was stated to be "large and elongated, larger below than above, very tense, did not fluctuate, and was not painful when touched; the surrounding parts were also rather tenser than on the right side." At this time, blood reappeared in the urine, which was also phosphatic. On June 18th, the swelling in the loin had increased, and was tender if touched; and, three days later, a large clot, representing (apparently) a perfect cast of the pelvis of the kidney and upper part of the ureter, was passed. The swelling in the left loin increased till the third week in July, and became painful to the touch; blood and mucus were passed almost daily with the urine. At the beginning of August, vague but severe pains appeared about the pelvis, the lower part of the abdomen, the testicle (left), and penis; and an examination *per rectum*, when the prostate was touched, caused extreme pain, which extended up to the left loin. The prostate appeared irregular, and a nodule could be felt in it. In September, all his pains increased, though the lumbar swelling diminished; the bladder became very irritable (micturition occurring every ten minutes) and there was great pain down the left leg, which was found, on measurement, to be one inch smaller round the thigh than on the right side. During all this time, various modes of treatment had been adopted with the idea of soothing the pain, but without permanent benefit; and when, about now, it was suggested that he should be discharged, he declared that he would rather destroy himself than go out in such agony as he was then suffering.

In September, he came under the care of Mr. Golding-Bird, who, considering that his symptoms mainly pointed to calculus in the left kidney, proposed exploring that organ. This was done on September 16th, under carbolic spray. The incision was oblique through the parietes, as for colotomy, but close under the last rib. The subperitoneal fat was soon exposed; and the peritoneal sac, uninjured, was seen moving with each inspiration. Two vessels only required torsion. The wound, being held open with retractors, allowed an easy exploration of the kidney as far forward as its pelvis. Nothing, however, was felt in the pelvis of the organ. The renal substance was smooth, save where one small nodule, of the size of a millet-seed, was felt in it, and slightly projecting on the surface. No stone being discovered, the wound was closed with silver sutures, and soon healed without a bad symptom.

For about a fortnight, the patient expressed himself relieved somewhat of his pain; but it then returned with its former severity, and his urine presented its old characteristics. There was no swelling in the loin at the time of the operation; nor did it appear again, as during the previous month.

In October, the patient again came under Mr. Durham's care, who on October 29th sounded him for stone, but found nothing. Although, since the operation of September 16th, the patient had had intervals of less pain more frequently, he was practically no better; and, therefore, on December 30th, Mr. Durham performed perineal section, tying a No. 12 catheter in the bladder through the perinæum. There was a gradual improvement from this time in the patient's condition, though the pain in the loins recurred very severely at times. The urine gradually became clearer; and on February 5th, 1880, the catheter was finally removed. On February 7th, the report says, "He has still the same pain in his kidney and side as formerly"; but on February 20th, "The patient does not complain of anything this morning." On March 3rd, he was discharged to Bognor, free from all pain.

REMARKS.—The interest in this case centres in the fact that exploration of the kidney by operation was undertaken as much for the purpose of diagnosis as with the prospect of giving relief to symptoms and curing the patient; and, while it failed in the latter object, it set at rest the long-debated point whether the patient was suffering from disease of the bladder or from renal calculus. This case had been the subject of much clinical discussion; and the symptoms, taken in detail, at one time seemed to point to kidney, at another to bladder. "Nephrolithotomy" was undertaken in preference to cystotomy, since the recent passage of a large blood-clot, apparently from the kidney, and the left lumbar enlargement (though it had subsided before the operation), pointed more specially to renal trouble. A still greater reason lay in the fact that there was less risk to life in the exploratory incision in the loin than in perineal section or cystotomy; and, so long as the symptoms were pretty evenly balanced, it was deemed wiser that the minor operation should take precedence of the major. Had the operation resulted in finding a renal calculus, and been crowned by its successful removal, it would have been regarded as a triumph for the surgeon; but, though it resulted in disappointment to the operator, it was none the less a gain for surgery. Where symptoms which point to renal calculus assume such proportions as to render life a misery (or

short of that?), and are not palliated by drugs, there is no sound reason for refusing to the surgeon the chance of curing by nephrolithotomy. If a stone be found and removed from the kidney, the end will be allowed as justifying the means; while, if it prove to be a case of mistaken diagnosis, the mere incision that has been made is well compensated for by the assurance it has given to the patient that the utmost has been done for him.

As to the operation, it may be added that while, as far as superficial structures are concerned, it is the same as that for colotomy, yet it does not jeopardise the patient's life to the same extent as the latter operation. It does not interfere with the peritoneum—the risk in colotomy; nor does it even present the element of chance—that of finding the bowel in the usual spot—since the kidney may be regarded as sure in all cases to be where it normally should lie. If the kidney be not incised, there is nothing to interfere with antiseptic dressings; while the wound is in the best possible position for drainage.

No physician would now-a-days withhold colotomy from his patients, with all its risks; and the demands for surgical aid are at times scarcely less urgent in cases of (supposed) renal calculus; while the (probable) relief offered by operation is attained with far less anxiety to the operator than in colotomy. The risk to the patient is about commensurate with the inconvenience the incision gives him, and that is but trifling.

Although the patient's symptoms were relieved by cystotomy, and therefore, presumably, his main source of trouble must have been his bladder, yet no light was thrown upon those symptoms, both subjective and objective, which from time to time pointed to renal calculus.

THE GENERAL HOSPITAL, BIRMINGHAM.

INFLAMMATION OF THE VERMIFORM APPENDIX FROM FÆCAL ACCUMULATION, CAUSING DEATH BY GENERAL PERITONITIS.

(Under the care of Dr. RICKARDS.)

[Reported by Mr. S. E. JOHNSON.]

ARTHUR P., aged 13, a schoolboy, was admitted into the hospital in the afternoon of October 28th. He was perfectly well up to the evening of the 27th, on which day he had boiled beef for his dinner; for his tea, bread and butter and watercress, and supped off oatmeal-porridge at 8 P.M. He was particularly hearty and merry that evening, playing with children at a neighbour's house. At 1 A.M. on the 28th, he aroused his mother, and complained of pain in the belly. He commenced bilious vomiting, which continued throughout the morning, and the pain increased. At 7 A.M., he vomited the watercress he had eaten the previous evening. His mother gave him some brandy, which he at once vomited; and then he said he felt easier, and would like to go to sleep. The bowels were moved twice naturally in the course of the morning. The mother voluntarily stated that, up to the time of his present illness, he had never had any trouble with his bowels; but that, if at any time he ate an apple, or the part of one, it would be vomited in five minutes.

On admission, he complained of pain in the belly, not confined to any particular spot. The whole of the abdomen was exceedingly tender, and somewhat tympanitic; the thighs were slightly flexed on the abdomen, and he was frequently vomiting. The tongue was rather furred and dry. The face was pale and pinched. Pulse small, wiry, 120 per minute; temperature 101°. He was ordered hot fomentations to the abdomen, and a mixture containing seven minims of liquor morphiæ if pain continued.

October 29th. He was seen by Dr. Rickards, and ordered five minims of tincture of opium every three hours, and turpentine stupes to the abdomen. His condition was much the same as yesterday. Pulse: morning 136, evening 146. Temperature: morning 100°, evening 103.

October 30th. There was no improvement. Pulse: morning 146, evening 136. Temperature: morning 100°, evening 101. He was ordered iced milk and water. A sixth of a grain of morphia was substituted (hypodermically) for the opium mixture.

October 31st. The condition of the boy was worse. He looked collapsed. Pulse 164; temperature 100°. A teaspoonful of brandy was ordered every two hours. He died at 4.30 P.M.

NECROPSY, twenty-four hours after death. The body was well nourished; the abdomen was slightly distended. The lungs and heart were sound. The intestines generally were distended with flatus, dull, and hyperæmic; they were glued together in many places by recent adhesions. In the peritoneal cavity, especially in the pelvis and in the region of the vermiform appendix, there was a considerable quantity of purulent fluid, containing flakes of lymph. The cæcum was especially hyperæmic, and in it was felt a hard smooth mass. The vermiform appendix was intensely inflamed, and of a deep purple colour, and in it could be felt a small hard lump about the size and shape of a cherry-stone. The other organs were healthy. On opening the cæcum, the hard mass which it contained was seen to be about the size of a hen's egg, and had the appearance and consistency of hard gingerbread. The nodule in the vermiform appendix was of the same character; they were consolidated fæces. No communication by ulceration between the interior of the vermiform appendix and the peritoneal cavity was discoverable.

REMARKS.—It is uncertain how long the fæcal accumulation had been present in the cæcum; probably it had been there for some weeks, possibly for some months; the fæces gliding by it from day to day, a fragment of it had doubtless become separated and lodged in the vermiform appendix, setting up inflammation in that body, which extended to the peritoneal cavity. The history seems to show that, from the commencement of the inflammation of the vermiform appendix to death by peritonitis, the time was but three days and a half. Dr. Rickards remarked, on first seeing the case, that there was no evidence as to the cause of the peritonitis; it might be removable by operation, but he did not think it right, in the face of the acute general peritonitis which was present, to have gastrotomy performed, although the prognosis was most unfavourable if nature was assisted by medicine and external application only; the chances of recovery after the operation were small, and recovery without operation was not impossible.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 3RD, 1880.

W. S. PLAYFAIR, M.D., President, in the Chair.

Specimens.—Dr. GALABIN showed microscopic sections from a case of pyometra.

Dr. MATTHEWS DUNCAN showed a child born hydrocephalic with only stumps of arms, and with deformity of both lower limbs. The mother had been frightened during gestation by seeing a dog run over.

Dr. CULVER JAMES showed an anencephalous monster.

Dr. HEYWOOD SMITH showed photographs of a young woman whose profile showed a remarkable concavity of the face. The mother had been frightened during gestation by a monkey.

Ruptured Tubal Gestation.—Drs. JOHN WILLIAMS and GALABIN read their report on Dr. Godson's case of ruptured tubal gestation. Chorionic villi were present. There was no corpus luteum.

Chorea in Pregnancy.—Dr. WADE read a case of chorea in pregnancy, occurring in an unmarried primipara, aged 19. There was a faint systolic murmur heard at the apex. She had had rheumatic fever. The os uteri was dilated under chloroform, and the choreic movements diminished. They, however, recurred, and dilatation was again effected under chloroform, with the result of rapid and uninterrupted recovery from the choreic movements.—Drs. Routh, Matthews Duncan, Aveling, and Tayler made remarks.

Absence of Vagina: Distension of Uterus by Menstrual Fluid.—Dr. C. H. CARTER read notes of a case of absence of the vagina, with distended uterus from retained menstrual fluid. The patient was sixteen years old, and had never menstruated. She had suffered almost daily pain for two years. About one inch and a half up the rectum, a rounded elastic mass was felt, reaching up about halfway to the umbilicus. An artificial vagina was made. The uterus was first punctured with the aspirator, and about ten ounces of treacly matter withdrawn. The uterus was afterwards washed out with 1 in 80 carbolic solution. Menstruation took place regularly after the operation. A year later, a pointed sound could be passed three inches and a half into the uterus.—Drs. Galabin, Routh, Braithwaite, Godson, Aveling, joined in discussion on the case.

Congenital Abnormality of the Uterus.—Dr. BRAXTON HICKS reported a case of congenital abnormality of the uterus, simulating retention of menses. The patient, aged 24, had never menstruated. About twelve weeks ago, she had severe pain in the right hypochondrium, lasting about four weeks. About the same time, she noticed an increasing swelling in the lower abdomen, and recently tension had become severe. On admission, a tumour was felt, reaching above the umbilicus, tense and semifluctuating, causing distress and œdema of the legs. She had not distinctly suffered from increased distress at the menstrual epochs. The vagina was nearly of normal length, ending in a kind of transverse depression, beyond which was felt the tumour, exactly resembling a uterus distended with menses. The patient was placed under chloroform, and a trocar inserted through a depression resembling a dilated os uteri. Only a little bloody serum escaped.

The sound was then passed up into what seemed to be the centre of the uterus, but there was no sign of menstrual fluid. She became feverish, and died about thirty hours after the tapping. *Post mortem* examination exposed the absence of uterus and ovaries. There was a large cyst attached to the upper end of the vagina; the walls of the cyst were smooth without, irregular within. It was half filled with a cheesy white matter, and half filled with grumous, dark material. The wall above was thinned, and perforated in two or three places, where the fœtid contents had escaped into the peritoneal cavity.—Dr. ROUTH said that, in similar cases, an aspirator should be used to puncture.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

THURSDAY, NOVEMBER 25TH, 1880.

JAMES WILLIAMSON, M.D., in the Chair.

Scarlatina.—Dr. WILLIAMSON read a paper on scarlatina. He said that his experience led him to the conclusion that there was no connection whatever between scarlatina and diphtheria. He believed that poisoned milk, poisoned water, and poisonous exhalations from decomposing matter, gave rise to scarlatina, as they undoubtedly did to other exanthematous fever. His olfactory and gustatory nerves were extremely sensitive to the emanations of scarlatinal patients, for he could both taste and smell the disease, even when previously unaware of its existence. The sensation communicated to these nerves was similar to that produced by placing a piece of silver upon the dorsum of the tongue, and a piece of zinc in contact with its surface. There were three points in treatment which should always be borne in mind. In the first place, it was important, if possible, to bring out a well-developed rash. In the second place, the sore-throat demanded attention; and finally, the sequelæ would often tax our utmost resources. Sydenham, during the first twenty years of his practice, hardly witnessed a single death from scarlatina; yet, during the latter part of his life, he regarded this disease as one of the most dangerous of the exanthems, and one of the greatest scourges to the human race. Dr. Williamson's treatment was that usually adopted, but he strongly advocated the frequent use of iced milk.

Syphilitic Ataxy and the Preataxic Stage of Locomotor Ataxy.—Dr. DOWSE said that he had no hesitation in making the statement, that every case of locomotor ataxy, with very few exceptions, could be traced to syphilis as a cause; and that every case of locomotor ataxy was curable, provided it were treated sufficiently early, and in the most energetic manner. It was interesting to consider what relationship existed between the advent of the electric-like pains and the advent of the ataxic gait in reference to time. Dr. Dowse detailed the signs and symptoms of an ataxy in its three stages, as laid down by Dr. Seguin of New York; and called attention to the following signs, which were, in his opinion, diagnostic of what he called the preataxic stage of locomotor ataxy, namely: irregularity of pupils; small pupils; paresis of the third nerve; cutaneous fulgurating pains; sexual excitement; transitory inco-ordination of lower limbs; variable patellar tendon-reflex—never absent; spinal irritability; dysæsthesia; anæsthesia; hyperæsthesia; visual colour-changes; gastric and intestinal crises; variable temperament; retinal changes; mental depression; insomnia. Dr. Dowse then referred to treatment. The remedies which he generally used were the bromide of potassium and the liquor of ergot in full doses, and the twelfth of a grain of bichloride of mercury three times a-day, dry cupping of the spine, and active counter-irritation by means of blisters and the actual cautery.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL SECTION.

FRIDAY, NOVEMBER 26TH, 1880.

BALTHAZAR FOSTER, M.D., in the Chair.

Plastic Operation.—Mr. FURNEAUX JORDAN showed a boy after an operation for the restoration of the mouth, necessitated by the destruction of the lower lip from a burn. After suitable paring, the angles of the upper lip were brought together, and subsequently new angles were made by incision. Good union and a good mouth followed.

Adherent Placenta.—Dr. BASSETT showed a drawing of an adherent placenta, removed from a patient who is the mother of a large family, and suffers from a weak heart, with very defective circulation. During all her late pregnancies, she has been more or less of an invalid. She has been twice prematurely confined, after discharging daily for several weeks a considerable quantity of sero-sanguinolent fluid. She has reached her full term in the two last pregnancies by keeping the recumbent position. The morbid sequence which produces this result is: 1, a weak heart; 2, augmented quantity of blood in the body; 3, placental congestion and exudation; 4, absorption and partial organisation. In these cases, adhesion very often does not occur.

Porrigo Decalvans.—Dr. BASSETT referred to the case of a boy who had suffered for three years from porrigo decalvans, without receiving any benefit from a variety of remedies, but had been cured by an ointment of chrysophanic acid, used at the suggestion of Mr. J. Hutchinson.

Cerebral Tumour.—Dr. SIMON showed a cerebral tumour occupying the second left frontal convolution. Its microscopical appearances were those of glioma. The symptoms had existed two years, and consisted of frontal pain, epileptiform attacks, and loss of memory. There was no paralysis; but her face had lost all expression; she was dull, and took no interest in her surroundings. Her mother and grandmother had been inmates of lunatic asylums; and this circumstance increased the difficulty of making a diagnosis.

Antiseptic Surgery.—Mr. LAWSON TAIT opened a discussion upon the clinical results obtained by the Listerian method of performing operations and dressing wounds; in which Mr. Bartleet, Mr. West, Mr. Gamgee, Mr. Jordan, Mr. B. May, Mr. Chavasse, Mr. H. L. Bunne, Mr. Manby, Mr. Hyde (of Worcester), Mr. Solomon, Dr. Barling, and Dr. Carter took part.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, NOVEMBER 9TH, 1880.

HECTOR CAMERON, M.D., President, in the Chair.

Thrombosis.—Dr. FINLAYSON showed specimens from a female patient who had died from thrombosis of the veins, embolism of the pulmonary artery, and gangrene of the toes. The femoral veins were completely occluded by clots up to Poupart's ligament; the right innominate vein was also filled; the heart was slightly enlarged, and contained numerous old thrombi, but the valves were normal. Both pulmonary arteries were almost occluded, and the lungs contained numerous infarctions. The right pleura presented recent inflammatory exudation, and contained a large quantity of bloody serum. The chief symptoms were severe dyspnœa, pleuritic pain with friction below the right mamma, œdema of the lower limbs and of the right arm, gangrene of all the toes. The pulse was rapid and weak; heart's action cantering; slight hæmoptysis. There were no shiverings; temperature once reached 100° Fahr., but was generally rather under the normal. Dr. Finlayson considered that the thrombosis of the femoral veins had caused embolism of the pulmonary artery, with hæmorrhagic infarction of the lungs and secondary pleurisy, although the pulmonary symptoms appeared before any local manifestation in the limbs.

Fibroid Tumour of Uterus.—Dr. WILLIAM REID showed part of a large tumour, removed from a patient aged 40. It was attached to the fundus uteri, and at its base was two inches and a half thick. It was removed at two operations by the *écraseur* and chain-saw. After the second operation, there was no hæmorrhage, and the patient did well till the sixth day, when parotitis set in. On the tenth, after the evacuation of some pus from the neck, the patient died of exhaustion. The *écraseur* used was designed by Dr. Reid to increase the sawing action of the chain or wire. This was effected by using a long screw, on which there were two travelling nuts, one of which could be made to travel after the other had gone the whole length of the screw.

Vascular Lesions in Hydrophobia and Cases of Cerebral Excitement.—Dr. GEORGE MIDDLETON showed several microscopic preparations, illustrative of vascular lesions in the nervous system in cases of cerebral excitement, and which he has described at length in the *Journal of Anatomy and Physiology*, October 1880. In the course of an examination of the microscopic appearances presented by two cases of hydrophobia that had occurred in the Royal Infirmary, he had found the perivascular lesion described by previous observers, and he had been led to examine the nervous structures in some other diseases, with a view to determine whether their lesion was in any way characteristic. Of twenty-four cases examined, fifteen showed this perivascular lesion, some of them in a form almost quite as marked as in hydrophobia. Sixteen cases had more or less marked cerebral symptoms—delirium, etc. Among these were cases of fracture of the skull, erysipelas, delirium tremens, diabetes, tubercular meningitis, uræmia, etc. The frequency of the lesion in so many diverse diseases was held to indicate that it could not be attributed to any special irritant in the blood, but rather to nervous excitement; and the investigations seemed to point to the fact that the intensity of the lesion varied directly with the intensity and duration of the cerebral excitement.

MADAME THIERS is dangerously ill from inflammation of the bowels, and little or no hope is entertained of her recovery.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

WEDNESDAY, NOVEMBER 3RD, 1880.

THOMAS FITZPATRICK, M.D., in the Chair.

Case of Pericarditis.—Dr. W. G. SMITH exhibited a recent specimen of pericarditis, taken from a young man aged 26, who suffered from his first attack of rheumatic fever in 1879. He made a good recovery, and seemed to enjoy excellent health, being free from any heart-trouble, until his fatal illness. This commenced early in October 1880, with chills, shivering, and pain. Among other symptoms on the day after admission to hospital, *the radial pulse was markedly irregular, while the heart beat regularly.* The patient died early on the morning of October 28th. The diagnosis of pericarditis was made with considerable certainty a week before distinctive physical evidence was forthcoming. Stress was laid upon the feebleness and variability of the heart-sounds, weak apex-beat, with increase of cardiac dulness; but more especially on the notable discrepancies between the cardiac sounds and impulse and the radial pulse. The irregularity of the pulse while the heart beat regularly seemed to bring the case within the category of cases described by Griesinger and by Kussmaul, who introduced the term "pulsus paradoxus". Various explanations of this curious phenomenon had been suggested. When, as in the above case, extreme thickening of the pericardium existed along with more or less mediastinitis, Kussmaul's explanation might hold good; for, when the great vessels at the base of the heart were imbedded in the thickened connective tissue, and the pericardium was adherent to the back of the sternum, the inspiratory distension of the thorax would drag on the aorta, and tend to constrict it. Consequently, during inspiration, less than the normal quantity of blood would find its way into the aorta, and so the radial pulse would be enfeebled or might disappear during a full inspiration, especially whenever a feeble heart-beat coincided with inspiration. During expiration, on the contrary, especially when coincident with a stronger heart-beat, the pulse would be relatively full and strong. This hypothesis, however, did not answer for all cases, inasmuch as the paradoxical pulse occurred not only in exudative pericarditis with and without mediastinitis, but it had also been observed in a healthy individual.—Dr. HAYDEN said that, in the case just narrated, it appeared to him that the first event of the pathological series was myocarditis, which travelled slowly from within outwards, contrary to the usual course, and ultimately involved the pericardium in a common inflammatory process. The pericarditis in this case was hæmorrhagic—a form of the affection most frequently exhibited by the subjects of scurvy and blood-poisoning.—Dr. FINNY thought that Dr. Smith had not at all made plain that the *pulsus paradoxus* did exist in this case. The paradoxical pulse was not so much an irregular pulse as a retardation and a lowering of the pulse on inspiration. These features were not very plain in Dr. Smith's case. Besides the view of coexistent myocarditis causing the irregularity of the pulse, might not the endocardial complication of acute inflammation of the aortic and pulmonary valves afford an additional explanation? Dr. Smith referred to a systolic basic *bruit*; and, though he referred it entirely to the pericarditis, might it not also be produced by the coexistent valvulitis?

Nervous Palpitation.—Dr. WALTER BERNARD detailed the subsequent clinical history of a patient whom he had introduced to the Society on a previous occasion (see BRIT. MED. JOURNAL, May 22nd, 1880, page 770). The man took a voyage to America, and became perfectly well. He was now at work as a school-teacher. The interest of this case lay chiefly in, (1) the difficulty which attended the diagnosis; (2) the sudden and complete recovery; (3) the want of proportion which existed between the palpitation and the other great characteristic symptoms of Graves's disease.—Dr. HAYDEN regarded the case as an example of exophthalmic goître, in which palpitation with rapidity of pulse was far in excess of proptosis and thyroid enlargement. The man had made a report of his own case, from which it would appear that on one occasion the pulse attained a rate of 242 in the minute. Exophthalmic goître in males was comparatively rare.—Dr. H. KENNEDY remarked that Dr. Bernard's patient had been afflicted with worms when a young man. He also had suffered from epistaxis on his journey to town, shortly before he was examined at that Society.—Mr. SWANZY said that one of the most remarkable points in connection with Dr. Bernard's patient was his sex. He remembered having seen but one case of the disease in the male. The patient presented himself at von Gräfe's *clinique* in Berlin, when he was there as assistant. He was a shop-assistant, aged about 22: and a few days previously had endeavoured to have connection with a girl, but had encountered active opposition. The struggle had lasted a considerable time, at the end of which, having failed in his attempt, he was utterly exhausted, and the cardiac palpitation which came on during the struggle did not cease. Next day the eyeballs began to be prominent, and the throat to swell; in short, he had acquired well marked exophthalmic goître.

The Diagnosis of Enteric Fever.—Dr. WALTER BERNARD read a paper on this subject. He said that the difficulties of diagnosis arose from the fact that typhoid fever exhibited many Protean forms, and closely resembled many other morbid states. At the present day, the term typhoid was used to include too many acute febrile states. There could be no doubt that accurate clinical observation, along with careful *post mortem* examinations, would at some future time add one or more names to the list of fevers. Zenker, in 1860, proved by *post mortem* examination that a patient, who was supposed to have died from typhoid, really suffered from trichinosis. An attempt had been made by the Registrar-General for Ireland (Dr. Grimshaw) to show that many cases of the so-called typhoid were really cases of acute gastro-enteric catarrh. Although the author was not prepared to deny the existence of the *febris gastrica* as an independent disease, still he thought it was impossible, with our present knowledge, to distinguish between this disease and mild cases of typhoid. Cases occurred during endemics of typhoid which exactly answered to Dr. Grimshaw's description of acute febrile gastro-enteric catarrh. It was to be regretted that in those cases no notice had been taken of the size of the spleen. The poison of typhoid fever, even in its mild form, had a peculiar elective affinity for this organ. The thermometer was invaluable as an aid to diagnosis. Light would sometimes be thrown on obscure cases by careful attention to the etiology and history. The instances in which typhus and typhoid coexisted were very perplexing. It was sometimes difficult to distinguish typhoid fever from septicæmia, or from acute tuberculosis. Sometimes, especially in children, it was difficult to come to a conclusion whether the pyrexia was due to some local affection (*e.g.*, intestinal irritation, enteritis, pneumonia), or whether it was primary.—Dr. H. KENNEDY referred to the occurrence of cases of enteric fever in which there were successive crops of typical rose spots, while the other characteristic symptoms of the disease were wanting.—Mr. SWANZY, in answer to a question addressed to him, thought it was of the utmost importance that the ophthalmoscope should not be overrated in connection with medical diagnosis. The only form of tubercular disease which could be diagnosed with the ophthalmoscope was acute miliary tuberculosis. In a few cases of this disease, miliary tubercles occurred in the choroid. When present, they were situated not far from the optic disc, and presented the appearance of minute white specks. In typhoid fever, there was never any specific ophthalmoscopic sign.—Dr. FINNY laid stress on the significance of a slow pulse-rate, compared with the height of the temperature, as bearing on the diagnosis of enteric fever. Even with high temperature, the pulse rarely exceeded 100 in the earlier stages of the disease.—Surgeon-Major JACKSON confirmed Dr. Finny's observation.—Dr. HAYDEN remarked that a pulse-rate under 100, in combination with a febrile temperature of 102° to 104°, was peculiar to simple typhoid—that is, fever uncomplicated with serious pulmonary or other disease.—Dr. J. W. MOORE spoke of the difficulty experienced by his colleague Dr. Reuben J. Harvey and himself, in the present epidemic of typhus, in establishing a differential diagnosis between enteric fever and mild cases of typhus—instances of *typhoïdation à petite dose*. In several cases of typhus recently treated at Cork Street Fever Hospital, *taches bleuâtres* were observed, and diarrhœa was often present. With Dr. Bäumler of Freiburg, he regarded an examination of the spleen as of considerable importance in arriving at a diagnosis of enteric fever.—Dr. W. G. SMITH was sceptical as to enteric fever running its course without a pyrexial temperature. He considered the occurrence of ochrey stools and an enlargement of the spleen as of much diagnostic value.—Dr. BERNARD, in reply, referred Dr. Smith to the following passage in Dr. Cayley's lectures in the BRITISH MEDICAL JOURNAL of April 3rd, 1880, page 507. "Many cases and even epidemics of typhoid have been met with, in which the temperature has been subnormal throughout the whole course of the disease. One such epidemic has been reported by Strube."

The Society then adjourned.

CORONERS' INQUESTS.—The following are the recent disbursements of the different Middlesex coroners: Mr. Humphreys, for 175 inquisitions, from the 1st of October to the 10th of November, £307 2s. 8d.; Dr. Hardwicke, for 156 inquisitions, from the 1st of October to the 9th of November, £318 9s. 6d.; Dr. Diplock, 69 inquisitions, from the 1st of October to the 10th of November, £127 13s.; Mr. Bedford, 30 inquisitions, from the 1st of October to the 29th, £65 18s.

REVIEWS AND NOTICES.

THE DIAGNOSIS OF DISEASES OF THE SPINAL CORD. An Address delivered to the Medical Society of Wolverhampton, October 9th, 1879. By W. R. GOWERS, M.D., F.R.C.P., Assistant Professor of Clinical Medicine in University College, etc. (With Additions and Illustrations.) London: J. and A. Churchill. 1880.

THIS book sets forth, in a concise and very lucid manner, what is known about the symptoms and diseases of the spinal cord, up to the very latest researches, in which Dr. GOWERS himself has taken a conspicuous part. His outline of the anatomy of the spinal cord, illustrated by a diagram prepared by himself, displays, with great preciseness, the position of the cord and its relation to the vertebral canal, as well as that of the spines to the origins of nerves. The description of the general structure of the cord is presented with equal clearness, and also accompanied by different demonstrative diagrams.

After referring to the secondary degenerations of the columns, Dr. Gowers states, that, besides those frequently described, he has lately found, in a spinal cord of which the lower extremity was crushed, a symmetrical area of slight ascending degeneration in the anterior part of the lateral columns in front of the pyramidal tracts. In this case, sensation was greatly impaired. "This fact", as Dr. Gowers remarks, "at present stands alone; but, taken in conjunction with the experiments on animals, it points, I think, to the probability that some sensation is conducted in this region in man; what or whence, whether from the skin or deeper sutures, we do not know."

The subject of Reflex Actions is exposed in the most thorough practical manner. The superficial and deep forms of reflex actions are separately considered. The controlling centre of the former, in man, is probably situated, not in the corpora quadrigemina, but in the optic thalami. The effect of cerebral disease does not interfere materially with these reflexes as indications of spinal disease, and it affords important signs of the existence of an organic disease of the brain. The best methods of eliciting the deep reflexes are separately described. Dr. Gowers justly objects to the term "tendon-reflex", by which the deep reflexes are commonly designated, as their relation to tendon is extremely doubtful, and certainly not exclusive. "The front-tap contraction", which occurs when (during passive flexion of the ankle) the muscles in the front of the leg are tapped, is worthy of special attention, as a very delicate and convenient test of morbid contractility. "In health, the front-tap may sometimes, although very rarely, be obtained. The tendon-cap contraction may sometimes be obtained. The ankle-clonus *can never be obtained in health by sudden passive tension.* Thus produced, it is absolutely pathological, and of the highest importance, as certainly indicative of a structural change in the spinal cord."

Co-ordination of movement is chiefly related to the root-zone of the posterior columns, traversed by the fibres of the posterior roots. Disease limited to this situation causes the most complete ataxy. "It is not probable that movements are, strictly speaking, co-ordinated in the cord; the probable seat of this function is the basal ganglia of the brain. Disease of the posterior columns may interfere with the influence of the co-ordinating centres upon the muscles or lower centres."

But deep muscular reflex actions also tend to facilitate the voluntary co-ordination; and, in proof of this, Dr. Gowers has shown that "there is a very complex series of myo-reflex actions, by which a relation is established between tension, contraction, and relaxation, which must undoubtedly play a very important part in muscular co-ordination". These actions are all dependent on the deep reflex processes; and hence, "it is a question whether the loss of these reflexes will not alone account for the inco-ordination in posterior sclerosis, without the assumption of disease of special co-ordinating fibres, which have been supposed to run vertically in the postero-external columns". It is true, that, in several cases of ataxy, there may be no loss of the knee-reflex, and, with some of the deep reflexes in excess; but then, as Dr. Gowers very properly points out, these are not typical examples—there being more unsteadiness than inco-ordination; and it is not improbable that the deep reflexes are impaired elsewhere than in the region in which the knee-reflex and ankle-clonus are developed.

The evidence put forward by Dr. Gowers has been so plain in respect to the co-ordination of the movements of the eyelids, and so legitimate are his suppositions in regard to the last-mentioned instances of ataxy, that we could not well dissent from the views held by him. At all events, it could not be denied, that, as he further maintains, "we know nothing of co-ordination of movements in the spinal cord of man, except as the result of the deep reflex actions; and, if there is more in locomotor ataxy (posterior sclerosis) than this loss, it is due to an interference in some way with cerebral co-ordination".

This whole section on Pathological Physiology is written in an engaging manner, and states many pregnant views concerning the clinical aspects of the subject. The same is the case with the section devoted to Anatomical and Pathological Diagnosis. For a better comprehension of the former, Dr. Gowers presents a diagram and table, showing the approximate relations to the spinal nerves of the various motor, sensory, and reflex functions of the spinal cord. A table is also given showing the common relation of the lesions, according to their onset, dividing them into: *Sudden* (few minutes); *acute* (few hours or days); *subacute* (one to four weeks); *subchronic* (one to two months); *chronic* (two to six months); and, *very chronic* (six months and upwards).

Speaking of syphilis, Dr. Gowers remarks, as it has been also our experience, that in the majority of cases of locomotor ataxy—*i. e.*, of primary sclerosis—there is a history of syphilis. He thought, at first, that this existed in about one-half of the cases; but he has found, by subsequent experience, this calculation to be below the actual proportion—for, in fourteen cases of ataxy, he has discovered that eleven had had chancres, and many had presented symptoms of constitutional syphilis.

We fully agree with Dr. Gowers in thinking that a vigorous scientific imagination, much more than observation, has supplied the current descriptions of anæmia and of hyperæmia of the spinal cord, or of reflex paralysis.

Dr. Gowers' nomenclature throughout the book is simple and readily intelligible. He recommends that, to convey exact ideas of the diseases of the spinal cord, we should endeavour to substitute the idea of morbid processes for that of definite diseases. By combining the terms indicating the place and the lesion, we may have a system of terminology already fairly in use, and which will altogether suffice for our present needs. Thus, we may have a "columnal", or a "cornual degeneration", or a "cornual myelitis", etc. The "anterior cornual myelitis" is called *tephro-myelitis* by Charcot, and *anterior polio-myelitis* by Erb; but Dr. Gowers thinks that this latter term possesses no advantage over that proposed by Charcot—both, however, being much less obvious than Gowers' anterior cornual myelitis. The simplicity and advantages of Dr. Gowers' system are certainly manifest. The instructive histories of six cases, as illustrations of the methods of diagnosis, and a plate, very finely executed by Dr. Gowers, representing some of the more important lesions of the spinal cord, close the book.

Looking at its comparatively small number of pages, the reader could hardly anticipate the amount of learning and clinical research condensed in them, which make us realise the solid progress of science, although we may yet stand in need of further light in many directions of spinal pathology. The striking simplicity of the mode in which Dr. Gowers has reduced to practical aphorisms the great body of positive facts, on such a complex subject as the Diagnosis of Diseases of the Spinal Cord, keeping himself altogether free from the speculations which commonly enshroud it, commend his excellent book as a valuable guide for students and practising physicians.

NOTES ON BOOKS.

THE seventh edition of Dr. AITKEN'S *Science and Practice of Medicine* (Messrs. Griffin and Co.) appears in two large volumes, copiously illustrated, and to a large extent rewritten. Dr. Aitken is indefatigable in his efforts in making this important text-book a faithful representation of the medical science and practice of the day. The section on diseases of the brain and nervous system is completely remodelled, so as to include all the most recent researches, which, in this department, have been not less important than they are numerous. The whole book is brought thoroughly up to the standard of present knowledge, and fully maintains its reputation.

DR. BRISTOWE'S *Treatise on the Theory and Practice of Medicine* (Smith, Elder, and Co.) appears in its third edition, which has been rapidly called for. It is much more compact and concise than Dr. Aitken's great work in two huge volumes, and has in that respect a great advantage over it; while, on the other hand, its fulness and exactness have strongly recommended it to the higher class of students and careful practitioners. The present edition differs chiefly from its immediate predecessor in the incorporation into it of brief notices of hæmophilia and tetany, and of an article of some length on madness, and in the addition to it of about fifty woodcuts, mostly from original drawings. There is no better handbook than this in any language.

MR. H. K. LEWIS, of Gower Street, adds to the new text-books of the month another translation of the revised edition of NIEMEYER'S *Text-Book of Practical Medicine.* This is published in America, is well

translated, and retains all the characteristics of clearness and scientific breadth of principle which has made it a favourite text-book for many years. The new edition is well brought up to date.

ANOTHER treatise on the practice of medicine comes also from America, and is introduced to English readers by the intelligent enterprise of Mr. H. K. Lewis, BARTHOLOW'S *Treatise on the Practice of Medicine*. This is a new work, the production of an author who has distinguished himself considerably in the department of materia medica and therapeutics. This present work deserves more attention than we can give to it in the small space now at our disposal. We may say, however, that the book is distinguished by strong therapeutic faith, considerable clinical experience, and opposition to what Dr. Bartholow stigmatises as "therapeutic nihilism". The book is interesting, though imperfect; and a good many people will entertain considerable doubts as to what Dr. Bartholow calls his "true principles of treatment".

Descriptive Atlas of Anatomy: a Representation of the Human Body, in 92 royal 4to plates, containing 550 figures. London: Smith, Elder, and Co., 15, Waterloo Place. 1880.—This atlas, designed and drawn by Mr. NOBLE SMITH, is certainly one of the most remarkable publications of the day. It is surprising how Mr. Noble Smith, indefatigable in industry and remarkable in artistic skill, as he has already demonstrated in other important works, should have succeeded in producing these five hundred careful drawings of all the parts of the body at such a rate as to allow this book to be produced at its singularly low cost. The great advantage which it presents is that all the attachments of bones, the arteries, veins, etc., are copiously lettered and described *in situ;* and the arteries and veins are coloured. The book is one of great utility and merit, and reflects credit on the artist, and also on those who have produced it. It has, we hear from lecturers on anatomy, been received with favour in the schools; and it will be a boon to students.

The History and Therapeutical Value of Arsenic in Skin-Diseases. By MALCOLM MORRIS, F.R.C.S.E.—Mr. Morris gives in this paper an interesting and careful account of the history of the employment of arsenic in medicine, and supplies corroborative instances from his own experience to show that it has occasioned curative effects in lichen planus and pemphigus. Two cases are given in which the administration of arsenic for psoriasis was shown by measurement to produce diminution of the number of red corpuscles in the blood, without any change in the relative number of leucocytes.

The Nature and Treatment of Syphilis and the other so-called Contagious Diseases. By C. R. DRYSDALE, M.D., etc. Fourth Edition. Pp. 172. London: Baillière, Tindall, and Cox. 1880.—This little book has no pretension to be considered in the light of an exhaustive treatise on venereal diseases. It is, as the author describes it, a "sketch", which the recent discussions on syphilis in England and abroad have enabled him to make more perfect in the present edition. The subject of gonorrhœa, with its complications, occupies the first thirty-eight pages. Then come primary syphilis and soft sores, which are disposed of in the next three pages; the remainder of the space being devoted to the constitutional effects of syphilis and their treatment. The scope of the work does not, of course, allow a description in detail of the various affections due to syphilis; but the chief features of that disease are more or less fully noticed; and, if the author modestly keeps himself and his opinions somewhat in the background, he at least shows that he has made himself acquainted with the recent literature of syphilis, and especially with the works of French syphilographers, which he quotes, however, with a certain vagueness and want of critical perception. Of the syphilitic visceral affections, those of the nervous system receive most attention; and the writings of the principal authorities on this part of the subject are referred to. In Chapter XI, under the heading of Recent Opinions on the Treatment of Syphilis, Dr. Drysdale quotes a number of authors, English and foreign, on the question of the value of mercury in syphilis; and states that he himself now uses the drug in small doses. A few formulæ bring the book to an end. To the next edition we would advise the author to add an index, or at least a moderately full table of contents.

Speech for the Deaf: Report of the Milan Congress on Education of the Deaf. 8vo., pp. 159. London: Allen and Co.—We hope that this volume will attract the attention of the profession. The unanimity of the recent congress of experts on the question of teaching the deaf must convince all, whatever their previous bias, that systems of "signs" and "finger-talking" must, for the future, be entirely set aside in favour of the "pure oral" or "German" system, which, dispensing absolutely with signs, teaches every pupil to read from the lips of his teacher, and speak as he speaks, not with hideous guttural noises, but in a voice indistinguishable from that of a hearing child. These views, now happily in the ascendant, have always had powerful advocates in the medical profession, and we congratulate our brethren, who have long and earnestly pressed forward the subject, that their perseverance has at length borne fruit. It will, however, still need the enlightened support of medical men to impress upon the parents of deaf children that they must not be brought up as a class apart; that dumbness is not a necessary consequence of deafness, but should in every case be prevented, unless blindness or imbecility coexist with deafness. The volume before us contains, besides the report and resolutions of the Congress, papers sent by members of the Society for Training Teachers of the Deaf (Office, 298, Regent Street), one on the Mental Development of the Deaf; another, peculiarly interesting to those advocating the systems, entitled, My Experience of the Various Methods of Educating the Deaf-born; in which the author, Miss Hull, describes how she found it necessary to give up "signs", the "combined system", "visible speech", and now rests in the "pure oral" system. The paper by Dr. Symes Thompson, on the Health of Deaf-Mutes, shows that the development of the lungs and of the whole body is greatly improved by the oral method; while the concluding paper, by Dr. Buxton, who has devoted his life to the subject, brings out some valuable facts, census-returns, etc., as to the causes of deafness.

The Dissector's Guide: a Manual for the Use of Students. Part II. By D. J. CUNNINGHAM, M.D., C.M., F.R.S.E.—This volume is devoted to the abdomen, and purposes to be a complete text-book upon the practical anatomy of that region. The volume commences with a description of the perinæum, for the dissection of which only *one day* is allowed in the Edinburgh school, which the author admits is "somewhat limited". Fifty pages are devoted to the anatomy of the perinæum and its neighbourhood, including a short and practical account of the surgical anatomy of the region. The walls of the abdomen are next described, including hernia. The abdominal cavity is then dealt with; and, lastly, the pelvic cavity. The text throughout is written clearly and agreeably, and in an explanatory manner, which entices the reader to read on. The illustrations are moderately good. They consist of fifty-six woodcuts, three of which are repeated. About half the number are borrowed, chiefly from Gray's *Anatomy*. The plate which shows the lines along which the peritoneum leaves the wall of the abdomen to invest the viscera is an useful one; but none of the others call for special remark. If this manual is to be used in the dissecting-room, we doubt the propriety of introducing so many illustrations; and if it is intended to be used for the purpose of learning anatomy prior to dissection, the figures ought to be much more comprehensive. We believe that the best teachers in the London schools disapprove of the use of plates *in* the dissecting-room, but recommend that the part to be dissected should be studied as completely as possible beforehand. The whole volume is written in a systematic manner, the type is agreeably large, and the solid letter headings give an useful distinctness to the separate descriptions of the various structures.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FOSSILINE.

UNDER this name, Messrs. Evans, Son, and Co., of Liverpool, have introduced a substance of the nature of petroleum jelly, and—like the excellent hydrocarbon jellies—bland, inodorous, and pure. When they first introduced it, such products were selling at about 2s. 6d. per pound; whereas they quoted theirs at 10d., the low price making it as cheap as lard, to which it is greatly superior. Latterly, improved methods and low prices have become the rule; and, to the great advantage of surgery, these petroleum jellies are coming into universal use with local applications. Messrs. Evans have produced a fossiline plaster, which is known as Savar's Fossiline Plaster, and which has the great advantage of adhering firmly to the skin, but yet not sticking, so that it can be easily taken off, without any pain, from raw wounds. It is thus applicable to bed-sores, and for other general surgical and hospital purposes.

THE West Indian islands would seem to have a bad reputation for morality. We recently referred (page 668) to the enormous percentage of illegitimate births in Antigua; and, in the last Report of Governor Strahan on the Island of St. Vincent, it is stated that, of the births last year, no fewer than 54.5 per cent. were illegitimate—the average of the last ten years being 55.4. In the Island of St. Lucia, moreover, it would appear from the testimony of the Governor that, whilst the legitimate births numbered 598, the illegitimate numbered 989, or 62 per cent. of the total.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 11TH, 1880.

THE ASSOCIATION AND THE "JOURNAL."

THE Programme, which we publish in accordance with a time-honoured custom, and which will be found on page 953, will, we believe, sufficiently indicate that the Association and the JOURNAL have reasonable expectation of continuing, during the forthcoming year, to fulfil, satisfactorily, the aims which they have successfully kept in view up to this time. There is no present indication of any arrest in that remarkable growth, which commenced thirteen years ago, and which has continued with singular, but almost mathematically unchanged ratio, to this day. There is no want of vigour in the action of the Branches; there is thorough concord and unity in the Councils of the Association; and subjects of interest and importance still open out before us, as the years grow.

The next annual meeting will be held under circumstances of especial and unusually interesting character. The year 1881 will see the assemblage of an International Medical Congress in London, which promises to attract a considerable number of distinguished foreign medical men, and which will certainly prove also attractive to a large number of members of the profession in Great Britain. The International Congress of 1879 at Amsterdam selected England, as its place of meeting, by its own unanimous vote; and requested Mr. Lister and Mr. Ernest Hart, the two English Vice-Presidents of that Congress, to accept, as was usual, the duty of giving to the Congress an invitation in obedience to its wish, and undertaking the organisation of its proposed meeting for 1881.

It was, however, not possible, in view of the many considerations which such a meeting involved, to accept that responsibility; and it was felt necessary to leave to the then officers of the Congress itself the responsibility of arranging the place and time of meeting, by which its wish could be realised, on English soil. This was effected by subsequent negotiations from Amsterdam; and the International Congress has been organised in London on a scale which has been described by some of our continental friends as pompous, but which, it may be hoped, will be found to deserve the more generous epithets of liberal and extensive. It was found necessary, to suit the exigencies of an international congress, that the first week in August should be utilised for the meeting. This is the date on which, for nearly half a century, it has been customary for the British Medical Association to hold its annual meetings; and it is obvious that, if this time-honoured custom had been adhered to, the holding of the annual meeting of an Association which numbers in Great Britain eight thousand members would have interfered with the complete success of the International Congress, and might have made it fail to realise the complete success which is desirable. With the courtesy and public spirit which a great national association should display on such an occasion, it was determined by the executive of the British Medical Association to endeavour to make its arrangements add to the success of the International Congress, rather than to clash with it; and, with this view, the meeting of the British Medical Association is postponed for a week. It will assemble on the 9th of August, at Ventnor, Isle of Wight, under the presidency of Mr. Barrow; so that foreign and home members, who may have taken part in the International Congress, will be able to continue their pleasant holiday labours and entertainments at one of the most delightful marine resorts among the many of which England can boast. It is probable, therefore, that the next annual meeting of the Association will be almost as much international as the International Congress itself. On the other hand, to avoid a surfeit of sectional labours extending over a protracted series of days, and continued from one congress to another, the sectional proceedings of the meeting of the British Medical Association will be this year somewhat abridged, as compared with what they were at Cambridge. The next annual meeting will present features of its own, and will undoubtedly prove especially attractive to both home members and our foreign guests; and a gathering may be anticipated which may even tax the resources of our friendly hosts in the South-Western Branch and in the Isle of Wight, but which is likely to sustain the reputation of the Association for varied resources, representative character, and general adaptability to the real wants and large interests of its members and of the profession.

Ample care will no doubt be taken that the proceedings of the Sections are thoroughly representative of the progress in medical science. The programme is more elastic and less set than that of the International Congress, in which the subjects of the day are exclusively limited long beforehand; and this will afford room for filling up, at the meeting at the Isle of Wight, the obvious gaps which have been left in the representation of progress in medical science recently realised by British workers. At the same time, it is probable that many of our guests will be glad to bring forward at this meeting special results of their researches in their own country, for which it will not be possible to find space within the restricted programme of the international meeting.

Of the JOURNAL itself, we need, perhaps, only say that we can, we venture to think, point to the volumes of the present year as an evidence that it continues to deserve that most pleasing eulogy which Dr. Bradbury and Professor Haughton, last August, pronounced upon it at Cambridge, as being the most complete and living exponent of the scientific progress of medicine and surgery in all their branches; we may also refer to the programme for the ensuing year as an evidence that it is our intention to realise, with the greatest possible energy, a still further advance in this direction. The meeting at Cambridge was remarkable, among other things, for its admirable pathological museum, in which a considerable selection of specimens of the highest interest in medical science was displayed and demonstrated. We have obtained, from the authors of most of these preparations and demonstrations, full accounts of their work; and we have in readiness a series of articles, thoroughly illustrated by engravings, which will put upon record, in a continuous form, most of the interesting series of preparations there shown, illustrating advances in pathological knowledge. We have also in hand, for early publication, the reports, fully illustrated by engravings, of the Anæsthetic Committee of the British Medical Association; of Dr. Ogston of Aberdeen, on Micro-organisms in Surgical Diseases: of Dr. Gerald Yeo, on certain Scientific Applications of Antiseptics in Surgery; of Dr. Braidwood and Mr. Vacher, on the Life-history of Contagium; of Mr. Eve, on the Pathological relation of Irritation to Epithelial Cancer; Dr. Leech and Dr. Silver's researches on Kidney-Changes in Nephritis; and other papers of not less scientific value. We shall recommence also a series of lectures by Dr. Lauder Brunton, F.R.S., on the physiological and therapeutic action of drugs, of which the first series was published some years since, and which has frequently elicited the expressed admiration of physiologists and physicians. As usual, all the principal public courses of colleges and societies will be published *in extenso* or in abstract, according to the special interest of the subject and the necessities of our space. Our general programme is so extensive, that we shall be obliged to apologise, as in past years, rather to those who have placed at our disposal the stories of their varied experience, than to our readers, on whose behalf we shall incur perhaps the embarrassment of a plethora of excessive richness in material. The political and social interests of the profession, which are at the present moment so actively supported by some of the chief committees of the association, will, of course, receive, as heretofore, the most earnest consideration.

We may close this short *envoi* of the coming procession of weekly journals, with the hope that the prosperity which has thus far attended the efforts of the executive of the Association, and the conduct of the JOURNAL, may at least not be diminished by anything which may occur in the ensuing year.

DRUGS AND THEIR ADULTERATIONS.

THE purity of drugs is at all times replete with interest to the medical practitioner. Especial attention is at the present moment directed to the subject by the publication of the elaborate Report on Deteriorations, Adulterations, and Substitutions of Drugs, recently presented by Mr. C. Lewis Diehl to the American National Board of Health (*National Board of Health Bulletin: Supplement No. 6*).

By the term deterioration is understood those natural changes for the worse which take place in drugs as the result of age or of exposure. Adulteration or sophistication—for the terms are synonymous—consists in the intentional addition to any article, for the purpose of gain or deception, of any substance, the presence of which is not indicated by the name under which it is sold. Substitution is the sale of one article in place of, and under the name of, another. As a rule, the collectors of crude vegetable drugs are but imperfectly acquainted with their botanical characters, and fail to distinguish very accurately between allied species, so that in this way substitution often arises.

Mr. Diehl considers that the drug market is "essentially fair". It is not denied that poor and adulterated drugs are largely sold, or that impure medicines are not uncommonly dispensed; but no difficulty is ever experienced in obtaining pure drugs, provided only that the purchaser is prepared to pay the price. On the other hand, those who regulate their purchases by the price rather than by the quality, get goods of an inferior description. Drugs for which there is comparatively little demand are those most likely to be deteriorated; and, to the extent of their deterioration, all preparations made from them must suffer.

Powdered drugs are very commonly of inferior quality, and this arises either from adulteration, or from the practice of using the inferior or less sightly portions of the drug for this purpose. It frequently happens that powders are offered at the price of, or at an inadequate advance upon, the crude drug, notwithstanding the loss occasioned in drying and powdering. It is found that frequently many of the officinal preparations are of such a character as not to bear very close scrutiny. Infusions and decoctions which should properly be made from the drug itself are too often prepared by adding the corresponding fluid extract to water. This is done not so much from motives of gain, as to save trouble to the dispenser. Tinctures, too, vary very materially in character and quality. This often arises from careless or unskilful preparation, but still it is well known that certain tinctures are made to vary in strength, both of drug and menstruum, in order that they may be sold at a lower price.

Mr. Diehl gives a long list of drugs which have been examined at different times by various pharmaceutical authorities, and his disclosures are certainly not reassuring. Glancing down the list of roots, we find that much of the aconite sold is partially or entirely tasteless, being probably exhausted and then redried. Of different packages of arnica, one contained 50 per cent. of the true root, another only 10 per cent., whilst a third contained none at all. Hydrastis, too, is not always found in a state of purity, for a sample contained 50 per cent. of beet-root besides serpentaria, sanguinaria, and podophyllum. Sarsaparilla was found to be adulterated with nut-galls, ipecacuanha, matico-stems, paper, bark, straw, and bay, belladonna, and digitalis-leaves. Amongst the curiosities of adulteration may be mentioned pepper. Whole pepper has been found adulterated with acorns turned into small globes and dyed. Artificial peppercorns made of oil-cake, clay, and cayenne pepper, are also met with. Pepper of light weight is made to pass muster by macerating it in brine. The common adulterants for ground pepper are pepper-leaves, sage, rape-seed, potato, spices, capsicum, guinea-pepper, chicory, rye, laurel-leaves, stones from olives, bone-dust, and dirt. All the highly priced drugs are special objects of adulteration. Quinine is particularly noticeable in this respect; thus, in one case, finely picked cotton was introduced into the bottles to increase the bulk; in another, the preparation consisted almost entirely of salicine; whilst a large sample of "sulphate of quinine" exported to India contained not a trace of any of the cinchona alkaloids. Of three specimens of santonin, the first contained mica, the second was adulterated with 22 per cent of boracic acid, whilst the third consisted wholly of picric acid. It would be interesting to know to what extent pepsin is adulterated, but we are given no information on this point.

Adulterations have been practised from the earliest times, and in the remotest ages; and, according to Mr. Diehl, are likely to be practised in all time to come. The methods, however, are subject to change, progressing with the advance of science. It is said that, in Brussels, there was till recently an extensive establishment exclusively devoted to the adulteration and imitation of the most important chemicals, their preparations giving evidence of the most consummate skill. It is said, too, that a large firm in a western city have a regularly organised adulterating department, with a skilled staff, and all modern appliances necessary for carrying on successfully this branch of industry. The most profitable field for the exhibition of this art and mystery is probably that of powdered drugs, for, owing to their physical condition, it is well-nigh impossible to detect foreign admixture. Indeed, so systematic has been the practice of adulterating powders, that, in many drug-mills, regular formulæ are kept for the preparation of "pure and genuine" powdered drugs. Several of these recipes are given, culled from the note-book of a gentleman who has retired from the active practice of his profession. Thus, we learn that powdered Cape aloes consists of cape aloes and ship's biscuit, equal parts, with turmeric a sufficiency. Ship's biscuit should be possessed of active therapeutic properties, for it enters into the composition of powdered ipecacuanha, powdered opium, powdered gamboge, and about half-a-dozen others, in proportions varying from 25 to 50 per cent. In powdered scammony, it is true, the proportion is not so high, but the deficiency is compensated for by the plentiful admixture of cocoa-beans and lampblack.

We are often reproached with want of faith in the curative action of drugs; but, if adulteration and substitution are as common as these observations would imply, it is hardly a matter for surprise. "It is not sufficient that the medicine should be very nearly that which is designed; it should absolutely correspond to the standard which the physician has before his mind at the time when he finds it necessary to prescribe it. It is, therefore, the duty of the dispenser to see that the medicines he dispenses conform, in every respect, to the standard that has been framed for his guidance, as well as for the guidance of the physician. The fulfilment of these conditions depends not only on the integrity of the dispenser, but equally on his knowledge and skill; and, unless these are combined with integrity, the prescriber cannot hope for results which the nature of the disease may justify him in expecting."

Speaking of the present condition of pharmacy in America, Mr. Diehl says:

"It must be remembered that, among dealers in drugs and medicines, those who have qualified themselves by a systematic course of study are the exception, and by no means the rule; and that qualifications so obtained are not always a safeguard against dishonest practices. The great majority of druggists enter upon their business solely as tradesmen, and with the view to making money; and, being in their particular branch subject to as great temptations as those engaged in other branches of trade, they enter into competition, and undersell each other, until their business no longer returns a profit. Under these conditions, the conscientious dealer struggles along, supplying good medicines, maintaining fair prices as best he can, eking a precarious living, or, as is sometimes the case, giving up his business in despair. It is quite different, however, with the dealer who possesses an elastic conscience, and who regards his business first from the standpoint of trade, and last from that of ethics. He is bound to succeed at all hazards, and enters into keen competition. With him, Peruvian bark is Peruvian bark, and rhubarb is rhubarb; and if he can buy the one for seventy-five cents or a dollar, why should he pay two dollars and a quarter for

what is offered as true Calisaya bark? or, if he can obtain the other at fifty or sixty cents, why should he pay one dollar and a quarter for a select article of rhubarb? With him, that manufacturer is the best who gives him the largest discount on his goods; and if, perchance, he should find that a preparation is invoiced to him at a price which is inadequate to pay for the material used in its manufacture, he marvels at the progress made in the production of pharmaceutical preparations, and becomes all the more confirmed in his view that it does not pay to make them himself. He is keen at a bargain; does not hesitate to overstock his shop with medicines of a fugitive character, so he can obtain them below the market price; and, in short, regulates his purchases exclusively with a view to selling cheap. And in this he is, in a great measure, supported by the public, who fail to appreciate the fact that commerce furnishes as many grades of quality in drugs as among other articles, and that it is easier to meet competition in price than competition in quality."

The paper concludes with some suggestions for limiting the sale of "patent medicines". It is well known that the most energetic agents of the materia medica enter into their composition, often in doses which a physician would hesitate to prescribe; these being necessary to produce the decided and prompt manifestation on which their sale and popularity depend. Narcotics and stimulants are largely represented in them; and it is easy to understand not only how, in a large class of diseases, real or imaginary, temporary relief may be obtained, but, also, how they may give rise to habits the consequences of which are moral and mental ruin, and death.

THE WORK OF THE BRANCHES OF OUR ASSOCIATION.

THE opportunities which the Association, by means of its Branches, affords to the profession of organisation for the promotion of objects of professional or public advantage, are not even yet, we think, fully recognised, although yearly becoming more so. The most important and valuable opinions, even when strengthened by facts, as well as the most reasonable and just demands, commonly receive less attention than they deserve, if put forward by individuals. It is different, however, when a constituted body, appointed by a great Association of about 8,000 members, or any of its integral portions, urges its views upon any subject which it may take up. It is not our object here to refer to what the various central committees, with the assistance of the Branches, have hitherto done, and are still doing, in promotion of the objects of the Association, as indicated by its distinguished founder. Suffice it to say, that the present position of the British Medical Association, from the numerical greatness of its members, and the completeness of its organisation, is such as to give the profession a *locus standi* in this kingdom of no mean public and political importance. From this point of view, the success which has so far attended the efforts of the Council of the Dublin Branch, in inducing the corporation of their city to make the notification of infectious disease compulsory, is very gratifying. The corporation has now definitely committed itself to apply the measure to Dublin; and, as a result of a conference it had on the 2nd instant with representatives of the Dublin Branch, the dispensary medical officers, and other members of the profession, irrespective of their opinions, the following resolution was agreed to: "That, after a full consideration, and after hearing the views of a large number of representative leading medical men, and after considering the reports and experiences of other cities, the committee is of opinion that the Edinburgh system—viz., the direct notification by the medical attendant—is that which should be promoted by the corporation; and that the responsibility should also be put upon the householder or head of the family." It was also resolved that the Chief Secretary for Ireland should be requested to receive a deputation from the corporation, with a view of requesting him to introduce a permissive Bill for Ireland, of which Dublin and other large towns could avail themselves. It is but natural that in Dublin, as was the case in other towns, when the measure was first mooted, it should receive opposition from some practitioners imperfectly acquainted with its objects, scope, and mode of working; as well as from those who were apprehensive lest it would prejudice them with their patients, and interfere with their practice. Nevertheless, there is a very influential and general opinion in its favour. And that the action the Branch has taken is looked upon with approval, is shown by the recent accession of several new members to it. Whatever difference of opinion there may be as to the *method* of notifying, the benefits to the public health that must follow from an efficient working of the measure are incontrovertible by any reasonable individual. We understand that the subject will again be brought before the Branch, at its annual meeting next month, by the President, Dr. R. McDonnell, in his retiring address.

Meanwhile, we think the Dublin Branch is to be congratulated on what it has already done in a comparatively short existence. It has shown an example to other Branches in initiating within its sphere a measure of such vast public importance, of which the principle had already been endorsed by the Association; and it has demonstrated anew, to the profession generally, one of the advantages of united action which our Branch organisation affords. With this number we publish the names of the Honorary Secretaries of the Branches; and we would impress on our associates (who may not belong to a Branch), and any new members in the coming year, the desirability of their joining the Branch of the district where they may reside, or of forming one themselves, if a Branch do not already exist there.

GOVERNMENT INQUIRY AS TO INFANTILE MORTALITY.

IT will be a matter of general interest—concerned, as every practitioner and as every humane person must needs be, with the very large existing mortality amongst infants—to learn that the Local Government Board have at length consented to undertake the general inquiry into the causes which determine the origin and prevalence of summer diarrhœa, which has been long and urgently called for in our columns. In a communication addressed to the Town Council of Leicester—a place pre-eminent amongst English towns for the terrible infantile mortality that takes place there every summer—the Board have stated that, having in view the importance of obtaining, for general use, more information as to the conditions under which diarrhœa is so prevalent and fatal amongst infants in urban populations, they propose to refer the subject to one of their medical staff as a matter of general study and local research, with directions to give Leicester a foremost place in his inquiries.

Although this decision has been rather tardily arrived at, its importance is so great that all cavilling at its procrastination must needs be silenced. The inquiry is undoubtedly one of great difficulty, complexity, and length; and, as such, was not to be lightly undertaken without some reasonable hope of its being carried through to a successful issue. Infantile diarrhœa has puzzled many cautious and careful minds; but its investigators have hitherto been necessarily limited to their own narrow opportunities for research. It has long been felt that the only way of really learning something definite about the causes of this annually recurring "massacre of the innocents" lay in a general inquiry into the subject being undertaken by Government, who alone have the time or the funds to carry it out. Some important results have, it is true, been arrived at by individual inquirers; but, though certain influences, such as high temperature and improper feeding, are generally admitted to assist in intensifying the prevalence and fatality of the disease, the mystery of its origin and spread is still unfathomed. It would be idle to attempt to reconcile the various theories which have been advanced upon this question. The matter will, no doubt, be thoroughly sifted by the Government inspector charged with the general study of the disease; and we may expect some highly important results from his researches.

It is but fair to assume that the recent decision of the Local Government Board has, to no small degree, been influenced by the terrible mortality from diarrhœa which occurred throughout the kingdom in the third quarter of this year. A glance through the Registrar-General's returns shows that the fatality was much more generalised and intense than usual, although the old haunts of the disease still stand out in

conspicuous relief. Hardly a town or urban district of importance escaped, and in some the mortality was simply appalling. The general rate throughout the country was, indeed, higher than in any of the ten preceding summers; the highest having been 3.11 in 1870, whilst that of this year was 3.32 per 1000 of the population. In the twenty large towns, the rate was 4.4; varying from 2.4 in Bristol, and 3.3 in London and Oldham, to 8.4 in Salford, and 10.6 in Leicester. In fifty other considerable towns, the rate was 4.6; and, in Ipswich, was 8.2; in Coventry, 8.3; in Stockport, 10.0; and, in Preston, 13.6. The terribly high mortality in the latter place—by far the highest that has been recorded at Preston since the Registrar-General's returns have been published—deserves a word of special mention. It will be seen that it far overtops the mortality of even Leicester, as, indeed, it did last year, when other large towns were comparatively free from the disease. The reasons for this excess it will be most important to discover, for the meteorological conditions of last quarter were necessarily much the same throughout Lancashire, and the large demand for female labour at Preston, and the consequent neglect of infants, is in no wise so exceptional as to account for the immense divergence between the diarrhœa mortality of Preston, and of other towns similarly circumstanced as regards social conditions.

The Registrar-General's statistics unfortunately do not give, except for London, the ages at which the fatal cases occurred; but summer diarrhœa is well known to be a disease specially fatal to children, and still more so to infants. The metropolitan figures show that nearly three-fourths of the deaths from diarrhœa are those of children under one year of age, and a fifth more are of children between the ages of one and five. These proportions are even exceeded in certain manufacturing districts; and, at the best, they constitute a subject for very serious reflection. In his last return, the Registrar-General gives a table for the purpose of showing that epidemic diarrhœa does not attack the various towns, nor reach its maximum, at precisely the same period. Thus it would seem that, besides heat and close aggregation of people, some other factors are required to explain the very variable incidence of the disease. The general healthiness of the town, as measured by the death-rate from other causes than diarrhœa, is, doubtless, one factor; for, speaking generally, towns with a high diarrhœa-rate have, also, high death-rates from other diseases. Another factor having some slight influence is the height of the birth-rate; but, after making all allowances for such influences as these, there plainly still remain some other factors, as yet unknown, which it will be the business of the Government inspector to discover. As a preliminary step to the commencement of his labours, the Local Government Board have issued a circular letter of inquiry to all places having, last quarter, exceptional mortality from diarrhœa; asking whether the inquiries of the local officer of health have led him to any judgment as to the conditions which have determined the prevalence or the fatality of the disease in the district. It may be hoped that the local experiences which will be thus gathered up will be an useful auxiliary to the inspector charged with the general inquiry; but it will be perhaps wisest, on the whole, that he should begin his investigations absolutely *de novo*.

THE COUNCIL ELECTIONS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We invite attention to the letter which we publish in another column from Mr. George Pollock, on the subject of the mode of election of members of the Council of the College of Surgeons of England.

Everyone will agree with Mr. Pollock, that the system of canvassing under which this election is carried out at present, is open to many and serious disadvantages. Caucussing is always objectionable, and the particular form of underhand and half-ashamed caucussing which has come into vogue in order to secure the election of particular candidates to the council, has had the effect of deterring many men from coming forward in their turn: and has been felt, very extensively, to be objectionable and humiliating by many of those who have to submit to it. Mr. George Pollock, like Mr. Campbell De Morgan, has preferred to keep away from the council altogether, rather than pass through an ordeal of the kind; and everyone will admit that both are names which will at once be recognised as representing exactly the quality of mind and stamp of man who should be most welcome in the councils of the college. On the other hand, the present mode of election is defective, because it does not give adequate influence to distant members of the college, and greatly increases the power of metropolitan members by making personal attendance necessary. Mr. Pollock's proposition aims at remedying both defects. It will be interesting to see how far it meets with approval from the opposite parties, whose various views it aims at conciliating. It has at least the advantage, on the one hand, of repressing vulgar touting, and on the other, of providing elements of representation of all interests; we therefore commend it to the careful consideration both of Conservatives and Radicals. Those who are thoroughly versed in the political science of the question, will be able to tell us how far it is capable of perversion to other ends than those for which it is designed; and how far it will be found in practice, as it intends on paper, to furnish a just representation of provincial interests and adequate means of bringing forward desirable candidates without lending itself to the tactics of parties or cliques. Mr. Pollock has had little experience in political organisation, and possibly some will find his suggestions as naïve as they are well intentioned. Put forward by a man so thoroughly independent, so able and so devoted to the best interests of the college and the profession, they will certainly claim the most careful attention, and suggest considerate criticism.

Telegrams from St. Petersburg deny the alleged existence of plague at Moscow.

The present weekly issue of the British Medical Journal amounts to 10,000 copies; a considerably larger circulation than has ever been attained by any medical periodical.

In our next number, we shall publish *in extenso* the text of the Report of the Glasgow Committee of the British Medical Association on the Action of Anæsthetics. The report will occupy fifteen pages of the Journal, and will be illustrated with woodcuts.

We shall publish, in the same number, a tabulated analytical statement of the cases of deaths during the administration of anæsthetics, recorded during the last ten years in the columns of this Journal.

We are, with great regret, compelled by pressure on space to defer until next week our article on the recent Indian Army Medical Warrant published in last week's *Gazette*.

A very successful class for the instruction of soldiers' wives as nurses has been commenced at Woolwich by Mr. Cruikshank, under the auspices of the St. John's Society.

At a large meeting of the Midland Medical Society, a resolution condemning the action of Mr. R. A. S. Prosser, in the O'Leary affair, was passed unanimously.

Statistics show that 25,906 arrests were made in New York last year. Of these, one was a clergyman, one an editor, eight were artists, six actors, two custom-house officers, forty-seven lawyers, and eleven undertakers; but there is no medical student in the list.

In the year ending the 31st of March last, stamp-duty was paid on 16,627,131 packages of patent medicine, amounting to £135,366 3s.: in the preceding year, the number was 16,727,669, and duty £132,385 19s. 4½d.

Scarlatina has again commenced to be prevalent at Sunderland, and Dr. Yeld is urging the local authority to obtain for the borough, as early as possible, compulsory notification of the existence of infectious disease.

A YOUNG Russian lady, who was studying medicine in Paris, committed suicide a few days ago, by firing off a revolver through her head. Death was instantaneous; and it was ascertained that the despair of passing her examination, which was to come off the next day, was the cause of the melancholy event.

ANOTHER fatal football accident is this week reported from injury to the spine. The game was played on the association rules, which all agree to be the most dangerous. It seems to be regretted, in view of the comparatively frequent serious accidents, that the rules of the game are not so modified as to reduce the risk to life and limb.

DR. T. ISHIGURO of Japan has published a little pamphlet, in which he strongly supports whale-tendon ligature as a substitute for Lister's catgut ligature. It is, he says, cheap, strong, readily procured and preserved, and answers every purpose of an animal ligature and suture. It is extensively used in Japan.

DR. ROTH of Wimpole Street has published, through Baillière and Co., a very interesting account of the Night Medical Service of Paris, introduced by Dr. Passant, of which we have already more than once given details, with a view to its introduction into London. Dr. Roth supports this object, and enters into useful details.

A DEPUTATION of the Fog and Smoke Committee of the National Health Society, introduced by Mr. Ernest Hart, had an interview with the Lord Mayor at the Mansion House on Monday last, and obtained his Lordship's consent to preside at a public conference on Fog and Smoke, which will be held at the Mansion House on January 7th, 1881.

IN consequence of the prevalence of small-pox within a few miles of Salford, and the existence of more than one case within the borough itself, the municipal authorities have issued precautionary notices urging vaccination and revaccination, advising isolation in the sanitary hospital, and requesting prompt information as to the existence of cases.

THE infantile mortality of Darlington is always high, but last quarter the figures were more unsatisfactory than usual, no fewer than 122 out of the 200 deaths registered in that quarter being of children under five years of age. It would be interesting to learn how far unsanitary conditions are responsible for this terrible sacrifice of infant life.

LAST quarter, the death-rate at Hove was 18.8 per 1000—the highest rate that has been observed in any quarter since the local sanitary returns have been published. The increase in the mortality was mainly due to the larger number of infantile deaths, and especially to the fatality of diarrhœa. From this disease, seventeen deaths occurred, fifteen of which were in children under two years of age.

DR. BESNIER read, at the sitting of the Academy of Medicine of Paris, on November 23rd, a very elaborate report, summarising observations undertaken throughout the hospitals during the last twenty years, under the auspices of the Hospital Medical Society of Paris, in which he carried out a research of the laws which regulate outbreaks of typhoid fever in relation to seasons. He is of opinion that the influence of the law of seasons, upon typhoid fever in particular, is very marked; and of this he gives numerous details.

THE funeral of the late Mr. Ceely took place at Aylesbury on the 3rd instant, amid many marks of esteem and respect from the inhabitants of the neighbourhood. A graceful recognition of Mr. Ceely's eminent abilities, and of his services, in days gone by, to the medical department of the State, was evinced by the presence, amongst the mourners, of Dr. Thorne Thorne, who attended on behalf of the Local Government Board.

WE are glad to find that, in consequence of the public attention drawn to the position of a sewage-pipe in one of the wells of the Kidderminster water-works (see p. 786), the Town Council have had the obnoxious pipe removed. The chairman of the Drainage and Water Works Committee was very bitter about the "prejudice" that had been shown with regard to this question, and apparently acted quite against his own predilections in giving orders for the removal of this obvious source of danger to the water-supply of the place.

A DISCUSSION has been going on, during the last month, at the Biological Society of Paris, which seems to have resulted in the confirmation of an announcement made by MM. Dastre and Morat at the Institute at the close of last August, that they had discovered, in the great sympathetic, in the dog, the vaso-dilator nerves which have been long sought in the cerebro-spinal nerves, viz., the dilators of the ear in the dog, rabbit, and goat; the cutaneous dilators of the upper and lower limbs, and the buccal dilators, of which the origin was not known. Their views were opposed by Mons. Laffont, but the fundamental and extremely interesting fact appears to be established.

IT is reported that Dr. Nairne, one of the Senior Commissioners of Lunacy, will retire very shortly; and that it is intended to fill his post by the appointment of a physician selected from the general ranks of the profession. We have, on a former occasion, urged that such vacancies should be filled from the ranks of those who have earned experience in asylums; and we have been glad to see that rule gain more and more acceptance with successive Lord Chancellors. We quite agree, however, that it is desirable that the medical element among the Commissioners should not be exclusively confined to past superintendents, but should include at least one physician whose experience is that of general medical practice; and it would be satisfactory that Dr. Nairne's place should be filled by a gentleman of similar position to himself. Dr. Nairne, prior to receiving this appointment, was physician to St. George's Hospital.

GUY'S HOSPITAL.

AT a meeting of the members of the Brixton Medical Book Society, held on Friday, December 3rd, it was unanimously resolved: "That this meeting desires to express its sympathy with Dr. Habershon and Mr. J. Cooper Forster, in their retirement from their positions on the staff of Guy's Hospital; and their appreciation of the self-sacrifice which they have shown in support of the dignity of their profession."

TYPHOID FEVER AT WORTHING FROM INFECTED MILK.

AS we briefly indicated last week, a somewhat serious epidemic of typhoid fever, due to infected milk, has occurred at Worthing. Through the courtesy of Dr. Kelly, the energetic health-officer of West Sussex, we are enabled to give the following authentic particulars of the outbreak. It appears, from Dr. Kelly's reports, that there have been two distinct outbreaks of enteric fever at Worthing this autumn: one clearly due to the exhalation of infected sewer-air, and the other as clearly owing to the drinking of infected milk. To the latter outbreak, as the larger and most important, we shall at present confine our remarks. Omitting, for the sake of brevity, the connecting links of evidence by which Dr. Kelly traced the epidemic to the milk, it may be stated, shortly, that a son of the occupier of one of two adjoining houses—the other occupier being a dairyman—returned from London in good health on September 16th; and, on September 24th, fell ill of typhoid fever. The excreta from the patient was thrown down the drains, which were very defective. The two houses had in common a well, which had been in use for forty years or more; and about April last was cleaned out and the brickwork whitewashed. Examination of its interior, after the outbreak occurred, showed a palpable soakage into it from the outside, a little above the water-line, and on the same side as, and just beneath, the drain of the other house. Thus, it can hardly be doubted that some of the infective discharges from the lad suffering from enteric fever found their way into this well. The dairyman had the town-water laid on to his house; but for other purposes, and especially for the washing out of milk-cans, the well-water was used. About the middle of Octo-

ber, cases of typhoid began to occur in the town, not limited—as in the first series—to one particular area, but appearing in all parts of the town, and in some houses where there were no sanitary defects. All the houses were supplied with milk from this dairy. On November 2nd, suspicion as to the milk was so far aroused that the handles were removed from the pumps of the well. Fresh cases among the milk-consumers appearing on November 3rd, the well was closed on the 4th by filling it up—examination having first been made of it with the result already stated. The last case of fever, in which infected milk could be accepted as a cause, occurred on November 9th, five days after the filling up of the well—a fact which tends to confirm the view that the well-water was the cause of the outbreak. The milk distributed by the dairyman was derived from two farms, where the cows were in good health, and yielded excellent milk. Those persons who obtained their milk from these farms, in cans of their own, escaped the disease; and, in one village, another dairyman supplied about thirty houses from the same cows as the Worthing milk-seller, without any fever appearing amongst his customers. Thus, it was clear that the milk, as supplied by the farms, was not at fault; but that it must have become polluted after it entered the dairyman's cans. Abundant proofs of this are adduced by Dr. Kelly; but it is hardly necessary to go into the evidence in detail. It may suffice to say, that, by November 12th, about forty persons who drank the dairyman's milk were attacked with enteric fever, besides a few others, in whom the disease was not well defined. In all, 44 cases occurred, 8 of which proved fatal. It is instructive to notice that those who habitually drank large quantities of cold milk were the chief sufferers. Those who had only a small amount in their tea or coffee, or who drank the milk after it had been boiled, seem to have escaped the disorder. Thus, amongst the poor, who only bought a very small quantity daily, the outbreak hardly appeared; while it attacked, in a marked degree, those persons who daily used a large quantity. The moral of these oft-repeated milk-epidemics, it is unnecessary again to point. Had it not been for Dr. Kelly's promptitude of action, the epidemic, serious and fatal as it has been, might have become infinitely more widespread. On the principle that prevention is better than cure, it is to be hoped that the Government will, without further delay, introduce fresh legislation, with the object of providing much more efficient regulation of dairies than the present phantom and illusory supervision under the Orders of Council of last year.

TYPHOID FROM INFECTED MILK.

MR. BARRON, of Southport, reports to us an outbreak of typhoid fever there, due to infected milk. The milk was brought from a rural district beyond the control of the Sanitary Authority of Southport. Mr. Barron writes: "We had thirty-two cases altogether. Immediately it was discovered the disease was becoming prevalent in the town, the cause was sought for, and it was soon found to originate from some infected milk-farms several miles away. The sale of this milk was stopped, and the disease is now fully stamped out. So far as we know, there has not been a fresh case for the past fortnight."

THE GENERAL LYING-IN HOSPITAL.

DR. JOHN WILLIAMS and Dr. Champneys were nominated, on Wednesday last, for the vacant offices of Physicians-Accoucheur to the York Road Lying-in Hospital, and will be submitted to the governors for election on Wednesday next. It may thus be hoped that, with an amended constitution, and a hearty desire for united action on both sides, the very unsatisfactory state of things which has prevailed for some time at this hospital will cease. This state of matters was chiefly owing to the unfortunate attitude of some of the lay governors; to considerable want of tact and want of perception of the limits of lay authority in medical matters; and to an attempt unduly to magnify the authority of the nursing department, and an unwillingness to subordinate it to the medical. All this has been, with no small difficulty, altered. The governors have come to recognise the necessity for increasing the medical authority in the hospital, and taking more frequent counsel with the medical officers, who are now made members of the board; and this should prevent any future collisions. The difficulties at the General Lying-in Hospital between the governors and the staff bear a certain family relation to those at Guy's Hospital; and the change introduced into the constitution of the General Lying-in Hospital affords, we believe, the true solution to such difficulties. The governors of the General Lying-in Hospital have had a severe lesson; and there is every reason to hope that they will profit by it.

ST. BARTHOLOMEW'S HOSPITAL.

WE understand that, at the close of the present year, Mr. Luther Holden will retire from the office of Surgeon to St. Bartholomew's Hospital, which he has filled with much acceptance. There is consequently much fluttering in the dovecot, and many candidates are on the tiptoe of expectation. For our own part, we can but express once more our regret that the staff of this hospital is not enlarged. There can be no doubt that patients and students would alike benefit.

SCARLATINA AT BOLTON.

ALTHOUGH Bolton possesses powers, under its local Act of 1877, to require cases of infectious disease to be reported to the municipal authorities, the usefulness of such information is sadly spoilt by the lack of a hospital in which patients can be isolated that cannot properly be treated for infectious disease at their own homes. Mr. Sergeant, the health-officer, informs his authority, in a recent report, that scarlet fever still continues to be very prevalent in Little Bolton, and has assumed in Halliwell an epidemic character. In a block of twenty back-to-back dirty and unventilated houses, nine cases of scarlatina had occurred since the outbreak, of which three had had a fatal termination. The total deaths from scarlet fever in the borough amounted during the nine weeks reported on to 31, or nearly a fifth of the number of cases (160) registered under the local Act. This is a large proportion, and shows the malignancy of the disease now prevalent. Yet, in the absence of a hospital, Mr. Sergeant is unable to take any really effective steps to prevent the disease from spreading; and unisolated cases in the filthy back-to-back houses which he describes must needs be so many foci of contagion. He observes: "It is absolutely impossible for a fever of such an insidious nature to be stopped without the aid of a hospital"; and he reports that the want of such a building for isolating scarlatina is very seriously felt. He adds: "I believe that we should now have very little of the disease in the town, if we had had means of effectually isolating the first cases. All the thirty-one deaths were preventable, and ought not to have occurred." It is to be hoped that the Town Council will take this lesson very seriously to heart, and forthwith provide a proper hospital.

TYPHOID FEVER AND POLLUTED WATER.

AN outbreak of typhoid fever is reported from Sutton-in-Ashfield, due, according to the medical officer of health, to polluted water. The health-officers, in reporting the outbreak, took occasion to tell the local board plainly that it was entirely through them that it occurred. "They went to considerable expense eight years ago in having the water of Sutton analysed, and it was universally condemned; but they had allowed this state of affairs to continue; and, in his opinion, the illness was caused by bad water."

INSANITY IN ITALY.

IN a communication to the third Italian Phreniatic Congress, held last September at Reggio-Emilia, Dr. Andrea Verga states that, based on the official census made the last day of December, 1877, he has been able to ascertain that, among the different causes of insanity in Italy, pellagra appears in 8.88 per cent. of the cases; diseases of fœtal life and early infancy in 7.77 per cent.; derangement of the female sexual organs, and related to the maternal life, in 6.96 per cent.; epilepsy in 7.73 per cent. of the males, and in 5.51 per cent. of the females, amounting to a net total of 6.68 per cent; alcoholism in 3.92 per cent.; venereal and other excesses in 3.73 per cent. among males, and 1.16 per cent. among females. Dr. Verga further points out the greater frequency of mental diseases among physicians, and the increase of general paralysis.

SIR JAMES PAGET ON MUSEUM CATALOGUES.

We publish, in our present number, the valuable suggestions of that distinguished surgeon, Sir James Paget, on the compilation of pathological catalogues. In the history of contemporaneous pathology—ever a record of hard work for the love of the work itself—there is nothing that can be more pleasing to observe, than the energy with which Sir James Paget has set to work in revising the catalogue of the pathological series of the Museum of the Royal College of Surgeons. The zeal with which he undertook to write the impression now in use, nearly forty years ago, has rather increased than abated. Fame and practice have failed to dull his enthusiasm, or blunt his love of the work for its own sake and for the sake of its usefulness. While laboriously and persistently performing this local duty, he takes the trouble to give to the profession his experienced opinions in the article which we bring forward. There are hundreds of young men eager to do any amount of scientific work, not directly for the lust of gain, not necessarily for the higher aim of making a name, but often, we believe, solely for the pure love of such exalted work. Later in life, this noble principle, though replaced by other excellent sentiments, is too apt to fade, either smothered by the ease of a well-earned competence, or blasted by certain cynical notions which the elderly and the disillusioned are too apt to adopt. Sir James Paget is a grand exception to this too frequent deterioration of scientific ardour. We heartily desire that his example may be imitated. A text-book on medicine by a physician who has practised medicine for nearly half a century, and combined scientific freshness with such experience; or a work on operative surgery by a surgeon who has operated for thirty years in the operating-theatre, and not for three or four in the dissecting-room,—would be priceless pearls of medical literature, which to compare with certain actual publications might be highly profitable.

MIDWIFERY AT THE ROYAL COLLEGE OF SURGEONS.

At the last meeting of the committee of examiners of the College of Surgeons, it was resolved to recommend to the council that midwifery be made a compulsory subject of examination for membership. This determination, however tardy, must be considered to be entirely in the right direction. It has always been an anomaly of a very serious kind, and open to the gravest reproach, that while there have been for a whole generation a large number of the members of the College of Surgeons practising as surgeon accoucheurs throughout the kingdom, an examination in midwifery formed no part of the regular examination for the diploma of the college, and was only a voluntary subject for examination. This anomaly was the more to be regretted as a great part of the practice of most of the members of the college has always been made up of obstetric and gynæcological practice. One result of the neglect of obstetric education and examination by the College of Surgeons, has been to throw the practice of midwifery, which is in itself essentially surgical, very largely into the hands of gentlemen who owe their professional status chiefly to their degree of physicians. The College of Physicians has been in this respect wiser than the College of Surgeons, and less illiberal. In former days Stone, Blagden, and the leading obstetricians, were distinguished members of the College of Surgeons; now Farre, Priestley, Barnes, Playfair, and the like, are leading members of the College of Physicians. Inasmuch as the examination in midwifery will, under this recommendation, be compulsory for the fellowship as well as for the membership, it is to be expected that the College of Surgeons will regain its influence in the obstetric department.

DEATHS FROM CHLOROFORM.

A death occurred from chloroform, at Guy's Hospital, on Saturday last, the patient being one under the care of Mr. Lucas, for erysipelas of the arm and hand. The patient, a male, 43, had taken chloroform at the hands of the same house-surgeon who administered it on this occasion about a month before, when free incisions were made into the suppurating and inflamed parts; and, at that time, the anæsthetic occasioned no anxiety, and gave rise to no prejudicial effects. Mr. Lucas saw the patient on Friday, and left instructions with his dresser to remove the remnant of a finger almost destroyed by gangrene. The house-surgeon administered the anæsthetic by means of an inhaler formed of flannel stretched over a frame. Some struggling took place; and, immediately after the patient came under the influence of the drug, he ceased to breathe, and his pulse stopped. The patient drew a few breaths after this; but, in spite of artificial respiration and tracheotomy, which was promptly performed, he never rallied. Mr. Howse and Mr. Lucas, who were in adjoining wards, were quickly summoned; but their efforts, and those of the dressers, were unavailing. Neither pulsation nor cardiac sound could be detected from the first. Galvanism was tried, and artificial respiration kept up for an hour, without effect. Death appears to have been due to cardiac syncope. No *post mortem* inspection of the body was made. An inquest was held on Monday, before such examination had taken place; and the body was removed from the hospital soon after the finding of the verdict.—A death from chloroform is reported in the *Louisville Medical News*, November 2nd, as having occurred in Ballard County, Kentucky. The anæsthetic was administered for the removal of a wen upon the neck. The patient was thirty-five years old, six feet seven inches high, and weighed two hundred and thirteen pounds. The diagnosis was "heart-disease".—A fatal accident also occurred (*Allg. Wiener Mediz. Zeitung*, No. 48) in the *klinik* of Prof. Billroth on the 25th ult. An exceedingly anæmic patient, fourteen years old, who was subjected to deep narcosis for the sake of rectifying a spontaneous luxation in the left hip-joint, after he had endured osteomyelitis in the right lower extremities, died suddenly, and could not be resuscitated, in spite of all efforts. The narcosis was produced in the manner usual there, by the inhalation of a mixture of chloroform, ether, and alcohol (100: 30: 30).

THE MONT DORE OF BOURNEMOUTH.

A proposal, which we think excellent, is now being brought under professional notice for the establishment at Bournemouth of a bath and therapeutic inhalation establishment, comparable to those which are found so useful and popular at foreign health-resorts, and somewhat on the model which has been much approved at Mont Dore, and has been recently described in our pages. Bournemouth has admirable climatic advantages and excellencies of soil, air, and vegetation. Its marine site, its sandy soil, its fir groves, its mild climate and equable temperature, have made it famous by reason of the good gifts of nature. Science, art, and social influences will add greatly to these claims, if the proposed "cur-haus" and "salle des bains" are added. The enterprise is one in which medical skill and experience are fitly united with commercial enterprise. If it succeed—and we anticipate that, with good management, it will be a great success—it will point the way in which Hastings, Ventnor, and Torquay should follow. We have excellent health-resorts, marine and inland, in this country; but our marine bathing places and wintering towns, especially, have hitherto done too little to engage the resources of art and science in increasing their healing powers and attractiveness to the invalid.

THE LIMITS OF OBSTETRICS.

An eminent correspondent writes to us: "I have recently received a document relating to the International Medical Congress of London, 1881, purporting to be a prospectus of the Section 6, described in the English copy as Obstetric Medicine and Surgery. The list of subjects for discussion under that head are as follow: 1. Oöphorectomy (Battey's operation; 2. Excision of Fibroid Tumours by Laparotomy; 3. Total Extirpation of the Uterus (Freund's operation); 4. Antiseptics in Midwifery; 5. Cæsarean Section, with Removal of the Ovaries and of the Uterus at the junction of Neck and Body (Porro's operation); 6. The Treatment of *Post Partum* Hæmorrhage. Thus it will be seen that only two out of the subjects selected are what are usually considered to be at all included in obstetric medicine; and of the five surgical subjects only one can, in my opinion—and, I imagine, in the opinion of surgeons generally—be included in obstetric surgery. The others are pure surgery. I think this is important, as showing a tendency, which is more and more marked, to include, under the head of Obstetrics, the wide

range of general surgical operations comprehending, in some instances, even amputation of the breasts. The prospectus should be noted as having, on its fly leaves, two translations of the programme for the use of foreigners. The French translation is headed "L'Obstétrique"; and here, even still more distinctly, Frenchmen will learn that under the head of "L'Obstétrique" are included the large range of surgical subjects described. The German heading is still more incorrect if it be meant as a translation; it is "Gynäkologie und Geburtshülfe". "Gynäkologie" is not Obstetric Medicine, and "Geburtshülfe" is Midwifery; while No. 6 is the only subject in the programme which relates to midwifery. There is nothing in the programme on the subject of anæsthetics in midwifery, extremely interesting as it is to foreigners in relation to English practice, nor any obstetric operation except the Cæsarean section, nor any of the conditions which impede delivery, or any puerperal diseases. These are subjects which legitimately belong to obstetric medicine and surgery; and which might, in the present state of knowledge, reasonably be set down for discussion. But if obstetricians are determined to take laparotomy, hysterotomy, and oöphorectomy, for their field of activity, it is perhaps not surprising that these pleasing and enterprising novelties monopolise their attention, to the exclusion of more purely obstetric subjects. If the question were one merely of detail, I should never have troubled you with this letter; but it appears to me to be one also of principle, and of principle extending beyond the mere statement of the programme of this particular meeting. It might be well, therefore, that it should be discussed, and that those who drew the programme should explain their point of view.

SMALL-POX AND VACCINATION.

THE lamentable outbreak of small-pox which occurred at Bath at the beginning of this year, and which, owing to misconception and lack of energy on the part of the local sanitary authorities, attained such extensive proportions that 272 persons were attacked, and 61 died, has one bright side to it. It has shown—as, indeed, every small-pox epidemic shows—the strong protection that persons may secure for themselves against the disease, and against its fatal issue, by the operation of vaccination. In a report (recently issued) from the pen of Mr. Robert Biggs, the medical officer of the Bath Workhouse, where (in consequence of the prohibitive price put by the Town Council upon admission to their sanitary hospital) the larger proportion of cases were isolated, the following instructive particulars are given as to the effect of vaccination upon the fatality of small-pox. Mr. Biggs states that every patient admitted to the workhouse hospital was carefully examined, at the earliest possible moment, for marks of vaccine cicatrices; and when the marks (however imperfect) were visible, the case was recorded as "vaccinated". It would certainly have been more satisfactory if the degree of success of the vaccination had been stated; but even as they stand, the figures given by Mr. Biggs afford striking testimony of the efficacy of vaccination. Of 177 cases admitted into the workhouse, 82 were vaccinated and 95 were unvaccinated. Of the vaccinated cases, 6 died, or 1 in 13½; of the unvaccinated, 35 died, or more than 1 in 3. The figures as to children born within the last ten years, and thus probably vaccinated more thoroughly than their elders are still more important. No cases were admitted of vaccinated children under five years of age, whereas 14 unvaccinated children of the same age were admitted, 7 of whom, or 50 per cent., died. Of children between five and ten, moreover, 7 vaccinated cases were admitted, 1 of whom died, against 15 unvaccinated cases, with 5 deaths.

PUBLIC AND PRIVATE ENGAGEMENTS.

VON LANGENBECK, the illustrious surgeon whose seventieth birthday was recently celebrated by his most distinguished pupils assembling to do him honour from all parts of Germany, replies to them in an affectionate address; reminding them that, for forty-three years, his duties as an university teacher had been nearest to his heart, and the first and greatest honour and duty of his life; and he rejoiced to find himself still able to take part in such glorious work. Recently, a German professor, to whose letters on the English medical schools we referred, expressed therein his astonishment to find the owners of most eminent names in London no longer associated with teaching or hospital work; but, in the early prime of life, retiring from public duties, and withdrawing from clinical instruction, to give their whole time to the "increasing claims of private practice". Professor Langenbeck emphasises the opposite view, which prevails throughout France and Germany very strongly. Few men, however, at so advanced an age, would still be capable of taking so active a part in teaching, and continuing to impart to students the invaluable experience of his long, active, and full career.

APPALLING MORTALITY AMONGST COOLIES.

THE Queensland Government have published a report by a medical commission, consisting of Drs. Wray and Thomson, appointed to ascertain the causes of the excessive mortality amongst South-Sea islanders employed in certain sugar-plantations of the colony. The attention of the Colonial Government has before been directed to the absolute necessity of placing some restrictions on the indiscriminate employment of Polynesians; but it was not until this year, when the Government inspector drew attention to the terrible mortality prevailing amongst the islanders in certain plantations, that any serious action was taken in the matter. It appears that, at present, there is a gain to the planters on the death of those near the end of their three years' engagement, which is balanced against the loss caused by the death of those newly arrived. Drs. Wray and Thomson found that men were imported for the work at too early an age; that their hours of labour were too long; that they were sometimes housed in overcrowded grass-huts; that the water-supply was often bad, and a long way from the labourers when at work; and that their food was bad, insufficient, and not sufficiently varied. The mortality amongst the islanders was found to be appalling. The death-rate in the plantations more particularly reported on was, for the five years and a quarter ended March 31st, 1880, 92 per 1000; for the year 1879, 107 per 1000; and for the three months ended March 31st last, 100 per 1000. The sick, as a rule, are reported as receiving little attention. "The sick or the dying, in no matter what weather, have to expose themselves, and manage as best they can, and so prefer their own places; and there, in a hut, whose roof was, perhaps, less than five feet from the ground, they would be found coiled up within a few inches of a smouldering fire—and actually found; for, in many instances, the fact of their being sick was only made known to the manager or overseer when he discovered them", as he accompanied the Commissioners on their inspection. Evidently, a state of affairs exists here which calls for the very strongest measures of repression by the Queensland Government; and it would be well if the attention of the Colonial Office were specially directed to the subject.

MORTALITY STATISTICS IN ITALY.

ON the 18th October, the Royal sanction was given to a decree regulating the statistics of mortality in the kingdom of Italy. Till now, about thirty of the principal towns issued monthly or weekly bulletins, giving the mortality in their respective districts. By the new law published by the Minister of Commerce, such bulletins must be issued at regular intervals, by all the towns and communes in the kingdom, commencing from the 1st January next. They will also include tables of the causes of death. The necessary instructions have already been sent to all the syndics, and a circular has also been addressed by the Minister of Commerce to all physicians, surgeons, and directors of sanitary institutions, inviting their diligent co-operation.

THE FATE OF GREAT DISCOVERERS.

THE four American claimants of the grand discovery of anæsthesia were Jackson, Long, Morton, and Wells. The fate of these men was very unfortunate. Long died in 1878, very little known, and a poor man. Morton, having been reduced to poverty during the twelve years in which he tried to obtain from Congress and the courts a recognition of his rights, died suddenly in New York City of cerebral congestion,

brought on by reading a work attacking his claims. Wells's mind failed in the fierce controversy; and after his arrest in New York for throwing vitriol on women's clothing, he destroyed himself. Jackson died on August 30th, after seven years' illness, during which his mind was clouded with agitation and disappointment.

PROFESSIONAL CONFIDENCES.

THE following is a copy of the law existing in the state of New York, on this subject: "No person duly authorised to practise physic or surgery shall be allowed or compelled to disclose any information which he may have acquired in attending any patient, in his professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon." A movement is on foot in other states of America, for the extension of the law, which is stated to have a good effect.

SISTER DORA'S KNEE.

MR. R. C. LUCAS, Assistant-Surgeon to Guy's Hospital, writes to us as follows. "Those who may desire to elucidate a lecture by reference to a popular report of an hysterical knee-joint, will scarcely find a more apt illustration than that supplied by the biographer of "Sister Dora". This account is the more valuable since the writer, as she has herself stated, is possessed of a considerable experience in nursing. After relating how Sister Dora had been persuaded to break off an engagement with a gentleman to whom she was strongly attached, the biographer continues (page 78): "No wonder that, after such a severe mental strain, she should have an illness. She was hard at work, as usual, one day, when she fainted away upon one of the beds. The fit proved to be the beginning of an attack of pyæmia; and matter formed in the knee, to the despair of the old surgeon, who thought that amputation of the leg would be necessary in order to save life. Like many of her own patients, she vowed that she would not submit to the operation, for that she would rather die than live. This, no doubt, was true enough; and, indeed, ever afterwards, she showed a carelessness and recklessness about her health painful to witness. The poor old doctor went out of the hospital in tears, saying, 'If Sister Dora dies, I'll never enter these doors again'. But she affirmed that she was going to recover; and, although she was ill for a month, and was obliged to leave her patients in the charge of her lady-pupil, she was as good as her word. One morning, on hearing that there was a very serious operation, at which her presence would have been greatly missed, she got out of bed, and fell straight to her old duties, without going through any period of convalescence." Those who have read this remarkable biography, cannot fail to have been struck by the uneven temperament that Sister Dora was ever displaying. Thrice during her life, when apparently under the influence of love or some kindred affection, she would appear to have embraced a doctrine of unbelief, and thrice to have been reconverted. On one occasion, when under the influence of an inspiration derived, probably, from Sankey and Moody, she mounted a cart, told a story, and pointed a moral, to a crowd, after the manner of a popular orator. At last, we are left somewhat in doubt whether she died a Protestant or a Roman Catholic, both sects having laid claim to her soul. Her endurance under excitement, and her desire to die a martyr, point, also, to a warp in her nervous temperament. The history of the knee-affection itself is most characteristic. There was the antecedent mental strain and disappointment; then the sudden onset in a so-called fainting fit. It will be noticed that she fainted away "upon one of the beds"—a convenient position, free from danger or discomfort. "The fit", we are told, "proved to be the beginning of an attack of pyæmia; and matter formed in the knee, to the despair of the old surgeon, who thought that amputation of the leg would be necessary in order to save life." There are few, I think, who would feel inclined to agree in the diagnosis of the "poor old doctor", as he is afterwards affectionately called; and it is rather hard that he should have his mistaken diagnosis thus made public. The termination or cure was as sudden and characteristic as the onset; for, with a new excitement—a serious operation, at which her presence was greatly in request—she jumped out of bed, and resumed her duties as if nothing had been the matter. I put it to the profession, whether any actual synovitis, of a serious type, ever terminated abruptly in this manner. The knee-affection was, from first to last, a neurosis; and, viewed in connection with her highly strained nervous temperament, it will be of interest to psychologists as well as to surgeons.

PROTECTION IN NECROPSIES.

THE use of flexible collodion has been recently suggested to the medical profession, by a writer in the *Chemists' Journal*, as a means of protecting the hands during *post mortem* examinations. A jug sufficiently large to contain the hand is necessary, into which the collodion is poured. The hands are then dipped in several times, (allowing each film to dry), so as to obtain a covering film of sufficient thickness. The collodion is then poured back into a stoppered bottle. The film does not interfere with touch or freedom of movement. Afterwards, the hands having been washed, the film can be readily removed with a little ether. A quart of collodion lasts a long time. This plan is said to have advantages over the thin India-rubber gloves which are used for the same purpose. They are liable to retain matter from previous examinations, and to lose their elasticity, crack, and become useless.

STIMULANTS IN WORKHOUSES.

AT a recent meeting of the West Derby (Liverpool) guardians, the following report from Dr. Anderson, medical officer of the Walton Workhouse, was read: "At the urgent request of many guardians, supported by statistical returns from other unions, I was induced to put to practical test, as an experimental trial, the treatment of hospital patients with a *minimum* amount of alcoholic stimulants—that is, to order them only in the most urgent and severe cases. This system was adopted on September 7th, and continued until the present time. During the eight weeks ended November 2nd, I find that the total consumption of stimulants amounts to £31 17s. 7d., while the number of deaths during the same period has increased to 63. During the corresponding period last year, 23 deaths only occurred, with a consumption representing £122 7s. 8¾d.; while 1878 is represented by 22 deaths, and £85 19s. in stimulants. In the face of such figures, I feel certain the guardians will agree with me that it would be impolitic to continue the experiment. I would, therefore, beg to direct the attention of the guardians to the prolonged convalescence attending the non-stimulating treatment. Of this there is abundant evidence in the over-crowded condition of the hospitals with acute cases. The results of the experiment prove to me conclusively, that paupers suffering from acute diseases, admitted here in a half-starved and impoverished condition (the physical state in which the majority are received), recover in a much shorter period, when stimulants are freely but judiciously employed, as an important part of the treatment."

THE BURNING OF A LUNATIC ASYLUM.

THE *New York Herald* gives a description of the painful scene during the recent burning of the State Insane Asylum, St. Peter, Minnesota. The patients in the annex wing were males. Many of them refused to leave the building. They ran up and down the halls, screaming and crying. Of course, those who could not be coaxed or forced out of the building, became victims. The others were saved, some by ladders, and some by leaping from the windows. Many of the poor demented and crazed inmates fled as if for their lives, and could not be overtaken or confined. Those who escaped were to be seen in all directions, flying in wild fright from those who attempted to save them, and hiding in alleys and dark corners for some time. While the flames were slowly progressing, the matron of the female department made all haste to get the inmates out, and many of them ran shrieking into the snowdrifts in their night-clothes, even burying themselves in the snow, and they had to be dragged into the barns and sheds, while those near wrapped blankets and shawls around them. Intense suffering could not be avoided, as the patients had to be taken about fifteen or twenty rods through the snow to the nearest shelter, which was on a hill immediately

in the rear of the south wing. The actual number of burned cannot be got at in any way at the present time, as many are known to have wandered away in the intense excitement that prevailed throughout the premises. Several women were taken out of some of the rooms and halls, and several persons were carried into the halls, when they seemed determined to return to the flames. One room, occupied by two men, was broken into, and while one of the occupants had to be dragged out, the other was determined to remain in his warm bed, and, when dragged out, insisted on waiting to be dressed.

SHAM DIPLOMAS.

THE *Boston Herald* has just exposed another sham diploma manufactory. The affair was known as the "New England University of Arts and Sciences". Its head man was Dr. Henry C. Stickney; he had lived at Manchester, New Haven, Stowe, Vermont, and Boston, Massachusetts; the diplomas were all dated at these places. The Act incorporating the university in New Hampshire was passed in 1875, but was repealed the next year. The diplomas were signed by William Wancock, D.D., President; D.M. Smith, M.D., Secretary; H. C. Stickney, M.D.; E. Edgeworth, M.D.; John Thompson, LL.D.; A. Simoons, M.A.; and H. E. Hasgood, M.D. It is supposed that about one hundred doctors have diplomas from this mill; the price of the diplomas was from 100 to 145 dollars.

SCOTLAND.

DURING November, 513 cases were treated at the Edinburgh Sick Children's Hospital. There were 52 cases in hospital at the beginning of, and 40 new cases were admitted during, the month. There were 403 out-door cases, and 18 vaccinations.

ROYAL INFIRMARY, EDINBURGH.

WHAT are known as ward-concerts have already begun. These (when the cases in the particular ward are not likely to be distressed by the audience) are excellent for patients and nurses; and the concerts are eagerly looked forward to and much enjoyed by the patients who are able to go to them, as well us by the nurses, to whom they afford a pleasant change. The performers are mostly drawn from the residents, clerks, and dressers; but there are always plenty of outsiders willing to give their services to so good a cause.

UNIVERSITY OF EDINBURGH.

PROFESSOR TURNER having resigned the Deanship of the Medical Faculty, Dr. Thomas R. Fraser, Professor of Materia Medica, has been appointed Dean of the Faculty. The Sibbald Scholarship has been awarded to Mr. John Stevens; the Grierson Bursaries to Henry J. Mackay, first; T. W. Gill, second; T. L. Sherar, third; and Simon W. Smith, fourth; the Tyndal Bruce Bursary to G. C. Dickson; while Mr. W. W. R. Love has been recommended for the Thomson Bursary.

PORTOBELLO DESTITUTE SICK SOCIETY.

DURING the last year, the Portobello Destitute Sick Society relieved 154 deserving cases among the sick poor, and has a satisfactory balance with which to go on in its good work.

ABERDEEN UNIVERSITY MEDICAL STUDENTS' SOCIETY.

DR. ALEXANDER OGSTON delivered a lecture to this society on Friday of last week, on "Bacteria". He gave an account of the earlier investigations into the life history of minute organisms, and vindicated the chief results of the elaborate investigations of Pasteur, Lister, and Koch. Experiments, he said, abundantly proved that bacteria were not spontaneously engendered in tissues, but existed in the atmosphere. That to these organisms was due the prevalence of a large class of diseases called zymotic was more than probable. These organisms worked evil in the domain of surgery as well. In wounds which served as nests, they readily developed, and gave rise to putrefactive fermentation. Against this evil the surgeon had long to contend in vain, until Lister discovered the means of destroying these germs. Of the valuable results that have followed the adoption of Lister's antiseptic treatment, they had ample evidence, both in hospitals at home and those abroad. He had no doubt that the further investigation and study of bacteria would lead to other results, and open up problems for solution, if not in our own day, at least in that of the future. Examples of micro-organisms, micrococci, and bacteria, and those organisms found in erysipelatous tissue, were shown under the microscope.

FEVER ACCOMMODATION AND INFECTIOUS DISEASES IN EDINBURGH.

THE Public Health Committee of the Edinburgh Town Council held a meeting last week to consider the negotiations at present going on with the managers of the Royal Infirmary, as to the accommodation and treatment of infectious diseases. A report was submitted by the medical officer of health, stating that, during the last month, there had been 426 cases of infectious diseases reported by practitioners, of which 365 were scarlatina, 36 typhoid fever, 11 diphtheria, 10 measles, 3 erysipelas, and 1 typhus fever. Of the scarlatina, 128 were reported from the New Town, 200 from the Old Town, and 37 from the southern suburbs; 90 deaths were registered as from scarlatina, and an average of 12 cases per diem of scarlatina reported. The Committee are to meet again soon to consider the subject.

IRELAND.

DR. STEPHEN O'SULLIVAN has been appointed to the Professorship of Surgery in Queen's College, Cork, in the room of Dr. Tanner. Dr. O'Sullivan is a graduate of the Queen's University, Surgeon to the North Charitable Infirmary, Cork; an Ex-President of the Cork Medico-Chirurgical Association; and acted as one of the secretaries to the Surgical Section at the meeting of the Association in Cork last year.

AN important visitation commenced at Queen's College, Cork, on last Tuesday, in reference to an appeal by a medical student against a sentence of rustication by the Council, and deprival of scholarship. The visitors were the President of the Royal College of Surgeons in Ireland, the Master of the Rolls, and Mr. Justice Fitzgerald; and we trust to be able to refer to the matter more fully in our next issue.

TYPHUS FEVER IN DUBLIN.

THE Registrar of Cork Street Fever Hospital reports that the large number of admissions of cases of this disease into the hospital gives evidence that the disease has assumed an epidemic form in the city of a very serious nature. There were one hundred and twenty-six cases of the disease under treatment in the various Dublin Hospitals on the 27th ult.

NURSES-HOME AND TRAINING SCHOOL, BELFAST.

THE annual meeting took place lately at the Home, Frederick Street, Belfast, presided over by Earl Cairns. The chairman remarked that the foundation of the institution, seven years since, was in a conviction that nursing the sick and suffering was not an occupation which could be taken up by any person with success, unless it was preceded by systematic training. Nursing the sick was an employment which gave scope and opportunity for the greatest skill, the greatest tenderness, the greatest experience; and just in proportion as there was skill, tenderness, and experience, the thorough training of nurses would be successful. The object of the promoters of the institution was to train nurses for three particular purposes—viz., for the Belfast Royal Hospital, for private houses, and for the poor who were not able to pay for private nursing; and the object has been in each respect carried out in a most satisfactory manner. During the year ended, alterations and improvements have been carried out in the Home, and five new auxiliaries have been formed, and one old one revived; and it is hoped still further to extend these auxiliaries throughout the province, as the openings for trained

nurses are rapidly increasing, and the applications exceed the supply: for it should not be forgotten that, although a Nurses' Home may be self-supporting, a training school must always be a heavy expense, unless the probationers are able to pay for their training. Of the fifteen probationers admitted in 1879, twelve are now private nurses; while, this year, six have been admitted, and are now under training: the present staff consisting of thirty-eight trained nurses and six probationers. The private nurses attended one hundred and ninety cases during the year, being forty-two more than last year. The subscriptions have been increased by £50 over the previous year; and the private nursing produced upwards of £700, or an increase of £70. A motion, that the thanks of the meeting be given to the medical staff of the Belfast Royal Hospital for their help in training the nurses, was agreed to unanimously, and the proceedings shortly afterwards terminated.

REVACCINATION FEES.

In reply to an application by Dr. Duncan, medical officer of Omagh Union, for fees in revaccination cases, the Local Government Board have informed that gentleman that fees are only given in successful cases of revaccination—that is to say, when the operation is followed by the formation of a vesicle, which affords proof of a primary vaccination being insufficient. It follows from this that the mere insertion of lymph, not succeeded by a result, cannot be regarded as a successful vaccination, and will not be paid for.

CORK WORKHOUSE.

Dr. Callaghan, one of the medical officers of the Workhouse, has recently reported that the nursing division is overcrowded. He states that Dr. Brodie, Local Government Board Inspector, has succeeded, to a certain extent, in improving matters; and a condemned shed in the yard has been converted into a dining-hall and day-room. Dr. Callaghan suggests that the Guardians should purchase a piece of ground adjoining the Workhouse, and erect a well-arranged and isolated nursery building—a proposal which has been referred to the Visiting Committee for consideration.

THE ETIOLOGY OF ENTERIC FEVER.

The following singular case, bearing upon this, is extracted from a note in the report of the registrar of the Armagh district, published in the last quarterly return of the Registrar-General for Ireland.

"A family living about two miles from the city were struck down one after another with typhoid; no cases of fever in the neighbourhood; origin of disease due to pollution of drinking-water in well by admission of liquid matters from stable and manure-pit; this was remedied. Now comes the singular part of it. One of the daughters, aged about 18, fearing lest she should take the fever, left her father's house whilst three of her brothers and sisters were ill, and went to her grandfather's house, a distance of at least eight miles—another part of my district—and stayed there three or four days, sleeping with her cousin, a girl of twenty-one years of age, who, in less than a week, sickened, and was ill with typhoid for four weeks. The girl, when she left her father, was in good health; and, except that she conveyed the contagion in her clothes, I cannot see how else, as there were not then any cases of fever in that part of the district; besides, since her return to her father's house, this very girl contracted the disease, and has been down now in fever for ten days."

THE STATISTICAL SOCIETY OF IRELAND.

Dr. Mapother, as President of this Society, gave his inaugural address last week, at the opening of its thirty-fourth session. The address dealt with the important subject of preventable diseases, and the means of their abatement and removal, and with numerous other questions of sanitation, on which Dr. Mapother, as Consulting Medical Officer of Health for Dublin, is so competent to treat.

CORK DISTRICT LUNATIC ASYLUM.

At a meeting of the governors of this institution, last week, Dr. Tanner, assistant medical officer, applied for an addition to his salary, in consequence of the increased number of patients in the asylum. A discussion arose as to whether it would not be advisable to have a second assistant, instead of increasing Dr. Tanner's remuneration, more especially as there were 896 patients in the asylum, and Drs. Eames and Tanner could scarcely have the necessary time at their disposal for attending to so many. Further, when it is considered that Dr. Tanner has to act as an apothecary, and is expected to keep the case-sheets, which often entail three hours' work daily, it is evident that additional assistance is necessary. Dr. Tanner's application will be entertained at a meeting to be held next Monday; and notice has also been given as to the propriety of increasing the medical staff.

ENTRIES IN THE DUBLIN MEDICAL SCHOOLS.

The number of students in the Dublin medical schools returned to the Inspector of Anatomy by the Anatomical Committee has, for the first time, this year been made a public communication. Although we have been in a position to publish the numbers in former years in the Journal, as returned by the representatives of the different schools on the Anatomical Committee, such return was regarded as private. We are glad that this restriction has been removed; as the numbers will now, of course, be looked upon as above suspicion. In consequence of the closure of the Steevens' Hospital School, the number of students in each of the five schools now in existence is slightly larger than it was last year. The annexed table of the return for the past five years is of some interest at the present time.

School.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.
Trinity College	152	176	196	169	192
Royal College of Surgeons.	198	189	178	170	168
Ledwich	198	213	214	221	230
Carmichael	62	63	103	142	111
Catholic University	75	83	98	85	94
Steevens' Hospital	95	60	60	58	—
Total	780	784	849	845	843

A Committee has been appointed by the King and Queen's College of Physicians, to confer with a similar Committee of the Royal College of Surgeons, as to the advisability of obtaining a sessional record of the entries in the various Dublin schools, and also of the certificates granted by them.

THREATENING THE REGISTRAR-GENERAL FOR IRELAND.

We regret to learn that our well-known associate has received a letter, threatening his life unless he dismisses one of his men-servants. Dr. Grimshaw has recently given up his house in Dublin, and taken a residence in the country. In addition to a gardener, whom he retained in his former situation on taking the place, he took a pensioner into his service; and it is against this man the dastardly missive is aimed. The result, we believe, is, that Dr. Grimshaw is now under police protection.

HEALTH OF BELFAST.

From the report of Dr. Browne, medical superintendent officer of health, for the past month, it appears that the deaths registered amounted to 395, which included 43 from phthisis, and 117 from diseases of the respiratory organs. The births numbered 478, showing a natural increase of 83—a smaller ratio than in any preceding month of the present year. The average death-rate for the four weeks ending 20th ultimo was 23 per 1,000 of the estimated population; the mortality from the principal zymotic diseases being as low as 3.5. Diarrhœa, which caused a good many deaths in the preceding month, in November exhibited a rate of 1.17 only.

Alcoholic Solutions of Pepsin.—M. Petit (*Journal de Thérapeutique*, June and July 1880) has made a series of careful researches on pepsin which confirm the conclusions previously arrived at by Professor Liebreich of Berlin on the value of slightly alcoholised glycerine extracts of pepsin, such as that which is now well known in medicine as Liebreich's pepsin-essenz. The value of pepsin, he points out, depends upon its power, not only of dissolving fibrine, but of transforming it into peptones; and a slightly alcoholised solution not only preserves its activity permanently, but its efficiency is in no way interfered with, provided its alcoholic strength, when diluted in the stomach, does not exceed 5 per cent.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE ordinary monthly meeting of the Council of the College was held on Thursday, the 9th instant. After considerable debate, the minutes of last meeting were confirmed, but with the addition to Sir James Paget's motion, that the committee consider the whole question of preliminary examination. Reports were read from the Court of Examiners on candidates found qualified for the fellowship, from the Committee on Examinations in Anatomy and Physiology, and from that on the Erasmus Wilson Fund. Mr. John Langton, Lecturer on Anatomy at St. Bartholomew's Hospital, was appointed to the Examinership in Anatomy, by the retirement in rotation of Professor Christopher Heath; and Dr. Gerald Yeo, Professor of Physiology in King's College, London, was appointed Examiner in Physiology, in room of Mr. H. Power, retired. Mr. H. T. Butlin was appointed Joint Erasmus Wilson Professor, along with Mr. F. Treves; the former to deliver two lectures, the latter one. Mr. Butlin will lecture, in continuation of his subject for the present year, on investigations made by him on the structure and nature of certain tumours; while Mr. Treves proposes to lecture on the pathology of scrofula.

A letter was read from Dr. Haldane, President of the Royal College of Physicians of Edinburgh, and representative for that body in the General Medical Council, on Preliminary Scientific Examinations. The letter was referred to a committee.

Mr. Luther Holden's motion, regarding the discontinuance of the President's annual report, which was postponed from last meeting, was carried; and it was resolved, that an abstract of the events occurring during the course of the year should be reported at the annual Council meeting by the Secretary instead.

GUY'S HOSPITAL REFORM.

ARRANGEMENTS have been made for a committee meeting, chiefly of vestrymen and guardians of Southwark, on Friday. A public meeting will be held, at eight o'clock, on Wednesday evening, the 15th December, at the Bridge House Hotel, Southwark: Arthur Cohen, Esq., M.P., Q.C., in the chair.

MEDICO-LEGAL REPORTS.

PERSONAL RIGHTS AND MEDICAL EXAMINATIONS.

WE have taken repeated opportunities to caution medical men to exercise the utmost possible care in avoiding the making of any personal examination at the request of third persons, unless with the full assurance of the assent of the individual to be examined. This is especially the case in circumstances where employers desire that their servants be medically examined, even when the police request that such examination be made, without high judicial direction. An example of the trouble which may unwittingly be incurred with the best intentions is afforded by the case of Latter *v.* Braddell and others, which came once more under notice in the Common Pleas Division on December 3rd, before Mr. Justice Lindley and Mr. Justice Lopes. This matter had been several times before the court. The plaintiff, a young woman, had been a domestic servant in the service of two of the defendants, Captain and Mrs. Braddell; and she sued them, and also Dr. Sutcliffe, for damages for an assault. The assault complained of was that her mistress, having, without good reason, accused her of being in the family way, sent for Dr. Sutcliffe, who examined her. When the case first came on for trial, the jury were discharged without having given a verdict; and upon the second trial at Manchester, before Mr. Justice Lindley, he decided that there was no case against Captain and Mrs. Braddell; and the jury found a verdict for Dr. Sutcliffe. The question now was, whether the case should be set down for a third trial. Mr. Addison, Q.C., showed cause against a rule for a new trial; and Mr. Murphy, Q.C., and Mr. Jordan (instructed by Messrs. Shaen, Roscoe, Massey, and Shaen, on behalf of the Vigilance Society for the Defence of Personal Rights), supported the rule. Mr. Justice Lopes said that the rule was granted upon the ground that the learned judge should not have withdrawn the case from the jury against Captain and Mrs. Braddell; and that, as to the other defendant, the verdict was against the weight of evidence. His opinion was that there should be a rule absolute for a new trial. There was abundance of evidence of non-consent to be left to the jury. To send for the doctor without the consent of the petitioner was a high-handed proceeding, which could not be justified. A consent to examination from a belief on the part of the plaintiff that she was bound to obey her master and mistress, or from a consideration of the evil consequences that might arise to herself from disobedience, would not be assent within the law. Mr. Justice Lindley adhered to his ruling at the trial. He said that the plaintiff's case could not be put higher than this: that, without consulting her wishes, her mistress ordered her to be examined; and she consented, protesting and sobbing, and saying that she did not know what else to do; but no force or threat of violence was used to overcome her will. The action had been already twice tried, and he would not give his voice for further litigation. The result of this difference of opinion was, that the rule for a new trial was discharged.

ROMAN SANITARY STATISTICS.

(FROM OUR OWN CORRESPONDENT.)

IN the weekly returns of the English Registrar-General, extracts from which appear in the *Times* and other journals, the mortality in Rome is always stated as much higher than that given in the official bulletin of this city. This arises from the fact that, in the returns published here, the calculation is made after the deduction of the deaths among the non-residents, while the English report includes those deaths. The discrepancy is great, as it is in the fluctuating population that the mortality is highest.

Now it is certain that, in some returns in Great Britain (those of Edinburgh, for instance), country deaths are deducted before the rate per 1,000 is given, but this may not be the usual custom. Still it may be shown that there are certain exceptional circumstances justifying the deduction, large as it is, in the Roman returns. For this purpose, it is necessary to refer to the year 1878, the last for which complete returns are published.

The mean registered population of Rome for that year is stated as 286,952. Every certificate of death is at once compared with the register, to see whether the name is included in the fixed population. The total number of deaths is given as 8,429, but of those, no fewer than 1,857 were not on the register. The Roman officials, deducting those deaths, make the mortality 22.9 per 1,000 *per annum*. The English Registrar-General would make the same death-rate as equal to 29.3 per 1,000 *per annum*.

Out of the 1,857 deaths of non-residents, 1,272 took place in the hospitals, 90 in the Foundling Hospital, and 130 in the Campagna, where only peasants reside. It is clear, therefore, that those 1,492 deaths were amongst the poorer classes, almost all, in fact, having been those of agricultural labourers, who come down at regular seasons from the Abruzzi and elsewhere to work on the Campagna. The number of those migratory peasants is calculated at 42,000 for the year (1878). Of course, this is only approximately correct; but, considering the great extent of the Agro Romano, and that its fixed population, as ascertained at the last census, is ridiculously small, it cannot be very far from the truth. Although those peasants are only in the neighbourhood for a short time, yet, I think, if their deaths are to be counted with those of the fixed population, an addition of something like 40,000 should also be made to that population, as the mortality is very high amongst them; even as much in bad, *i.e.*, very malarial, seasons, it is believed, as one in ten. And, indeed, the life those unfortunate peasants lead sufficiently explains this enormous mortality. Coming from comparatively healthy parts in the mountain districts of central and southern Italy, or from the neighbouring Sabine ranges, they engage themselves to the large landed proprietors and farmers, to reap the crops and to prepare the soil for fresh ones. Insufficiently nourished with a little bad bread and cheese, some bacon, and a few poor vegetables; often unable to find shelter in the scattered huts and barns which exist, exposed all day to a broiling sun, they throw themselves at nightfall on the ground, without other covering than the scanty rags they own, to fall into the deep sleep of exhaustion, which almost inevitably entails their seizure by the germs of the malarial fevers that prove so fatal to them. When once ill, there is no nearer refuge than Rome; and I have often seen them brought from long distances to the city hospitals, to enter them only when moribund, and thus swell their death-rate. In the autumn, the Santo Spirito, the male medical hospital, overflows with such patients, true slaves of the soil, who come from their own purer air, as De Journon says, to find on the Roman Campagna "an inglorious death on a terrible field of battle"; and but little has been done since De Journon's time to improve their lot. The few medical stations established since 1870 by the Roman Municipality are too scattered; and, as they are unprovided even with temporary hospitals, all that the doctors in charge can do is to give a few doses of quinine before sending the sick off to the capital. What is true for one year is true for all; and the high death-rate, therefore, among those unfortunate peasants need not surprise us.

Some, of course, of the deaths of non-residents in the hospitals are those of members of the labouring and citizen classes, who have been attracted to Rome by the rapid development of the capital since the entry of the Italians in 1870, but who, from one cause or another, have

not been entered in the record of the fixed population. The number of deaths in the Foundling Hospital, too, is out of all proportion to the entries, sometimes amounting to 70 per cent. of the infants received annually.

Turning from the non-resident classes who died in the hospitals in 1878, we find that there remain 365 deaths of persons not included in the fixed population to be accounted for. From inquiries made by the officials of the Department of Statistics at the Municipality, the mean annual number of visitors to the principal hotels and pensions is about 40,000, and this takes no note of any received into private houses. The average duration of residence is unknown. Of those, about 16,000 are foreigners; and, in 1878, thirty-four persons of foreign nationality died in Rome. This leaves 331 deaths occurring in the city among Italians whose circumstances did not compel them to take advantage of the hospitals, and whose names were not on the register of the population. To add 24,000 to the population to counterbalance their deaths would probably not be legitimate, owing to the probably short average duration of residence; but some correction ought to be made.

Small-pox has again been epidemic in Rome. Beginning about the middle of April, the deaths from the disease up to the end of October were 333. Of those, 276, or 83 per cent., were unvaccinated; 57, or 17 per cent., vaccinated. Of the total number, vaccinated and unvaccinated, 214, or 64.2 per cent., were under five years of age; 56, or 16.8 per cent., from five to fifteen; and 63, or 19 per cent., above fifteen years old; that is, the disease has told very much on children under five years of age, who are, or ought to be, thoroughly protected in countries where a compulsory vaccination Act exists. In the epidemic of 1871-72, the same thing occurred, as pointed out by me in the BRITISH MEDICAL JOURNAL at the time; the proportion of deaths under five years of age being then even higher, or 67.6 per cent. of the total mortality; whereas, in well-vaccinated countries, the death-rate from an epidemic among children under five years ought not to attain 25 per cent. Facilities indeed are offered for vaccination, but, as the law only compels proof of vaccination when the children enter schools or other public institutions, there invariably exists plenty of food for small-pox amongst the very young; and thus, every five years or so, an epidemic is inevitable, as long as the deplorable indifference to the value of thorough protection by a proper compulsory vaccination Act continues. This is true for every part of Italy, but it is difficult to know much about the prevalence of any particular complaint, detailed statistics being published only in one or two of the larger cities, as Milan and Rome.

The number of cases is now diminishing, though there were still twenty-eight under treatment about a week ago, when I was in the small-pox wards of the Santo Spirito Hospital.

PHYSICIANS TO PROVINCIAL HOSPITALS.

IT is more evident each year that the prospects of consulting physicians and surgeons in provincial towns—excluding, of course, those which possess schools of medicine—are becoming less and less encouraging. Without resorting to general practice, the juniors, unless possessed of considerable private fortune, stand little chance of weathering the period of anxious waiting. Whether this is due to the increased facilities which the better class of patients possess of visiting the metropolis, to the considerable influence exercised by, and to the confidence reposed in the medical officers of the numerous cottage hospitals, or to other causes, we cannot decide. The fact, however, remains, whatever may have brought it about, that young consultants cannot longer get a living in provincial towns. In these circumstances, it is not surprising there should be a growing feeling in favour of relaxing the rules which compel all the physicians to abstain from general practice. At Worcester, for example, Dr. William Strange, the senior physician to the infirmary, has taken up the cause of the junior physicians. He shows that, "ever since the death of Sir Charles Hastings in 1866, one physician after another has taken office, only, after a longer or shorter time to relinquish it, disappointed of that success in private practice" which the office was supposed to, and did formerly, ensure, and upon which he had to depend for a living. Each of the later junior physicians to the Worcester Infirmary has spent several valuable years of his life in anxiety, ending in disappointment and loss, not from want of talent, of energy, or of patience, but from an absence of opportunity to attain success. Dr. Strange, therefore, advocates a relaxation of the present restrictive system, so far as the junior physician is concerned. He would allow him to enter into private practice, including the attendance upon women in their confinement, for the earlier years of his physicianship. He would invite men of the highest qualifications; but he would not insist, as of old, upon their being confined to the barren dignity of the pure physician, whilst the surgeons, "with not greater, perhaps not so great, deserts, carry off all the remunerative practice".

Such is Dr. Strange's proposal; and we have taken some little trouble to ascertain the prevailing rule at the provincial hospitals having no medical schools. Of twenty-four county infirmaries, only the Sunderland, Cheltenham, North Staffordshire, and Worcester place any such restrictions upon the physicians. The Norwich, Bedford, Brighton, Hull, Salisbury, Shrewsbury, Lincoln, and Hereford, and other hospitals, leave the physicians free to take the kind of practice which they may consider best. In these circumstances, the preponderence of precedent is in favour of a relaxation of the rules at the Worcester and other similar hospitals. A physician to a provincial, or, for that matter, to any hospital, should be a man of varied attainments. As Dr. Strange says, "such a man possesses energies which he will seek to exert, and which it is unfair and even immoral to seek to check. The experience he gains in the wards of a hospital should benefit both his poor patients there, and his paying patients out of doors. The possession of private practice enables him to compare the diseases of one class of persons with those of another, and so the infirmary profits by his experience gained in private practice." For these and other reasons, especially as the work of the infirmary at Worcester necessitates the appointment of two, if not of three physicians, it seems desirable that the present rules should be relaxed in favour of the junior physician.

Another question arose at Worthing, when it was recently proposed to appoint a physician to the infirmary. For many years the staff have been designated medical officers; and there have been no physicians and surgeons—owing, no doubt, to the smallness of the institution. A lady, however, desired to benefit the infirmary, and to secure the election of her private medical attendant, a graduate of St. Andrew's, as physician to the Worthing Infirmary. This gentleman had formerly been one of the medical officers, but had resigned his appointment a few years previously. The lady in question offered to give £2,000 to the institution, on condition that the committee elected her medical attendant physician to the infirmary. When this proposal was under consideration, the three medical officers protested against any such appointment being made, on the ostensible ground that no gentleman who was not a Fellow or Member of the Royal College of Physicians of London was eligible, or could rightly be elected to so honourable an office. They even went so far as to declare, they would resign in a body, if the conditions were agreed to and the money was accepted. In the result, the committee refused the £2,000, which, if offered to one of the Covalescent Hospitals Associations, would probably ensure the immediate opening of a convalescent pay hospital at Worthing, to which the gentleman in question might be elected physician. Unless professional feeling was justified in the Worthing case, precedent and practice prove the staff to have been wrong in the objection they raised to the appointment of a physician. At only two out of thirty of the leading provincial hospitals do the rules insist upon the physicians being Fellows or Members of the London College. Brighton is one of the exceptions; and this, no doubt, went far to influence the committee in coming to a decision. Otherwise there was no good reason, on the ground of the professional qualification of the candidate, for depriving the Worthing Infirmary of the £2,000. It is something to be able to afford to refuse such a sum.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE next meeting of the above District will be held on Thursday evening, at half-past eight o'clock, in the Library of the London Hospital Medical College; Dr. HABERSHON, President of the Branch, in the chair.

The following papers will be read:

1. A. E. Sansom, M.D.: On a New Method of Supplementary Alimentation.

2. Major Greenwood, L.R.C.P.Lond.: Some Remarks on the Symptoms and Diagnosis of Typhoid Fever.

3. George Weller, M.R.C.S.Eng.: Notes of a Case of Foreign Body in Male Bladder; Operation for its Removal.

243, Hackney Road, E. FREDERICK WALLACE, *Hon. Sec.*

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this District was held on Wednesday, November 17th, at the Maiden's Head Inn, Uckfield; Dr. W. J. TREUTLER in the chair.

Communications.—The following communications were made.

On Hydrophobia, its Pathology and Prevention. By JOSEPH EWART, M.D.—With reference to the first point, the investigations of Radcliffe, Coats, Benedikt, and Gowers, were succinctly summarised; and, as regards the second, valid reasons were given for looking upon early excision, with or without cauterisation, as the most efficient mode of prophylaxis.

A Fatal Case of Ileus caused by Congenital Malformation of the Intestine. By W. WALLIS, Esq.—It occurred in a young man aged 19, who died after sixty hours' illness. At the *post mortem* examination, one-third of the ileum was found to be strangulated by a fibrous cord. This proved to be a hollow tube, extending from the ileum, and attached by a fimbriated extremity to the abdominal parietes. The danger of fæcal extravasation, in case an operation had been resorted to, was pointed out. The appendix vermiformis was natural.

Metrorrhagia in an Old Lady. By G. F. HODGSON, Esq.—The case was that of an old lady aged 75, who had had metrorrhagia for upwards of sixteen years. Two mucous polypi were found growing from the fundus uteri. The specimen was exhibited.

Hemiplegic Unilateral Anasarca, consequent on Scarlatina. By W. J. TREUTLER, M.B.—The case occurred in a girl aged 5½.

Dinner.—The dinner took place at the hotel; Dr. Treutler in the chair. In the course of the after-proceedings, the Chairman ably and eloquently alluded to the benefits conferred by the British Medical Association, and such meetings as the present.

The Next Meeting will take place at Eastbourne, in March; Dr. Jeffery to be invited to take the chair.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE second meeting for the session was held at 44, Mildmay Park, on Thursday, November 25th; Dr. WILLIAMSON in the chair.

Papers.—The following papers were read:

1. On Scarlatina. By James Williamson, M.D.
2. On Syphilitic Ataxy, and the Pre-ataxic Stage of Locomotor Ataxy. By T. S. Dowse, M.D.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

The Medical Institute.—The Queen's College.—Mason's College.—Projected Industrial Museum.—The Goodall Testimonial.—Alleged Poisoning of Dogs at the Dog Show.

SINCE my last letter, the arrangements have been completed for the formal opening of the new buildings of the Medical Institute, in Edmund Street, by the President of the Royal College of Physicians—Dr. James Risdon Bennett. The ceremony will take place on the 17th inst., at the institute; when it is expected that Dr. Risdon Bennett will deliver an address; after which, there will be a dinner, at which Mr. D. W. Crompton, the President of the Medical Institute, will preside. It it well known here, that of all the active friends to whom the institute owes so much, it is most of all indebted to Mr. Crompton; so that it is especially pleasing that he should preside during the inaugural year, and at the inaugural ceremony. Mr. Crompton has been at all times unsparing of his valuable time, his extensive influence, and his purse, to bring to a successful issue, this attempt to provide a home for the medical profession in the town and district. At present, the institute consists of a very handsome building, situated in the centre of the town, containing reading-rooms, committee-rooms, and a large handsomely furnished library-hall for meetings. The meetings of the Branch and its Sections, and the Midland Medical Society, are held in this room; these societies paying a small rental for the use of the rooms. The library numbers over six thousand volumes, and the reading-room table is well supplied with British and foreign periodicals. It is a highly satisfactory fact, that the building will be opened free from any building debt.

The anatomical class, at the Queen's College, is being conducted this winter by Professor Thomas alone, no successor having been appointed to Mr. Jolly. Two students of the college, Messrs. Suckling and Harvey, were placed in the first class at the recent M.B. examination of the University of London.

Mason's College has an entry of between fifty and sixty students, but of these, a large proportion are ladies. I understand that this is quite as large an entry as the trustees expected. There is some ground for hoping that the basis of the trust-deed may yet be enlarged, so as to get rid of the exclusive clauses, and to enable the trustees to provide accommodation for instruction in literary subjects, if the endowment for the chairs be forthcoming.

A great effort is to be made to induce the present Government to aid Birmingham, and the other great manufacturing towns, to found industrial museums out of the funds at present appropriated too exclusively by South Kensington.

The committee entrusted with raising a fund for a testimonial to Mr. W. P. Goodall, were extremely successful in their efforts. At a meeting of subscribers held in the committee-room, at the Town Hall, the Mayor, Mr. Richard Chamberlain, in the chair, Mr. Goodall was presented with an illuminated address, a piece of plate, and a purse of five-hundred sovereigns.

The Cattle and Poultry, and Dog Shows have brought many strangers to the town during the past week. Several of the dogs have been taken ill, and these have died under circumstances so suspicious, that their stomachs have been sent to Dr. Hill, the Borough analyst, for chemical investigation. The facts, when known, caused considerable excitement among the owners of dogs in the show.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

University of Glasgow.—Bute and Randolph Halls.—South Side Infirmary.—Temperance Legislation in Scotland.—Professor Pettigrew's Lecture on "Flight."

THE number of students attending the classes in the different faculties of the University of Glasgow this winter session has just been made public. The matriculation closed on December 1st, and the total number of students this year is 2,281 against 2,220 on the same day last year, showing an increase of 3 per cent. Taking the different departments *seriatim*, we find that the students in arts are 1,389 against 1,365; in medicine 557 against 539; in law 189 against 193; in theology 85 against 73. Some students have entered for classes in two faculties, and of these there are 61, against 50 last year.

It is satisfactory to be able to announce that not only is the new Common Hall of the University rapidly approaching completion, but, with the cordial sanction of Mrs. Randolph, widow of the late Mr. Charles Randolph, part of the large legacy left by that gentleman to the university for building purposes is to be immediately expended in completing the buildings necessary for joining the new Common Hall to the main building. A good deal remains to be done in order to the completion of the design, and the Building Committee will require to make a fresh appeal to the liberality of the citizens, it being stipulated by the Marquis of Bute, when he gave his handsome donation of £45,000, that the general public should contribute a certain sum within a specified time. The new buildings will include a hall to be named the Randolph Hall, which will be of much smaller dimensions than the Bute or new Common Hall, and which will be available for meetings where the attendance will be limited. Seeing that the sum of money given by Mr. Randolph is not available in the meantime, according to the provisions of the legacy Mrs. Randolph having the life-rent of it, the permission of that lady to allow part of it to be made available for present requirements must be regarded as a very handsome and generous proceeding. The length of the Bute Hall internally, from north to south, is 110 feet, its width 68 feet, and its height 74 feet. Along each side and across the north end are spacious galleries, intended for the accommodation of the public, the students occupying the body of the hall. From the cloisters, which extend under the entire area of the hall, are circular turret staircases, at each angle of the building, leading to the hall and galleries. In each turret are two winding staircases, so arranged that the students may gain access to the floor of the hall without coming in contact with the public going to the galleries. These double-staired turrets, which are after the model of that in the Castle of Blois, were suggested by Professor Blackburn, who designed the staircases. It is scarcely likely that the hall will be ready for the inauguration of the newly elected Lord Rector, but no doubt his successor will be duly installed within its walls.

The question of increased infirmary accommodation in Glasgow has been lately taken up in one or two quarters. Although the new wards in the Western Infirmary are now completed, and nearly ready for occupancy, the managers have decided only to use them as they receive money to defray the expenses which will be thereby occasioned. No doubt the necessary funds will be in time forthcoming, but with the view of lessening the demands upon the Royal and Western infirmaries, there has been a renewal of a movement set on foot some years ago, to take steps for the erection of a suitable hospital and dispensary on the south side of the city. The Glasgow Southern Medical Society, which has all along interested itself in the matter, has continued the committee which it appointed some time ago, instructing them to take all necessary steps for the furtherance of the scheme, by making it generally known, and obtaining support from all employers of labour and

other influential persons. We wish the committee every success in their efforts, and hope soon to see the erection of a suitable hospital and dispensary on the south side of the town; and we also hope that sooner or later steps may be taken in a city of such dimensions as Glasgow to follow in the steps of other large towns, and, by founding a well-organised system of Provident Dispensaries, do something to lessen the improvidence which is rife among a certain section of the population, and which makes heavy demands on our medical charities.

The friends of temperance reform in Scotland will be interested in the answer given by the Lord Advocate to the deputation which waited on him recently from different societies, who approched him with a memorial on the licensing question. In his reply, Mr. McLaren said that without being in possession of the views of the Government on the matter, he might state that, in his own opinion, the time had come when the legislature might reconsider the licensing laws; and that any general measure of reform should be made to apply to the three kingdoms instead of to Scotland alone. He also stated that he saw no reason why the principle of popular representative government should not be applied in any future measure dealing with the liquor question. From this, it is clear that the Lord Advocate is a friend to something which looks very like the principle of local option. It is true, he would not be a party to suppress the traffic in liquor; but he yet regards the representative as superior to the judical system of granting licenses, and, apparently, he would take the executive authority out of the hands of the Justices of the Peace and place it in those of a board, elected directly by the ratepayers.

The Glasgow Science Lectures are proving very successful this winter; and the one delivered lately by Professor Pettigrew of St. Andrew's deserves more than a mere passing notice. The subject was, "Flight, Natural and Artificial", and the views put forth by the lecturer were those already well known by his published writings. He regards flying as a purely physical problem, including considerations of weight and strong muscular power, and thinks that there is nothing mysterious in it. It is merely a question of force acting on matter, through the instrumentality of travelling surfaces, whether these take the form of feet, fins, or wings; and, however paradoxical it might appear, weight is necessary to flying. The lecture, which was illustrated by several interesting experiments with natural and artificial wings, was very well received by a large audience; but we think that, notwithstanding Professor Pettigrew's lucid explanations on the subject, and hopeful views, the question of a flying machine involves something more than mere time and perseverance. Indeed, even with ballooning, little progress has been made in aerial progression, and at present the dream of the laureate, of "the heavens filled with commerce" does not seem likely to be speedily verified.

Æsthesiogenic Action of Blisters.—M. Grasset, in a very interesting essay which he has recently published in the *Journal de Thérapeutique*, directs attention to the influence of blisters upon local sensation, and on the peripheral and central nervous systems. Attention was first called to this in these pages by a Scotch physician, and subsequently by Dr. Hughes Bennett. A series of further observations has been made on this subject in France, in which no credit was ever given to English observers. M. Grasset, in the present study, points out that the thermogenic action proceeds parallel with the æsthesiogenic, and perhaps by means of it, but is sometimes independent of it, and even occasionally occurs alone. The return of the sensibility is, in his view, independent of any purely peripheral action—whether circulatory or nervous; and it must be the result of the modifying central action. M. Grasset insists on the fact, that the return of sensibility takes place, not over nerve-tracts, but in limbs and segments of limbs. From this point of view, he recognises four large regions: the upper limb, the lower limb, the posterior part of the trunk, and the anterior part of the face. He subdivides even the lower limb into the inferior region and anterior regions below the knee; and the upper limb into the peripheral half and the central half. In the latter, the return of sensibility takes from the periphery towards the centre, and often also on the face. To the lower limb, if blisters be applied to the thigh, sensibility returns to the whole limb; but, if applied to the ankle, it only returns below the knee; while, for the upper limb, sensibility returns in the whole limb, whatever be the place of application of the blister. But in a general manner, except in the upper limb and face, the return of sensibility is limited to each of the large regions above-mentioned.

CORRESPONDENCE.

THE GUY'S HOSPITAL DISPUTE AND NURSING SISTERHOODS IN HOSPITALS: A SUGGESTION.

Sir,—There can be no doubt that the whole of the medical profession in this country has been deeply moved by the circumstances which have attended the altercation at Guy's Hospital, arising, as it has done, out of the large and important question of the systems of nursing in operation in our large hospitals.

It would be much to be regretted if the existence of this general feeling of dissatisfaction were not turned to some practical good account; and it is with this objeet in view, that I venture to put forward the following suggestion.

The time seems to be ripe for a thorough investigation into the influence and operation of nursing sisterhoods generally in our large hospitals in London and the provinces. The air is full of disquieting rumours, insinuations, and more or less positive statements, reflecting on the manner and spirit in which the nursing duties are performed in many of our hospitals. It is time that these should be sifted and examined; and either their truth established, or their falsehood exposed. This is due alike to the public, to the nursing sisterhoods themselves, and to the medical profession at large: for the efficiency of the nursing arrangements in an hospital is of scarcely less importance to the real welfare of these institutions, than the skill and reputation of their medical officers. I would, therefore, suggest that a Committee be at once formed (under the auspices of the Metropolitan Counties Branch of the British Medical Association), composed of physicians and surgeons from all our principal metropolitan hospitals, together with one or two laymen, of known capacity as hospital managers, for the purpose of inquiring into the working of nursing sisterhoods in hospitals, and also into the larger question of nursing in our hospitals generally.

It would be the business of such a Committee to take evidence upon, and to thoroughly sift, the various rumours and statements which are afloat as to the manner in which their work is now done; also, by means of subcommittees, to actually visit, and examine for themselves, the nursing arrangements at the principal London hospitals; to draw up a report and recommendations, as to what seems to them the best system of hospital nursing; also, as to the relations which should exist between the members of this nursing staff and the senior and junior medical officers.

The public and the profession would thus be put in possession, first, of an authoritative judgment on the present state of the nursing arrangements in our large medical charities; and, secondly, of an authoritative opinion as to the system of nursing which is best calculated to answer the requirements of these institutions—so that those nurses best fulfil the intentions of their founders and supporters, and best minister to the wants of their sick inmates.—I am, sir, your obedient servant,

I. Burney Yeo, M.D.

Hertford Street, Mayfair, November 26th, 1880.

GUY'S HOSPITAL.

Sir,—I have not hitherto taken any active part in the misfortunes which have befallen my old school, Guy's Hospital. I am not, at this moment, inclined to go into the merits or demerits of either party to the contest. Mistakes, I venture to think, have been made, certainly by the treasurer and governors; and also, I believe, by the medical and surgical staff. Enough has come to the surface to prove that inquiry is necessary: into the constitution of the governing body, their powers, and their management of the trust. If I am rightly informed, no such investigation can satisfactorily take place, except it emanate from Parliament. The relative position of the governors to the medical and surgical staff; the financial condition of the hospital, with its enormous deficit; the closure of one hundred and eighty beds, in a great medical school—these appear in themselves sufficient grounds to apply to Parliament. As a member of the Parliamentary Bills Committee of the British Medical Association, representing the interests of eight thousand medical men, I venture to think the initial pressure for such inquisition would come well from this body. I have no authority for saying the Committee would take the matter up; but, individually, I would warmly urge it upon my colleagues. Meanwhile, I would entreat the staff of Guy's Hospital to go on with their duties to their patients and to the school—referring all their complaints, temperately, directly to the body of governors. They have had their protest. Let them now work on, in full reliance that justice must eventually be done.—I am, faithfully yours,

C. Holman, M.D.

Reigate, November.

THE MODE OF ELECTION OF THE COUNCIL OF THE LONDON COLLEGE OF SURGEONS.

SIR,—I think the greater number of the Fellows of the College of Surgeons must allow, that the present method of election of members of the Council is far from satisfactory. They will also probably admit that, beyond the professional status connected with the position, the fact of being a Fellow of the College, to the majority, carries with it but little advantage. To the larger number, the Fellowship merely gives the option of voting once a year (in person) for candidates for the Council. This, to those who would wish to avail themselves of their privilege, entails not only expense, but may be, in many instances, a considerable loss. Many, living any distance from London, are frequently unable, or disinclined, to attend the ballot at the College in July; or cannot afford the time or the cost. It has, consequently, I think, been of late a subject of consideration whether the Fellowship should not convey the privilege of a vote by proxy, whenever Fellows are called on for their votes at the College.

Under the present law of election to the Council, the too frequent recourse to canvassing for votes is much to be regretted; and is an evil which, I believe, most Fellows would gladly see at an end. If, however, voting by proxy were permitted under the existing law, canvassing for votes for the Council could and would be greatly extended—to such an extent, no doubt, that an election would hereafter be mainly secured by the most active and organised system of canvass; and this, to the consequent exclusion of many eligible members, who would be averse to any such measures to secure their election. Thus the best interests of the College and the profession would indirectly suffer by such an alteration in the mode of voting.

It has been for some time a consideration with me, in what manner the system of election could be improved, while, at the same time, each Fellow had the privilege of voting by proxy. The remedy, I think, rests with the Fellows themselves.

That each Fellow should be permitted to vote by proxy, if he so desire, I would strongly urge; but not that this privilege be granted, under the existing law of election to the Council. The following are the alterations which occur to me as desirable and practical.

1. That every Fellow of the College have the right to vote by proxy, or in person, when occasion requires.

2. That once, yearly, a Committee (say thirty) of Fellows of the College, be elected—by votes of the Fellows—to be called "The Committee of Election". Half of such Committee, at least, to consist of Fellows in the *bonâ fide* practice of their profession in London. The President and Vice-Presidents of the College to be *ex officio* members of this Committee.

3. That the names of the Committee of Election be advertised; and that the Committee be summoned, as soon as convenient, to appoint such members of Council as may be required to fill the vacancies caused by death or resignation.

4. That the Committee of Election appoint the President, when that office is vacant; and also the Vice-Presidents, under similar circumstances.

5. That the members of Council be appointed for a period of seven (?) years only. That the President be appointed for a period of five years. That the Vice-Presidents be appointed for a period of two or three years.

6. That any Fellow who has served as member of Council be eligible for appointment as Vice-President, and President, if so nominated by the Committee of Election, at any period after the termination of his service in the Council. But the Committee of Election to have power to elect the President, or Vice-Presidents, from any member of the Council, or any who may have served on the Council.

By some such arrangement, the appointment of the President, Vice-Presidents, and Council would be indirectly in the hands of the general body of Fellows. It should be a regulation that the ballot-paper, on which the names of the Committee of Election are to be written, be returned with the proper number of names required to constitute the Committee, or else the proxy-paper be void. The election of President, Vice-Presidents, and members of Council, under the circumstances above suggested, would surely be more honourable, and more coveted, than under the existing laws of the College—the appointment of President and Vice-Presidents being now little more than a matter of seniority.

If the general body of Fellows approve of these suggestions, subject to any modifications to be hereafter considered, there can be no doubt that a memorial to this effect, to the Council of the College, would be satisfactorily considered, and carried out in a new charter. I shall feel obliged if you will give me the opportunity to bring these views to the notice of the Fellows of the College of Surgeons, by allowing them to appear in the columns of the BRITISH MEDICAL JOURNAL.—Yours faithfully,

GEORGE POLLOCK.

Grosvenor Street, W.

THE EXAMINATIONS OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—Having last month completed my five years of office, as a member of the Board of Examiners in Anatomy and Physiology at the Royal College of Surgeons, I feel at liberty to reply to your criticisms of November 20th.

The complaint, that a student is kept to one subject for the greater part of his examination, had a great deal of truth in past years; but, for the last twelvemonth, as chairman, I have had ample opportunity of knowing that such a thing is very rarely, if ever, done now. If an examiner were to shift his ground too rapidly, the student might reasonably complain that he had not time to collect his thoughts; but, if he clearly know nothing about the subject in hand, it is only fair to try another. You do not seem to be aware that it has always been the practice for the assessor to note down the subjects of the examination; and that the marking is the result of a consultation between the two examiners, with this record before them. When a candidate is shown an ordinary blood-clot, and pronounces it to be, first liver, and then spleen, it clearly is the examiner's duty to make him break the clot up with his fingers, and thus help him on to the truth; and it would be unfair to leave the subject without giving him a chance of retrieving his error. So also, when limpid urine is pronounced to be cerebro-spinal fluid, it is only right to have the specific gravity taken, and a few tests applied, in order, if possible, to put the candidate on the right track. This can hardly be called examining and cross-examining unfairly.

Again: in anatomy, every candidate is examined upon a bone, upon recent dissections, and upon preparations in spirit; and in no case, I believe, is a student kept at one preparation—unless, indeed, it is one showing several regions, which are taken *seriatim*.

It is my firm conviction that no student of average intellect, who has worked steadily in the dissecting-room for two winters, finds much difficulty in passing the anatomical portion of the examination; and that students fail, as they frequently do, in the physiological portion, is the fault, I believe, of the teachers rather than of the examiners. The physiological teaching of the present day is not the plain, easily intelligible teaching of the vital processes which charmed the pupils of Todd, Sharpey, or Paget; but plunges the first year's man at once into organic chemistry, of which he knows nothing, and physics, of which he understands little, and bewilders his mind with elaborate apparatus for recording phenomena, the *rationale* of which he has yet to learn. Judged by results, the course of practical physiology is, in most schools, a delusion and a snare: for candidates have often not learnt how to put a preparation under the microscope, how to distinguish urine from serum, or to know the use of test-papers. *Verbum sapientibus*.—Yours obediently,

CHRISTOPHER HEATH.

ALL SAINTS' HOSPITAL, EASTBOURNE.

SIR,—Kindly allow me to inform all who are interested in this hospital, that we have been compelled to return the grant lately made to us by the Hospital Sunday Fund, on the grounds that the conditions imposed upon its acceptance are such as to preclude the possibility of our availing ourselves of it. We have arrived at this conclusion after lengthy and earnest consideration, and not without the co-operation and counsel of very influential friends well able to assist us by their advice.

The "conditions" I refer to are, that we give to the Hospital Sunday Fund two hundred and fifty "letters" in return for the five hundred guineas. The grant would thus be reduced in value to two hundred and fifty guineas, or, at the rate of thirty shillings which is paid by each patient not having a subscriber's "letter", and which barely covers the cost, to £150.

First, by such an act we should be contravening two of our rules, and be dealing unfairly towards our numerous subscribers.

Secondly, the issue of two hundred and fifty "letters" in such a wholesale way would involve a demand upon the accommodation of the hospital with which it would be unable to cope, even with its present dimensions.

Thirdly, this stipulation was not laid before us when making the application, or it would certainly not have been made. These are some of our reasons for thus acting.

We are preparing, as speedily as possible, for the enlargement of the hospital in two of its departments, which will increase the number of our beds to over three hundred; and this additional accommodation is

necessitated by the present applications for relief, many of which we are compelled to refuse, simply for want of room.

A free gift of £500 to our funds would be a most invaluable help at any time, especially just now; but, if all our subscribers and donors were to impose the terms of the Hospital Sunday Fund, this institution would have to be immeasurably enlarged; while the question of maintaining its efficiency would become a very serious problem.—Yours faithfully, EDMUND IBBOTSON, Chaplain.

December 7th, 1880.

THE HEALTHINESS OF ROME.

SIR,—I read in the Journal of December 4th, "there is much sickness in Rome. An applicant to a community of French Sisters who attend the sick, for a nurse" was informed that every sister was already engaged. I have rarely met with so remarkable a deduction from such insufficient premises. The applicant ought to have stated that there is only one such community of French Sisters, the Nuns of the Bon Secours; that they number twelve in all, of whom only ten are available at one time; that they are practically the only sisters of charity nursing in a population of 300,000, except those attached to the different hospitals; and that they are as much employed in Italian families as among strangers, for, though it is not so stated, the paragraph is almost certain to lead to the impression that the sickness alluded to is among the visitors.

To-day I saw the Mother Superior. She says that on one day, about three weeks ago, all the sisters were out; but so far are they from being fully engaged in incessant nursing, that during the whole of last week eight sisters were at home. She laughed at the idea of their having too much to do.

I can answer for the English-speaking strangers, who are more numerous than usual this season, that there has been so little sickness amongst them, that each of the six regularly established English nurses has come to me within the last fortnight to complain of want of work.

There are, it is true, some small-pox cases. Italy has no proper Vaccination Act, and, therefore, there must be an epidemic whenever the unvaccinated food for the disease accumulates in sufficient quantity. Three-fourths of the cases have been amongst the unvaccinated, and two-thirds of the deaths it has caused have been those of children under five years of age. In every other respect the health of the population is good, and the weather is, and has long been, most beautiful.—I am, Sir, yours, etc.,

LAUCHLAN AITKEN, M.D.

52, Via Frattina, Rome, December 6th, 1880.

HOSPITAL AND DISPENSARY MANAGEMENT.

IT was stated at the quarterly court of the governors of the Brompton Hospital for Consumption, that £1,050 had been received from the Hospital Sunday Fund. Very satisfactory progress was being made with the new building.

THE MONTROSE ROYAL LUNATIC ASYLUM.

THE annual report of the Montrose Royal Lunatic Asylum, which has just reached us, describes the approach towards completion of an extensive and comprehensive series of sanitary improvements, which are well worthy of imitation in some other lunatic hospitals.

There is not now at the Montrose Asylum any sewerage-drain under any part of the building, or any soil-pipe within its walls. The waste-pipes from lavatories, baths, and sinks are all disconnected from drains outside, and the ventilated soil-pipes of water-closets are so arranged as to render the passage of sewer-gas into the house a practical impossibility. The sewage, instead of being, as formerly, stored in a capacious cesspool, whence it was pumped by a steam-engine to the farm-land, on which it was distributed in a very putrid state, now flows by gravitation, direct and at once to open straining-tanks, after passing through which, the liquid portion is run over the land before it has undergone fermentation, and while it is almost inoffensive in smell. As the addition of new buildings to the asylum necessitated the removal of the old water-main, Dr. Howden thought it advisable to revise the whole water-supply system. Instead of one central main, he provided a separate four-inch pipe from the store-tank to each side of the building; and from these, prior to their entering the building, he carried a branch to each general bath-room; so that, on bathing days, an abundant flow of water is obtained, without interfering with the general supply of the establishment. All pipes inside the building have been removed from hidden recesses, and exposed to view on the surface of the walls, so that any defects in them may be promptly noticed and readily repaired. The advantages derived from the sweeping alterations which Dr. Howden has effected are thus succintly and exhaustively summarised: 1. Absolute exclusion of sewer-gas from every part of the house; 2. Avoidance of risks of drains choking; 3. Removal of risk of water-contamination by separation of water-closet supply from general water-main; 4. Expulsion of rats from lavatories, bath-rooms, water-closets, etc.; 5. More remunerative and innocuous application of sewage to the land; 6. Saving in fuel, formerly consumed in pumping sewage to the farm; 7. Ample water-service in all parts of the house; 8. Saving in consumption of water, which was formerly wasted at unseen leakages and overflows; 9. Saving in labour and material in plumber-work for the future, owing to simple and more efficient arrangement. As the crowning and all-important outcome of his sanitary improvements, Dr. Howden not unreasonably hopes for an improved standard of health amongst his patients.

PROVIDENT DISPENSARIES.

AT a meeting held at the Village Hall, Chislehurst, on April 27th—the rector in the chair—it was resolved, upon the report of a medical committee, to form an association to be called "The Chislehurst, Sidcup, and Cray Valley Medical and Surgical Aid Society". A number of influential gentlemen were requested to act upon a provisional committee; all the medical men of the district being *ex-officio* members. Dr. Cockcroft was appointed treasurer, and Dr. Allfrey acted as honorary secretary. It was proposed that the society should establish a system of provident dispensaries, by means of which the poor ineligible for parish relief may, whilst choosing as far as possible their own attendant, receive advice and medicines for a small regular payment. It was also proposed to assist the poor generally, whether members of the dispensaries or not, by establishing local depôts for the supply of medical and surgical necessaries and appliances gratuitously or on easy terms.

Facilities are to be offered for securing the services of good nurses in sickness, and for obtaining the admission of suitable cases into hospitals and convalescent homes; and it is also proposed to make arrangements for attendance on poor married women in their confinements at a reduced fee.

Liberal subscriptions have been obtained for starting the dispensaries, and Dr. Allfrey informs us that the dispensaries which were opened on July 1st have been very successfully commenced; 260 cards, representing about 750 individuals entitled to benefits, having been issued. It is now proposed to organise a system of village nurses, and Dr. Allfrey will be glad of any information on this head based on past experience.

MILITARY AND NAVAL MEDICAL SERVICES.

SURGEON HENRY BEAUMONT (1870) has been promoted to the rank of Staff Surgeon in Her Majesty's Fleet, with seniority of the 1st December, 1880.

IT is understood that Sir William Muir, K.C.B., will retire from the office of Director-General of the Army Medical Department at the close of the financial year, which will witness the completion of his thirty-ninth year of service. The choice of a successor is said to lie between Surgeons-General Munro and Crawford. The former is notoriously not in favour with the service at large.

SURGEON-MAJOR G. J. H. EVATT, M.D., has been appointed to succeed Surgeon-Major Roberts as medical officer to the Royal Military Academy, Woolwich. Dr. Evatt, has recently returned home from Afghanistan, where he had been in charge of one of the field hospitals with the Cabul Field Force in the last two years.

THE MEDICAL OFFICERS IN THE AFGHAN WAR.

IN Lieutenant-General Sir Frederick Roberts' report of his march from Kabul to Kandahar, and brilliant victory at the latter place, it is stated that, "Brigadier-General Macpherson records that the devotion of the medical officers of the Brigade, in attending to the wounded, in the field under fire was most admirable." The following medical officers are specially commended by General Macpherson: Surgeon-Major S. B. Roe, 92nd Highlanders; Surgeon-Major W. Finden, 2nd (P. W. O.) Goorkhas; Surgeon E. H. Fenn, No. 6-8 Royal Artillery; Surgeon H. J. Linton, 24th Punjab Native Infantry; Surgeon H. Hamilton, M.D., 23rd Pioneers. Major-General Ross, C.B., "speaks in high terms" of Officiating Deputy Surgeon-General J. Ekin, M.B. Brigadier-General T. D. Baker specially mentions Surgeon-Major G. W. M'Nalty,

M.D., and Surgeon-Major C. A. Atkins—the latter "for the manner in which he attended to the wants of the wounded in the fighting line." Surgeon-Major G. C. Chesnaye, and Surgeon-Major E. C. Markey, are also named by Brigadier-General Macgregor, and Surgeon-Major R. Lewer by Brigadier-General Hugh Gough. The services of Deputy Surgeon-General J. Hanbury, M.B., are alluded to by General Roberts in terms of high appreciation; and the name of Surgeon J. F. Williamson, M.B., appears among those of officers of his personal staff.

EDWARD GOODEVE MEMORIAL FUND.

A MEETING of the friends of the late Deputy Inspector-General Edward Goodeve, M.B.Lond., Honorary Physician to the Queen, was held at 3, Connaught Square, Hyde Park, London, on November 18th, Deputy Inspector-General F. J. Mouat, M.D., F.R.C.S., in the chair, at which the following resolutions were unanimously adopted. "1. That subscriptions be invited for the purpose of raising an 'Edward Goodeve Memorial Fund', to be devoted to the purchase of a marble bust for the Calcutta Medical College, and the endowment of a scholarship in connection with the Professorship of Medicine in that school. 2. That the following gentlemen be nominated as an executive committee to carry the resolution into effect; Inspector-General J. Forsyth, C.B., Q.H.P. (President); Surgeon-General Sir Joseph Fayrer, M.D., F.R.S., K.C.S.I.; Surgeon-Major A. Grant, F.R.C.S., Q.H.S.; J. H. Matthews, Esq.; Deputy Surgeon-General S. B. Partridge, F.R.C.S.; and that Mr. Partridge be requested to act as honorary treasurer."

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

AN attack of scarlet fever is reported amongst the scholars of Winchester College. Happily, the type of the disease is a mild one, and none of the cases have had a fatal termination.

THE outbreak of yellow fever at Havana, to which we referred on page 786, still continues. During the week ended October 29th, there were 15 deaths from the disease, of which 9 were among citizens and 6 in the military hospital. Small-pox is also on the increase in the city, 11 deaths being reported in the week ended October 29th, and 16 in the week after.

THE recrudescence of small-pox in the East of London deserves the serious attention of the Local Government Board. It would be well that, whilst the provision of adequate hospital accommodation for the threatening epidemic is being considered, the importance of securing general vaccination in the infected districts should not be lost sight of; and we are glad to learn that, in some of the unions at least, special measures are being adopted for meeting the emergency.

NO fewer than 85 deaths occurred from diarrhœa in the Penzance registration district last quarter. The Medical Officer of Health reports that these deaths were principally in infants under one year, who were the children of poor parents. Improper feeding, and small, badly-ventilated houses, seem to have had a considerable share in determining the fatality of the disease.

THE St. Columb rural sanitary authority have been considering the question of giving their Medical Officer of Health a higher salary, in view of the labours cast upon him by the Newlyn last epidemic. The proposal was not assented to; but it is singular that increased remuneration to the officer of health, on account of the Newlyn work, should have been suggested, without a proposition being made for some recompense to Mr. Vigurs for his efforts during the epidemic. We are glad, however, to find that this omission has been rectified; and that, at the next meeting of the authority, the question of a gratuity to Mr. Vigurs will be brought up.

ACCORDING to the official returns, the death-rate of Warsaw for 1879 showed an extraordinary diminution from that of 1878, which was 43 per 1,000, against a trifle over 30 last year. The total figures, as supplied by the authorities, show 10,778 deaths, the population on January 1st, 1879, being 336,703; among these 648 were strangers, and 633 foundling children. The elaborate and complete system of drainage, projected for the city by a noted English engineer, still exists on paper only.

THE difference in the incidence of summer diarrhœa on well-to-do neighbourhoods and densely populated localities, is well shown in the fact that, of the 124 deaths registered from diarrhœa at Bristol in the third quarter of this year, only 4 occurred at Clifton, with its population of 32,000; whilst, in the crowded and dirty district of St. Philip, no fewer than 56—or nearly half the total number—were recorded.

THE Southend Local Board seem to have very singular notions as to their responsibilities under the Public Health Act. When the recent epidemic of typhoid fever at Prittlewell occurred, the Government Inspector, who was sent down, strongly recommended that all the wells in the village should be closed. Pending the laying of water-mains to Prittlewell, a supply of water has been taken to the village in carts; but this supply the Local Board have now suddenly resolved to discontinue immediately, on the ground of its being "unfair for the Prittlewell water to be paid for by the inhabitants of Southend". The laying of a main to Prittlewell is still quite in the clouds—so that, the unfortunate inhabitants will now have no choice but to revert to the polluted wells, which undoubtedly caused the last outbreak of fever, and will doubtless as easily cause another.

LOCAL LEGISLATION AS TO INFECTIOUS DISEASE.

RECENT *Gazettes* have contained, in accordance with the Standing Orders of the Houses of Parliament, notices by local authorities and others, stating the purport of the local Bills which they propose to submit to the legislature during the coming session. Amongst these Bills, we are glad to notice no fewer than seven (Barrow-in-Furness, Birkenhead, Bradford, Lincoln, Reading, Salford, and Stalybridge) which contain clauses providing for the compulsory notification to the sanitary authority of cases of infectious disease. Most of these authorities, moreover, seek for the enlarged powers for dealing with infectious disease which have, during the last two sessions, been increasingly bestowed by Parliament. It is eminently encouraging and satisfactory to observe that, with hardly an exception, the "improvement" Bills to be promoted next session by municipalities contain clauses providing for the registration of infectious disease—a fact which shows very strikingly how favourably this important question is coming to be regarded by local authorities. As soon as the Bills are printed, they will in due course receive the careful consideration of our Parliamentary Bills Committee. Meanwhile, we think it may be of interest to our readers to sketch the main features of the new provisions relating to public health which Parliament will be asked to sanction for these places.

Barrow-in-Furness desires to make further provisions with respect to the prevention of infectious and other diseases; for the giving of notice as to infected persons; the providing of hospitals for infectious diseases; the removal of infected persons to hospitals; removal of dead bodies; prohibition of the use of public conveyances for the removal of infected persons or dead bodies; and the sale of milk from, and letting of, infected premises.

Birkenhead wishes to make further and more effectual provision for the sanitary improvement of the borough; and for the prevention and removal of nuisances, contagious diseases, and overcrowding of dwellings, and the keeping of animals; and for regulating the exercise of trades, and preventing the adulteration of articles of food and drink; also to authorise the corporation to provide and fit up rooms for the reception of the dead, and to make by-laws as to the management of, and charges for, the use of such rooms; and as to the interment of the dead, and to enforce the removal to such rooms of any corpse which shall be lying where there is no proper accommodation for it.

Bradford seeks to make provision for—1. The better protection of the public health; the better detection of infectious and contagious disease; compulsory notification to the medical officer of health of such disease; 2. The temporary closing of any day-school in any neighbourhood threatened with, or infected by, any such disease; as also of places used for sale of milk, fruit, confectionery, or food, or for the sale or making-up of wearing apparel where such disease exists; 3. Enforcing removal into a hospital of any person suffering under any such disease not having proper accommodation for isolation; 4. The better regulation of cemeteries.

Lincoln proposes to make better provisions and regulations with respect to the prevention and spread of infectious and contagious diseases, and the giving of notice to the corporation of persons suffering therefrom, and to provide nurses, hospitals, and temporary shelter and accommodation for such persons, and for their care, isolation, and removal; and to provide for the cleansing, disinfecting, and closing of houses, schools, and other infected places; and the removal, disinfection, and destruction of infected clothing, bedding, or other infected articles, and the prevention of the sale thereof; and for the removal of any person suffering from any such disease to any such hospital, shelter, or accommodation. Also for the removal and disposal of any body which shall have died from infectious disease, and the interment of any

such body, together with power of entry by the corporation, their officers and servants, for any of the foregoing purposes. It is proposed, moreover, to give powers for the making of by-laws for the prohibition of, and imposing penalties in respect of, the conveyance in any public vehicle of persons suffering from infectious or contagious disease.

Reading wishes to make better provision for preventing infection and for dealing with cases of infectious and contagious diseases; and for the regulation, registration, and isolation of such cases.

At *Salford* it is contemplated to make provisions for the prevention of the spread of infectious and contagious diseases, by compelling notice to be given of persons suffering therefrom, and by extending the powers of the corporation for the providing of nurses and temporary accommodation, the construction and maintenance of hospitals, the removal of persons thereto and their maintenance therein; by prohibiting persons suffering from such diseases or dwelling in the same house as such persons from attending any school, workroom, or manufactory, and by enabling the corporation to close any school, dairy, laundry, or place for the sale, deposit, or storage of any article of consumption or clothing.

Lastly, in the *Stalybridge* Bill, there are provisions for conferring upon the corporation further powers for the improvement and good government of the borough, with respect (*inter alia*) to the making and enforcing of regulations as to the removal to hospitals of persons suffering from infectious diseases; and requiring notice of such diseases to be given to the corporation.

VENTILATION OF SEWERS.

SIR,—The short note regarding the ventilation of sewers at Maidstone is doubtless inserted for the purpose of raising the point stated in the paragragh.

It is curious how persistently endeavours are made to discredit ventilation. The objectors would apparently rather drive the foul air into the houses, than allow it to escape into the open. I would urge upon the sanitary authorities of Maidstone that it is their duty to provide more openings, not to close up those which are present; but, above all things, to call upon their engineer to do his duty, and prevent the sewers from continuing as sewers of deposit. The fault is in the construction of the sewers, and not in the ventilators. If local authorities will go on forming imperfect sewers, they will continue to produce evil instead of removing it; but to close the ventilation, which is complained of, would only make things materially worse than they are.—I am, sir, your obedient servant, ALFRED CARPENTER, M.D.

Croydon, December 4th, 1880.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ORMSBY.—The Ormsby Local Board have sent us a copy of a special report made by their medical officer of health, in answer to the allegations that have of late been freely circulated as to the insanitary condition of the district. The health-officer's report does not, however, touch the chief ground of complaint; viz., that the sanitary circumstances of the place are unwholesome, and that the Local Board are neglectful of their duties. It is satisfactory, indeed, to learn that the epidemic of scarlatina which lately ravaged the district is now extinct, and that during the past six weeks there have been only three deaths from infectious disease there; but we do not see how an appeal to the death-rates of the last four years of itself invalidates the statements of the vicar and others that the sanitary condition of the place is neglected.

GLASGOW.—During the second quarter of 1880, the general death-rate of Glasgow was 26 per 1,000 living; the birth-rate 39 per 1,000 living. The deaths under five years amounted to 46 per cent. of the total deaths. The deaths under one year amounted to 46 per cent. of the deaths under five years, 21½ per cent. of the total mortality, and 14 per cent. of the total births. Of the total deaths, 90 per cent. were certified, and 43 per cent. were in Friendly Societies. Of the births, 8 per cent. were illegitimate. Of the deaths under one year, in only 77 per cent. was the cause of death certified; of the deaths over one and under five years, in 89 per cent.; of the deaths above five years, in 95 per cent. Of the deaths under one year, 23½ per cent. were in Friendly Societies; of the deaths over one and under five years, 52½ per cent.; of the deaths above five years, 47 per cent. Of the legitimate children who died between one and five years, 90 per cent. were certified; while of the illegitimate, 80½ per cent. were certified. There was, therefore, no proof of medical attendance having been obtained for 10 per cent. of the legitimate, and 19½ per cent. of the illegitimate, children who died between their first and fifth years. Consumption and acute diseases of the lungs caused 1,210 deaths; nervous diseases of children, atrophy, debility, etc., 487; scarlet fever, measles, whooping-cough, croup, and diphtheria, 471; fevers, 122; diarrhœal diseases, 55; and unclassified causes, 1,139 deaths. As compared with the corresponding quarter of last year, there is an increase of 346 deaths. This increase is manifest in all the classified diseases, but chiefly in the fevers, which are 159 per cent., and in the infectious diseases of children, which are 83 per cent. more fatal. The former increase is due to the dissemination of enteric fever through the medium of contaminated milk, and the latter to the epidemic prevalence of whooping-cough and measles.

TAUNTON URBAN AND RURAL DISTRICTS.—The chief event in the sanitary history of these districts during 1879, was the opening in July of the Infectious Hospital, provided jointly by the two authorities. Dr. Alford reports that it has already been of much service, and has been gladly made use of by the poor. During the early part of the year, whooping-cough was prevalent, and several cases of scarlatina occurred. Enteric fever was present in certain places, in association with bad sanitary conditions, and a few cases of diphtheria were also noticed. In both districts, the deaths from diseases of the respiratory organs were numerous—the rate amounting in the rural district to 5.4 per 1,000, and in the urban to 5.1 per 1,000. The unusually inclement weather raised the general death-rate above the average, both in the town and country. In the rural district the rate was 18.5 per 1,000, and in the urban 23.9 per 1,000. Some extension of sewerage was made in the town, but in the rural district nothing seems to have been done in this direction. The scarcity of the water-supplies would appear to be deserving of the very early attention of both authorites.

BIRMINGHAM.—During the third quarter of this year, the total number of births and deaths in Birmingham was 3,572 and 2,127 respectively—equal to rates of 36.2 and 21.65, against rates of 38.3 and 16.35 in the corresponding quarter of 1879. The increase in the mortality is wholly due to the much greater fatality of diarrhœa—due, Dr. Hill thinks, to the much higher temperature of this summer than of last. Out of a total of 727 deaths from zymotic diseases, diarrhœa was responsible for no fewer than 606—equal to an annual death-rate of 6.1 per 1,000 persons living. Seventy-two per cent. of the deaths occurred in children under one year old, and upwards of 94 per cent. in those under five years—so that the disease was almost entirely confined to infants of tender age.

WEDNESBURY.—The birth- and death-rates in this district were last year both lower than in 1878. The total mortality in 1879 was 442, against 579 deaths in 1878—giving the low death-rate of 17 per 1,000. Of zymotic diseases, "fevers" were responsible for 11 deaths and scarlatina for 24 (as compared with 90 in 1878). Measles and whooping-cough were both very prevalent, though the deaths from them were few. The mortality amongst infants has steadily declined since 1875, being now equal to 3 per 1,000. Pulmonary diseases were not more fatal than usual; but, nevertheless, caused as many as 134 deaths. It is to be regretted that the Local Board of this large district of twenty-six thousand people does not see fit to publish Mr. Garman's reports.

A LOW DEATH-RATE.

SIR,—I think it may not be without interest to many sanitarians, to record, that in the Brownhills (Staffordshire) Local Board of Health District (which comprises a very large mining population) the number of deaths for the month ending October 31st was seven, and the death rate only 7.7 per 1000 *per annum* of the population. The rate of mortality will bear very favourable comparison with that of any health district in the United Kingdom. My reason in wishing to record this death-rate is to point out that even in large mining districts, where the people are not the most cleanly in their habits, and are less careful in preserving their health, an exceptionally low death-rate very frequently prevails.—I am, sir, yours, etc.

DAVID EDGAR FLINN,
Medical Officer of Health, District Medical Officer,
Lichfield Union.

A QUESTION REGARDING APPOINTMENTS.

SIR,—Can you inform me if it is legal of a board of guardians to appoint a qualified assistant of a medical man, who already has in his own name one district of the union, to another district? And if so, would the Local Government Board be likely to confirm such appointment? The assistant, of course, is liable to be dismissed by his principal at a moment's notice.—I am, etc., RUSTIC.

Wellingborough, December 1st, 1880.

POOR-LAW MEDICAL APPOINTMENTS.

*COLLINGWOOD, J. E., L.R.C.P.E., reappointed Medical Officer and Public Vaccinator to the Castle Bytham District of the Bourn Union.

*FLINN, David Edgar, L.K.Q.C.P.I., L.R.C.S.I., L.M., reappointed Medical Officer of Health to the Brownhills Urban Sanitary Authority.

STEELE, W. C., M.R.C.S., appointed Assistant Medical Officer and Dispenser to the St. Saviour's Infirmary Union, Walworth, *vice* Reginald Maples, L.R.C.P.Ed., resigned.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—M.D. Examination, 1880. Pass List.

Buchanan, Arthur, Guy's Hospital.
Cattle, Charles Henry, Leeds and University College.
Chapman, Paul Morgan, University College.
Colquhoun, Daniel, Charing Cross Hospital.
Dunbar, James John Macwhirter, St. George's Hospital.
Ferrier, John Christian, Guy's Hospital.
Gristock, William, University College and Westminster Hospital.
Henderson, G. Courtenay (Gold Medal), University College.
Jones, Arthur Henry, Guy's Hospital.
Lubbock, Montagu, Guy's Hospital.
Mackern, George, Guy's Hospital.
Phillips, Sidney Philip, University College and Middlesex Hospital.
Sainsbury, Harrington, University College.
Silcock, Arthur Quary, B.S., University College.
White, William Hale, Guy's Hospital.
Wigleworth, Joseph, Liverpool Royal Infirmary and St. Thomas's Hospital.
Wilkinson, Arthur Thomas, B.A., B.Sc., Owens College.
Willcocks, Frederick, King's College.

Logic and Psychology only.

Bond, James William, B.S., University College.
Lendon, Alfred Austen, University College and Middlesex Hospital.
Plumbe, Samuel Thomas, St. Bartholomew's Hospital.
Prowse, Arthur Bancks, St. Mary's Hospital.
Ryley, James, University College.
Williams, Dawson, B.S., University College.

Second M.B. Examination, 1880. Examination for Honours. Medicine.

First Class.

Newsholme, Arthur (Scholarship and Gold Medal), St. Thomas's Hospital.
Money, Angel (Gold Medal), University College.
Saunders, Arthur Rich, University College.
Barnes, George Frederick, St. Bartholomew's Hospital } equal.
Sellers, William, University of Edinburgh and London Hospital }
Meek, John William, Guy's Hospital } equal.
Pollard, Bilton, University College }
Paddle, James Isaac, B.A., B.Sc., University College } equal.
Suckling, Cornelius William, Queen's College, Birmingham }

Second Class.

Brooke, Henry A. G., B.A. Owens College and Guy's Hospital } equal.
Harvey, Alfred, Queen's College, Birmingham }
Shaw, John, St. Thomas's Hospital.
Wainewright, Robert Spencer, Guy's Hospital.
Baddeley, Charles Edward, King's College.
Dalton, Norman, King's College } equal.
Penny, Edward, Guy's Hospital }

Third Class.

Day, Donald Douglas, St. Bartholomew's Hospital } equal.
Sayer, Mark Feetham, University College }
Notley, William James, B.A., University of Edinburgh.

Obstetric Medicine.

First Class.

Barnes, George Fredk. (Scholarship and Gold Medal), St. Bartholomew's Hosp.
Paddle, James Isaac (Gold Medal), University College.
Banks, William, University College.
Saunders, Arthur Rich, University College.
Newsholme, Arthur, St. Thomas's Hospital.

Second Class.

Pollard, Bilton, University College.
Sayer, Mark Feetham, University College.
Rich, Arthur Creswell, St. Thomas's Hospital.
Permewan, Arthur Edward, University College.

Third Class.

Sellers, William, University of Edinburgh and London Hospital.
Dalton, Norman, King's College.
Harvey, Alfred, Queen's College, Birmingham.
Meek, John William, Guy's Hospital.
Day, Donald Douglas, St. Bartholomew's Hospital.

Forensic Medicine.

First Class.

Meek, John William (Scholarship and Gold Medal), Guy's Hospital.
*Paddle, James Isaac (Gold Medal), University College.
†Banks, William, University College.
†Shaw, John, St. Thomas's Hospital.
Rich, Arthur Creswell, St. Thomas's Hospital.
Money, Angel, University College.
Berry, Frederick Haycraft, Guy's Hospital.

Second Class.

Newsholme, Arthur, St. Thomas's Hospital.
Penny, Edward, Guy's Hospital.
Pollard, Bilton, University College.
Wainewright, Robert Spencer, Guy's Hospital.
Saunders, Arthur Rich, University College.

* Obtained the number of marks qualifying for the University Scholarship.
† Obtained the number of marks qualifying for a Gold Medal.

Third Class.

Faulkner, John Thomas, Owens College.

M.S. Examination, 1880.

Symonds, Charters James, M.D., Guy's Hospital.

B.S. Examination. Pass List.

First Division.

Claremont, Claude Clarke, University College.
Gill, Richard, B.Sc., St. Bartholomew's Hospital.
Neale, William Henry, University College.
Pollard, Bilton, University College.
Sheppard, Charles Edward, St. Thomas's Hospital.
Smith, Robert Percy, St. Thomas's Hospital.

Second Division.

Day, Donald Douglas, St. Bartholomew's Hospital.
Money, Angel, University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the fellowship, at the half-yearly meeting of the Court of Examiners terminating on the 29th ultimo, were reported to have acquitted themselves to the satisfaction of the Court, and at a meeting of the Council on the 9th instant were admitted Fellows of the College.

Messrs. Cleland Lammiman, L.R.C.P.L., Tunbridge Wells, diploma of membership dated July 21st, 1871; Charles H. Newby, L.R.C.P.L., Adelaide Road, N.W., January 22nd, 1873; James Black, M.B.Cantab., Stockwell, January 26th, 1875; Samuel D. Clippingdale, M.D.Aberd., Kensington, July 20th, 1875; Robert W. Greenich, L.R.C.P.L., New Street, N.W., July 27th, 1875; Hubert F. Weiss, L.R.C.P.L., Fulham, January 8th, 1876; Hugh P. Dunn, Guilford Street, January 8th, 1876; George R. Turner, L.R.C.P.L., Sussex Gardens, July 25th, 1877; Walter J. Milles, L.R.C.P.L., Wyndham Place, July 27th, 1877; Hayward R. Whitehead, L.R.C.P.Ed., Cadogan Terrace, November 3rd, 1877; George J. Lloyd, L.S.A., Birmingham, July 23rd, 1878; James O'M. MacDonnell, M.D. Queen's Univ. Irel., H.M.I. Army, November 17th, 1880; Alfred H. Young, M.B.Ed., Warrington (not a member).

Twelve candidates were sent back to their professional studies for twelve months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 2nd, 1880.

Cooper, Richard Gilpin, Park Road, Southport.
Everard, Horace Nathaniel, Leicester.
Field, Cornelius, Fortess Road, Kentish Town.
Jerome, John William, St. Heliers, Jersey.
Orton, Arthur, Queen's College, Birmingham.
Osborne, Harold Rochester, St. Ives, Huntington.
Unsworth, Francis Henry, Derby.
Willis, Arthur, Soham, Cambridgeshire.

The following gentlemen also on the same day passed their Primary Professional Examination.

Baker, William B., London Hospital.
Campbell, Henry William, Guy's Hospital.
Jones, David William, University College.
Holroyd, John, London Hospital
Williams, Montagu, Middlesex Hospital.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ADDENBROOKE'S HOSPITAL, Cambridge—Resident House-Surgeon. Salary, £65 per annum, with board, lodging, and washing. Applications, with testimonials, to the Secretary, on or before December 15th.

ASYLUM FOR IDIOTS, Earlswood, Redhill.—Assistant Medical Officer. Salary, £150 per annum, with board and washing. Applications, with testimonials, to the Secretary, on or before December 20th.

BATH HOSPITAL, Harrogate—Secretary and Dispenser. Applications, with testimonials, to the Secretary, before January 6th, 1881.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL—Medical Tutor. Salary, £40 per annum. Applications on or before December 14th.

DORSET COUNTY ASYLUM—House-Surgeon. Salary, £70 per annum, and £10 additional as Secretary. Applications, with testimonials, to the Chairman, on or before January 12th, 1881.

FISHERTON HOUSE ASYLUM, Salisbury—Senior Assistant Medical Officer. Applications at once.

*HOSPITAL FOR SICK CHILDREN, Great Ormond Street.—Ophthalmic Surgeon. Applications, with testimonials, on or before December 16th.

*KENSINGTON UNION—Medical Officer to Workhouse and Infirmary. Salary, £100 per annum. Applications, with testimonials, not later than December 23rd.

LEICESTER INFIRMARY AND FEVER HOSPITAL—House-Surgeon and Apothecary. Testimonials, addressed to the Secretary's Office, 24, Friar Lane, on or before Monday, December 13th.

LIVERPOOL NORTHERN HOSPITAL—Assistant House-Surgeon. Salary, £70 per annum, with board and residence. Applications, with testimonials, not later than December 11th.

MITCHELSTOWN UNION—Medical Officer for Galbally Dispensary District. Salary, £100 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 15th instant.

MOUNTMELLICK UNION—Medical Officer for Cooham Dispensary District. Salary, £90 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 13th instant.

*NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY—Resident Medical Officer and Secretary. Salary, £100 per annum, with board and lodging. Applications, with testimonials, to the Secretary, on or before December 21st.

NOTTINGHAM DISPENSARY—Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 20th; election January 3rd, 1881.

*RADCLIFFE INFIRMARY, Oxford.—Junior Resident Medical Officer. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, before December 18th.

ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon. Applications on or before December 30th.

ROYAL BERKS HOSPITAL, Reading—Assistant to the House-Surgeon, with board and lodging. Applications, with testimonials, on or before December 21st.

ST. BARTHOLOMEW'S HOSPITAL, Chatham—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, etc. Applications, with testimonials, on or before December 13th.

*ST. THOMAS'S HOSPITAL—Surgical Registrar. Salary, £100 per annum. Applications to the Secretary on or before December 21st.

UNIVERSITY OF EDINBURGH—An additional Examiner of Pathology. Applications and testimonials to the Secretary not later than January 17th, 1881.

*WALLASEY DISPENSARY—House-Surgeon. Salary, £140 per annum, with furnished residence, coals, and gas. Applications, with testimonials, to the Honorary Secretary, on or before January 7th, 1881.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

FORT, T., L.R.C.P., appointed a Certifying Factory Surgeon, *vice* H. Halkyard, F.R.C.S., resigned.

HORNE, John F., F.R.C.S.Ed., appointed Surgeon to the Beckett Hospital and Dispensary at Barnsley, *vice* W. Stawman, M.R.C.S.Eng., deceased.

MADELEY, E., M.R.C.S.E., appointed Resident Medical Officer to the Lincoln United Friendly Societies' Dispensary, *vice* C. M. Davidson, M.R.C.S., resigned.

*MORTON, Shadforth, M.B., M.R.C.S.Eng., appointed Surgeon to the W Division of Metropolitan Police, Croydon, and Examiner of Recruits for the Militia and Regular Army in the Croydon District.

OSWALD, H. R., M.B., C.M., appointed Medical Officer to the Royal South London Dispensary.

SMYTH, S. T., M.D., appointed Consulting Surgeon to the Infirmary for Sick Children, Sydenham Park, upon resigning as Surgeon.

WALDO, F. J., M.A., M.B., appointed Resident Medical Officer to the East London Hospital for Children, *vice* T. E. Hayward, M.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

COCKELL.—On the 5th December, at 62, Forest Road, Dalston, the wife of Fredk. E. Cockell, junr., M.R.C.S.E., of a son.

CURTIS.—On the 3rd of December, the wife of William Curtis, jun., of Eastbrook House, Alton, Hants, of a son.

MARRIAGE.

MOXON—TUCKWELL.—On December 1st, at South Street, Exeter, by the Rev. F. Bosworth, M.A., assisted by the Rev. J. Tuckwell, brother of the bride, Dr. William Moxon, of Matlock, Derbyshire, to Julia, youngest daughter of Henry Tuckwell, Esq., St. Leonard Road, Exeter, Devon.—No cards.

DEATH.

HEWLETT.—On December 5th, from convulsions, Ethel, fourth daughter of John and Caroline Hewlett, of The Ferns, Hornsey, and Cree Church Lane, London, E.C.

MEDICAL MAYOR.—Dr. Thomas E. O'Sullivan has been elected Mayor of Limerick for the ensuing year.

HIS Excellency the Lord-Lieutenant has appointed Sir George B. Owens, M.D., J.P., to be High Sheriff of the County of the City of Dublin for the year 1881.

DONATIONS, ETC.—Dr. John Moore and Mr. Macrory have given £50 each to the Belfast Royal Hospital, to qualify as life governors. The late William McKeown has left £50 to the Belfast Royal Hospital, and Lord Ashtown, £100 to the Hospital for Incurables.

BABY-FARMING.—At Durham Quarter Sessions, a widow named Elizabeth Bell, pleaded guilty to unlawfully abandoning a child, whereby its life was endangered, at Gateshead. Prisoner had received £12 from the child's mother to maintain it, but notwithstanding this, the child was recently discovered in an emaciated and shocking condition. Prisoner was sentenced to twelve months' imprisonment with hard labour.

VACCINATION.—Mr. A. H. Boys of Pill, near Bristol, has received a grant of £7 8s. (second time) for efficient vaccination.—Dr. G. K. Sproule of Frome has received a vaccination grant, for the third time in succession.—Dr. Lionel A. Weatherly has been awarded a Government grant, for efficient vaccination, in No. 6 District, Bedminster Union (second time).—Mr. George Harvey of Wirkworth has received a local Government award for vaccination of £7 8s., being the third in succession.

DURING the past nine weeks of the current quarter, the metropolitan death-rate has averaged 21.3 per 1,000, against 21.7 and 22.3 in the corresponding periods of 1878 and 1879.

PUBLIC HEALTH.—During last week, being the forty-eighth week of this year, 5,552 births and 3,478 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 21 deaths annually in every 1,000 persons living. The annual death-rate was 22 in Edinburgh, 21 in Glasgow, and 30 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Brighton, 14; Wolverhampton, 14; Bristol, 17; Sheffield, 18; Plymouth, 18; Leeds, 18; Birmingham, 19; Bradford, 20; Leicester, 20; London, 21; Portsmouth, 21; Newcastle-upon-Tyne, 21; Manchester, 22; Oldham, 22; Salford, 23; Liverpool, 23; Nottingham, 24; Norwich, 24; Hull, 25; and the highest rate, 26, in Sunderland. The annual death-rate from the seven principal zymotic diseases averaged 2.5 per 1,000 in the twenty towns, and ranged from 0.0 and 0.7 in Brighton and Wolverhampton, to 4.8 and 6.7 in Salford and Sunderland. Scarlet fever showed the largest proportional fatality in Sunderland, Leicester, Bradford, and Liverpool; measles in Salford; and whooping-cough in Hull and Nottingham. The highest death-rates from fever (mainly enteric) occurred in Leeds and Leicester. In London, 1,446 deaths were registered, which were so many as 322 below the average, and gave an annual death-rate of 20.6. The 1,446 deaths included 10 from small-pox, 54 from measles, 73 from scarlet fever, 10 from diphtheria, 12 from whooping-cough, 17 from different forms of fever, and 9 from diarrhœa—being altogether 185 zymotic deaths, which were 79 below the average, and were equal to an annual rate of 2.6 per 1,000. The 73 fatal cases of scarlet fever showed a decline of 10 from the number of the previous week, and were within 2 of the corrected weekly average; 4 were returned in Islington, 4 in Shoreditch, 4 in Bethnal Green, 7 in Bromley and Poplar, and 9 in Lambeth. The fatal cases of small-pox, which had been 10 and 19 in the two preceding weeks, declined again to 10 last week, of which 4 were recorded in the Metropolitan Asylum Hospitals at Homerton and Deptford, and 6 in private dwelling-houses. Six of the deceased small-pox patients had resided in the East (including 4 in Bethnal Green), 2 in the North, and 2 in the South groups of registration districts. The new cases of small-pox admitted to the Metropolitan Asylum Hospitals, which had been 99 and 57 in the two previous weeks, were 67 last week. The deaths referred to diseases of the respiratory organs, which had been 332 and 367 in the two preceding weeks, declined again to 334 last week, and were no fewer than 170 below the average; 210 resulted from bronchitis, and 87 from pneumonia. Different forms of violence caused 64 deaths; 56 were the result of negligence or accident, including 20 from fractures and contusions, 8 from burns and scalds, 6 from drowning, 2 from poison, and 17 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 44.1°, and 2.6° above the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 11.4 miles per hour, which was 0.9 below the average. Rain fell on Wednesday, to the amount of 0.04 of an inch. The duration of registered bright sunshine in the week was equal to 8 per cent. of its possible duration. Very little ozone was recorded during the week.

MEXBOROUGH.—The chief feature in the vital statistics of this district, for 1879, is the terrible mortality amongst children. Of the 109 deaths, no fewer than 74, or rather more than 67 per cent., were in children under five years of age; 46, or a little over 42 per cent., being registered as occurring under one year of age. Mr. Sykes has evidently devoted some pains to discovering the reasons for this abnormal mortality, which he ascribes mainly to improper feeding, and to injudicious exposure of children insufficiently clad. The only zymotic diseases prevalent were scarlatina, which caused 7 deaths; and measles and whooping-cough, which caused 5 and 7 deaths respectively—both the latter diseases spreading all over the town. Although the Officer of Health recommended the closure of one of the schools, on account of the prevalence of measles, the School Board saw fit to disregard his advice—with the result of considerably protracting the epidemic. Of the non-zymotic diseases, bronchitis and the other diseases of the respiratory organs were the most fatal, 30 persons dying from these disorders. The general death-rate is calculated as 18.16 per 1,000; though the accuracy of the estimated population may be open to question. The birth-rate was very high (44.6 per 1,000), which may account in part for the large infant mortality.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 2; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Allchin, "A Case of Gastric Ulcer". Dr. Habershon will read the notes of a case of Obstruction of Colon from Contraction of Calibre of Intestine.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Bantock, "On Hyperpyrexia after 'Listerian' Ovariotomy"; Mr. Lawson Tait, "Hydatids of the Liver treated by Abdominal Section and Drainage". Dr. Thin will show the subject of an Unusual Form of Skin Disease.

WEDNESDAY.—Association of Surgeons practising Dental Surgery, 7.30 P.M., Council Meeting. 8.30 P.M., Mr. Edmund Owen, "On Maxillary Abscess and Necrosis in Childhood". Meteorological Society, 7 P.M. Rev. T. A. Preston, "Report on the Phenological Observations for 1880". Mr. G. M. Whipple, 1. "On the Variations of Relative Humidity and Thermometric Dryness of the Air, with Changes of Barometric Pressure at the Kew Observatory"; 2. "On the relative frequency of given heights of the Barometer Reading at the Kew Observatory during the ten years 1870-79".

THURSDAY.—Harveian Society of London, 8.30 P.M. Harveian Lecture, by Dr. J. L. Pollock, "On the Progress and Treatment of Chronic Diseases of the Chest, in relation to Modern Pathology".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

MR. TENNYSON AND THE MEDICAL PROFESSION.

SIR,—Much as medical men may feel grieved at the piece you quoted last week from Tennyson's new work, yet, in writing that, he has only been consistent with the opinions he has before expressed concerning the medical profession. The following quotations will fully show that.

"In truth
We shudder but to dream our maids should ape
Those monstrous males who carve the living hound,
And cram him with the fragments of the grave;
Or, in the dark dissolving human heart
And holy secrets of this microcosm,
Dabbling a shameless hand, with shameful jest
Encarnalize their spirits." *The Princess.*

"Doctors they knaws nowt; fur a says what's nawways true;
Naw soort o' koind o' use to saay the things that a do."
Northern Farmer (old style).

"And sleep must lie down arm'd, for the villanous centre-bits
Grind on the wakeful ear in the hush of the moonless nights;
While another is cheating the sick of a few last gasps, as he sits
To pestle a poisoned poison behind his crimson lights."—*Maud.*

I am, yours obediently,
Ferndale, December 5th, 1880. W. COLE HAIME.

QUÆRE should recommend a consultation with an eminent surgeon accustomed to investigate such cases.

THE ONE PORTAL SYSTEM: WHY DO THE COLLEGES EXIST?

SIR,—Mr. G. R. Gilruth is in the same boat with a good many others who write on questions about which they know nothing. The great question with the medical profession is not that of the title of doctor, or the union of two colleges to grant such titles, but why should these colleges exist at all? We, in Scotland, have no reason to complain; for the sum of £105, or at most £120, spread over four years, any student can obtain two university degrees. The hardship complained of by English students does not, therefore, exist here. The real question, as I have said, is: Why do the corporations exist at all? Take the Colleges of Surgeons and of Physicians of London, the Apothecaries' Hall of London, the two Colleges in Edinburgh, and the Faculty of Glasgow. What are these bodies doing for the furtherance of medical science? They are simply examining boards; they are not teaching bodies at all. From candidates for their diplomas they draw about £15,000 annually—probably more. Surely, if the Government is able to examine candidates for its public services, it is capable to examine candidates for civil practice. By so doing, a clear profit of between £20,000 to £25,000 would be annually saved to the country. You complain of the method of examination conducted by the London College, and proceed to show that students are sometimes examined on the physiology of only one organ. This, I am sorry to say, is not peculiar to the London College of Surgeons. Here, the examining board is virtually self-elective; death of one of the examiners being the only chance of change. The examiners, with two exceptions, are general practitioners; and I have known that students in anatomy have been examined only on the bones of the pelvis by a midwifery practitioner; and frequently all the questions have been on the nervous or digestive system, read up the night before by the examiner. Besides, a strange system prevails here. Ages ago, the Colleges met and propounded a list of questions, which are used over and over again, reminding one of the story of the parson who bought a barrel of sermons, drawing one out at the bottom, and placing it on the top when used. I know for a fact that the paper set for the double qualification in July did service in October, and came round nicely for those rejected in the former month. There are other abuses; but my letter is already too long. Apologising for taking up your valuable space, I am, sir, your obedient servant,

H. AUBREY HUSBAND, F.R.C.S.E., Lecturer on Medical Jurisprudence, Medical School, Edinburgh.

13, Northumberland Street, Edinburgh, Nov. 21st, 1880.

P.S. The truth is, no medical paper troubles itself about us, and thus things continue as they were from the beginning. Thus, the London College gets all the lecturing and advice. The beginning was bad enough.

PUZZLED.—The statement quoted is a fair sample of the perversions of the anti-vaccinators. It is undoubtedly true that Mr. Ernest Hart, in his book on the *Truth about Vaccination*, stated that "the characters of small pox, when uncontrolled by vaccination, still remain the same, as is evidenced by the present mortality from it amongst unvaccinated persons"; and that he gave statistics to show the immensely larger death rate from small-pox amongst unvaccinated than amongst vaccinated persons. But it is, to say the least, illogical to assert, as Mr. Enoch Robinson has done in the memorial submitted to the Ashton under Lyne board of guardians, that "the same writer [viz., Mr. Hart] on October 23rd, 1880, says" what the merest glance at the context of the paragraph on page 672 of the JOURNAL for that date would show were the observations of Dr. Dixon of Bermondsey, who is, of course, alone responsible for the opinions expressed therein.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

The Medical Profession and Intemperance in America.

Sir,—[illegible] Mr. Rogers's letter [illegible] from a certain [illegible] Nevertheless [illegible] and not [illegible] The [illegible] suggestion [illegible] [illegible] [illegible]

THE TREATMENT OF SEA SICKNESS.

SIR,—Having crossed the Irish Channel twice during the recent violent gales, I have had two opportunities of practically testing my views on the prevention of sea-sickness by large doses of bromide of potassium. Previously to using this remedy, I had suffered severely on taking a trip by sea, no matter how short the voyage. My first experiment at this time was from Silloth to Dublin, a passage lasting thirteen hours. As the storm had commenced before I began my journey, I took a drachm of bromide two hours before the advertised hour of starting, and repeated the dose on reaching the vessel. The passage was a very rough one, but I never felt a single qualm. On the return journey from Dublin to Holyhead, occupying eight hours, the gale still blowing, I adopted the same treatment, and again escaped, while nearly all the passengers on board suffered violently. More than one assured me that, though accustomed to sea-voyages, and to making this same passage on many previous occasions, they had never before been sea-sick. I suffered no evil after-effects from the large doses of the drug. For long voyages, the use of bromide of potassium, continued for some time, till the body becomes accustomed to the motion of the vessel, would yield equally good results.—I am, yours, etc.,

Helmsley, Yorkshire. R. BRUCE LOW, M.D.Edin.

SIR,—I beg to offer my experiences in aid of the valuable contribution by Dr. Long in the JOURNAL.

Impressed with the idea—very likely erroneous—that the exhausted patient, ever laying on his back, was suffering from pressure of the stomach on the solar plexus, I resolved to act on it at the next opportunity. This occurred on a voyage from Monte Video to Rio. I embarked on a most stormy and rainy night, and creeping under some tarpauling lay close to the funnel, amidships, on my right side, and, though a wretched sailor, remained well, and slept till morning. I have reason to know that not a single person, except myself, escaped sickness in that night.

On the voyage from Rio in a much larger vessel I adopted the same plan, with equal success, but when 12 or 13 days out I was requested by the ship's doctor to see a patient with him. This was a young lady who was vomiting from the day she came on board, was then in the last stage of exhaustion, was lying on her back unable to move, her stomach heaving every few moments. I had her moved gently on her right side and supported there, gave small doses of champagne and brandy at very short intervals, kept her head down on the pillow, and had the satisfaction of seeing the stomach quieted, and recovery surely, though slowly, taking place. Again, on another long voyage, I was requested by the captain and the doctor to see a very fine young Irish woman exhausted from long-continued sea-sickness. The same plan was adopted with her; the exhaustion abated, and she gradually recovered. At that time ice was to be found in these great vessels, and was a most valuable addition to our means.

I believe that keeping the head low, as Dr. Long recommends, and lying on the right side, are most valuable additions to our knowledge of curing sea-sickness, or, better still, preventing it. Your obedient servant, J. WM. MACKENNA.

31, Great Marlborough Street.

GLOVES FOR WET WEATHER.

SIR,—May I answer "J. T. K.'s" inquiry by telling him that Sister Taylor, of the Salisbury Nurses' Home, knitted me a "Richmond Glove," which is gauntlet, mitten, and glove combined; it is very warm, soft, and comfortable, and readily dries. The price was 4s., and the profit is devoted to "a good cause."—Yours truly,

A WILTSHIRE COUNTRY DOCTOR.

ON SWEATING OF THE FEET.

SIR,—A good many communications have recently been made to the BRITISH MEDICAL JOURNAL on the subject of that not very uncommon, but extremely unpleasant, complaint—fœtid sweating of the feet. Many years ago, whilst a student at St. Bartholomew's Hospital, I was consulted by one of my father's workmen, employed in his sugar refinery, who suffered much from the complaint; and from that period to the present, I have from time to time had occasion to put in practice on others the same treatment which then proved efficacious, and with equally good results.

Curiously enough, while this correspondence has been going on in the JOURNAL, a servant-girl was engaged at the lodgings where I am temporarily residing, who suffers—or rather did suffer—to as great an extent as anyone I have met with; so strong and offensive was the fœtor, that the whole room became intolerable if she only came in to put on coals, or do any other trifling job, which did not necessitate her remaining for more than a few seconds. This poor girl is only eighteen years of age, but had suffered in the same way for the last four years. Her feet presented the appearance which I have always seen in these cases; viz., a white sodden look, like the hands of a washerwoman when engaged at her work; and in warm weather, she says, they frequently become blistered, and so painful that she can scarcely get about. She tried, some time ago, washing them with a strong solution of soda, and then with alum, twice a week; but without any permanent benefit. She had, therefore, done nothing, for some months past, but wash them every night with warm water, and put on a fresh clean pair of stockings every morning.

The treatment I adopted, in the first case alluded to, consisted in washing the feet with warm water and soap, drying them, and then dusting well with the oxide of zinc powder. This effectually checked the sweating; but the feet became hot, dry, and burning, and so uncomfortable that the patient preferred his former condition; it then occurred to me that, if I used the ointment of zinc instead of the powder, the same good result might be obtained, without the unpleasant effects; and such proved to be the case.

In the few cases which have come under my notice since that time, I have always adopted the same treatment, and have never observed any of the ill effects which some German writers have attributed to a stoppage of the foot-sweat. As regards the duration of the treatment, and the permanence of the cure, these will probably depend on the duration of the disease previous to the treatment. The most satisfactory case that has come under my notice was that of a gentleman, in whom two applications sufficed to produce a permanent cure. In another case, there was a recurrence of the sweating months after it had been cured (excited, in all probability, by the sudden ushering in of very warm weather), which was at once stopped by a single application of the ointment. In the servant-girl referred to, there was no perceptible fœtor three days after she commenced the use of the ointment; though she still continues, eight days after she began the treatment, to rub a little between the toes on going to bed.

I offer the above facts for what they may be worth; a more extended experience may show that the remedy is only occasionally successful; but inasmuch as it has not been mentioned by any of your correspondents on this subject, it may be worth a more extended trial by those who have greater opportunities of testing it than myself.—I am, etc.,

C. HOLTHOUSE.

November 22nd, 1880.

MR. S. G. JOHNSON.—The letter arrives as we are preparing for press. It shall, however have attention for next week's issue.

FRIENDLY SOCIETIES.

SIR,—I beg to inform "M.B." that the position of medical officer to a Friendly Societies' Association is by no means an enviable one. The work is very heavy, and the salary comparatively meagre. There is always such a large number of cases that a medical man cannot possibly treat each case with a sufficient amount of care; thus he acquires a slipshod way of performing his work. In the election of an officer, age and marriage have more weight than ability and high degrees. He is also excluded from private practice afterwards. These appointments, however, would be just endurable but for the committee which manages the business of the association. This is usually composed of a most unsavoury class: such as small shopkeepers, petty schoolmasters, and mechanics, who are elected on account of surpassing their brethren in stolid insolence. These gentlemen, wishing to make themselves important, employ their leisure time in finding out complaints against the medical officer; the consequence is that, if he is not mean enough to curry favour with the committee, he has to appear frequently before this awful tribunal, which adjudicates and censures, in terms not always the most refined. As this is extremely annoying to a gentleman of education and culture, I should advise "M.B." to turn his thoughts to a more agreeable field of labour.

Yours, etc. SPECTATOR.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. G. Coden, Stourbridge; Dr. John Alexander, Glasgow; Dr. W. Macewen, Glasgow: Mr. Graham, Warrington; Rustic; Mr. W. D. Spanton, Hanley; A Member; Dr. Crichton Browne, London; Mr. Henry Hall, Carlisle; Dr. W. H. Tayler, Anerley; Dr. J. Graham Brown, Edinburgh; Mr. Andrew Spearing, Shaw; Mr. M. R. Behrendt, Burringham; Mr. John Glaister, Glasgow; Dr. H. L. Snow, London; Dr. Sawyer, Birmingham; Mr. F. J. Hanbury, London; Dr. S. W. Smith, Pershore; E. G. T.; Mr. H. G. Cartwright, Narborough; Dr. H. M. Rowland, Malvern Wells; Mr. L. C. Parkes, London; Dr. R. B. Low, Helmsley; Dr. J. Ward Cousins, Southsea; Mr. G. Eastes, London; Dr. J. Rogers, London; Mr. G. Andrew, Staines; Mr. J. A. Haynes, London; Mr. Jabez Hogg, London; Dr. J. L. Mackenzie, Rugby; Mr. W. H. Dobie, Edinburgh; Dr. G. W. Potter, London; Our Aberdeen Correspondent; Mr. S. Morton, Croydon; Mr. A. Kempe, Exeter; Placenta; Mr. W. P. Turner, Leytonstone; Dr. Mackie, Alexandria; Mr. Archibald Clerk, Glasgow; Mr. T. Sansome, West Bromwich; Our Dublin Correspondent; B.A.; Anglo-Scot; Our Edinburgh Correspondent; Dr. B. Kraus, Berlin; Dr. W. Dale, Lynn; Dr. Bankart, Exeter; Mr. C. G. Read, Wickham; Mr. E. Witten, Brighton; Mr. C. F. Pollock, Glasgow; Dr. R. Saundby, Birmingham; Messrs. John Marston and Co., Birmingham; Mr. J. Porter, London; Dr. A. Robinson, Hull; E. M. S.; Sceptic; Mr. F. Wallace, London; Dr. A. Carpenter, Croydon; Mr. W. Peyton, Hartlepool; Mr. W. R. Belch, Philadelphia; Mr. W. C. Haime, Ferndale; Dr. John Kennedy, Fife; Dr. T. Jones, Ross; Dr. M. Collins, Scarborough; Dr. J. F. Goodhart, London; Dr. J. Garrett, Norwich; Our Glasgow Correspondent; Mr. T. Holmes, London; Mr. Ancell Ball, Spalding; Mr. A. H. Benson, Dublin; Dr. James E. Pollock, London; Dr. Joseph Ewart, Brighton; Mr. J. R. Clouting, Thetford; Mr. W. M. Bird, York; Our Paris Correspondent; Mr. W. Nicholson, London; Dr. G. B. Barron, Southport; Mr. J. B. Wilkinson, Sheffield; Dr. J. J. Ridge, London; Dr. E. Haughton, London; Mr. G. Walter, London; Mr. J. Hamilton Craigie, London; Dr. John Grigor, Rome; Rev. E. Ibbotson, Eastbourne; Dr. Jacob, Leeds; Mr. S. G. Johnson, Nottingham; Dr. Thin, London; Mr. J. E. Smith, Snodland; Mr. Lawson Tait, Birmingham; Mr. G. Bush, London; A Member; Mr. J. W. Hulke, London; Dr. L. Aitken, Rome; Mr. Richard Davy, London; Mr. Warrington Haward, London; Mr. S. Smith, Edinburgh; Mr. David Davies, Bristol; etc.

BOOKS, ETC., RECEIVED.

A Treatise on the Theory and Practice of Medicine. By John Syer Bristowe, M.D.Lond. Third Edition. London: Smith, Elder, and Co. 1880.

A Manual of Ophthalmoscopy, for the use of Students. By Dr. Dagunet. Translated by C. S. Jeaffreson, F.R.C.S.E. London: J. and A. Churchill. 1880.

Observations on the Cæsarean Section, Craniotomy, and on other Obstetric operations. By Thomas Radford, M.D., F.R.C.P.Edin. Second edition. London: J. and A. Churchill. 1880.

The Science and Practice of Medicine. By William Aitken, M.D., F.R.S. Seventh edition. Two vols. London: Charles Griffin and Co. 1880.

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REPORT
ON
THE ACTION OF ANÆSTHETICS
TO
THE SCIENTIFIC GRANTS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.*

By a Committee consisting of JOHN G. MCKENDRICK, M.D., Professor of Physiology in the University of Glasgow; JOSEPH COATS, M.D., Pathologist to the Western Infirmary, Glasgow; and DAVID NEWMAN, M.B., Pathological Chemist to the Western Infirmary, Glasgow.

AT the meeting of the British Medical Association in Manchester, in 1877, a committee was appointed to investigate the action of anæsthetics. The committee originally consisted of John G. M'Kendrick, M.D., Professor of Physiology in the University of Glasgow; Joseph Coats, M.D., Pathologist and Lecturer on Pathology, Western Infirmary, Glasgow; and William Ramsay, Ph.D., Assistant to the Professor of Chemistry in the University of Glasgow. Dr. Ramsay retired from the committee on his appointment to the Chair of Chemistry in University College, Bristol, when David Newman, M.B., Pathological Chemist, Western Infirmary, Glasgow, became a member of the committee.

Since the appointment of the committee, three preliminary reports to the Scientific Grants Committee of the Association have appeared in the pages of the JOURNAL.† The object of the present report is to give the Association a complete account of the investigation from the date of the appointment of the committee to the present time.

I.—INTRODUCTORY RESEARCH.

In conducting our investigations, two lines of inquiry soon opened themselves to us: first, to discover wherein the special dangers of chloroform consist; and, second, to try if some anæsthetic agent could be found which would avoid these dangers. We also kept in view the investigation of the physiological action of anæsthetics in general, and the collection of evidence from the profession regarding the value and dangers of the anæsthetics at present in use.

In the first of these lines of inquiry, the much vexed question of the effects of chloroform on respiration and the heart presented itself. Without going into detail, we may say that it soon became apparent to us that chloroform, administered to dogs and rabbits, has a disastrous effect on the respiratory centres; it is easy to kill one of these animals by pushing the chloroform till respiration is paralysed. In observing the state of the heart during these experiments, it could often be determined by auscultation that its contractions were maintained after respiration had ceased. It was apparent, however, that, even when failure of respiration was more directly the cause of death, the heart was to some extent simultaneously affected; and there were even cases in which the heart appeared to fail at least as soon as, if not before, the breathing. Considering these facts, and bearing in mind that failure of the heart is often asserted in the reports of death from chloroform, we devised a method of experimentation by which respiration would be eliminated, and the effects of chloroform on the heart observed apart from that complication.

The frog is an animal in which the movements of respiration are not necessary to life, so far at least as the heart is concerned, as that organ continues beating long after these movements have ceased. After subjecting a frog to the vapour of chloroform under an inverted jar till it was anæsthetised, we exposed the heart by cutting the sternum in the middle line. The animal being replaced under the jar, it was found that the heart became rapidly weaker, till it ceased beating. A similar experiment with ether showed a very different result. The exposed heart continued vigorously beating for a considerable time—in fact, as long as the experiment was continued. These facts are quite familiar to physiologists.

With a similar view, a method was devised for warm-blooded animals. Rabbits were first used, and afterwards dogs. The animal was anæsthetised; then the trachea was opened, a tube introduced, and artificial respiration begun by means of a double-acting pump (one cylinder forcing air in, and another sucking it out). By an arrangement of India-rubber tubes, chloroform or any other anæsthetic could be introduced in the circuit between the pump and the trachea. It is to be understood that, in these experiments, the air passed into the animal's lungs was saturated with the vapour of the substance used. After artificial respiration had been set going, the heart was exposed by an incision in the middle line, which was carried by a pair of blunt scissors or bone-forceps through the ensiform cartilage and lower part of the sternum. This was effected generally with no serious bleeding. It soon became apparent that, when chloroform is given in this way, there is at once a most serious effect on the heart; the right ventricle almost immediately begins to distend, and the heart presently stops, with the right ventricle engorged with blood. The heart had often, in the case of rabbits, virtually come to a standstill within a minute of the introduction of chloroform by the method described. The contrast was most striking when ether was used instead of chloroform; the other steps in the experiment being the same. Ether may be given for an indefinite period without interfering with the heart. We kept up artificial respiration with ether in the circuit for an hour, not including twenty minutes occupied in producing anæsthesia; and, at the end of that time, the exposed heart was beating as vigorously as at first.

It was obvious, therefore, that, apart altogether from its action on the respiratory centres, chloroform has a disastrous effect on the heart, while ether has no baneful influence. While presenting in this respect an enormous advantage over chloroform, it was yet apparent, however, that ether has some great disadvantages. The chief of these is the tardiness of its action. In comparative experiments with rabbits, in which the anæsthetics were given on a towel, it appeared that, with chloroform, complete anæsthesia was produced in about three minutes; while, in the case of ether, it took fifteen to twenty minutes to produce this effect, although the cloth was kept saturated. It occurred to us, therefore, to endeavour to find an agent which should be as potent an anæsthetic as chloroform, and yet affect the heart and respiration as little as ether.

II.—EXAMINATION OF VARIOUS SUBSTANCES AS TO THEIR GENERAL ANÆSTHETIC EFFECT.

In testing the various agents used, we employed the methods described above. We administered them to animals, and watched the effects on the heart and on respiration. We used the method on frogs by which the effect on the heart could be observed; and, in the case of some of the agents, we performed the experiment on rabbits and dogs, using artificial respiration, and exposing the heart. It may here be remarked that, in these experiments, the anæsthetics were given intentionally in large doses, because, if any substitute for chloroform is to be found, it must be one which may safely be given in exceptionally full doses. The following substances were administered.

1. *Benzine* ($C_6 H_6$) was used with the frog. Its effects were nearly as slow as that of ether, and it produced struggling; weakening of the heart was apparent, but not so great as with chloroform.

2. *Acetone* ($C_3 H_6 O$) produced only slight anæsthesia in the frog, even after prolonged administration.

3. *Pyrrol* ($C_4 H_5 N$) produced anæsthesia in frogs with considerable less rapidity than chloroform, but great excitement and muscular spasm took place before complete anæsthesia. Administered to three young rabbits subcutaneously, it produced convulsive movements, chiefly of the jaws and fore paws. Anæsthesia in these rabbits was doubtful.

4. *Bichloride of methylene* (so called, but, as it has not a definite and constant boiling point, it is obviously a mixture. Reputed formula, $CH_2 Cl_2$). With frogs, it was found that the heart became quickly affected, and soon stopped. With rabbits, respiration rapidly deteriorated and stopped, while the heart was still beating. In an experiment with artificial respiration and exposure of the heart (as described above), the heart was weakened and soon stopped, but not so rapidly as with chloroform. As in the case of chloroform, the right ventricle became enormously distended—the first sign of paralysis being the commencement of this distension.

5. *Amylene* ($C_5 H_{10}$) was administered to rabbits both by cloth and subcutaneously. No anæsthetic effect was produced.

6. *Butyl chloride* ($C_4 H_9 Cl$) administered to rabbits affected respiration, but not very rapidly. In experiments with exposure of the heart, the cardiac pulsations became weaker, and ceased altogether after some time. In one experiment, it was noted that, almost immediately after complete anæsthesia, the respirations became shallow, and soon stopped.

7. *Ethene dichloride* (formerly named ethylene dichloride, or Dutch liquid, $C_2 H_4 Cl_2$) produced convulsive movements of both extremities, continuing up to death. There was no anæsthesia up to the commencement of the convulsions.

* Read at the Annual Meeting of the Association at Cambridge by David Newman, M.B., one of the Committee.

† BRITISH MEDICAL JOURNAL, vol. i for 1879, pages 1, 103, and 921.

8. *Methyl chloride* (CH_3Cl), which boils at the ordinary temperature, was obtained in alcoholic solution in a sealed tube, and allowed to boil off into a funnel, into which the muzzle of a rabbit was inserted. After somewhat prolonged use, there was not any abolition of reflex action, and the animal almost immediately recovered. The only effect was slight drowsiness.

9. *Ethyl chloride* (C_2H_5Cl, boiling at 12° Cent. = 53.6° Fahr.), administered to rabbits in the same way as the above, produced rapid anæsthesia; but in one case the respirations soon stopped, and in another, when air was admitted more freely, general convulsions occurred.

10. *Nitrous ethyl ether* ($C_2H_5NO_2$) produced great excitement and convulsions, almost immediately followed by cessation of respiration.

It was apparent that the above substances all presented disadvantages which rendered them unsuitable for general use as anæsthetics. There remained two agents, the actions of which were more promising. These were isobutyl chloride and ethidene dichloride.

11. *Isobutyl chloride* (C_4H_9Cl). *a. Experiments on frogs:* When it was administered under a glass jar, complete anæsthesia occurred in about five minutes. The heart was then exposed, and it was observed for thirty-five minutes, during which period its contractions were perfectly vigorous. *b. Experiments on rabbits:* When it was administered with a cloth, anæsthesia was produced in three to five minutes. It was continued after anæsthesia for nearly half an hour, without any interference with respiration. *c. Experiments on dogs:* It was administered on cloth; anæsthesia was produced in four minutes. It was continued for half an hour, and respiration was unaffected, except slight occasional stertor.

12. *Ethidene dichloride* ($C_2H_4Cl_2$, an isomeride of ethene dichloride produced from aldehyde). *a. Experiments on frogs:* Administered as before. The exposed heart continued beating slowly, but regularly throughout the experiment, which lasted in one case twenty minutes, and in another twenty-six minutes. Anæsthesia was produced in four or five minutes. *b. Experiments on rabbits:* It was given on cloth, as usual. Anæsthesia was produced within four minutes. On one occasion, respiration stopped, but soon recommenced. In experiments with artificial respiration and exposure of heart, the cardiac contractions continued vigorous throughout, the observation being continued for forty minutes from the first administration. *c. Experiments on dogs:* It was administered on cloth. Anæsthesia was produced in two or three minutes. In one case, anæsthesia was accompanied with some excitement, manifested by squealing; the animal was a young puppy. In another case, a large dog was kept fully anæsthetised for half an hour, without the slightest failure of respiration or heart. The anæsthesia in this case was very rapid, and the administration was intentionally pushed with successive doses at short intervals, as evaporation took place. The recovery was rapid, and the animal manifested remarkably good spirits. *d.* Two experiments were made on dogs, in which the heart was exposed, artificial respiration being kept up. No failure of the heart's action was observed, although the air passing into the lungs was saturated with the vapour of the substance. There was complete anæsthesia. On quickly removing the bottle containing ethidene dichloride, and substituting chloroform, the right side of the heart began almost immediately to become distended, and to be dark in colour, and the activity of the heart rapidly failed. The contrast between the effects of the two substances on the heart was most striking. Practically, a dog will live for a lengthened period in a state of complete anæsthesia under the influence of ethidene dichloride, while it will die in a short time when chloroform is used.

It is worthy of observation that two substances, butyl chloride and isobutyl chloride, which have the same chemical formula, exhibit such different actions. The same contrast is seen in the actions of ethene dichloride and ethidene dichloride, which are also isomeric. The first of these produced severe convulsions, while the second promises to be an excellent anæsthetic without any convulsive effects.

It was now necessary to test the effects of the two substances whose results seemed promising, and of any others of similar value, on the higher animals and on man.

III. Special Investigation.

With reference to the physiological action of anæsthetics, our attention was, up to this time, mainly occupied with three inquiries, viz.: 1. The changes, if any, produced in the gases of the blood; 2. The changes effected in the gases of respiration; and, 3. The effect of anæsthetics on nervous conduction, and on mental phenomena as observed in man. All these experiments have been of a very laborious character, involving the use of complicated apparatus, and the methods employed to yield satisfactory results only after considerable practice.

1. *The Effect on the Gases of the Blood.*—The blood was collected by means of a graduated tube filled with mercury, and provided with a glass stopcock at each end. The upper end was placed in communication with the aorta or the inferior vena cava of a rabbit (immediately after it had been deeply anæsthetised) by means of a cannula; and, by opening the stopcocks, the blood flowed in at the upper end, replacing the mercury, which escaped at the lower extremity of the tube. It was thus possible to collect the blood without any admixture of air. The small portion of the tube above the stopcock was then washed and filled with a boiled solution of salt, and attached by an India-rubber tube to the tube entering the receiver of a Pflüger's air-pump. The lower end of the tube containing the blood was then inserted in mercury. On opening the stopcock of the receiver, and those of the tube containing the blood, the mercury in the vessel below displaced the blood, which flowed into the exhausted receiver, frothing and evolving gas. The gas was collected in the usual manner, and carbonic acid and oxygen were successively estimated by known methods. Some boiled solution of tartaric acid was then allowed to enter the receiver, and displaced a further quantity of carbonic acid, which was in its turn collected and estimated. A sufficient number of reliable experiments have not as yet been made to permit our giving results.

2. *The Effect on the Air breathed.*—The gases of respiration were analysed as follows. The animal was placed in a tin box with glass sides, provided with a lid of thick brass plating above, fitting over a square hole, and secured tightly by means of a washer of India-rubber and eight strong screw-nuts. Very great difficulty was experienced in procuring an air-tight joint, but the above means proved the best. Air, deprived of carbonic acid by passing through potash solution, and then dried over sulphuric acid, entered the box by means of a tube at one side, and was drawn off at the other, through a tube filled with calcium chloride, and then passed through a set of bulbs filled with solution of caustic potash. The increase of weight of the bulbs in a given time gave the amount of carbonic acid expelled. An attempt was also made to estimate oxygen by passing the air, after absorption of carbonic acid, over a strong solution of ammonia; enough of that gas is carried over to ensure the combination of all the free oxygen with the hydrogen of the ammonia, when the mixture was passed over red-hot copper. Caustic baryta was used to absorb the water formed. The residue consists of a mixture of ammonia and nitrogen; and, after removal of ammonia by sulphuric acid, the remaining nitrogen is so pure that it does not tarnish melted sodium when a stream is directed against it.

The amount of carbonic acid accordingly is given by increase of weight in the potash-bulbs, and that of the oxygen by increase of weight in the tube filled with caustic baryta, after multiplication by eight, and division by nine, to reduce water to oxygen; for water contains eight-ninths of its weight of oxygen.

After ascertaining the normal amount of carbonic acid exhaled, and of oxygen absorbed, by an animal in a given time, it was removed from the box, anæsthetised, again placed in the box, and the gases of respiration estimated. Without giving detailed results, it may be stated that *the effect of chloroform pushed to anæsthesia is to increase the amount of carbonic acid exhaled within a given time.*

3. *Effects on Nervous Phenomena.*—Several curious facts have been elicited with regard to the effects of small doses of chloroform and ether on the rapidity of nervous and mental processes. By a refined method of experimenting with Regnault's chronograph, it was ascertained that a few respirations of air containing chloroform or ether produced remarkable retardation in the time of signalling back that a visual impression had been perceived, although the person operated on was quite unconscious of any such delay. These experiments are interesting chiefly from a psychological point of view.

At this period of the inquiry, ethidene dichloride yielded results so promising as to lead us to enter on a special investigation of its action as compared with chloroform and ether. When we first employed ethidene, we were led to give it a trial from a consideration of its chemical composition, and we were unaware that it had previously attracted notice; but, on looking into the literature of the subject, we ascertained that various observers had already noted some of its remarkable properties.

IV. History of Ethidene Dichloride.

Ethidene was first employed as an anæsthetic by Dr. Snow, of London. He administered it in fifteen cases with good results (see Snow, *On Chloroform, etc.*, last paper, published in 1858). In 1870, it was used by Liebreich and Langenbeck in Berlin (*Berlin. Klin. Wochenschrift.*, Nos. 31 and 33, 1870, p. 401). In 1871, two papers appeared: one by Sauer, in the *Pharm. Centralblatt*, No. 14, p. 140; and the other by Steffen, in *Deutsch. Klinik*, No. 44, p. 398. Sauer mentions one case

of death in a patient suffering from heart-disease. In thirty-three cases, two vomited, and two suffered from nausea and headache. In 1872, Steffen published another paper in the same journal (p. 358), in which he gives details regarding twenty cases, and he states that the results were satisfactory (see also *Jahresb. der Medicin*, 1870, 1871, and 1872, where abstracts are given). It is worthy of note, however, that Snow, whose work in connection with anæsthetics is well known and much appreciated, was the first to use the substance. When he obtained it, it had been used in Paris as an application to joints in rheumatism. What led him to give it a trial as an anæsthetic, does not appear; but he states that the difficulty of obtaining it pure may prevent its general use. That difficulty chemists have now removed, and there is little doubt that, if required, ethidene may be made in a state of purity.

Since we directed attention to this substance in January, 1879, it has been used extensively throughout the country; and, not long ago, Mr. J. T. Clover published in the BRITISH MEDICAL JOURNAL an account of his experience derived from 1,877 cases (May 29th, 1880). In this interesting paper, he gives the particulars relating to a case of death from cardiac syncope after administration of ethidene and nitrous oxide gas, the nitrous oxide having been stopped before the ethidene was given. At the *post mortem* examination, the heart was found to be enlarged, and its fibres were shown to have undergone fatty degeneration. In some of his observations in connection with the cases in which ethidene has been used, Mr. Clover calls attention to its depressing action on the heart, a circumstance to which we will also particularly refer. The Committee believe that ethidene has frequently been used on the continent and in America; but they have found no published records except the above.

V.—Clinical Investigation of Ethidene and Chloroform.

In a report published in the BRITISH MEDICAL JOURNAL (January 25th, 1879), we related six cases in which we had used ethidene as an anæsthetic, and expressed our satisfaction with the results. Since then, we have instituted a series of observations, with the object of contrasting the effects of chloroform and ethidene; and, in order to facilitate the record of these, we drew up the following schedule.

Anæsthetic. Quantity used,
Posture of Patient, and Mode of Administration.
Date. Name. Age. Ward.
Occupation. Disease.
Operation, Condition of Patient.
General Habits.
Administration begun at When completely under
Administration stopped at Time under

——	Pulse.	Respiration.	State of Pupil.	When Given.	Quantity.	Remarks.
Before Administration						
4 Minutes after						
6 "						
8 "						
10 "						
12 "						
14 "						
16 "						
18 "						
20 "						
24 "						
28 "						
32 "						
36 "						
40 "						
44 "						
48 "						
52 "						
56 "						
60 "						

Remarks regarding Pulse and Respiration,
Temperature of Apartment,
Appearance of Surfaces,
Loss of Blood during Operation,
Vomiting or Sickness during Operation,
Vomiting or Sickness within twenty-four hours,
When food or drink last taken,
State of Muscular System while under or on recovering from Anæsthetic,
Patient's sensations while going under and after recovering from Anæsthetic.
General Remarks,

With the kind permission of the surgeons of the Western Infirmary, Glasgow—Professor Macleod, Professor Buchanan, and Dr. Patterson—we were enabled to make the following arrangements. To Dr. Buchanan's cases, ethidene was administered; to Dr. Macleod's, chloroform; and to Dr. Patterson's, ethidene and chloroform, in alternate months. The observations were, with a few exceptions, conducted in the operating-theatre, the temperature of which was on no occasion below 59 or above 64 deg. Fahr. The cases were not selected, except two cases of ovariotomy of Dr. Macleod's, in which ethidene was given; the others were taken as they presented themselves. The anæsthetics were given invariably on a towel, the usual way of administering chloroform in Scotland; and in all the cases the patients were lying upon the back. It is necessary here to explain what is meant by the phrases "When completely under" and "Time under", as they appear in the schedule. It is somewhat difficult to give an exact definition of what is understood when we say a patient is completely under an anæsthetic. In one sense, it might imply the death of the patient; for it is only when the anæsthetic has exercised all its powers, by subduing respiratory movements, and abolishing the functions of the cardiac ganglia, that we can say its action is complete. It is not, however, with this signification that we make use of the term. When sensation and voluntary motion are gone, and the reflex functions of the cerebro-spinal axis are in abeyance so far as concerns the voluntary muscles, so that they are perfectly relaxed and passive, it may be said—at least, from a clinical point of view—that the patient is "completely under". By the term "time under" is meant the time occupied from the beginning of the administration till the patient is so far recovered from the anæsthetic as to be sensible to pain, and able to understand what is said to him. In order to find out the time during which the patient has been *completely* under the anæsthetic, all that is necessary is to subtract the time required to put him under from the "time under", as recorded in the following tables. These tables are constructed from fifty cases of chloroform, and the same number of ethidene.

TABLE I.—*Showing the Time-relations, etc., in Fifty Cases of Administration of Ethidene Dichloride.*

No. of Case.	Time in Minutes required to put Patient under the Anæsthetic.	Time in Minutes under the Anæsthetic.	Time in Minutes between Stoppage of Administration and Recovery.	Dose in Cubic Centimetres.	Age of Patient.	Sex.	Stage during Operation.	Sickness within 24 Hours after Operation.	Vomiting within 24 Hours after Operation.	Appearance of Surfaces. Lips.	Face.	Skin.	Conjunctivæ.
	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
1	4	35	3	[illegible]	12	F.	N.	Sl., 1 h.	N.	G.	G.	W. & D.	N.
2	5	20	4	4[illegible]	[illegible]	F.	Sl.	Sl., 1 h.	Sl., 1 h.	G.	G.	W. & D.	N.
3	3	10	2	[illegible]	53	F.	N.	Sl., 6 h.	Sl., 6 h.	G.	G.	W. & D.	N.
4	3	32	[illegible]	[illegible]	22	M.	N.	[illegible]	[illegible]	G.	G.	W. & D.	N.
5	4	30	6	[illegible]	1[illegible]	M.	N.	N.	N.	G.	G.	W. & D.	N.
6	4	[illegible]	3	[illegible]	43	F.	N.	N.	N.	G.	G.	W. & D.	N.
7	2	32	3	[illegible]	[illegible]	M.	N.	N.	N.	G.	G.	W. & D.	N.
8	3	13	3	22	18	M.	N.	N.	N.	G.	G.	W. & D.	N.
9	[illegible]	35	11	[illegible]	[illegible]	M.	N.	Sl., 12 h.	Sl., 12 h.	P.	P.	P. & D.	N.
10	3	14	4	[illegible]	18	M.	N.	N.	N.	G.	G.	W. & D.	N.
11	4	25	[illegible]	[illegible]	[illegible]	M.	N.	Sl. 1 h.	N.	G.	G.	W. & D.	N.
12	[illegible]	[illegible]	2	[illegible]	[illegible]	F.	N.	[illegible]	[illegible]	G.	G.	W. & D.	N.
13	3	26	4	35	45	F.	N.	N.	N.	G.	G.	W. & D.	N.
14	3	40	1	[illegible]	[illegible]	—	N.	N.	N.	G.	G.	W. & D.	N.
15	4	30	[illegible]	[illegible]	[illegible]	F.	N.	Sl., 2 h.	Sl., 2 h.	G.	G.	W. & D.	N.
16	[illegible]5	33	4	[illegible]	18	F.	N.	Sl., 2 h.	N.	P.	P.	C. & M.	I.
17	5	[illegible]	5	55	[illegible]	M.	N.	N.	N.	G.	G.	W. & D.	N.
18	5	22	11	40	22	M.	N.	Sl. 1½h.	N.	G.	G.	W. & D.	N.
19	4	23	4	[illegible]	[illegible]	M.	N.	Sl., 3 h.	N.	G.	G.	W. & D.	N.
20	6	19	[illegible]	40	10	F.	N.	[illegible]	Sl., 1½	G.	G.	W. & D.	N.
21	9	18	9	48	25	M.	N.	N.	N.	G.	P.	C. & D.	N.
22	3	12	4	40	[illegible]	M.	N.	N.	N.	G.	G.	W. & D.	N.
23	7	[illegible]	3	[illegible]	68	M.	N.	Sl., 2 h.	N.	G.	G.	W. & D.	N.
24	4	17	2	[illegible]	[illegible]	M.	N.	[illegible]	N.	G.	G.	W. & M.	N.
25	3·5	16	3	25	45	M.	N.	N.	N.	G.	G.	W. & D.	N.
26	5	10	3	50	23	M.	N.	N.	N.	G.	G.	W. & D.	N.
27	6	12	4	[illegible]	56	M.	N.	N.	N.	G.	G.	W. & D.	N.
28	6	14	3	25	14	M.	N.	Sev., 12h.	Sev., 12h.	G.	G.	W. & D.	N.
29	2	23	4	25	[illegible]	M.	N.	N.	N.	G.	G.	W. & D.	N.
30	4	10	5	30·5	[illegible]	M.	N.	Sl., 2 h.	N.	G.	G.	W. & D.	N.
31	4	13	4	25	16	M.	N.	N.	Sl., 2 h.	G.	G.	W. & D.	N.
32	10	30	8	60	46	F.	N.	Con. 72 h	Con. 72 h	G.	P.	W. & D.	N.
33	3	25	7	54	14	M.	N.	N.	N.	G.	G.	W. & D.	N.
34	5	23	5	42	12	F.	N.	Sl., 12 h.	Sl., 12 h.	G.	G.	W. & D.	N.
35	5	30	7	45	45	M.	N.	2 h.	h.	G.	G.	W. & D.	N.
36	4	17·5	2·5	40	[illegible]	M.	N.	N.	N.	P.	P.	C. & M.	N.
37	3	15	2	31	27	M.	N.	N.	N.	G.	G.	W. & D.	N.
38	4	17	7	49	[illegible]	F.	N.	Sl., 1 h.	N.	P.	G.	C. & M.	N.
39	4	27	3	[illegible]	47	F.	N.	N.	N.	G.	G.	W. & D.	N.
40	3	17	7	33	14	M.	Sl.	N.	N.	G.	G.	W. & D.	N.
41	5	10	2	20	45	F.	N.	N.	N.	G.	G.	W. & D.	N.
42	4	17·5	4	31	45	M.	N.	Sl., 2 h.	Sl., 2 h.	G.	G.	W. & D.	N.
43	4	[illegible]	3	18	23	F.	N.	N.	Sl. 1½ h.	P.	P.	C. & M.	N.
44	3	30	4	66	35	F.	N.	Sl., 1 h.	Sl., 1 h.	P.	P.	W. & D.	N.
45	3	12	2	15	3	M.	N.	N.	N.	G.	G.	W. & D.	N.
46	4	10	2	20	10	M.	N.	N.	N.	G.	G.	W. & D.	N.
47	2	[illegible]	5	20	14	M.	N.	Sev., 2 h.	N.	G.	G.	W. & D.	N.
48	3	[illegible]	5	17	3	M.	N.	N.	N.	G.	G.	W. & D.	N.
49	2	10	6	12	9m.	M.	N.	Sl., 1 h	N.	G.	G.	W. & D.	N.
50	2·5	10	7·5	[illegible]	19	F.	N.	N.	N.	G.	G.	W. & D.	N.

TABLE II.—*Showing the Time-relations, etc., in Fifty Cases of Administration of Chloroform.*

No. of Case.	Time in Minutes required to put Patient under the Anæsthetic.	Time in Minutes under the Anæsthetic.	Time in Minutes between Stoppage of Administration and Recovery.	Dose in Cubic Centimètres.	Age of Patient.	Sex of Patient.	Sickness during Operation.	Sickness within 24 hours after Operation.	Vomiting within 24 hours after Operation.	Appearances of Surfaces. Lips.	Face.	Skin.	Conjunctiva.
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
1	2	25	13	30	32	M.	N.	N.	N.	G.	G.	C. & M.	N.
2	6	30	5	60	32	F.	N.	N.	N.	P.	P.	W. & D.	N.
3	2	35	15	30	18	F.	N.	N.	N.	P.	P.	C. & M.	I.
4	3	33	8	30	—	F.	N.	N.	N.	P.	P.	C. & M.	I.
5	5	4	11	42	45	—	N.	Sl., 12 h.	Sl., 12 h.	P.	P.	C. & M.	N.
6	12	10	14	35	30	F.	N.	Sl., 4 h.	N.	P.	P.	C. & D.	N.
7	7	30	4	72	67	M.	N.	Sl.	Sl.	P.	P.	C. & D.	N.
8	3	24	8	40	—	M.	N.	N.	N.	G.	G.	W. & M.	I.
9	3	14	3	—	—	F.	N.	N.	N.	P.	P.	C. & M.	I.
10	4	30	5	22		M.	N.	N.	N.	G.	G.	W. & D.	I.
11	6	14	4	28	—	M.	N.	N.	N.	G.	G	W. & D.	I.
12	3	10	2	18	2.5	F.	N.	N.	N.	P.	P.	C. & M.	I.
13	5	12	4	25	50	M.	N.	N.	Sl.	P.	P.	C. & M.	I.
14	4	[illegible]	6	12	20	M.	N.	Sl., 24 h.	Sl., 24 h.	P.	P.	C. & M.	N.
15	3	22	7	35	36	F.	N.	N.	N.	P.	P.	C. & M.	N.
16	3	10	3	16	15	F.	N.	N.	N.	P.	P.	W. & D.	N.
17	5	22	3	49	47	M.	N.	Sl., 30 h.	N.	P.	P.	C. & M.	N.
18	8	18	2	25		F.	Sev.	N.	N.	G.	G.	C. & M.	N.
19	6	2	7	27	16	M.	N.	N.	N.	P.	P.	C. & M.	I.
20	10	13	3	32	50	F.	Sl.	Sl., 24 h.	N.	P.	P.	W. & D.	N.
21	5	10	5	45	44	F.	N.	Sev. 12 h.	Sev. 12 h.	P.	P.	C. & M.	N.
22	5	14	5	35	14	M.	N.	N.	N.	P.	P.	C. & M.	N.
23	4	15	4	37	30	F.	N.	Sl., 12 h.	N.	P.	P.	C. & M.	N.
24	7	1	2	12	15	M.	N.	N.	N.	P.	P.	C. & M.	I.
25	4	12	3	20	25	M.	N.	Sl., ½ h.	Sl., ½ h.	G.	G.	W. & D.	N.
26	3	27	3	30	3	F.	N.	Sl., 2 h.	N.	G.	G.	W. & D.	N.
27	4	5	8	37	12	M.	N.	Sl., 1 h.	Sl., 1 h.	P.	G.	W. & D.	N.
28	5	15	3	37	5	F.	N.	Sl., ½ h.	N.	G.	G.	W. & D.	N.
29	5	5	2	30	8	M.	N.	N.	N.	G.	G.	W. & D.	N.
30	3	7	3	38	16	M.	N.	Sl., 2 h.	Sl., 2 h.	P.	P.	C. & M.	N.
31	4	10	4	53	15	M.	Sl.	Sl., 3 h.	Sl., 3 h.	G.	G.	W. & D.	N.
32	7	16	4	34	22	M.	N.	Sl., 2 h.	Sl., 2 h.	P.	P.	C. & M.	N.
33	7	13	4	72	15	F.	N.	Sl., 2 h.	Sl.	G.	G.	C. & M.	I.
34	4	8	3	18	14	M.	N.	N.	N.	G.	G.	W. & D.	I.
35	4	10	2	30	12	M.	N.	N.	N.	G.	G.	W. & D.	I.
36	5	25	7	53	40	M.	Sl.	48 h.	N.	G.	G.	C. & D.	N.
37	4	16	8	30	3 m.	F.	N.	N.	N.	P.	P.	W. & D.	I.
38	5	12	2	26	24	M.	N.	N.	N.	P.	P.	C. & M.	I.
39	5	13	4	27	74	M.	N.	N.	N.	G.	G.	W. & D.	N.
40	5	18	4	14	19	F.	N.	Sev. 24 h.	N.	P.	P.	C. & M.	I.
41	5	13	3	30	77	M.	N.	N.	N.	G.	G.	C. & M.	N.
42	5	10	3	19	27	F.	N.	Sl., 12 h.	N.	G.	G.	W. & D.	N.
43	3	11	3	25	49	M.	N.	Sl., 2 h.	N.	P.	P.	C. & M.	I.
44	4	15	5	33	33	M.	N.	N.	N.	P.	P.	W. & D.	N.
45	5	11	3	5	16	F.	N.	Sl., 2 h.	Sl., 2 h.	P.	P.	W. & D.	N.
46	6	15	4	35	35	M.	N.	N.	N.	G.	G.	W. & D.	N.
47	6	11	4	31	20	M.	N.	Sl., 4 h.	Sl., 4 h.	G.	G.	W. & D.	N.
48	7	25	7	60	24	M.	N.	N.	N.	G.	G.	W. & D.	N.
49	8	18	2	40	16	F.	N.	Sl., 2 h.	Sl., 2 h.	G.	G.	& D.	N.
50	5	10	1	24	18	M.	N.	Sl., 4 h.	N.	G.	G.	C. & M.	N.

FACES [illegible] *Explanation of letters used in columns* VII, VIII, IX, X, XI, XII, XIII.—In column VII, it is intended to indicate that in the cases where [illegible] occurred during the operation; in column VIII, the [illegible] in the condition of the conjunctiva. Sl. signifies [illegible] N. [illegible] before it, shows the length of time the vomiting [illegible], being a contraction for hour. N., in columns VIII and IX, means that nothing of sickness occurred. In the columns showing the appearances of surfaces, G. signifies that the colour was *good*; P., that it was *pale*. W. [illegible] was *warm*; C., *cold*; M., *moist*, and D., *dry*. I., that the conjunctiva was *injected*.

In Table I. the observations, as recorded in the ethidene schedules, are inserted so as to show at a glance the history of each case, and, at the same time, in such a form as to facilitate the comparison, not only of individual cases, but also the general results of our investigations. It will be observed that, at the foot of the first four columns, figures are given showing the average time in minutes required to put the patient under the anæsthetic; time under the anæsthetic; time occupied in recovery; and the average dose in cubic *centimètres*. The same plan is adopted in Table II. Let us first contrast these results. It may be here stated that, before making up these tables, our general impressions as to the comparative results were somewhat different from what is shown in the figures before us. The average dose of ethidene may be stated as 40.3 c. c.; or, in other words, 1.8 c.c. for each minute during which the patient is under the anæsthetic; whereas, in the case of chloroform, the average dose is 31.8 c. c., or 1.7 c. c. for each minute.*

* The method we adopted for administering the anæsthetic (on a towel) prevents us from arriving at a conclusion as to the actual amount of anæsthetic vapour which entered the patient's lungs: the results in respect to the doses given are, therefore, only comparative.

It will be further seen, that the time required to put the patient under chloroform is greater by 1.1 minute (5.4—4.3) than what is necessary to anæsthetise with ethidene. In connection with these observations, there are several points which must be taken into consideration. First, owing to the average time during which the chloroform patients were under the anæsthetic being less (18 m.) as compared with those who had ethidene (22.3), the dose per minute (1.7 c. c.) is proportionately increased in the case of chloroform; for it is during the first few minutes that the greater quantity of the entire dose is administered. When the patient is once under the anæsthetic, a comparatively small quantity is required to keep him under. The same cause may also account for the difference in the time necessary for recovery from the effects of the agents. In chloroform, the average time required is 4.8, with ethidene 4.4, minutes. The chloroform average is considerably augmented by the figures given in Cases 1, 3, 5, and 6; in all of which the time occupied was more than twice, and in one case (No. 15) more than three times, the average. Deducting these five cases, the average will be found to be 4.1 in the place of 4.4 minutes. There are only three cases in which the time necessary for recovery from ethidene was more than double the average (Nos. 9, 18, and 21).

In two cases in which ethidene was employed, sickness during the operation is recorded. In Case No. 2, it is accounted for by the fact that the patient, shortly before the operation, had taken a glass of milk. (The usual practice in the Western Infirmary is to allow the patients to have a cup of beef-tea five or six hours before the operation, but nothing after that time.) The sickness in the other case (No. 40) occurred as the patient was recovering from the anæsthetic. In twenty-four cases, sickness is recorded as occurring within twenty-four hours after the operation, in fifteen of which it was associated with more or less vomiting. In most of the cases, the vomiting was slight; in three cases (Nos. 4, 28, 32), however, it was severe. The average length of time during which the sickness and vomiting lasted is shown in Columns VIII and IX. Taking the average (omitting Case No. 32), in which it is questionable whether or not the vomiting was due to the anæsthetic, it will be found that the mean is 3 hours 17 minutes in the twenty-two cases of sickness, and in the thirteen cases of vomiting the average is 4 hours 21 minutes. These averages are considerably increased by Cases Nos. 9 and 28, in each of which the sickness and vomiting lasted for twenty-four hours. If we take the mean of the time occupied in putting the patients who have suffered from sickness and vomiting under ethidene, it will be noticed that it is equal to 4.6 minutes, while the average dose of the anæsthetic is 43.5 c. c. or 1.4 c. c. per minute. Both of these it will be observed are a little above the general average. In two cases, there was vomiting without sickness.

Let us now examine the condition of things in the cases where chloroform was administered. In four cases, we had vomiting during the operation; in three it was slight, in one severe. One of these cases was an out-patient (No. 31), so there was some doubt as to the time he last partook of food. It is a remarkable coincidence that, as with ethidene, there are twenty-four cases of sickness after the operation; and of these, fourteen suffered from vomiting, whilst one complained of vomiting without sickness. In two cases, the sickness was severe; in the others, it was comparatively slight. The mean duration of the sickness is ten hours, and of the vomiting five hours fifty minutes. In one case of sickness, and three of vomiting, the duration is not noted; it was, however, only for a short time. With some of the cases, as Nos. 14, 17, 20, 36, and 40, the sickness was prolonged; in the last four of these, it will be noticed that there was no vomiting. The mean time occupied in placing these cases under the anæsthetic is 5.7 minutes; whilst the average dose is 33.5 c. c., or 2 c. c. per minute. As with ethidene, both of these figures are slightly above the general average, but in neither of them is the increase sufficiently regular, or of such an amount as to lead us to believe that the actual increase in the dose is in any way responsible for these symptoms, nor has the time during which the patient is anæsthetised any relation to them. Thus, in the case of ethidene, the mean is 24 minutes, as compared with 22 minutes in the cases all over; and with chloroform, 17 minutes as contrasted with 18. The condition of surfaces is best seen by referring to the tables.

VI.—Influence of Ethidene and Chloroform on Pulse-Respiration Ratio.

The next point to which we desire to direct attention is one of considerable importance, and the only one in which there is much distinction between the action of the two anæsthetics: namely, their influence on the pulse-respiration ratio. Of the fifty cases in which ethidene was given, in only one instance did the pulse fall to 64 per minute, and the lowest number of respirations in the same time may be stated as 16. Both the pulse and respiration are particularly regular in a number of cases; as, for instance, in No. 4, Table I, where the mean

of the respirations per minute is 18.2, the maximum 19, and the minimum 17; the pulse mean 83.2, the maximum 92, and the minimum 80.

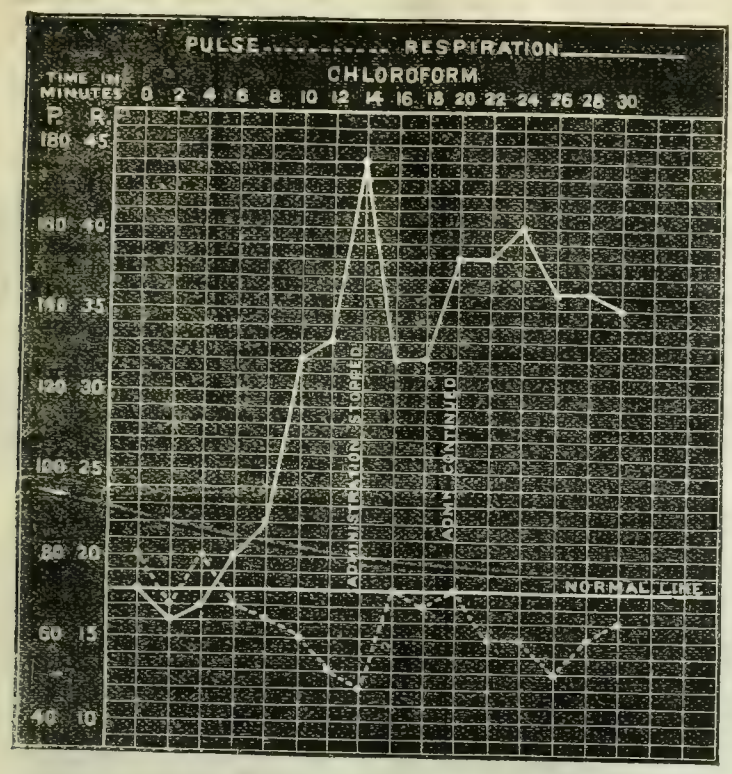


Fig. 1.

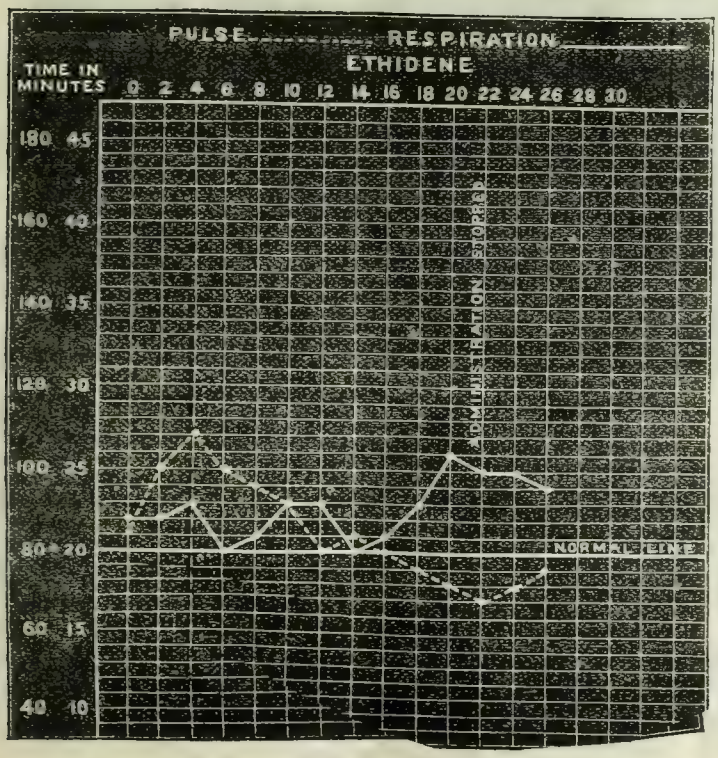


Fig. 2.

With chloroform, the results are somewhat different. In five cases, the pulse fell to 64, in seven to 60, in five to 56, and in one to 48 per minute; and the respirations rose in five cases to between 30 and 35, in six to between 35 and 40, and in five to 40 or slightly over it; in one case (No. 37) to 72 respirations per minute. With chloroform, as with ethidene, in some cases there is particular regularity in both the pulse and respirations, as in case No. 33 (the one in which the pulse-respiration changes are least marked), the mean number of respirations per minute is 24.2, the maximum 26, and the minimum 23; whilst the pulse mean may be stated as 96.8, the maximum 108, and the minimum 92 per minute. The cases are, however, few in which chloroform does not produce a greater effect upon the pulse and respiration. In a certain class of cases, the pulse-respiration ratio is greatly altered, the pulse falling as the respirations rise. With ethidene, such cases are comparatively rare, and the changes observed are not so marked. Out of fifty cases in which chloroform was given, nine show the changes to which we refer; whilst in only two of the ethidene cases are they seen, and even in these they are not very striking.

The following charts show the comparative effect of ethidene and chloroform in this respect; the ethidene case is selected as the most marked of the two; the chloroform one shows about the average of the nine cases above referred to.

Take first the chloroform chart (Fig. 1). The normal line is fixed a little below that of the ethidene (Fig. 2), on account of the difference in the ages of the patients: the one (chloroform) aged 40, the other 11 years. The continuous line shows the respiratory, the dotted line the pulse curve. The most striking feature in the chart is the great rise in the respirations, and fall in the pulse below the normal line. Shortly after the commencement of the administration of chloroform, there is a slight fall in the pulse (from 80 to 68) and the respiration (from 18 to 16), followed by an increase from 68 to 80 in the former, and 16 to 17 in the latter. For the next ten minutes, there is a continuous fall of the pulse (to 48 per minute) and rise in the respiration (to 44 per minute). Within the next two minutes, the pulse rises to the normal line, and the respiration falls to 32. This change corresponds with an interruption in the administration of the anæsthetic for four minutes. The subsequent administration of the chloroform is followed by a similar, though not so extensive, alteration in the pulse-respiration ratio. It will be observed that the fall in the pulse is concomitant with the rise in the respiration. It is also to be observed that, in those cases where the pulse-respiration ratio was considerably altered, the pulse showed a tendency to become dicrotic, so that a double impulse was communicated to the finger. Thus, a pulse where the beats equalled sixty per minute might easily be mistaken for one where the impulses were a hundred and twenty. Associated with these changes, we have also indications of low arterial tension. Although the ethidene case is selected as being the one in which pulse-respiration changes are most marked, yet there is a manifest difference as contrasted with the chloroform one. There is a slight rise in the pulse for the first four minutes, followed by a gradual but almost continuous fall from 108 (at four minutes) to 68 (at twenty-two minutes), succeeded by a slight rise, corresponding with the stoppage of the administration. The first rise in the pulse is in advance of a fall in the respiration, and the subsequent rise in the respiration is preceded by a diminution in the frequency of the pulse; after the fourteenth minute, the respiration slowly rises to 26, and again falls to 25 before the administration of the ethidene is stopped. In only one case in which ethidene was given, did the pulse become dicrotic.

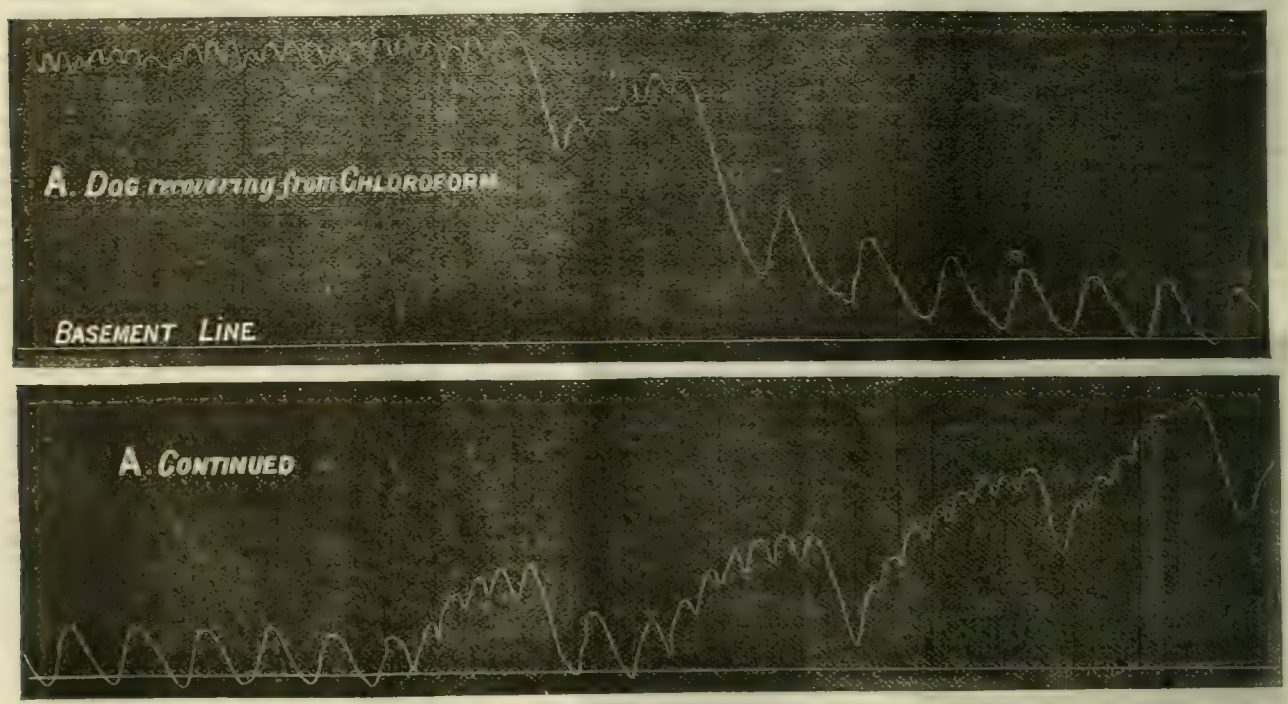
So much for our researches from a clinical point of view; we will now call attention to a series of experiments made with the object of investigating the condition AND ETHYLENE in animals under chloroform, ethide.

VII. INFLUENCE OF CHLOR...mittee* of the Royal Medi...

In the rep... bers of this committee were T. B. Curling, Th... Cartwright, Arthur Farre, George G. Gascoyen, Ge... Prescott Hewett, F. W. Mackenzie, William Marcet, Char... James Paget, William O. Priestley, Richard Quain, Fra... Dundas Thomson, Charles West, Septimus W. Sibley, G... der, John Birkett, and J. T. Clover, assisting.

Chirurgical Society, to inquire into the uses and effects of chloroform, published in the *Transactions* for 1874, vol. xlvii, there is a very excellent but brief record of the blood-pressure under chloroform and ether. The instrument used in these experiments was the hæmadynamometer of Poiseuille, which consists of an U-shaped tube, with mercury in the bend. One limb of the tube was connected with the femoral artery, and the rise of the mercury in the opposite limb indicated the blood-pressure. By means of this instrument, the committee were enabled to report that, on administering chloroform, there was at first a transient rise of the blood-pressure; after which, there was a gradual, but not a regular, fall. They also noticed that, when the force of the heart was reduced by chloroform to the full extent, the respiration of fresh air was at once followed by a rise of the mercury. In regard to ether, it was found that the primary rise in pressure was greater and more constant than with chloroform; and that the depressing effect was very slight or altogether absent.

In our experiments, we have been able to amplify these results; and, by means of more delicate instruments, to obtain more exact records. We have used a very complete kymograph, in the Physiological Laboratory of the University of Glasgow, made by Rudolph Rothe of Prague,* by means of which the variations in the column of mercury, produced by the pulsations in an artery, are written (by means of a stem which floats on the mercury) on a sheet of blackened paper, which is carried round by a clockwork arrangement. A sheet of paper, eight feet long, is adapted to the machine; and, as three or four lines of tracing can



be taken at different levels on the same sheet, a continuous tracing may be obtained of twenty-four, thirty-two, or even more feet. But, further, the sheets can be changed in a few seconds and so it is possible to take tracings of almost any length.† The instrument has also appliances by which time can be recorded in seconds, half seconds, or otherwise, on the tracing, with the tracing of the blood-pressure. (See Tracing A.) We have used two arrangements by which the exact time of commencing and of continuing an anæsthetic can be marked.

In the case of the rabbit, we have obtained records of experiments in rabbits and dogs, being of much the greater value. In the case of the rabbit, there seems to be delicible from these records considerable interest which is chiefly under chloroform, any fresh administration, even when the animal is apparently under the influence of the remarkable variations in blood-pressure, with retardation of the contractions. (See Tracings C and H.) There is frequently a heart's

* See Dr. McKendrick's *Outlines of Physiology*, page 352.

† In one case a tracing one hundred and fifty feet long was obtained.

dip in the pressure, to the extent of forty *millimètres* out of a total of one hundred and ten *millimètres*; and in the next few contractions, there is a very rapid rise up to the former level, to be succeeded by another sudden dip. This occurrence followed so uniformly in certain stages of chloroform-narcosis, on every approximation of a sponge containing the agent, even for a few seconds, to the animal's muzzle, that it was regarded as probably reflex. This is rendered all the more probable by the known fact that ammonia-vapour, applied to the nostrils of a rabbit, causes stoppage of the heart's action.* When the chloroform is given continuously, these variations gradually cease, and there succeeds a regular and gradual fall of pressure down to zero, if the agent be pushed. It was noticed that, in one or two instances, ethidene produced sudden variations in pressure similar to those of chloroform, but that ether did not. Our experiments were not fully prosecuted on rabbits in regard to the more permanent effects of these two agents; but it may be said in general that ether seemed to have no effect on blood-pressure, while ethidene reduced it to a considerable extent, but not to total extinction, like chloroform.

Turning to our experiments on dogs, the very first observation made was an exceedingly striking one. (See Tracing A.) The animal used was a black retriever, six or seven months old. Chloroform was given, and during deep anæsthesia a cannula was introduced into the carotid artery, and connected with the kymograph. By the time connection with the kymograph was established, no chloroform had been given for about two minutes. On first making the connection, the pressure registered 104 *millimètres*, which may be regarded as nearly normal; but now, without any fresh dose, the pressure rapidly fell to zero, with a remarkable retardation of the heart. Each pulsation had a height of 9 *millimètres*,† and a duration of a second and a half. After this the pressure rose with remarkable variations, equal to from 13 to 16 *millimètres*, referable to the respiratory movements. (See right-hand part of Tracing A.) It is to be remembered that the animal had at this time, to a great extent, recovered from chloroform, as evidenced by the high initial pressure; and this sudden fall of pressure is apparently reflex in character; the heart being, perhaps, more liable to such influences under the conditions present. A fresh administration of chloroform at this time led to a fresh variation of pressure, somewhat resembling those already referred

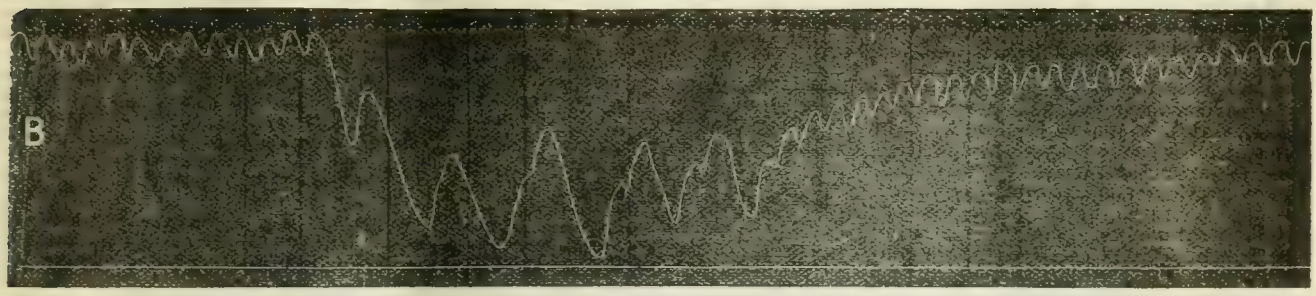
* See Professor Rutherford's paper in *Journal of Anatomy and Physiology*, vol. xvi, p. 277, "Cause of the Retardation of the Pulse which follows Artificial or Voluntary Closure of the Nostrils of the Rabbit."

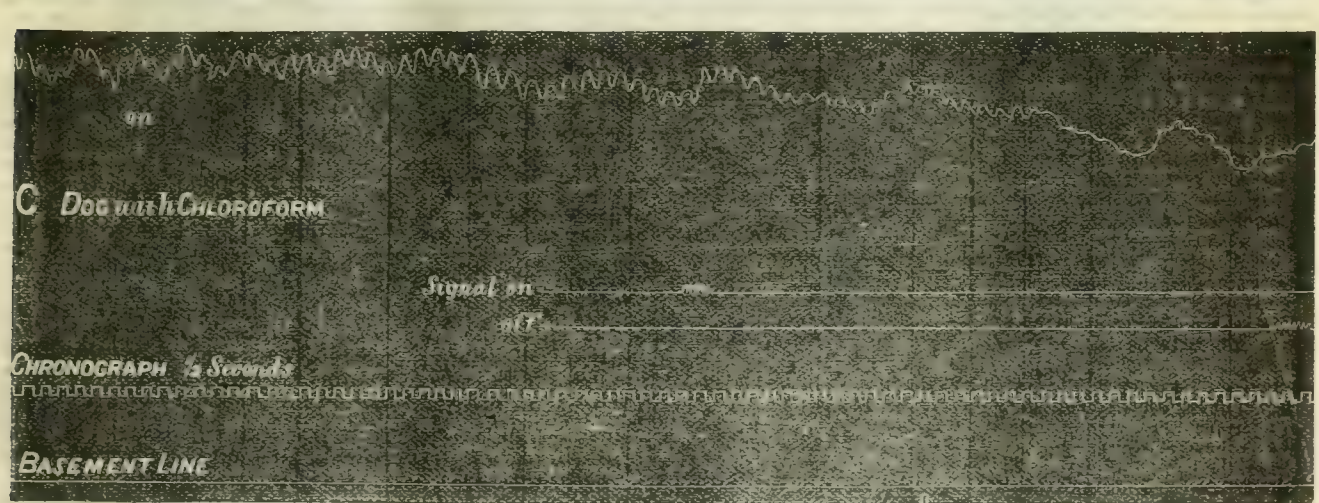
† It will be understood that the figures given represent the column of mercury raised, or the difference in level of the mercury in the two limbs of the U-shaped tube. This will always be double the distance from the point at which the mercury in the two limbs is level, or the basement line in the tracing.

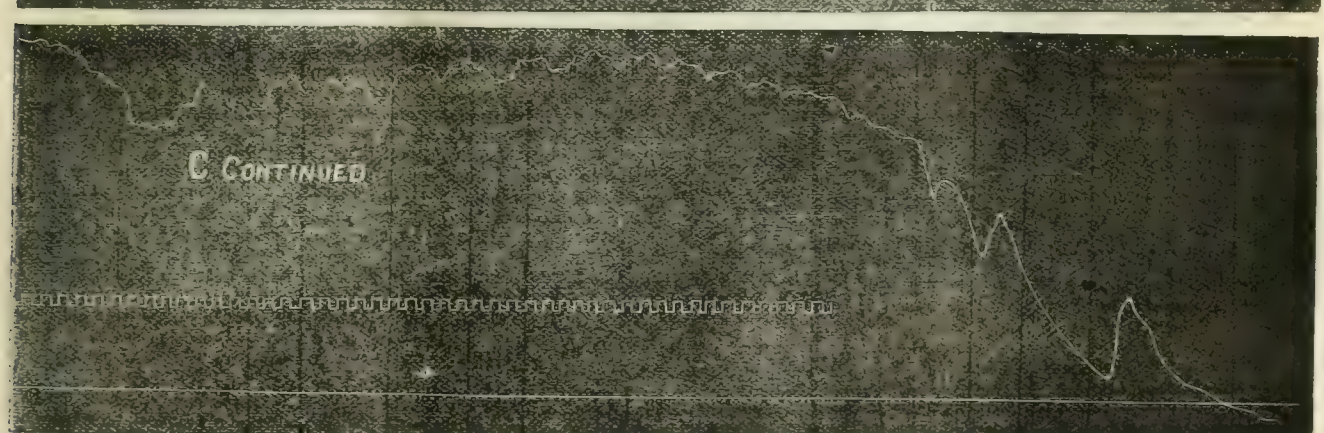
to in the case of rabbits. On continuing the administration, all irregular variations were abolished, and the presure gradually fell; but the agent was not in this instance pushed very far. During recovery from this administration, seventy seconds after the chloroform had been removed, and when the pressure had risen to 66 *millimètres*, there was, without any apparent cause, an occurrence somewhat like that at the outset, but less in degree. (See Tracing B.) The pressure fell to 20 *millimètres*; and the heart's pulsations became infrequent, each pulsation taking a second and half. This continued for six beats, when the pressure rose slowly to 100 *millimètres*, with recovery of the frequency of the pulsations.

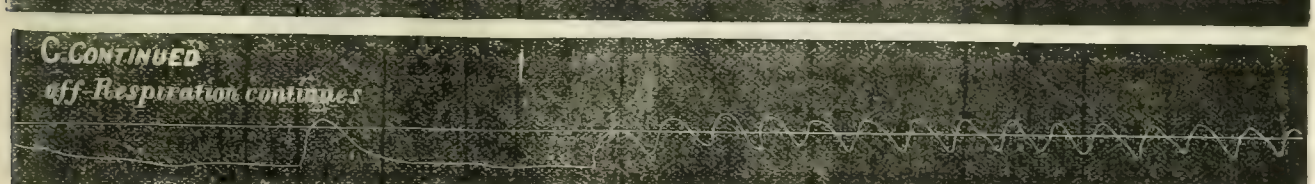
Ether administered to this dog produced little effect on the pressure; if anything, it improved it. There was slight diminution of pressure when the animal was struggling and howling.

Ethidene was given while the animal was still to some extent under the influence of ether. The pressure gradually but very slowly fell, and, under repeated doses, reached a minimum of 20 *millimètres*. The agent being still continued, the pressure began to rise, and had reached 28 *millimètres* when it was removed. Subsequently, ethidene was again given; and, after prolonged and constant use, the pressure was gradually brought down to 7 *millimètres*, when the administration was stopped.









It should be noted that all this time the respiratory movements were uninterrupted.

The same dog was used for a further set of experiments, which were prosecuted after a short interval, during which the animal partially recovered.* The pressure at the beginning of this series registered 110 *millimètres*, and the variations of pressure with respiration were well-marked. (See Tracing C. The respiratory curve is seen at the left of the tracing.) Chloroform being given, there was an almost immediate fall of pressure, with considerable variations, and reduction in the frequency of the heart's pulsations. The pressure remained about 70 or 80 *millimètres* for about half a minute; and then there was a very rapid fall, with great retardation of the pulsations, till the heart almost ceased. There was an interval of three seconds between two of the pulsations, of nine seconds between the next two, and of six seconds between the next; the pressure in these intervals being *nil*. (See Tracing C.) The chloroform was removed when this rapid fall occurred. During this period, the respiration continued. The pulsations were now resumed; but between each pulsation the pressure was *minus*, and the pulsation, only raised the mercury 10 *millimètres*, generally just to the basement-line; while the beats occupied about one second and three-quarters. After twenty-nine of these pulsations, the breathing stopped, while the pulsations went on regularly as before. After a few seconds, artificial respiration was used, by alternately compressing the chest and leaving it to expand. This being prosecuted for thirty seconds, spontaneous respiration was resumed, and the pulsations became more marked, having a rather higher excursion than before, but still returning to a pressure of zero between each two pulsations. This continued for about forty-two seconds, when the pressure began to rise; and this went on continuously till, in a hundred and sixty seconds, a height of 100 *millimètres* was reached.

We have dwelt in some detail on this last experiment, because we regard it as one of unusual interest and importance. It is to be remembered that this animal got chloroform in the usual way, by a cloth saturated with the agent being held over his mouth and nose. He received no overdose, and the administration only lasted seventy seconds. As bearing on at least one mode of death under chloroform, the relation of the heart's action to respiration is of particular significance. The blood-pressure is enormously reduced, and the pulsations have become so unfrequent as to be virtually ineffectual, yet respiration continues. But respiration stops forty seconds after the heart has resumed, the pulsations being still, however, so ineffectual, that the pressure is even minus.† We believe that the legitimate inference to be drawn is that the stoppage of respiration was not due directly to the chloroform, the inhalation of which had ceased for about forty-eight seconds. It seems likely that the failure of the heart in the first instance, and the insufficiency of its subsequent pulsations, were the cause of the failure of respiration. In such a state of the circulation, the respiratory centres would probably be insufficiently supplied with blood, and be consequently liable to cease acting. In this case, if death had occurred, it would only apparently have been due to the failure of the respiration, the primary failure being that of the heart. To what extent this may apply to human cases, we do not venture to speculate.

We now resume consideration of this set of experiments. The animal was allowed to recover considerably, and the pressure had reached 106 *millimètres*, when ethidene was administered. There was a slow but steady fall of pressure, the lowest point being reached in about 120 seconds, when the height was 36 *millimètres*. Continuing the administration, there was a slight rise, up to 50 *millimètres*, when the administration was discontinued. During the administration, the cardiac pulsations were regular in frequency, with slight variations in the height of the waves, probably depending on respiration.

It will not be necessary to give our further experiments in such detail. In one set, we kept up artificial respiration by means of the pump,‡ administering the anæsthetics by passing the air through a Wolff's bottle containing the respective agents. In these experiments, chloroform promptly reduced the pressure, which began to recover almost immediately on its removal. On continuous administration, the pressure fell much more gradually than by the ordinary method, and the lowest point reached still represented a considerable pressure, about 65 *millimètres*. The initial pressure was 132 *millimètres*. Ethidene was begun at a pressure of 80 *millimètres*, the recovery from the chloroform depression being incomplete. After prolonged use, there was a fall to 54 *millimètres*. On removal, a gradual recovery ensued, which attained to 80 *millimètres*. Ether was then given, when again a slight fall in pressure ensued.

It may here be incidentally remarked that with artificial respiration there were very exaggerated variations of pressure, as shown in Tracings H and K; these respiratory variations, however, only occurred when the animal made respiratory movements coincidently with the pumping. When as a result of deep anæsthesia, respiration ceased on the part of the animal, the respiratory variations also ceased, although the artificial respiration was kept up.

The next experiment is a somewhat interesting one, offering in a certain sense the converse of one already narrated. The same animal was used as in the last experiment; the tracheal tube was left in, and the animal breathed through it. The anæsthetics were administered by holding a cloth soaked with the agent over the mouth of the tube. Chloroform was given, and there was an almost immediate fall of pressure, but the fall was gradual, and in 234 seconds had reached 28 *millimètres*, when the chloroform was stopped. The respiration ceased just after the chloroform had been removed. Artificial respiration was at once resorted to; but in spite of this, the heart ceased beating twenty-one seconds afterwards. It is remarked, however, that although there were no indications of the heart's pulsations on the tracing, the pressure was maintained at 28 *millimètres*, and it is just possible that there may have been slight pulsations too feeble to be recorded. The pause of the heart continued for twenty-one seconds, and the pulsations were then resumed very feebly and irregularly. The pressure rose gradually to 46 *millimètres*, when a spontaneous respiration was given; then, with long intervals, spontaneous respiration was resumed, and the artificial respiration was stopped, as it was not required.

In this observation, it seems undoubted that the respiration failed first. The rapid failure of the heart is a remarkable circumstance, especially when the comparatively high pressure is considered. It is possible that the introduction of artificial respiration may have had to do with it. The respirations before they ceased were shallow; and though the air in the lungs was saturated with chloroform, little of it would find its way into the blood in the very limited respiratory movements. The introduction of artificial respiration would at first force the saturated air rapidly through the lungs, which would be vigorously inflated, and a large amount of chloroform would be introduced into the blood.

After the animal had recovered from this experiment, ethidene was given. There was a fall of pressure; but, though administration was continued in frequently repeated doses for nine minutes, the blood-pressure only fell to 38 *millimètres*, and there was no failure of respiration. Before the ethidene was removed, the pressure had risen to 60 *millimètres*. (See Tracings D and E; E is continuous with D after a considerable interval.) The respiratory curve was preserved even at the point of lowest pressure, and the regularity of the heart's pulsations was not interfered with.

In this animal the pneumogastrics were now cut, and the observations were repeated both with and without artificial respiration. It cannot be said that any essential difference was apparent in the results. The pressure fell both with chloroform and with ethidene, but the fall was perhaps not so rapid nor so great as under other circumstances. While artificial respiration was used, ethidene and chloroform were successively pushed to a very great extent, the Wolff's bottle being heated to facilitate the evaporation of the agents. Yet the blood-pressure was not reduced to the lowest, even with this treatment; and in the case of ethidene it even began to rise under it. The effect on the respiratory variations in pressure was remarked during these experiments. In the case of ethidene, even when the agent was given to the fullest extent, the respiratory curve, though very much diminished, did not entirely disappear. In the case of chloroform, the respiratory curve disappeared completely, and that shortly after the commencement of administration. The cardiac pulsations in the case of chloroform became scarcely perceptible, the pressure, however, not falling below 40 *millimètres*. With ethidene, in the same circumstances, the cardiac pulsations remained of nearly normal amplitude.

As a result of the whole set of experiments with this dog, it may be said that the heart showed throughout a remarkable state of vigour. It only exhibited signs of giving way on one occasion, and in that case the blood-pressure was maintained at a comparatively high position. On the other hand, respiration failed during the administration of chloroform very readily. In these respects, this animal contrasts with the former one. It is quite obvious, also, that on those occasions when the breathing ceased, the animal would almost certainly have died, but for the use of artificial respiration.

In some further experiments which we made with another dog, using

* During the whole of these experiments anæsthesia was complete, and the partial recovery referred to was indicated by a return of blood-pressure to the normal.

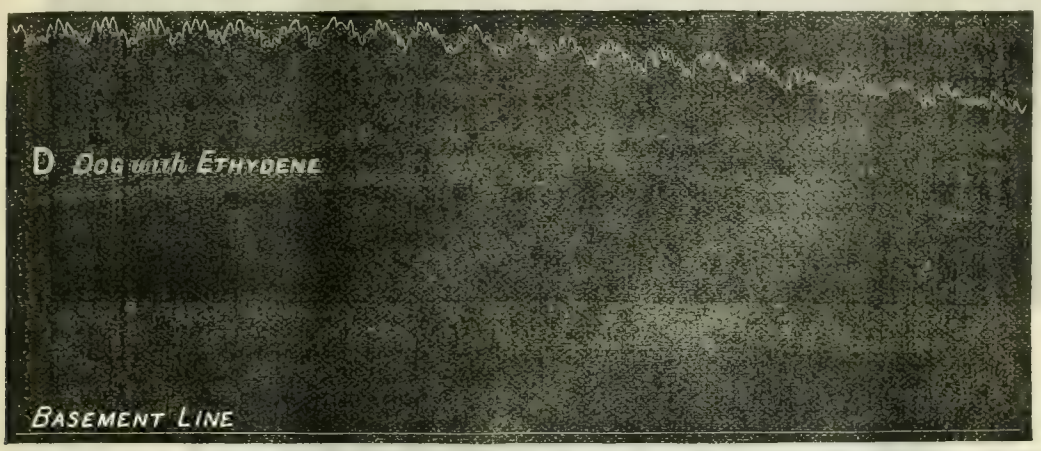
† That there was no fallacy here, was determined by testing the instrument after words, when the zero line was found to indicate no pressure.

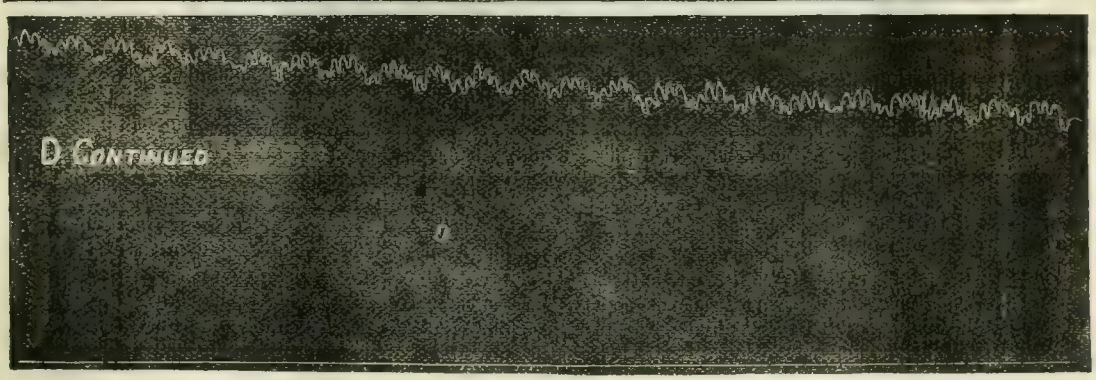
‡ The apparatus for artificial respiration used in the Physiological Laboratory, University of Glasgow, is the double piston pump, made by Rudolph Rothe of Prague, and figured in his price list.

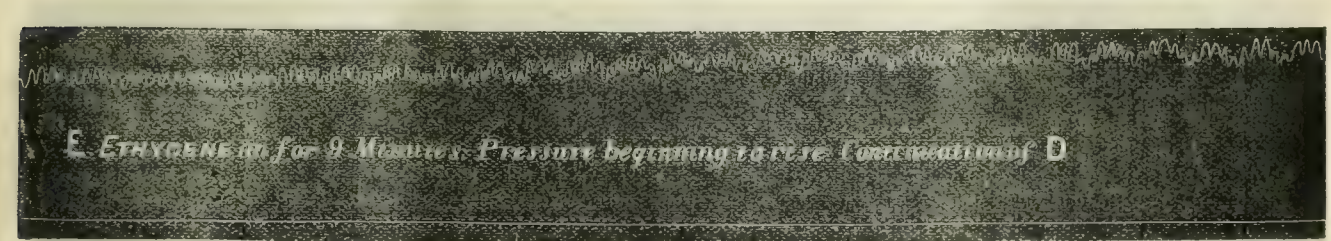
Fick's kymograph,* a more remarkable result was obtained. Both respiration and heart had stopped under the use of chloroform, but by means of artificial respiration, (by the pump) there was ultimate recovery, although the pulsations of the heart had ceased for a considerable time. In this case there could not be any feeble pulsations keeping up the circulation at a slow rate, as was supposed to be possible in a former case, because Fick's arrangement registers very accurately the slightest variations in the pressure produced by the heart's action. In the case of this dog also it was observed that several times, after a period of shallow respirations, the breathing stopped for a brief interval, the heart beating with considerable vigour. As respiration had ceased, no more chloroform was admitted to the blood, and after a time, the respiratory movements returned. So much was this the case that difficulty was experienced in killing the dog with chloroform, and this was only effected by administering it by artificial respiration, after the spontaneous movements of respiration had ceased. By artificial respiration an additional quantity was introduced, and the heart soon succumbed.

These facts are of considerable importance, as they show the varying effects of chloroform in the same animal at different times. At one period, respiration and the heart failed nearly at the same time. At another, respiration failed, and the heart, being still vigorous, was able to carry on the circulation till the chloroform had been sufficiently eliminated to allow the recovery of the respiration.

Some of the tracings referred to in the text are here reproduced. The basement line represents the point at which the needle was when the mercury in the two limbs of the manometer was level. According to the pressure, the mercury is pressed down in the one limb and raised in the other, the tracing giving the latter. As the actual pressure equals the weight of the column of mercury raised, this will be represented by the difference in the levels in the two limbs, and will be double the distance from the basement line to the tracing. The tracings are to be read from left to right.







A. Represents the occurrence mentioned in the text, in which, while a dog was recovering from chloroform, a sudden fall of pressure occurred, with great reduction in the frequency of the heart's contractions. There is a gradual recovery, with striking inequalities of pressure, corresponding with respiratory movements.

B. Another sudden fall of pressure and retardation of the heart's contractions, occurring seventy seconds after the removal of the chloroform, and when the pressure had returned nearly to the normal.

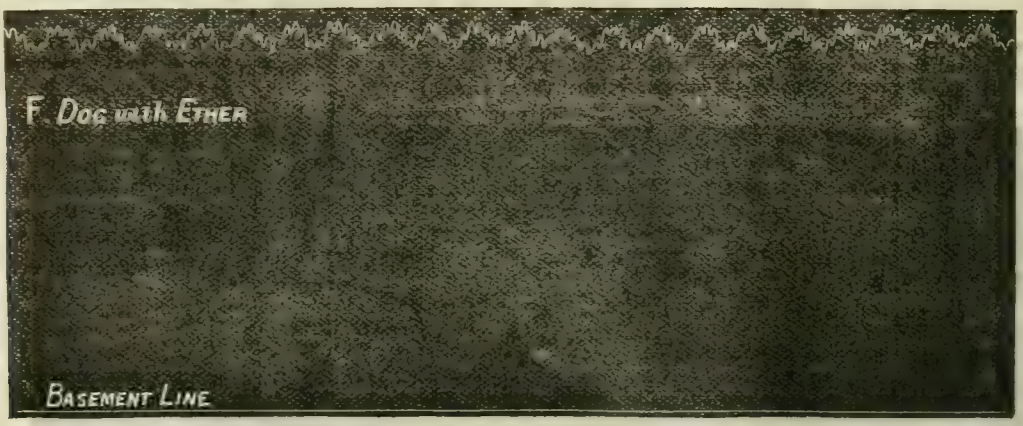
C. The arterial pressure in a dog under the influence of chloroform. There is a progressive but somewhat irregular reduction of pressure, ending in a stoppage of the heart, while respiration continues. There

* Shown in Dr. McKendrick's *Outlines of Physiology*, page 257.

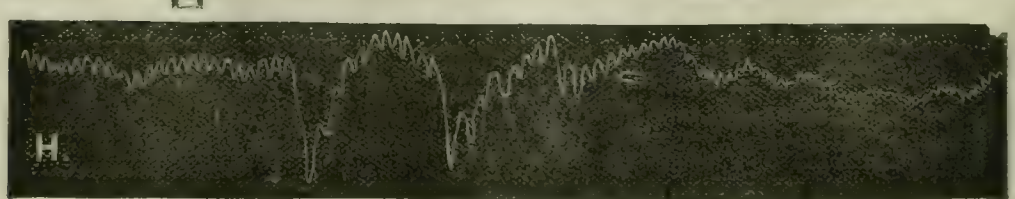
is an imperfect recovery of the heart, the contractions barely causing the pressure to reach the basement-line. Beneath this tracing are copies of the markings made with the chronograph, half-seconds being registered. The markings used to indicate the administration or leaving off of an agent are also reproduced.

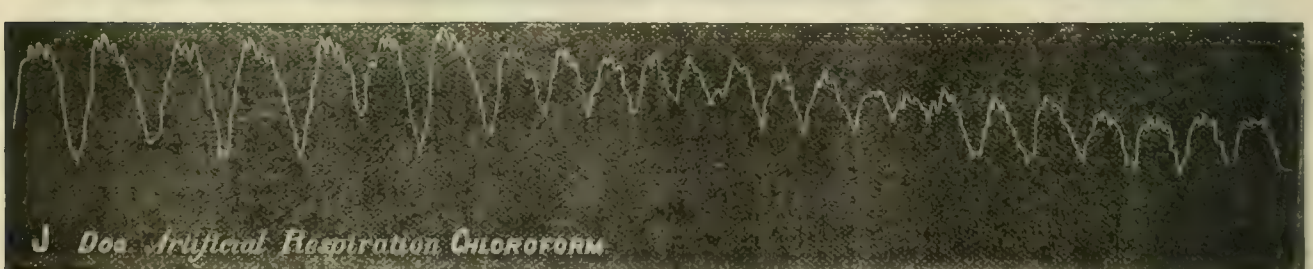
D. The arterial pressure in a dog under the influence of ethidene. There is a perfectly regular and gradual reduction in the pressure, the respiratory variations being preserved.

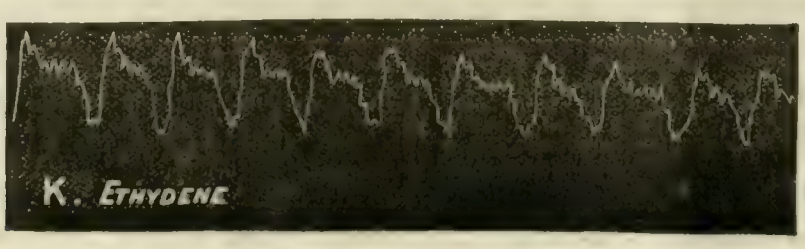
E. This is a continuation of D, after an interval. Ethidene has been given all the time, and the illustration begins at the point where the pressure is lowest. The pressure is now beginning to rise, the ethidene being still continued.











F. The arterial pressure in a dog under the influence of ether. No effect on the pressure is produced, and the respiratory variations are perfectly preserved.

G and H show the variations in pressure produced in rabbits by the administration of chloroform, the animals being at this time imperfectly under its influence. These variations are presumed to be reflex.

J and K show the exaggerated respiratory variations produced while artificial respiration was being carried out. It is to be understood that the animals made synchronous respiratory efforts. The arrangement for artificial respiration not only blew air into the lungs, but also sucked it out.

VIII.—Effect of Anæsthetics on Pulmonary Circulation.

We now pass on to the consideration of the effects of anæsthetics upon the pulmonary circulation and the lung-tissue itself.

One of the most striking effects of anæsthetic agents is the engorgement of the right side of the heart and the large veins near it. This has been directly observed by the Committee, and is well known. It is evidently a matter of importance to ascertain the causes of this phenomenon, which might be due to debility of the heart, to some change occurring in the lung resulting in obstruction, or to some influence on the circulation acting through the nervous centres governing it. The research now reported has reference to the effect on the pulmonary circulation.

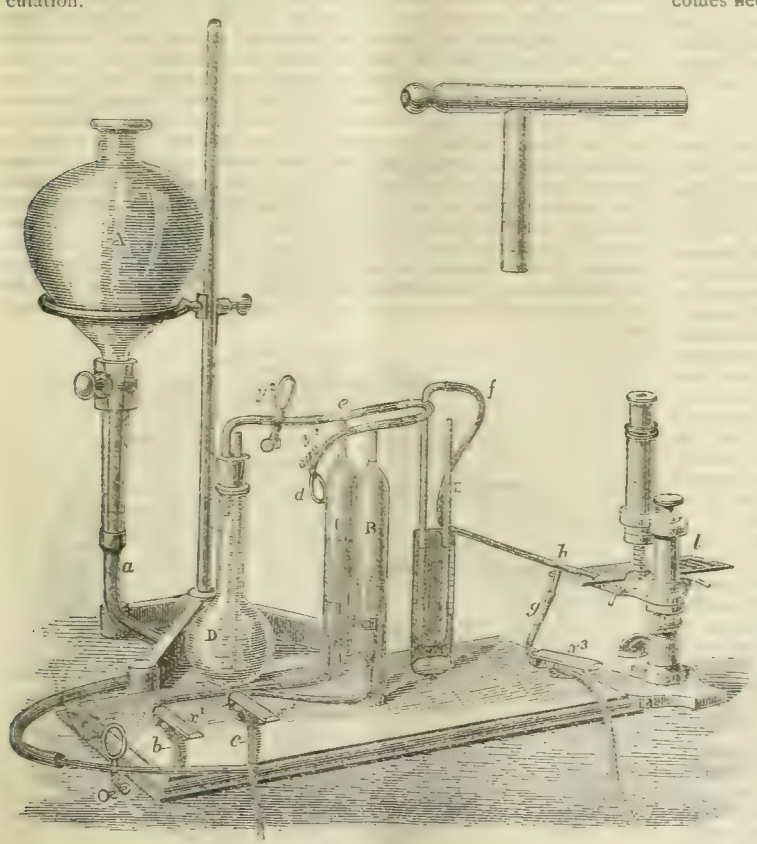


Fig. 1.

At the very outset, it was found necessary to devise a special apparatus for carrying on artificial respiration in the frog; so, before considering the results of the experiments, it will be requisite to describe it, and narrate the mode of procedure.

The apparatus, a drawing of which is shown in Fig. 3, consists of two graduated cylinders, B and C, capable of holding 100 c. c. each; the former being a reservoir for air, the latter containing a supply of anæsthetic vapour. Associated with each of these is a series of tubes, the connections and uses of which may be seen by referring to the drawing. From the pressure-bottle (A) passes a tube (*a*), which divides into three portions, two of which (*b* and *c*) pass under the keys (x^1 and x^2) to C and B; while the third branch passes downwards, and is fastened with a clamp the same as y^2. The glass cylinder C terminates in a T-tube (*e*), one limb of which conducts to a flask (D) containing the anæsthetic, while the other passes to the manometer E. The upper part of the vessel B likewise terminates in a T-tube, the one limb leading to the manometer, the other (*d*) communicating with the air. From the manometer (E) passes a tube (*f*) going to the cannula (*h*). The cannula is different from what is commonly used, and is represented on the upper right-hand corner of Fig. 1. It consists of a glass T-tube, one limb (that introduced into the glottis of the frog) of which is about 15 mm. in length; this, after being slightly constricted, terminates in a small ball.

Let us now explain the method of working the apparatus. The pressure-bottle (A) contains a quantity of water, which, by reason of its elevated position, exerts a pressure upon the contents of B and C. There are a number of clamps used in closing the India-rubber tubing at various points; the action of these will be explained as we go along, and understood by referring to the drawing. Supposing now that we wish to carry on artificial respiration with air or anæsthetic vapour. The clamp to the right of *b* is opened, whilst all the others are closed. To inflate the lungs with air, open the key x^1; and with anæsthetic vapour, x^1; and to empty the lungs, open x^2. It will thus be seen that, to carry on artificial respiration with air, all that is necessary is to open and close alternately x^2 and x^3; and with anæsthetic vapour, x^1 and x^3. When all the vapour in C is displaced by water, and it becomes necessary to have a fresh supply, close the clamp to the left of *b*, open y^2, and allow the water to escape through the tube, the prolongation downwards of *c*, by removing the clamp and opening the key x^1; the anæsthetic vapour will then be sucked from D into C; thereupon close all the clamps, open the one to the left of *b*, and begin the respiration afresh. When a supply of air is wanted, open y^1 in the place of y^2; *l* is a cork plate upon which the frog is laid.

One of the first difficulties in conducting the experiments was the trouble experienced in keeping the cannula in position after its introduction into the glottis of the frog, and several attempts were made to fasten it by means of a ligature. This method was soon given up, on account of its awkwardness. The cannulæ shown in Fig. 3 are found to answer very satisfactorily. It is advisable, however, to have them of several sizes; this being necessary on account of the differences in the dimensions of the glottis in individual frogs. By passing a pin through the upper and lower jaws of the frog, so that it is external to the angle formed by the two limbs of the cannula, the cannula is kept in perfect position without the use of a ligature. To complete the manipulative portion of the experiment, it is now requisite to make an incision in the thoracic wall, through which the lung is protruded; this is best accomplished by placing the frog upon its back, making a longitudinal cut of about three-quarters of an inch halfway between the spine and sternum, beginning about a quarter of an inch below the axilla. The lung being inflated, it passes through the incision just mentioned; and the circulation may be now watched under the microscope with a power of from 50 to 300 diameters.

In conducting the experiments, certain points require to be observed: (1) the quantity of air or anæsthetic vapour passed into the lungs during inhalation; (2) the pressure used; and (3) the time occupied. The first of these was regulated by measurement; the second indicated by the manometer. To save the trouble, however, of measuring the quantity for each inspiration, the following method was adopted. The lung having been distended by a suitable quantity of air (from 3 to 4 c. c., according to circumstances), and a certain point brought into focus, the condition of the circulation was observed. By opening the key x^3, the lung collapsed. Now, instead of inflating, and again focussing, the microscope was kept fixed, and air or anæsthetic vapour, as the case might be, passed into the lung till, by distension, the same point as before came into view. The focus may be as accurately fixed by gently pressing upon the keys x^1 or x^2, as by the adjustment of the microscope. This method had not only the advantage of submitting the same portion of lung for examination, but also guaranteed its equable distension throughout the experiment, and so obviated fallacies which might arise from variation in the quantity, or in the pressure of the atmosphere in the lung. The average quantity of air or vapour used to inflate the lung of a good-sized male frog equals 4 c. c., and the pressure 55 mm. (water manometer). During the experiment, the exposed surface of the lung was kept moist with a few drops of saliva applied occasionally. We will now give a few examples from a series of experiments.

Experiment 1.—A frog was placed in a bell-jar containing a piece of blotting-paper saturated with chloroform; the web of the right foot (the one to be subsequently examined) being, however, kept outside the jar. In two and a quarter minutes, when reflex action was destroyed, the cannula was introduced into the glottis, the frog laid upon the cork plate, and its right lung exposed, as described above. On inflating the lung with air, the circulation both through the capillary and large vessels was found to be active; pulse 18 per minute. Artificial respiration was now carried on by means of the apparatus, 50 c. c. of an atmosphere containing chloroform being inspired in fifty seconds. Fifteen seconds after the first inspiration, a distinct change could be observed in the rapidity of the flow of blood through the capillaries, even though the circulation in the larger vessels was unimpaired, and the number of the heart's impulses remained unchanged. By fifty seconds, however, not only had the pulse become diminished in number to a fourth, but the capillary circulation of the lung and web ceased; and by seventy-five seconds the flow of blood through the large vessels both of the lung and foot entirely stopped; while the heart-beats, as observed through the thoracic walls, were four per minute. Air was now substituted, and 400 c. c. passed through the lungs in eight minutes. By this time the heart-beats had increased to nine per minute, and the blood began to flow slowly through the larger vessels of the lung. No movement could be detected in the web. When, however, 600 c. c. of air had been expended in artificial respiration (the time occupied being twelve minutes), the pulse rose to 15; the flow of blood through the lung became as vigorous as before; while the circulation in the foot gradually increased, and in a few minutes became as active as before chloroform was administered by artificial respiration.

Experiment 2.—This experiment was performed in exactly the same manner as the last, with the exception that ethidene dichloride was used in place of chloroform. Instead of taking two and a half minutes, as with chloroform, to lose reflex action, it required nearly five minutes. On exposing the lung, its substance was found to be brighter in colour, and the circulation more active, than when chloroform was administered. The pulse was 23 per minute; 250 c.c. of ethidene vapour were now passed into the lung (time 180 seconds). Forty-five seconds passed before any change could be observed. In 105 seconds, however, the capillary circulation in the lung and web ceased, and in 180 seconds the flow through the vessels stopped, at which time the heart's impulses were seven per minute. The stoppage of the circulation was almost simultaneous in the web and lung. Artificial respiration was now carried on with air. After 100 c.c. had been given (time 50 seconds), a slight movement of the corpuscles was observed in the vessels of the lung, and in 75 seconds in the foot. When 250 c.c. (time 120 seconds) of air had been passed through the lung, the capillary circulation gradually became established; and, by the time (240 seconds) 250 c.c. had been respired, it was as active as at the beginning of the experiment, and the pulsations of the heart rose to 18 in the minute.

Experiment 3.—In this experiment, ether was used as the anæsthetic. The frog, placed in an atmosphere of ether, took eight and a half minutes to lose reflex action (pulse 24 per minute). The naked eye and microscopic appearances of the lung were much the same as when ethidene was administered. 500 c.c. of ether vapour were given before the circulation in the large vessels of the lung could be stopped (time twelve minutes), whilst the capillary circulation required 175 c.c. (time 110 seconds) before any change could be noticed, and 300 c.c. to make it stop completely—the pulse being 6½ in the minute. The frog was now made to inhale air. When 150 c.c. had been given, the circulation began to be re-established in the larger vessels, the pulse being nine per minute, and, when the air passed into the lungs amounted to 200 c.c., the capillary circulation also returned to what it was before the ether was given artificially. Chloroform vapour was now given for 180 seconds to the same frog with the following results. In fifteen seconds, a marked change was observed in the capillary circulation; in thirty, it stopped; and in forty-five, the flow through the large vessels ceased.

Before passing to the consideration of the minute changes in the lung, let us contrast the following points as regards the comparative effects of chloroform, ethidene, and ether.

1. The time required to produce complete stoppage in the pulmonary circulation.
2. The amount of anæsthetic vapour employed.
3. The quantity of air necessary to re-establish the circulation in the lung.
4. The time occupied in restoring the circulation.

By glancing at the above experiments, it is, in the first place, to be observed that the changes produced by the three anæsthetics employed differ only in the rapidity of their occurrence, not in kind. Thus chloroform may be placed at one extreme, ether at the other, whilst ethidene occupies an intermediate position. The relative effects of these anæsthetics are shown in the following table, constructed from the above experiments, which were chosen as showing strictly average results.

	Chloroform.	Ethidene.	Ether.
1. Time required to produce complete stoppage of pulmonary circulation ..	75 seconds	180 seconds	270 seconds
2. Amount of anæsthetic vapour employed..	50 c.c.	250 c.c.	500 c.c.
3. The quantity of air necessary to re-establish circulation in lung	600 c.c.	250 c.c.	200 c.c.
4. Time occupied in restoring the circulation.	720 seconds	240 seconds	180 seconds
5. Heart's impulses before artificial respiration	18	23	24
6. Heart's impulses when circulation has stopped.	4	7	6½

The difference in the action of these anæsthetics will be seen, from the above table, not only to depend upon a variation in the amount of anæsthetic vapour required to produce complete stoppage of the circulation in the lung, but also on the want of uniformity in the quantity of air nccessary to restore it to its former condition. For instance: the chloroform vapour necessary to stop the circulation is 50 c.c., administered in 75 seconds; ethidene, 250 c.c., administered in 180 seconds; and ether, 500 c.c., in 270 seconds. Now, it might be expected that the amount of air required to eliminate the ethidene taken up by the lung, during its exposure to the action of 250 c.c. of vapour, should be greater than that needed to free the circulation from the effects of 50 c.c. of chloroform; and more particularly when it is observed that the time during which the ethidene vapour was in contact with the lung amounted to almost two and a half times as long as the chloroform. But this is not the case. In fact, the contrary may be affirmed. The longer it takes to place the circulation in abeyance, and the greater the amount of anæsthetic vapour used, the shorter is the time requisite to re-establish the pulmonary circulation, and the smaller the amount of air necessary to do so; in other words, the length of time and the amount of air employed in artificial respiration, with the object of restoring, is in an inverse ratio to time and amount of anæsthetic vapour required to stop, the circulation. The impulses of the heart, both in relation to their frequency and other characters, will be more carefully studied further on.

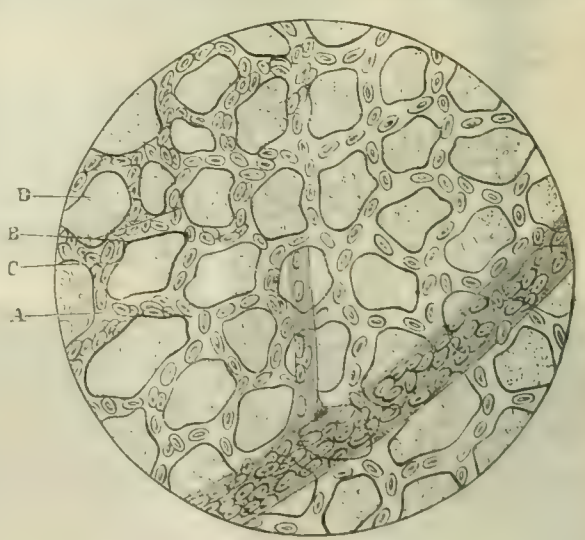


Fig. 4.

The next question which presents itself for our consideration is one of considerable importance and interest, namely: what are the changes which take place in the lung when anæsthesia is pushed to its utmost point; and how are these alterations to be explained? We will first attempt to describe the changes, and then proceed to the consideration of the causes which bring them about.

When anæsthetics are administered in excessive quantities, the first change noticed in the circulation in the lung is a diminution in the rapidity of the flow of blood in the capillaries; and this, notwithstanding that the number of the heart's impulses remains unchanged, and the circulation through the larger vessels is unimpaired. Very shortly after this, instead of the flow of blood being constant, it gradually becomes

intermittent—first in the capillaries, afterwards in the arterioles, and subsequently in the larger vessels. This intermission in the flow of blood is followed by a swinging to-and-fro movement of the corpuscles, just previously to the stoppage of the circulation through the capillaries.

It must now be observed that the stoppage of the circulation in the lung takes place first in the capillaries, then in the arterioles, and, last of all, in the larger vessels; further, that the sequence in recovery is exactly the reverse. Again: it is to be noticed that the circulation in the foot stops—not previously to, but shortly after, that of the lung; and its re-establishment never occurs before, but always subsequently to, the restoration of the pulmonary circulation. The more minute changes to be observed in the lung are represented in the woodcuts, figures 4 and 5.

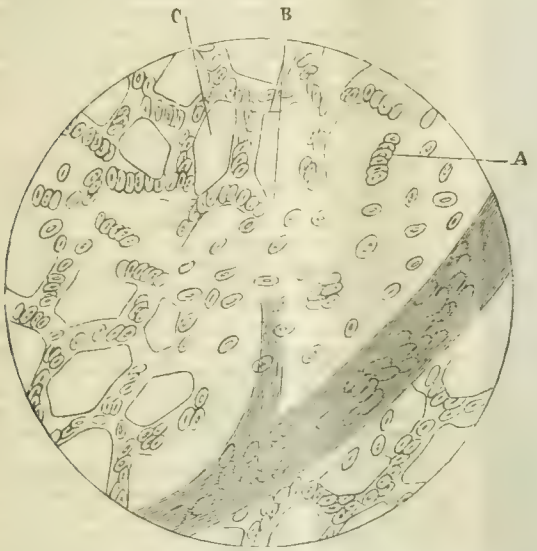


Fig. 5.

When the lung is *not* over-distended, and the amount of anæsthetic vapour administered is moderate, a plexus of irregularly shaped meshes may be observed, formed in the alveoli by the capillary vessels. The diameter of the capillaries varies from .0225 to .0275 mm.; while the size of the corpuscles may be laid down as from .020 to .025 mm.; and the enclosed spaces from .040 to .060 mm., or even more. The meshes (Fig. 4, B) not only vary in size amongst themselves, but also at different times, according to the pressure exerted upon the air in the pulmonary sac. So much is this the case, that, should the lung be over-distended, the meshes become so stretched that they diminish the calibre of the capillaries, and so retard, or even prevent, the flow of blood; hence the necessity of having the lung equally inflated throughout the experiment. While the circulation is active, the contour lines of the flat, irregular-shaped alveolar epithelium (Fig. 4, D) of the meshes, as well as their nuclei (Fig. 4, C), may be distinctly seen, and the outline of the capillaries (Fig. 4, B) is well marked. When, however, the anæsthetic has been pushed so as to stop the pulmonary circulation, the individual epithelium-cells become at first indistinct; the nuclei also become less evident, and subsequently disappear; so that, instead of presenting the aspect of cellular structures, the meshes enclosed by the capillaries show themselves as if they were spaces filled with granular protoplasm. Further, the limitation of the meshes themselves (Fig. 5, B) becomes so indistinct, that it is with considerable difficulty that the course of the capillaries can be traced. This difficulty is increased by the tendency of the corpuscles to aggregate themselves at certain points (Fig. 5, A), and so leave empty spaces where the capillaries, partly on account of this deficiency, become invisible (Fig. 5, B). The want of clearness in the definition of the capillaries is not, however, entirely due to the absence of corpuscles; for even where the corpuscles are abundant (Fig. 5, A), the capillary walls are less distinct than when the circulation is active. As regards the calibre of the arterioles and capillaries, it may be roughly stated that the former contract a sixth, the latter a ninth, from what they were previous to the administration of the anæsthetic vapour by artificial respiration. The causes of this contraction will be considered hereafter. Should repeated supplies of air be now passed into the lung, the condition of that organ will be restored to what it was before the anæsthetic was given.

The corpuscles themselves appear also to be altered by the action of the anæsthetic vapour, in so far that, at some points, they appear as if they had become completely disintegrated, and their place filled by a mass of a reddish-coloured material, which disappears on the re-establishment of the circulation.

The granular appearance presented by the contents of the meshes, and the disintegrated condition of the corpuscles, are not represented in Fig. 5, in which figure the outline of the corpuscles is too distinctly shown.

In order to determine the effect of anæsthetics upon the cardiac impulses, another series of experiments became necessary. These experiments were performed by means of the same apparatus referred to at page 962. A sheet of paper, eight feet long, and broad enough to accommodate ten tracings at different levels, was adapted to the cylinders, so that a continuous tracing of eighty feet, if necessary, might be obtained; at the same time, a record of time was taken, corresponding to each individual tracing; and, besides, by means of electro-magnetic arrangements, the periods at which anæsthetics were administered or certain changes observed were recorded. Fig. 6 shows selected portions of these tracings.

The method adopted in recording the movements of the heart was very simple. The heart was supported upon a small stage, so as to prevent the movements occasioned by artificial respiration affecting the tracings of its impulses. A lever, 20 c.m. long, was placed obliquely across the heart, so as to rest both upon the auricle and ventricle—in order that the first portion of the upstroke might correspond with the contraction of the auricle. When the ventricular contractions closely follow those of the auricle, the ascent line is straight, and no indication of the latter as separated from the former can be detected; whereas, if the ventricular contractions are delayed, the lower portions of upstrokes become curved (Tracing VIII, Fig. 6).

With the purpose of instituting a standard of comparison, a tracing of the heart's impulses is shown in Fig. 6, Tracing I, where the frog was under the influence of curare. The heart's impulses were 40½ per minute, while the period of activity may be said to occupy 2.5 hundredths of a minute, so that the period of rest, as far as indicated by the tracing, may be regarded as *nil*.

Chloroform was now given for fifteen minutes, by means of artificial respiration, to the curarised frog, and another tracing taken (Fig. 6, Tracing II). It may now be observed that the heart's beats are 23 per minute, and still the period of rest is not distinctly marked. In these tracings the up-strokes are rapid, and the periods occupied in the contractions are not great. Tracings III and IV show the pulsations of the heart under the influence of ether, the former immediately on the heart being exposed, the latter after ether had been administered for seven minutes by artificial respiration. The pulsations in III and IV are 21 and 19 respectively, so that, as contrasted with Tracing I, they may be said to be diminished in number by about a half. The period of rest is not well marked in either of these tracings. Tracings V and VI were taken from a frog under the influence of ethidene, the one on exposing the heart, the other after ethidene had been given by artificial respiration for five minutes.

Let us now examine these tracings more carefully. In Tracing V, the pulsations are 16 per minute. The period of activity occupies about 2.8, and that of rest 3.5 hundredths of a minute. The ascent-line is not quite straight, there being a slight curve both at the apex and base; the apex is rounded, and the descent line slightly sloped. In tracing VI, the impulses are diminished in number to 7 per minute. This diminution will be seen to be due to two causes: first and principally, to prolongation of the period of rest; and, second, to lengthening of the period of action, so that not only are the spaces between the waves greater, but the intervals between the origin of the ascent-lines and the termination of the down-strokes are also increased. To represent this in figures, it may be said that the period of activity equals a little more than four-hundredths, and the period of rest ten-hundredths of a minute. Tracings VII, VIII, IX, and X are those of a frog under the influence of chloroform. Tracing VII, immediately on exposure of the heart; VIII, after artificial respiration with chloroform for two minutes, 150 c. c. of vapour having been employed; IX, recovery after artificial respiration with air for three minutes; and X, after giving 200 c. c. more of chloroform-vapour, the time occupied being two minutes. The impulses in Tracing VII are 11 per minute. It will be observed that, from the termination of the down-stroke to the beginning of the following ascent-line, there is a gradual rise in the tracing. This is due to the slow filling of the cavities of the heart. The up-strokes are slightly curved, the apices rounded, while the descent-lines are almost straight. By pushing the chloroform by means of artificial respiration, we always get tracings similar to what is represented in VIII. Take, for instance, the large wave in the centre of the tracing:

instead of the up-stroke arising directly from the basement-line, it is preceded by a small wave (A^1), corresponding with the contraction of the auricle. From the apex of this wave it rises slowly so as to form the ascent-line, which terminates in a rounded apex. The descent-line frequently terminates in a smaller wave (Tracing X, A^2), which also corresponds with a contraction of the auricle. It is further to be noted that the auricular contractions (Tracing VIII, A^2) are not always followed by corresponding ventricular movements, the auricle continuing to contract at regular intervals, although the ventricle ceases to respond.

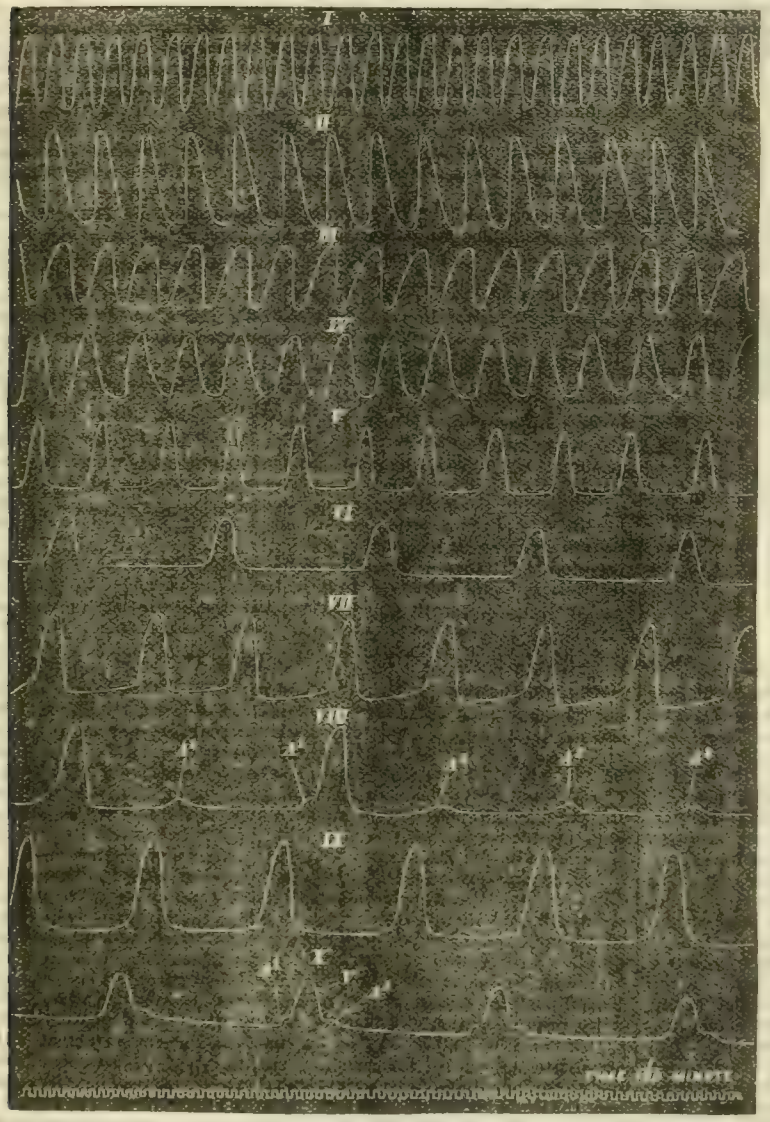


Fig. 6.

Let us now consider the facts demonstrated by the tracings, placed alongside the changes observed in the lung by means of the microscope.

It is evident that the interference with the proper action of the heart accounts to a considerable extent for the changes in the pulmonary circulation and tissue. Thus the slowing of the circulation through the lung, and the diminution of the calibre of the arterioles and capillaries, correspond exactly with the impairment of the heart's impulses; but then, again, it may be questioned, how far the stoppage of the heart depends upon increased resistance to the flow of blood through the pulmonary vessels. We have shown above that, when the lung is exposed, the current of blood is continuous, there being no intermittent movement, as a result of the ventricular contractions; when, however, anæsthetics are administered in larger quantities, the flow becomes interrupted, the arterioles and capillaries diminish in calibre, and certain changes are observed in the pulmonary tissue. The changes in the diameter of the vessels may be regarded as a result of a retardation, and less forcible contracting of the ventricle; or it may be due to local effects of the anæsthetic upon the lung, producing greater resistance to the flow of blood, and so preventing the heart emptying itself. The latter idea is supported by the fact that, when the animal is deeply under the influence of the anæsthetic, particularly chloroform, the heart is greatly distended. Another fact which must not be forgotten is the change in the condition of the corpuscles and of the capillaries. The mutual relationship of these may be so altered, by the direct action of the anæsthetic, that the force of the heart required to propel the blood through the pulmonary vessels is increased; while, by reason of the action of the anæsthetic upon the heart, the power at its disposal is considerably diminished. The disintegration of the blood-corpuscles, as pointed out above, shows distinctly that the anæsthetic vapour has a direct effect upon the blood.

IX.—SUMMARY.

From the observations recorded, we feel warranted in drawing the following conclusions.

A.—Clinical.

I. The dose (admininistered on a towel) is greater with ethidene than chloroform; but the time necessary to anæsthetise the patient is longer with the latter than the former agent.

II. The number of cases of sickness and vomiting is about the same with the two agents, but the duration is considerably protracted in the case of chloroform; the occurrence of these symptoms have no relation to the length of time the patient has been under, or reference to the quantity of anæsthetic administered in a given time.

III. With both agents, the pulse-respiration ratio is considerably altered in a certain number of cases, the pulse falling as the respirations increase in frequency. With chloroform, this change is not only much more marked, but its occurrence is also more frequent than with ethidene; the proportion, in our experience, being nine of the former to two of the latter. There is also a greater tendency in cases of chloroform to retardation of the heart's movements, and to dicrotism.

B.—Physiological.

I. The effect of anæsthesia with chloroform is to increase the amount of carbonic acid exhaled in a given time. The results of our investigations, in connection with the effects of anæsthetics on the gases of the blood, are not sufficiently reliable to permit us to give results.

II. Both chloroform and ethidene, administered to animals, have a decided effect in reducing the blood-pressure; while ether has no appreciable effect of this kind.

III. Chloroform reduces the pressure much more rapidly, and to a greater extent, than ethidene.

IV. Chloroform has sometimes an unexpected and apparently capricious effect on the heart's action, the pressure being reduced with great rapidity almost to *nil*, while the pulsations are greatly retarded, or even stopped. The occurrence of these sudden and unlooked-for effects on the heart's action seems to be a source of serious danger to life—all the more that, in two instances, they occurred more than a minute after chloroform had ceased to be administered, and after the recovery of the blood-pressure.

V. Ethidene reduces the blood-pressure by regular gradations, and not, so far as observed, by these sudden and unexpected depressions.

VI. Chloroform may cause death in dogs either by primarily paralysing the heart or the respiration. The variations in this respect seem to depend to some extent on individual peculiarities of the animals; in some the cardiac centres are more readily affected, in others the respiratory. But peculiarities in the condition of the same animal very probably have some effect in determining the vulnerability of these two centres respectively; and they may both fail simultaneously.

VII. In most cases, respiration stops before the heart's action; but

there was one instance in which respiration continued while the heart had stopped, and only failed a considerable number of seconds after the heart had resumed.

VIII. The use of artificial respiration was very effective in restoring animals in danger of dying from the influence of chloroform. In one instance, its prolonged use produced recovery even when the heart had ceased beating for a considerable time.

IX. Under the use of ethidene, there was on no single occasion an absolute cessation either of the heart's action or of respiration, although they were sometimes very much reduced. It can, therefore, be said that, though not free from danger on the side of the heart and respiration, this agent is in a very high degree safer than chloroform.

X. In regard to the effect of anæsthetics upon the pulmonary circulation, as in the experiments on the effects of the anæsthetics upon the blood-pressure, it may be stated that chloroform produces the most immediate effect, ether the least, whilst ethidene occupies an intermediate position.

XI. The quantity of air, and the length of time required to restore the circulation in the lung, are in an inverse ratio to the amount of anæsthetic vapour, and time necessary to stop it.

XII. The changes produced in the lung are the same in all; the only difference being in the rapidity of their occurrence.

XIII. The anæsthetics produce the following changes in the lungs—(1) retardation and ultimate stoppage of the circulation in the lung: first in the capillaries, then in the arterioles, and subsequently in the larger vessels; (2) the epithelium-cells of the meshes and their nuclei are no longer apparent; (3) the capillaries contract slightly, and their walls become less distinct, or even disappear from view, and the enclosed corpuscles may become more or less disintegrated.

XIV. The effect of ether and ethidene upon the heart, after artificial respiration for seven and five minutes respectively, is simply to produce a retardation of the impulses—ethidene having the most marked effect. Chloroform not only produces a retardation of the pulse, but the ventricular contractions are delayed and slightly separated from the auricular, and an auricular contraction may immediately follow the ventricular. The auricular contractions frequently occur without any corresponding ventricular movements.

C.—Practical.

The conclusions to be drawn from the above observations are these.

I. It is not only necessary to watch the effect of the anæsthetic upon the pulse, but it is also requisite to have regard to the respiration. We must not only take into account the danger of sudden stoppage of the respiration, but must also remember that, in the event of abnormal increase of respiratory movements, it may become essential, for the safety of the patient, to temporarily discontinue the administration.

II. Owing to the tendency of chloroform and ethidene—particularly chloroform—to reduce the blood-pressure suddenly, not only during the administration of these agents, *but also after they have been stopped for some little time* (a source of serious danger), it is necessary for the person who has charge of the administration of the drug to be on the look-out for symptoms of this occurrence, both during the time the agent is being given, and for some time after the patient has recovered from its more evident effects.

III. The danger of death, from stoppage of the respiratory functions, must be borne in mind in every case in which anæsthetics are given; but, of perhaps greater importance is the danger from interference with the proper action of the heart—particularly when it is remembered that, by artificial means, we can combat the former contingency. It might even be advisable, in certain cases, to introduce a tracheal-tube by the mouth—so as to enable us to force air into the lungs by means similar to those adopted in experiments with animals; or, in circumstances where such a procedure was impracticable, tracheotomy might be performed, with the same object in view. Artificial respiration should be continued, even though all evidence of cardiac action has ceased.

IV. As regards comparative danger, the three anæsthetics may be arranged in the following order: chloroform, ethidene, ether; and the ease with which the vital functions can be restored may be conversely stated, thus: the circulation is more easily re-established when its cessation is due to ether than to ethidene; and when the result of ethidene, than when chloroform has been used. The advantages which chloroform possesses over ether—in being more agreeable to the patient and more rapid in its action, in the complete insensibility produced by it, and the absence of excitement or movements during the operation—are more than counterbalanced by its additional dangers.

V. The chief dangers are: (1) sudden stoppage of the heart; (2) reduction of the blood-pressure; (3) alteration of the pulse-respiration ratio; and (4) sudden cessation of the respiration. The danger with ether approaches from the pulmonary rather than from the cardiac side—so that, by establishing artificial respiration, we have a means of warding off death. Its disadvantages are, to a great extent, obviated by the use of ethidene; whilst the dangers of chloroform are also reduced to a minimum.

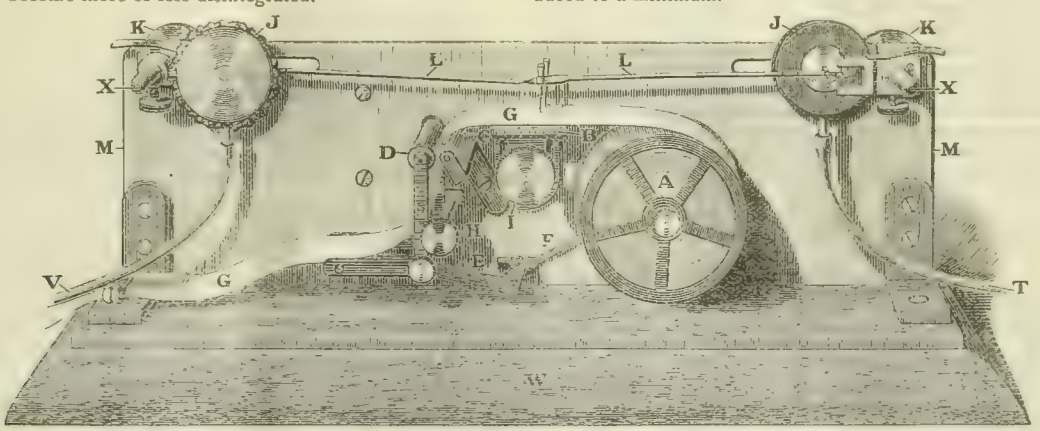


Fig. 7.

Description of Plate.—J. Tambours. X. Horizontal Bars, sliding in slot and fastened by Screw K. T. Tube to Cardiograph. V. Tube to Pneumograph. L. Levers. A. Drum. B. Stage. C. Plane Roller, moved by clockwork. D. Flanged Roller. E. Spring for pressing D against C. F. Spring controlling A. G. Ribbon of Paper. H. Eccentric for pressing back D. I. Pinching-Screw for fixing stage. M. Brass Plate, supported on wooden stand, W. Scale, ¼.

Future Studies.

In the event of the Scientific Grants Committee considering it advisable for us to continue our observations, we propose the following lines of research. 1. Specific action of anæsthetics upon the heart; to determine whether they act, *a*, on ganglia; *b*, muscular protoplasm; or *c*, on both. 2. The action of anæsthetic agents on the medullary centres; *a*, cardiac; *b*, respiratory; *c*, vaso-motor. 3. Specific action of anæsthetics on pulmonary tissue.

The Committee now feel that it is unnecessary for them to undertake clinical observations, except in the way of taking simultaneous tracings of the pulse and respiration; and for this purpose they have devised a special apparatus. They would respectfully suggest that schedules, similar to the one in this report, be now circulated, at home and abroad—so as, if possible, to collect information of the kind required regarding chloroform, ethidene, and ether, or other anæsthetic. They especially think it desirable to get specific information from America, as they have found it impossible to get cases of ether administration, in this country, sufficiently numerous for the purposes of comparison.*

The apparatus used by the Committee for taking simultaneous tracings of the heart's impulses and the respiratory movements is represented in Fig. 7. For the sake of description, it may be divided into two

* They were not aware, at the time of writing this report, that the use of ether is rapidly making way in this country, and that it is now solely used in several large provincial hospitals.

portions: (1) the transmitting and (2) the recording. We shall first describe the former of these. Owing to the difficulty of tracing the movements of the heart and thoracic wall by any direct method, we were compelled to employ Marey's tambours, although we are aware that there are certain objections to this mode of transmitting and recording impressions. The tambours (J) are fixed to a brass plate (M) by means of two horizontal bars (X). These bars may be moved from right to left along a slot in the brass plate, and fastened in position by a pinching-screw (K); by altering the length of the levers (L), tracings of various dimensions may be obtained; while, by the same arrangement, the pens may be adjusted so that simultaneous movements are recorded on the paper in the same line. The tube T communicates with the cardiograph, while V passes to the pneumograph. The recording portion of the apparatus is very simple. Coiled on the drum (A) is a ribbon of paper (G) about two inches broad. The paper, on leaving the drum, slides over a flat stage (B), and then passes between two rollers (C and D). The stage (B) may be elevated or depressed so as to suit the height of the paper on the drum, and fastened in position by the screw (I). The plane-roller (C) is made to revolve from right to left by means of clockwork placed on the other side of the brass plate (M). The purpose of the double-flanged roller (D) is simply to keep the paper in contact with the plane-roller (C). By altering the size of the plane-roller, the paper may be made to move at various rates, as desired. The movement of the paper may be stopped without interfering with the clockwork, by turning the eccentric (H) from right to left, when, by pressing back the roller (D), the paper will be relieved from its contact with C; and so, although C still revolves, the paper will remain stationary. The spring (F) presses upon the axle of A, in order to retard its movement sufficiently to keep the paper stretched as it passes over the stage (B), where it is written upon by the pens. The pens consist of small pieces of glass tubing (sufficiently large to hold a drop of ink), with a capillary prolongation, through which a cotton-thread is passed. The pens having been charged, the ink passes down the thread, and is transferred from it to the paper, without the point of the tube touching the paper; the friction is, therefore, extremely slight. By using inks of various colours, movements which closely resemble one another in appearance may be distinguished at a glance. Time, if required, may be recorded alongside the tracings.

CLINICAL MEMORANDA.

GOUT.

THE disease gout has in a measure been relegated to the domain of chemical investigation; and, though the physiology and histology of the affected tissues stand revealed, no attempt has, I believe, been made to apply this new knowledge to the study of an old disease. "Pathologists", says Lehmann, "are wont to refer to the chemist for the elucidation of this singular disease, from the misconception that, without physiology and morbid anatomy, medicine might be established in accordance with subjective chemical views." "It is a curious circumstance in the gout", said John Hunter, "that, though it is attended with all the common effects of the adhesive inflammation, as considerable swelling, which must be from extravasation of coagulating lymph, yet adhesions do not seem to be the intention, for none are produced: the lymph is in general taken up, and chalk-stone or tophaceous matter put in its place. It is most probably what may be called a true specific inflammation." And specific I believe it to be; an inflammation, in that the parts are red, swollen, and painful; but differing essentially and in detail from the phenomena (now accurately ascertained) whose sum total constitutes inflammation. For I believe that there is no stasis, and no excessive emigration of leucocytes; but that the process is an eliminative effort, ordained mainly for the elimination of uric acid. Now and again the attempt may be successful; but more commonly it is only partly so, and uric acid accumulates unremoved. "An attack of gout", says Sir Henry Holland, "consists in, or tends to produce, the removal of this matter from the circulation, either by deposits in the parts affected, by the excretions, or in some other less obvious way through the train of actions forming the paroxysm of the disorder." And that less obvious way is now discovered to us: for we find that fibrous tissues are truly centres of elimination, and that in them lie the entrances to the eliminative lymphatic system. And, further, Chrzonszczewsky* found, in his observations upon the peritoneal cavity of fowls whose ureters had been tied some hours before death, that the connective-tissue-corpuscles and the lymph-vessels springing from them were filled with a finely granular mass of urates. It is, then, I think, a fact proved to demonstration, that, following the law of compensation to which all organs in the body conform, the eliminative lymphatic system takes on excited action when the kidneys fail in the excretion of urates; and that urates accumulate in connective-tissue-corpuscles, which are the portals to the lymphatic system.

In gouty subjects, the kidneys are very generally granular and contracted; indeed, the term "gouty kidney" is sufficiently familiar to all. Moreover, Garrod has shown that, during the paroxysm, the excretion of urates by the kidneys is inefficient; and that they are present in the blood in excess.

I will add an observation to show how closely and concisely my theory is in accordance with the method which the disease adopts. The malady first affects the furthermost articulations, and proceeds progressively towards the trunk. It chooses, preferentially, joints which have been previously injured. I have assumed that, when the kidneys fail in their due excretion of urates, the fibrous tissues throughout the body take on excited and compensatory action. But in old age, when the lymphatic system is waning, this compensation will prove inefficient; and, in regions where failure first supervenes, there will be active and attentive congestion, such as ensues locally when the kidneys or liver fail in their functions. This will, as the lymphatic vascular system fails, first become evident in distal regions, and will follow a similar course to that pursued by senile gangrene—a disease due to inefficiency of the blood-vascular system. It will be all the more prone to appear in centres where injury has developed cicatricial tissue. GEORGE BUDD (Junior), M.B.

* Chrzonszczewsky, Virchow's *Archiv*, January, 1866; Afanassieff, Virchow's *Archiv*, July 1868; Genersich, Ludwig's *Arbeiten*, 1870, p. 51.

THERAPEUTIC MEMORANDA.

NOTE ON THE TREATMENT OF CHOREA.

I THINK that arsenious acid is the best remedy for chronic chorea in the materia medica. If I remember rightly, some statistics of cases of chorea treated by various drugs were published in the *St. Thomas's Hospital Reports* about ten years ago. From these it appeared that arsenic cured the malady more quickly than any other remedy; that is, the duration of the chorea was shorter under arsenical treatment than when zinc or other drugs were given. What I have seen in practice, especially when I was physician to the Children's Hospital, is generally confirmatory of this conclusion. In determining our treatment of a case of chorea, we must always keep in view the causal antecedents of the disorder. We mostly find chorea associated with, and causally related to, one or more of four distinct conditions—namely, rheumatism, acute or subacute; faulty hygienic circumstances, especially an insufficiency of animal food; emotional shock, particularly fright; reflex irritation due to intestinal worms. Each of these separate circumstances calls for appropriate treatment. But, however arising, for the chorea itself, if I may be allowed the phrase, arsenious acid is the best drug we have. Whatever dose we give, it is best to administer it in solution, freely diluted with water, and immediately after a meal. The dose of liquor arsenicalis, as laid down in text-books, is too small. Garrod, for instance, places it at from two to eight minims. Some time ago, I tried how much arsenic a choreic young woman could bear. I found I could gradually increase the dose of Fowler's solution from ten minims up to a drachm (equal to half a grain of arsenious acid) thrice daily, apparently with good effect on the chorea, before I produced signs of gastro-intestinal irritation. Sometimes chorea is a very obstinate affection, and chronic cases often pass from doctor to doctor, and go through long courses of medicaments, without benefit. The point I want to insist upon is this: we may cautiously increase the dose of liquor arsenicalis far beyond the limit of the text-books with good effect; and we may so cure cases of chorea which smaller doses of the remedy would not affect.—JAMES SAWYER, M.D.Lond., M.R.C.P., Birmingham.

CHRYSOPHANIC ACID IN SKIN-DISEASE.

DR. BALMANNO SQUIRE, in the number of this JOURNAL for December 11th, referred to the properties of chrysophanic acid in the treatment of chronic skin-diseases; and laid claim for this valuable medicine, both in the matter of expense and of curative influence, to superiority over its chemical ally and rival—pyrogallic acid. Of the question of expense there can be no doubt; but, of the curative differences, conclusions cannot be arrived at without recording the results of practical experience. For my part, there is no doubt of the superiority of chrysophanic acid over pyrogallic acid in the treatment of chronic psoriasis. To put the matter to the test, I have, in several instances of general psoriasis, directed one drug to be applied to one side of the patient's body, and the other to the opposite. This I conceived to be a test least liable to the fallacy to which the employment of the medications to dif-

ferent cases of psoriasis, or at different stages of it in the same individual, would be open. In all such test-cases, the parts where the chrysophanic acid was used invariably recovered soonest.

There are, doubtless, some cases in which great care must be taken, owing to its irritating properties on delicate skins, and the œdema which it may produce when applied to the head and face; but these reasons for caution do not in any way remove it from the list of the most efficient remedies for psoriasis. Where the epidermic scales are very thick, and where there is reason to believe the acid is not acting, owing to the scales not being removed by soft soap prior to inunction, I have found the happiest results follow its use, after the removal of all scales down to the corium, by rubbing in firmly to the affected places, by means of a ball of lint, a six per cent. solution of salicylic acid in rectified spirit —a line of treatment recommended by Dr. Priessman.

J. Magee Finny, M.D.Dublin.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

UNIVERSITY COLLEGE HOSPITAL.

PREGNANCY COMPLICATED BY OVARIAN TUMOUR: ABORTION AT THE FIFTH MONTH: PUERPERAL FEVER: OVARIOTOMY: RECOVERY.

(Under the care of Dr. John Williams.)

E. M., aged 38, married eight years, and who had had six children, was admitted September 4th, 1878, to University College Hospital. Her father was dead; the cause of his death was unknown. Her mother, aged 61, was living and healthy. One brother and two sisters were living and healthy. One sister had died of consumption. The patient had been strong and healthy until her present illness. The catamenia had first appeared in her fifteenth year, and had always been regular every four weeks. The flow was slight in quantity, but lasted six days, and was not accompanied by pain.

History of Present Illness.—The catamenia ceased last April, and for a time she thought she was pregnant. For the last three months, she had noticed that the abdomen was too large for the period of pregnancy. The increase of size was noticed at the lower part of the abdomen, but not especially on either side. At the same time, the womb descended outside the vulva, and the patient was sick in the morning. This sickness continued for two months, but it had been better for the past month, though it had not entirely ceased. The abdomen continued to increase rapidly in size, and the patient had forcing pain in the back and loins, and the legs became swollen. Four or five weeks ago, her breathing became affected, and she could not lie down. She was taken to the Samaritan Hospital on August 2nd, and was tapped on August 5th, and eleven pints of fluid were removed. After this, all the symptoms improved. On August 9th, she left the hospital, and walked home to the Euston Road. Almost immediately on reaching home, she found that there was a discharge of fluid from the point of puncture, which lasted about ten minutes, during which time, the patient thought, she lost about three pints. About a week after this (fourteen days ago), she began to feel the abdomen enlarge again; it continued to increase in size, and a pain came on in the left side of the abdomen, which was not affected by breathing. The pain was of a gnawing character, with occasional severe paroxysms. The bowels were regular, and micturition normal. On admission, her state was as follows. She lay on the right side or on the back, propped up with pillows, but could not lie comfortably in other positions. She was somewhat restless. The face was sallow, with dusky rings around the eyes, and an expression of weariness. There was some loss of flesh; no anæmia; the temperature was 99.4° Fahr. There was no dyspnœa whilst she was lying down, but it was considerable when she stood up. The lungs were healthy. The pulse was small, compressible, 116 per minute. The heart was healthy. The patient complained of dryness of, and sour taste in, the mouth. The tongue was flabby, indented, and its dorsum was coated with a thin white fur. The appetite was bad; she had great thirst. She had vomited several times after taking milk. The abdomen was greatly and uniformly enlarged, and measured around the umbilicus 45 inches. In the middle line, about two inches below the umbilicus, was an old scar of tapping. The umbilicus was prominent, the superficial veins were distended, and the lineæ albicantes well marked. When the hand was passed over the abdomen, greater resistance was felt in some parts than others. On palpation, two tumours could be made out; one in the middle line, rising up from the pelvis, and presenting the size and characters of the uterus about the fifth month of pregnancy; the other on the left of the umbilicus. This latter was oblong, and apparently concave on one side. It was extremely movable, and moved with the movements of the patient as well as with the hand of the observer. It did not feel unlike the body of a child placed as *in utero*, but no indications of the presence of limbs could be obtained. It was evidently a solid body floating in fluid. Fœtal heart-sounds could not be heard over either tumour. Superficial percussion gave dulness in the middle line up to the level of the umbilicus, and to three inches on each side. The right flank was resonant except at the extreme part, where there was some dulness. The left flank was slightly less resonant than the right. The dulness varied with change of position. Fluctuation was distinct in the dull area. The cervix of the uterus was large, soft, wide open, and projecting outside the vulva. The finger introduced felt a bag of membranes and the head and limbs of a fœtus. The urine contained no albumen.

On the night of September 14th, the membranes broke, and the amniotic fluid escaped; and, on the following morning, a fœtus of five months was born. There was no unusual hæmorrhage. Examination of the abdomen gave much the same physical signs as before the confinement, except that the uterus was with difficulty felt.

On the following day, the 16th, the patient felt well. Her temperature was 100.6° Fahr.; but, on the 17th, she had a rigor, and her temperature rose to 104°. The uterus was washed out with a solution of carbolic acid, 1 in 80. This was done three times a-day until the 30th.

On the 18th, the temperature rose to 106° Fahr., and the patient was, at 2.45 P.M., put in a bath, which was cooled by means of ice from 88° to 74° Fahr. in one hour and a quarter. During the bath, the temperature was taken every quarter of an hour, and it fell from 106° to 101.3°; and towards the end of that time, the patient became somewhat livid, and shivered with cold. She was dried and put to bed, and about 5 o'clock said she felt comfortable. The temperature was then 99°, and pulse 118. An ice-bag was applied to the head. The temperature rose in the evening to 105.2° Fahr. Sulphate of quinine (five grains) was given every alternate hour until 4 A.M., when the temperature fell to 101.2°, and at 12 noon, it had reached 99.4°.

From this time until September 30th, the patient continued very ill. She had several rigors. The pulse varied from 96 to 120 per minute, and the temperature from 101° to 103° Fahr.

On the 30th, dulness extended to the umbilicus in the median line, and to the level of the umbilicus on the left side, and to midway between the umbilicus and pubes on the right side. Both flanks were resonant. The vagina was hot. The uterus was freely movable; the os patulous, admitting tip of finger. Fluctuation was felt above the pubes and on bimanual examination. The circumference of the abdomen, at the umbilicus, was 37 inches. The solid tumour could be readily felt, but it was less movable than formerly. There was but slight pain and tenderness throughout.

On October 8th, the patient was carried to the All Saints' Institution in Gower Street. On the following day, there was some diarrhœa, and she felt very exhausted. On the 11th, she was examined with a view to the performance of ovariotomy; but the diarrhœa had continued, and she was depressed and listless. The pulse was 140 per minute, extremely weak, and intermittent; the respirations were 42 per minute, with frequent sighing. She was perspiring profusely. There was a double rub heard over the base of the heart, and a sound like fine pneumonic crepitation heard over the left subclavicular region. The operation was not attempted, and brandy and ammonia were ordered. The patient passed a restless night; and, on the following day, she was tapped, and four pints of sero-purulent matter, containing viscid masses which blocked the cannula, were withdrawn. On the following day, October 13th, the pulse had fallen to 104 per minute, and the temperature to 97.8° Fahr.; respirations 36.

On the 14th, there were no signs of pericardial friction or effusion, and no friction or pneumonic sounds heard over the lungs. The backs were resonant. She was seen by Mr. Christopher Heath, and ovariotomy decided on.

On October 15th, the patient was anæsthetised by ether, and ovariotomy performed by Dr. John Williams under carbolic spray, with antiseptic precautions. As the diagnosis was suppurating ovarian cyst, every precaution was taken to prevent the contents of the cyst from escaping into the peritoneum. An incision, about four inches in length, was made in the median line, between the umbilicus and pubes. While it was being made, the point at which paracentesis had been performed gave way, and some sero-purulent fluid escaped. The aperture was seized and tied. On

reaching the peritoneum, it was taken for the cyst-wall, and separated all round for some distance. It was very friable and gave way, and a large quantity of sero-pus and jelly-like material escaped. The inner surface of the parietal peritoneum was granular and reddish, like the inner surface of an abscess. The portions of it detached by the hand were removed. The cyst was now pressed into the wound, tapped, and then drawn out; and the pedicle transfixed and tied. The peritoneal cavity was found to contain a large amount of lymph, sero-pus, and colloid matter, and flakes of lymph were seen on the surface of the liver and intestines. The whole was carefully sponged out with carbolic solution, and the wound closed with five carbolised silk sutures. No drainage-tube was inserted. The amount of fluid in the peritoneal cavity and in the tumour amounted to 16 pints. The temperature in the evening was 99.2°, and pulse 130. The pulse continued quick, 120; the temperature went up to 101° once, and to 100° on four evenings, but usually 98.6° to 99.2° until the 24th. On that day—nine days after the operation—she appeared so well that she was allowed to get up. That evening the temperature rose to 100.8°; on the following evening to 101.8° Fahr. On the 26th, dulness, on percussion and fluctuation, was found above the pubes, and a thin sero-purulent fluid oozed through the hole which the lowest suture had occupied. A free opening was made, and a drainage-tube introduced, under the spray. From this time, she continued gradually to improve, although the pulse remained quick, and the temperature continued for some time to go up in the evening to 100°, and once to 102°. On November 1st, she was sent back to the hospital, where she afterwards had an attack of tonsillitis, and pleurisy on the left side. She, however, recovered from these complications, and went out well—the sinus in the lower part of the abdomen having completely closed.

NEWCASTLE-UPON-TYNE INFIRMARY.

ON STRICTURE OF THE OESOPHAGUS.

(Under the care of Dr. PHILIPSON.)

THE œsophagus is not very often the seat of disease. Acute inflammation of this division of the alimentary canal, produced by swallowing boiling water, or corrosive poisons, especially nitric or sulphuric acids, ammonia, or ardent spirits, is met with. Of the chronic diseases of the œsophagus, stricture, beyond doubt, is the most common. The constriction results from preceding inflammation or ulceration, from cancerous degeneration of the walls of the tube, or from the presence of a tumour or an aneurism. This formidable malady is manifested by impediment in swallowing; the patient, unless relieved of the condition, perishing miserably from starvation. As illustrative of the state of stricture, the two following typical cases are recounted.

CASE I.—Elijah A., aged 59, married, living at North Shields, employed in the shipping of coal, was admitted into the Infirmary, under Dr. Philipson's care, on May 10th, 1877. He stated that he had been ill since the preceding December, and that he had suffered from difficulty in swallowing food, and pain, felt most at the upper part of the centre of the chest. At first, he had experienced inconvenience from regurgitation of food after eating, preceded by a feeling of sickness, especially after taking solid food. In a little time, the solid portions of food were returned. Subsequently, he became sensible of obstruction at the top of the sternum. His trouble gradually increased, until he could only retain liquid or semiliquid nourishment. His complexion was sallow, the lips were pale, the tongue was moist, without fur, but was tremulous from debility; the conjunctivæ were very pale and straw-coloured. He was much attenuated, and, upon being weighed, was found to be 9 st. 2 lbs. Previously to his illness, he was a twelve-stone man. He had continued at his employment up to four weeks of his admission, but had been obliged to give up his work on account of his failing strength. His pulse was 72, regular, but small, and very easily compressed. The heart's impulse was feeble; the sounds at the base and apex were without murmur. The contour of the chest was normal, and there was no pulsation or dulness associated with the great vessels.

Upon being interrogated respecting his power of swallowing, he stated that he experienced the same difficulty and uncertainty with liquid as with solid food; that, upon some occasions, he was able to swallow with comparative ease and comfort, while at others, the passage of the food was not effected; in his own words, "The food would not go down". "It would come back." The patient was given milk to drink; after a few mouthfuls were sipped, a stronger effort to swallow was made than before, and then he stated that "it would go no further", "that it was stopped", and placed his hand upon the manubrium of the sternum, as the situation where he experienced the difficulty. The effort was followed by flatulent eructations; and by the expression of the patient, that he was in great pain. While the patient was attempting to swallow, the œsophagus was auscultated, the fluid was distinctly heard to pass the pharynx, and then flatulent eructations were heard, at the position corresponding to the lower third of the œsophagus. The vomited matter was alkaline in reaction, indicating that the food had not reached the stomach. Upon microscopical examination, no sarcinæ or cells, having a malignant character, were recognised. The urine was acid in reaction, of specific gravity 1022, clear, and was free from albumen or sugar. The case was regarded as one of stricture of the œsophagus, the patency of the tube varying, according to the presence or absence of spasm. As the probability of the stricture being caused by compression, by an aneurismal or other tumour within the thorax, had been excluded, it was deemed proper to have an œsophageal bougie passed, which was performed by Mr. G. E. Williamson, the senior house-surgeon. A No. 4 gum-elastic bougie was passed easily for a distance of thirteen inches and a half from the teeth, where it was firmly obstructed. After some difficulty, a bougie of the size of No. 1 was passed into the stricture, when it was firmly grasped; but, after manipulation, it was found to slip, and it was believed to have entered the stomach. The length of the bougie was then measured, and it was found to be fifteen inches and a half from the teeth. Upon the withdrawal of the bougie, no blood was found adherent. The mucus was examined microscopically, but no cells having the character of malignancy, or of pus or blood, were discovered. From the age of the patient, the rapid and great emaciation, the hue of the conjunctivæ, and the absence of any history of the patient having swallowed any corrosive or irritant liquid, it was surmised that the stricture was malignant.

The patient was prescribed twenty grains of the bromide of ammonium in one ounce of water, three times each day. As sustenance, he was ordered three pints of milk and two pints of beef-tea, in the twenty-four hours.

May 23rd. He expressed himself as feeling more comfortable, and stated that he had swallowed with more ease, and that he had not rejected any food for ten days. The bromide was increased to thirty-grain doses, and the beef-tea to three pints.

May 30th. The improvement had continued.

June 16th. During the last few days, his strength had declined. He had tired of the beef-tea, and the same amount of chicken-tea had been substituted.

June 23rd. The difficulty in swallowing had returned. Mr. Williamson endeavoured to pass No. 1 bougie, but was unsuccessful. He was ordered to continue the bromide of ammonium, with the addition of ten minims of the tincture of belladonna, and to take as much milk and chicken-tea as he was able, and to have nutritive enemata, consisting of ten ounces of strong beef-tea and two ounces of port wine, administered every four hours.

June 30th. His weakness had increased, and his mouth, tongue, and fauces had become coated with an aphthous eruption. The adynamia daily increased, and he died on July 4th.

Sectio cadaveris, twenty-eight hours after death. The body was greatly emaciated, scarcely a trace of fat being present in the tissues or omentum. The œsophagus was found to be very widely dilated in its middle third, and in its lower third contracted, the canal being almost impervious, the ordinary No. 1 bougie being passed with the greatest difficulty. The lower third of the œsophagus was greatly thickened, being fully three-quarters of an inch in thickness, and, upon being incised, was very dense and gristly. Upon being laid open, no ulceration was observable. Upon microscopical examination of the thickened portion, the characters of malignancy were clearly displayed, the appearances being those of scirrho-encephaloid. The mediastinal glands were also involved. The stomach was very much contracted, and was empty. The duodenum, jejunum, and ileum were contracted and empty. The liver was pale, and weighed three pounds and a half. The kidneys were pale, but in structure were unaltered; the right weighed four ounces, and the left three ounces and a half. The spleen was soft, and weighed four ounces and a half. The heart was attenuated; its muscular substance was pale and soft. The great vessels were normal. The lungs were both healthy. There was no disease, malignant in nature, in any organ or tissue, other than the lower third of the œsophagus and the mediastinal glands.

CASE II.—Isaac B., aged 33, single, tailor, living at Maryport, Cumberland, was admitted into the Infirmary, under Dr. Philipson, March 2nd, 1878. He stated that he had been ill for sixteen weeks; that he had been first under treatment at Maryport, afterwards in the Carlisle Infirmary for nine weeks, and, for the week previous to his admission, under Mr. W. L. Dickinson, surgeon, of Workington, Cumberland, who advised him to seek admission at the Newcastle Infirmary. In October 1877, having been strongly tempted by a friend, he drank some undiluted whisky, which, during swallowing, he felt to be very burning. He afterwards experienced great inward uneasiness, and

subsequently suffered from vomiting, and great pain and heat at the upper part of the sternum. These feelings continued for some weeks; he then began to experience difficulty in swallowing. Previously to the drinking of the whisky, he had been an abstainer. When he was in the Carlisle Infirmary, bougies had been passed, but always with considerable difficulty.

Shortly after his admission, he vomited about two ounces of watery, inodorous, slightly opalescent fluid, which was found to be alkaline in reaction, an indication that the vomited liquid was from the œsophagus and not the stomach. When examined with the microscope, no sarcinæ or cells having the characters of malignancy, blood, or pus, were recognised. While making the attempt to drink milk, he was auscultated, and the fluid was heard to stop at the position corresponding to the top of the sternum. This situation he stated to be the point where his "trouble" existed. The heart and great vessels, after careful physical examination, were regarded as normal. Upon this supposition, it was deemed desirable to have the œsophagus explored, which was accordingly done by Dr. L. J. Hobson, the senior house-surgeon. An obstruction was encountered fourteen inches from the teeth, and, after persevering efforts, a bougie of the size of No. ½ was passed, for its full length. Upon its withdrawal, no blood or pus, simply mucus, was found adherent. Upon microscopical examination of the adherent mucus, no cells, malignant in appearance, or corpuscles resembling blood or pus, were discovered. The case was regarded as one of stricture of the œsophagus, simple in nature, due to cicatricial contraction, the result of œsophagitis. He was prescribed twenty grains of the bromide of ammonium in one ounce of water, three times each day; and, as nourishment, three pints of milk.

March 9th. His emaciation and feebleness had increased. It was determined that an attempt should be made to have the perforated No. ½ bougie passed. With great difficulty, this was accomplished by Dr. Hobson, and one pint of beef-tea and two ounces of port wine were injected into the stomach. Enemata, consisting of ten ounces of strong beef-tea and two ounces of port wine, were ordered to be administered every few hours. The bromide of ammonium was increased to thirty grains.

March 16th. The perforated bougie had been passed each morning, sometimes with great difficulty, and only accomplished after much careful manipulation. The injections into the stomach and the enemata had been continued.

March 19th. He had to-day been able to swallow two table-spoonfuls of milk.

March 26th. Since the 19th, he had been able to swallow milk. Yesterday, he swallowed three pints of milk and four ounces of port wine in the twenty-four hours. The passage of the perforated bougie was discontinued, and, in its place, each morning, the No. 1 bougie was passed, which, after steady perseverance, was finally accomplished.

March 29th. He was able to swallow four pints of milk and three pints of beef-tea in the twenty-four hours. The enemata were discontinued.

April 2nd. A No. 3 bougie was passed for the first time. The bromide of ammonium was discontinued, and the iodide of potassium, in ten-grain doses, three times each day, was substituted. His strength and his weight, as also his appearance, had steadily improved. He was able to walk about the ward.

The improvement continued, and, on May 4th, he was able to go into the garden for the first time; and, on May 25th, he left the infirmary, to return to Maryport. His weight at the time of his admission was 5 st. 4 lbs., and, at the time of his leaving the infirmary, 7 st. 6½ lbs., being a gain of 2 st. 2½ lbs. His diet throughout was beef-tea, milk, uncooked eggs, and port wine.

REMARKS by Dr. PHILIPSON.—In reviewing these two cases of contraction or stricture of the œsophagus, the following points of interest are manifested. That they were both due to structural changes in the walls of the tube, is unquestionable; in the first, as was surmised during the life of the patient, and as was revealed upon necropsy, to carcinomatous disease; and in the second, from the causation and the symptoms, to hypertrophy and induration, the result of inflammation.

In the first case, after the establishment of the diagnosis of the existence of malignant disease, it was considered that the repetition of the introduction of the bougie would be in the highest degree imprudent, and that the indication of treatment was the allaying of the spasm, which was manifested by the varying difficulty in swallowing, and the maintenance of the strength of the patient; the former by the internal administration of the bromide of ammonium, and the latter by the use of nutrient enemata.

In the second case, the interference with the injection of food being regarded as the consequence of contraction of the calibre of the tube, from tissue-hypertrophy and induration, gradual dilatation was considered admissible, and the result obtained by such was very satisfactory. The employment of the perforated bougie, and the injection of aliment into the stomach, unquestionably was a valuable means in sustaining the vital powers, when a threatening of their failure was unmistakably manifested. In this case, also, good was obtained from the sedative influence of the bromide of ammonium; the substitution of the iodide of potassium for the bromide being subsequently made, with the hope of aiding the removal of the effused lymph by absorption.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 14TH, 1880.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

CASE OF HYDATIDS OF THE LIVER, TREATED BY ABDOMINAL SECTION AND DRAINAGE. BY LAWSON TAIT, F.R.C.S.

MR. LAWSON TAIT gave the details of a case of hydatids of the liver in which he had performed abdominal section successfully. The patient was a lady aged 37, under the care of Dr. Pike, of Malton, with whom Mr. Tait saw her in consultation in August last. The diagnosis of hydatids had been made by Dr. Pike, and confirmed by Sir William Jenner, who saw the patient a few days before Mr. Tait did. The tumour was of immense size, the hepatic dulness reaching from the third rib to the level of the umbilicus, and crossing the middle line. No air seemed to enter the right lung, and the patient's breathing was greatly interfered with. There was incessant vomiting, and great exhaustion. The disease seemed to date from 1872; but the history up till February 1880 was not clear. Mr. Tait opened the abdomen above and a little to the left of the umbilicus, and found the liver-tissue quite healthy in appearance, and not adherent to the abdominal wall at any spot. He made an incision into the liver about three inches long, and evacuated about two gallons of hydatid cysts, varying in size from a pea to an orange. The liver-tissue at that spot was about half an inch thick. He then stitched the edge of the wound in the liver to the edge of the wound in the abdominal wall, and fastened in a wide glass drainage-tube eight inches long. The relief to the patient was immediate and complete. The cavity rapidly contracted, continuing to discharge cysts and pus tinged with bile for about eight weeks. She rapidly gained appetite and flesh, having now, ten weeks after the operation, only a small sinus remaining.

DR. JOHN HARLEY was pleased to hear of the success of Mr. Tait's case. In the present day, there was too great a tendency to trust to puncture and the aspirator in the treatment of hydatids of the liver. He believed that very few cases were cured in this way. The use of a large trocar was suitable where a large incision could not be made, but it was of little good unless the opening could be enlarged. If the part were kept clean, and washed out with carbolised water, and all hydatids that presented themselves were removed, he believed that nearly all the cases thus treated would be cured.—DR. ALTHAUS said that some years ago Mr. Durham had successfully treated some cases of hydatid of the liver by electrolysis. The theory of the action of this was, that the chloride of sodium which the fluid contained was decomposed, and caustic soda formed, which killed the parasites.—MR. HULKE congratulated Mr. Tait on his success; but he had seen several cases of hydatid cysts cured by the use of a fine trocar. A distinction must be made between simple cysts and those which were inflamed and suppurating. Treatment which was suitable for the one class was not so for the other.—MR. SPENCER WELLS had seen several cases in which the removal of the fluid by the aspirator had produced a complete cure.—MR. JONATHAN HUTCHINSON had many years ago published cases of hydatid cysts of liver, showing that punctures in many instances produced a permanent cure; and he did not know that any of the cases had relapsed. In recent years, he had performed puncture in several cases, removing as much of the fluid as he could; and, he believed, with much success. Mr. Tait's case, however, was one of unusual severity, which justified his operation, and rendered his success a triumph for surgery.—MR. KNOWSLEY THORNTON said that there was, in the Samaritan Hospital, a case of hydatid cyst, which had been punctured several times; and he believed there had been suppuration. He would now be induced to make an exploratory incision; and, if further operation were necessary, he would produce adhesion of the liver to the abdominal walls before proceeding further.—MR. WILLETT asked if the wound in Mr. Tait's case was kept aseptic throughout.—MR. TAIT said that no antiseptic dressing was used. There were two kinds of hydatid of the liver: one, in which there was a large cyst with scolices lying loose in it; and another—of which his case was an example—where there were

numerous small cysts. In his case, aspiration would have been of no use: indeed, it had done harm.

ON HYPERPYREXIA AFTER "LISTERIAN OVARIOTOMY".

BY GEORGE GRANVILLE BANTOCK, M.D., F.R.C.S.

(Communicated by JONATHAN HUTCHINSON, F.R.C.S.)

DR. BANTOCK said that Mr. Lawson Tait had already questioned, before the Society, the advantages attributed to the Listerian precautions in the operation of ovariotomy. The absence of pyrexia had been alleged to be one of the best results following such precautions. In this paper, the fact, that pyrexia was absent in cases treated antiseptically, was disputed on clinical evidence. In the author's own experience, the Listerian method, in a series of thirty-six cases, showed in its favour a difference in temperature of but 0.4°, as compared with the same number of cases undertaken without complete antiseptic precautions; the lowest temperature occurred after a non-Listerian ovariotomy. Volkmann admitted a condition of poisoning from absorption of carbolic acid, and termed this accident "aseptic fever". Thiersch had encountered instances of great irritation from this agent, and now employed salicylic acid in its stead. Keith found very little difference in the temperature of a series of cases undertaken under the old and the new methods. In three Listerian cases, the temperatures were the highest he had ever seen. Before adopting antiseptics, he never found the ice-caps necessary for the reduction of pyrexia, except in one acute case of septicæmia. On the other hand, Mr. Mac Cormac asserted that the rise of temperature in Listerian cases was slight, or absent; and, when present, was due to other causes. Mr. Spencer Wells had found that, contrary to Mr. Tait's experience, pyrexia was subdued by antiseptics. Mr. Knowsley Thornton had observed no fever at all, as a rule, after antiseptic ovariotomy. When, however, an operator was predisposed to support Listerism, he might readily attribute to other influences ill results of which it alone could be the cause. It was easy to explain how pyrexia followed "antiseptic operations". Carbolic acid was an irritant. Its great advocate introduced the "protective" to counteract its irritating qualities. It was also a poison. It had caused death when inhaled, and had produced very serious symptoms when absorbed. This was illustrated in cases related by Lister, Lightfoot, Hanhorst, and the author, who described at length two instances of poisoning from prolonged action of carbolic spray in complicated ovariotomies. In both, the kidneys were affected by this medium. De Agostini had related a case of poisoning from carbolic acid solution, injected frequently into an abscess-cavity. Thomas Smith and others had noted the bad effects of this acid in operations upon children. The author observed albuminuria and temporary suppression of excretion of sulphates in the urine of a young girl, after antiseptic ovariotomy. Sonnenburg, Lightfoot, and others had also found that sulphates disappeared from the urine in similar cases, where, as in the author's patient, that excretion did not become dark. Carbolic poisoning was not always indicated and exposed by discoloration of the urine, as was generally believed. Keith admitted that evil effects might result from prolonged action of spray. The hyperpyrexia which followed was due, not solely to reaction, but also to carbolic intoxication. The whole merit of Listerism lay, not in the supposed good effects of carbolic acid, but in the cleanliness which it promoted. By gradually reducing the strength of the solutions used in operations, the author had gained excellent results, with absence of pyrexia.

The PRESIDENT referred to the local anæsthetic effect of carbolic acid.—Mr. KNOWSLEY THORNTON had had considerable experience in the application of Lister's method to ovariotomy. He did not think that any one had alleged that pyrexia was absent in such cases, except it were Mr. Lawson Tait, who had merely said that it was to be expected. It was very extraordinary not to expect the temperature to rise in ovariotomy. He had had 25 non-antiseptic, and 150 cases of antiseptic ovariotomy. In the former, the average duration of treatment was 26.3 days; in the latter, 20.5 days. In the former, the ice-cap was used in 17 cases; in the latter, in 31 cases. In the 25 cases it was applied to reduce heat in 12; in the 150 cases, in 14; in the remainder, it was applied as a preventive of pyrexia. Perhaps he had used the ice-cap more freely, because he had introduced it at the Samaritan Hospital. He had used it less as he gained faith in Listerism. Dr. Bantock had brought forward only 36 cases in which he had performed "Listerian ovariotomy." He (Mr. Thornton) believed that failure in the operation would be found to be due to imperfect attention to some part of the antiseptic theory. In the 36 cases, some had been dressed, not by the operator, but by the nurses, in the night. Again, in a former paper, Dr. Bantock had referred to the irritant effects of a 1 in 20 solution of carbolic acid; this, however, was no part of Mr. Lister's theory and practice. All were aware that carbolic acid could produce irritation and poisoning; but it was not shown that this explained the unfavourable cases. Suppression of urine had been observed in ovariotomy cases long before carbolic acid was used. When septicæmia after ovariotomy was more frequent than now, failure of the kidneys was one of the most frequent causes of death. He had been told that German surgeons were much inclined to attribute to carbolic acid deaths which were really due to septicæmia. He could not see on what principle a 1 per cent. solution of carbolic acid was used. If it were not germicide, did it increase the cleanliness of the water? Taking the last six years (1872-77) of Mr. Spencer Wells' hospital operations, done by the extraperitoneal method, and without antiseptics, he found that the mortality was 19.8 per cent.; in six years of Dr. Bantock's practice, by the intraperitoneal method, it was 17.64 per cent.; and in six years of his own practice, it was 11.25 per cent. For this year, Dr. Bantock, with a modified antiseptic treatment, had a mortality of 12.5 per cent.; while his own was within 7.5 per cent. In his last 100 cases he (Mr. Thornton) had had a mortality of 7 per cent. in hospital practice; and in private practice he had lost only one case out of 27. Without Listerism, the mortality in ovariotomy might be reduced to 10 per cent., but not lower.—Mr. LAWSON TAIT said that it seemed impossible for any one to understand the theory and practice of Listerism. It had been formerly thought that a high temperature and rapid pulse were the characteristics of pyæmia. He thought that one object of Listerism was to prevent surgical fever. If it were not, what was it? He had used solutions of carbolic acid, gradually reducing the strength, till at last he used simple water, and had found that his results were equally satisfactory under the simple dressing. Moreover, the wounds healed more readily when very weak solutions of carbolic acid, or simple water, were used; and his colleague, Dr. Savage, who was an advocate of Lister's method, had told him that his experience was similar. In one of his cases of ovariotomy (double) the temperature rose to 112, and remained so nearly 50 hours. He attributed this to the use of carbolic acid. He did not think that the ice-cap was of any use.—Mr. ALBAN DORAN had made *post-mortem* examinations in 41 cases of ovarian disease, and had found the kidney normal in only 7. He believed that the mortality after ovariotomy was often due to overlooked renal disease, which would interfere with the elimination of sulphuric acid and of the products of tissue-change.—Mr. SAVORY suggested that diminution of mortality in a surgeon's practice might be due, in great measure, to increased experience.—Mr. SPENCER WELLS said, that the mortality in his practice had certainly diminished as his experience had increased; but at last the reduction had come nearly to a standstill, until he began to use antiseptic treatment. Since adopting the antiseptic method in 1878, he had had 131 cases with 13 deaths, or 10 per cent.; the death-rate being exactly the same as in his last two years of hospital practice without special antiseptic measures. Before he used antiseptics, the results of the intraperitoneal method had been less favourable than those of the extraperitoneal; the reverse was now the case. He had never seen a remarkable rise of temperature after antiseptic ovariotomy; it rarely rose above 100. The wounds healed by the first intention in 49 cases out of 50.—Mr. HOLMES thought that the statistics brought forward showed no decided difference in favour of Lister's method in ovariotomy. He had long ago tried, without success, to master the details of the method, when they were more simple than at present; and he doubted whether any one understood it in its present form.—Dr. BANTOCK, in replying, said that his results had been as follows:—with 1 in 50 solution, 41 cases with 3 deaths (exhaustion and nephritis); with 1 to 60, 10 cases and 1 death (shock); with 1 in 80, 8 cases to 2 deaths (uræmia and bronchitis); with 1 in 100, 19 cases and 1 death. Patients with disease of the kidney were always unfavourable subjects for operation; and the disease was not always indicated by the state of the urine. In Italy, in the first 100 cases of ovariotomy (of which 4 were done antiseptically) there were 37 deaths; in the second 100, done antiseptically, the mortality was 36. He had not been able to desist from the use of the ice-cap, until he had reduced the strength of the carbolic acid solution to 1 in 80. Dr. Bantock further commented on the importance of cleanliness in ovariotomy, and in operating on the abdomen.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, NOVEMBER 5TH, 1880.

G. E. PAGET, M.D., F.R.S., President, in the Chair.

Some Points in the Pathology and Treatment of Acute Rheumatism.—Dr. LATHAM proposed to consider three questions: 1. What is the starting-point of the morbid process in acute rheumatism? 2. Is there any remedy which will cure the disease? 3. How does the remedy act? 1. As to the origin of the morbid process. In muscular tissue, the physiological change in health is, that oxygen passes to the

muscle, and an oxidation takes place in the muscular substance itself. Muscle is always producing carbonic acid, and, under contraction, there is a sudden and great increase in the amount of this acid. The latter can be extracted from muscle by the air-pump. The carbonic acid passes to the lungs, and is there discharged. This process is presumably under the control of a nervous centre which inhibits the chemical changes that would take place if the tissues were out of the body—the chemical inhibitory centre. If this centre be changed or weakened, the result is that, instead of the muscle absorbing and fixing the oxygen, and giving out carbonic acid, it disintegrates and decomposes—on the analogy of the action of oxygen or ozone on muscle removed from the body. What are those disintegrating changes? First, as regards the reaction, living muscle is alkaline, but muscle removed from the body is acid—the acid being lactic. The formation of lactic acid takes place simultaneously with the death of the muscle. The blood also undergoes this change to acid reaction after death. Next, as regards intimate changes. Kreatin, when exposed to oxidising agents, may be readily split up; by the action of baryta, it is resolved into sarcocine and urea: $C_4 H_9 N_3 O_3$ (kreatin) + H_2O = $C_3 H_7 NO_2$ (sarcocine) + $CN_2 H_4 O$ (urea). If this change takes place in the body, the urea is quickly eliminated, and living sarcocine (? urethane) undergoes further changes: $C_3 H_7 NO_2$ (? urethane) + $H_2 O = C_3 H_6 O_3$ (lactic acid) + NH_3; and the lactic acid is further oxidised in the tissue into carbonic acid and water: 2 ($C_3 H_6 O_3$) lactic acid + 6 O_2 = 6 CO_2 + 6 $H_2 O$. These changes presumably take place in the living muscle in the course of the production of carbonic acid, but the intermediate products cannot be detected. If, however, the action of the inhibitory centre be restrained, the intermediate products assume an actual existence. There would be the first step towards the death of the muscle; lactic acid, instead of being oxidised in the tissue, would pass into the blood, and by its effect there, possibly its oxidation, produce excessive amount of heat—the pyrexia of rheumatic fever. From this oxidation into lactic acid, carbonic acid, and water, there would arise an excessive amount of heat—the pyrexia of acute rheumatism. In considering the probability of the formulæ given above, the purely chemical action is not in itself a sufficient analogy; the molecules which make up sarcocine in the dead muscle may be differently arranged, and probably are, in the living tissue, and are only held together by the nervous force, which, when removed, allows of molecular change, which is accompanied by the development of heat. A collateral question is, whether lactic acid produces the symptoms of acute rheumatism on the joints directly, or indirectly through the nervous system? 2. The starting-point of acute rheumatism being taken to be hyperoxidation of muscular tissue, the question arises, Can we by any remedy remove the cause and eliminate the poison? Quina reduces temperature, and has been said to cure acute rheumatism. At a temperature of 102° to 103°, the red corpuscles are smaller; if quinine be administered, they return to their normal size. This is done by lowering the temperature. If ozonised turpentine be taken, and an alcoholic solution of guaiacum resin, and a drop of blood be added, a blue colour is produced; the theory being that the red blood acts as a carrier of ozone from the turpentine to the resin. If quinine be introduced, the blue colour of the above test does not occur. The theory of this is, that the quina inhibits the transference of the ozone to the resin. In the system, the red corpuscles are carrying the ozone. To administer quina is to introduce a substance which interferes with the transmission of the oxygen; it prevents the oxidation of the muscular tissue, and then the temperature falls. A very dilute solution will produce this effect. Quina lowers the temperature by putting a stop to the transmission of the oxygen from the lungs to the muscular tissue. But it does not enter into combination with the tissue itself; it passes out by the urine (in one experiment, 4.4586 *grammes* were given, and, in forty-eight hours, 4.3 *grammes* were excreted by the urine, showing a loss of .158 *gramme*). Bark differs from quina; it contains chinic acid. The special action of bark as an antipyretic is perhaps increased owing to its containing chinic acid (the dry distillation of which produces salicylous acid) in addition to quina. Quina, passing out unchanged, has not entered into combination with the morbid material, and has not destroyed it; that, however, is what salicylic acid does. When that remedy is given, it passes out of the system, not as salicylic acid alone, but also as salicyluric acid, just as benzoic acid becomes hippuric acid. Along with this chemical change, there are the symptoms of profuse sweating and of cerebral disturbance. 3. How are these changes brought about? If two molecules of salicylic acid be combined with two molecules of sarcocine, we get the constituents of salicyluric acid, water, and oil of gaulteria: 2 $C_7 H_6 O_3$ (salicylic acid) + 2 $C_3 H_7 NO_2$ (compound metameric with sarcocine) = $C_9 H_9 NO_4$ (salicyluric acid) + $C_8 H_8 O_2$ + $H_2 O$ (oil of wintergreen) and $C_8 H_8 O_3$ by the action of Na HO in the blood may be converted into sodium salicylate ($C_7 H_5 Na O_3$) + $CH_3 OH$ (methylic alcohol). Now, though creatine and sarcocine do not exist in living tissue, their elements must, and we may have compounds, metameric with sarcocine, in the living tissue, whose disintegration give rise to lactic acid, etc.; and when death takes place, by a molecular change in the elements, may produce sarcocine. If such a compound exists, then, as in the formula above, salicylic acid may seize upon it, and so prevent the formation of lactic acid or other *materies morbi* of acute rheumatism, at the same time forming innocuous products which are quickly eliminated from the system.* It is the methylic alcohol which may possibly produce the cerebral disturbance and the increased perspiration. Salicylic acid differs from the quina in its action; it enters into combination with the substance and decomposes it, and the amount of heat developed is less than the ordinary oxidation. Salicylic acid has come into disrepute on account of the sudden prostration, burning of the throat and stomach, and ulceration of intestines, which sometimes follow its use. Dr. Latham had been careful, during the four years that he had used it, always to employ the pure and not the artificial salicylic acid. The latter, which is four times cheaper, is made from carbolic acid, and is liable to contain carbolic acid; it is to that impurity that the depressing and other symptoms are due. The same symptoms follow the administration of six grains of carbolic acid. Dr. Latham had given salicylic acid in doses of 60 to 70 grains, up to 110 grains; in no single case, even when there was heart-disease, had any unfavourable symptoms followed, except slight cerebral excitement. The dose should be a large one, in order to put a stop to the chemical changes of which the disease consists. He was in the habit of giving it with pulvis acaciæ and glycerine in pills, 20 grains every hour up to three doses, the fourth dose at discretion; in medicated capsules, the irritation to the throat is avoided. The amount given might rise to 120 grains, and until decided physiological effects have shown themselves; these are copious sweatings and relief of the pain in the joints. The effect in reducing the temperature is only half that of quinine; hence the larger quantities. Relapses of the fever, which are apt to come on after a clear interval of relief, are explained by the supposition that, whilst salicylic acid is present in the system, the *materies morbi* is not formed by the tissues, even though the inhibitory chemical centre has not recovered its tone; but if, in a few days, the salicylic acid is all eliminated from the system, the nervous centre still being feeble, then the morbid changes again develop, and a relapse takes place. Relapses can be prevented by continuing the use of the drug. As to salicin, it does not produce the effects until salicylic acid is first produced from it within the body, and that change adds to the already existing heat. If it be asked why salicylic acid should not act in the same way in typhoid fever, pyæmia, pneumonia, etc., it may be answered, that the poison in these diseases is not only lowering the control of the chemical centre which acts upon the muscular structure, but also producing change in the blood itself.—Dr. BRADBURY asked how Dr. Latham would account for the fact that, in some cases of acute rheumatism, salicylic acid has no influence whatever.—Dr. INGLE referred to the observation of Senator, that salicin acts by being converted into salicylic acid, and that the latter is, therefore, to be preferred; the conversion of salicin into salicylic acid was, however, disputed by another writer, and the preference given to salicin.—Mr. WHERRY asked whether there was the usual evidence of carbolic acid being present in the urine, in those cases where the depressing and other injurious effects of salicylic acid were said to be due to the presence of a certain amount of carbolic acid in the drug.—Mr. HOUGH was not aware whether salicylic acid was ever recommended for chronic rheumatism; he had, however, lately been led to administer it to a patient, aged 80, the subject of chronic rheumatism, for an attack of acute pain; the effect being that the pain was relieved in a very marked manner.—Mr. CARTER wished for information as to the probable seat of the inhibitory nerve-centre. The alternations of chorea with acute rheumatism might be turned to account in Dr. Latham's theory. If the poison is generated in the muscular tissue, why should the fibrous and tendinous structures be the seat of the pain?—The PRESIDENT thought they were all of one opinion, that salicylic acid was an admirable remedy. It was the practice at Addenbrooke's Hospital, always to use the purely prepared drug. In his experience, patients had been invariably relieved of pain in the course of thirty hours, and completely relieved of pain and fever in three or four days. Had there been any experience of the use of salicylic acid in gonorrhœal rheumatism? With reference to Dr. Latham's theory, he thought the chemical formulæ had been somewhat freely handled. The brain ought to be more frequently disturbed, if methylic alcohol is produced in every case of the

* Dr. Latham has since, in a paper read before the Cambridge Philosophical Society, suggested that this compound metameric with sarcocine—may be $2 CO(NH_2) OC_4H_9$, urethane; $CN(OC_2H_5) H_2O$, cyanic ether and water.

administration of salicylic acid; and yet brain disturbance is not a frequent symptom. The weakest part of this very interesting speculation appeared to him to be the part relating to a chemical nerve-centre; inhibitory nerve-centres were much in vogue in the physiology of the day. He failed to understand why an inhibitory nerve-centre should be introduced in cases, for example, of old injuries, when it was the injured part that suffered.—Dr. LATHAM, in reply, said that, even in the case referred to by the President, of a previously injured joint, he should still maintain that there was disturbance of the presiding nerve-centre. He admitted that the question of controlling nerve-centres was a very difficult one. We must accept them, however, from the physiologists; and he quoted from a standard physiological work that "there is some positive evidence of their existence". As to the action of methylic alcohol, the cerebral symptoms might be only such as would follow some slight stimulation; for instance, buzzing in the ears. Salicylic acid would not necessarily effect a cure in every case, unless it was given to an amount to produce its physiological action, and perhaps that circumstance would account for the cases referred to by Dr. Bradbury. Carbolic acid as an impurity would be in relatively small quantity, and would hardly show itself by its colour in the urine. Salicylic acid was not generally supposed to have any effect on chronic rheumatism; and, in gonorrhœal rheumatism, many trials had been made of it, but it had as little effect on that disease as it had on pyæmia. He thought the alternating of chorea with acute rheumatism was a fact that yielded strong support to his view of the nerve-centre. Pain was felt in the fibrous and tendinous structures, because the poison did not act directly, but through the nervous system.

Large Combined Lipomatous and Myxomatous Tumour.—Mr. GRUBE exhibited a large fatty and gelatinous tumour (lipoma myxomatodes), weighing ten pounds and a half, which he had removed by operation from the back of the thigh, upper and middle third, in a woman aged 57, a charwoman. The tumour, which lay on the muscles, enucleated from a kind of capsule, but it had some strong fibrous attachments to the intermuscular septa. The patient had two other tumours; one in the supraclavicular region, the size of an infant's head; and another, the size of an egg, over the ilium. All three points at which the tumours had formed were parts of the body which, in the patient's occupation, appeared to be subject to pressure.

Long-standing Tuberculous Disease of Kidneys ending in Pulmonary Tuberculosis.—Dr. BRADBURY gave an account of the case of a man, aged 21, who had had symptoms referable to the urinary organs for at least seven years. Three years ago, hæmaturia began, and was constant for a year; it had recurred frequently during the last two years, lasting from twenty-four hours to two months or more. The amount of blood was never large; it was mixed with pus, and afterwards there was pus without blood. The general indications, such as very severe pain, were so like those of stone, that he had been sounded by more than one surgeon. About two months ago, he was taken with almost complete suppression of urine; he had attacks of shivering, the breath became urinous, the pupils widely dilated, and he died of uræmic coma. *Post mortem*, both kidneys were much enlarged, of a yellowish-white colour, and occupied by numerous cavities full of cheesy pus; much of the tubercular formation towards the cortex was still solid and firm. The right ureter was dilated, and covered throughout with tuberculous ulcers; the mucous membrane of the bladder was wanting, except for a small wedge-shaped area close to the neck, the muscular coat being laid bare, and here and there beset with small tuberculous nodules. Both pleuræ were covered with small translucent tubercles, and the substance of both lungs was occupied throughout with somewhat larger and whiter nodules. The interest of the case, as regarded diagnosis, was that it began ten years before, the symptoms for the first period being very like those of stone. In the subsequent history, there were symptoms, such as intense pain, that were more suggestive of nephritic colic than of scrofulous or tuberculous disease.—The PRESIDENT pointed out that the lungs had ultimately become affected with the tuberculosis. It was observed by Louis, who was distinguished for the accuracy of his observations, that, with a single exception, he had found the rule to be for the lungs sooner or later to become tuberculous, if there were tubercular disease going on anywhere within the body.

HERR NUELCK, a Berlin apothecary, recommends, in the *Berliner Klinische Wochenschrift*, No. 30, the substitution of sheep's tallow for the ordinarily used oils as a medium for diluting and applying carbolic acid. Sheep's tallow has a much higher melting point than lard or oils; and thus remains as a soft, bland, and consistent salve, when the heat of the skin would melt the usual ointments, and convert them into flowing and irritating fluids. He gives formulæ for preparations and dressings made with carbolic sheep's tallow.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 7TH, 1880.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Pathology of Rickets.—The adjourned discussion on this subject was resumed by Dr. DICKINSON, who began by referring to that part of Dr. Hilton Fagge's address, in which he stated his belief that visceral enlargement, when met with, was not so much a fact of rickets as due to the same cause as that disease. He (Dr. Dickinson) was strongly of opinion that the visceral enlargement was an essential feature of rickets; and that the changes in the organs leading to it were strictly analogous to the changes in the bones. Visceral enlargement in rickets attracted attention as long ago as the time of Whistler; and, more recently, Sir William Jenner had laid much stress upon this condition. The enlargement was most marked in the spleen, was present to a slighter extent in the liver, and was generally present also in the mesenteric and other lymphatic glands. The enlargement was not due to the presence of new growth, or infiltrated deposit, but to overgrowths of the normal tissue of the organ, and chiefly of the interstitial connective tissue, which, in the spleen, might become so thickened that the bands of connective tissue might be as thick as the meshes they enclosed. It was not only, however, by the overgrowth of tissue that the organic change resembled that in the bones, but by a deficiency in the earthy salts in the organ, which had been found to be as well marked in the spleen as in bone; the salts in one case being reduced to two-thirds the normal amount. There was formerly an idea that the rickety change was allied to the lardaceous degeneration; but this notion had been abundantly proved to be wrong. The rickety visceral changes, like the rickety condition of bone, were very amenable to treatment—not rapidly, but surely; he had seen a case in which the spleen reached from the ribs to the pelvis, and yet, in ten years, the organ had become so reduced in size as to be barely perceptible.—Dr. GEE remarked that, from his out-patient experience, he had come to the conclusion that it was very rare for rickets to begin after twelve months of age. Some authorities, Trousseau among the number, stated that it might be an adult disease; and it had even been asserted that mollities ossium was rickets in the adult. There was, however, no clear evidence that there was any connection between the two conditions. Parrot thought that rickets was invariably due to syphilis; but, against this proposition, was the fact that a condition closely resembling rickets was found in the lower animals—this condition being, so far as he was aware, exclusively confined to young animals. Parrot would doubtless argue that the condition in the lower animals was different from that of human beings; but, on this point, the *onus probandi* would certainly rest with M. Parrot. —The PRESIDENT showed a photograph of a skeleton in the Brighton Museum, which bore upon the relation of rickets to mollities ossium. The patient had died at the age of fifty, having presented well-marked mollities ossium since the age of thirty, many of the bones having been fractured. Two fractures had, however, taken place at the patient's birth, which suggested some abnormal condition of the bones in the fœtus. The child subsequently presented well-marked symptoms of rickets, from which it recovered, remaining healthy till the onset of the mollities ossium. Two daughters of this patient were rickety; one of them dying after Cæsarean section, necessitated by the rickety pelvis. This looked as though the opinion of continental authors on this point had not been so far wrong as was sometimes supposed.—Dr. NORMAN MOORE remarked that Whistler had been more than once referred to as the first to describe rickets. There could be little doubt that this was not correct: for Glisson had written an elaborate description of the disease in 1650, the result of many years' work; whereas, the only book by Whistler on the subject that could be found was written in 1684. As regarded the proportion of earthy salts in rickety bones, he agreed with Dr. Fagge that much too great a stress had been laid upon this point. He had taken the end of a rib from a healthy child, and from a rickety child; had reduced the portions to the same weight; had then calcined the bones, and found that the weight of the ash was identical in the two cases. He next called attention to the enlargement of the edges of the front of the vertebræ in the middle line. This enlargement was permanent, and could often be recognised at necropsies on adults, looking somewhat like the enlargement seen in rheumatic arthritis. In regard to the dependence of pigeon-breast upon a rickety condition, he had seen one case in which pigeon-breast had been produced by whooping-cough, without the presence of a single sign of rickets.—Mr. WARRINGTON HAWARD referred to Dr. Fagge's statement that rickets was a general disease, of which the changes in the bones formed only a part. He himself went further, and thought that very bad cases of rickets were met with in which the bone-symptoms were not very marked. He defined rickets as a special form of debility, the chief stress of which

fell upon the locomotor apparatus, in which must be included the muscles and ligaments equally with the bones; in addition to which, there was present a tendency to the other general symptoms referred to by Dr. Fagge and others. The symptoms might come on after the child began to walk; one of the first signs being, to use the mothers' expression, that the child was "taken off its feet". This must be due to muscular weakness rather than to weakness in the bones; and the same might be said of the bowed spine and the prominent abdomen. Weakness of the leg-muscles caused extra stress to be thrown on the ligaments, which, themselves being weak, give way; and hence resulted knock-knee. He had seen a child, aged four months, presenting signs of rickets, who was unable to move its legs at all, and its arms only a little—a condition that might be termed "rickety pseudo-paralysis"; the condition being associated with intense tenderness. On careful examination, decided nodulation of the ribs could be felt. The child rapidly improved, and quite recovered. This was a good instance of rickets, in which the bone-affection was little obvious and the muscular affection well marked. He had never made a *post mortem* examination of the muscles in a case of acute rickets; but, in less acute cases, he had been unable to detect anything beyond thinness and pallor of the muscular fibres. As regarded the rickety change in the skull, he thought it was one of shape rather than of tissue. If the skull of an infant were flattened at the top, so as to lead to squeezing out of the sides, the rickety skull was produced. He did not think the skull was larger than in healthy children; and, as regarded the brain-development in these children, he thought they were stupid rather than precocious.—Mr. PARKER considered it very necessary to try to determine the age at which rickets first commenced; for on that point hinged a good deal of the pathology of the disease. Was rickets ever congenital? English authors seemed to question this point; but many foreign authors had recorded undoubted cases. Was it ever hereditary? So many of the London children were rickety, that it seemed difficult to exclude such a probable cause. Sir William Jenner had long since drawn attention to the influence which debilitating influences, acting through the mother, exercised upon her child. He did not wish congenital rickets to be taken in the sense of fœtal rickets, which was probably a more fundamental change. He had not seen rickets, as ordinarily understood, in children under one month; but that was, perhaps, because younger children seldom showed symptoms which necessitated medical treatment. He quite agreed with Elsässer, that cranio-tabes was rickety in its nature rather than syphilitic, as Dr. Lees and Dr. Barlow had attempted to show in their communications read at the last meeting. He could not accept M. Parrot's view as to the origin of rickets, but thought that the opposite view might be more safely held. The rickety change predisposed to the syphilitic; much as a blow might develope tubercular meningitis in a subject in whom the tubercular diathesis had not previously been suspected.—Sir WILLIAM JENNER stated that he had nothing to add to what he had written on the subject in 1860, and that he had nothing to withdraw. He thought that no good reasons had been adduced by Dr. Hilton Fagge, or by Dr. Eustace Smith, against the use of the word "diathesis" in connection with rickets. Dr. Smith founded his objection upon a definition of the word "diathesis" given by Dr. Aitken; but he (Sir William Jenner) was not prepared to accept this definition. For him, the term "diathesis" meant a disposition to become diseased in a certain way, whether the disposition arose from hereditary tendency, or was induced by the conditions in which the child was living after birth. In what way, then, did rickets differ from tubercle or scrofula? Many a child, not born with a tendency to tubercle, became tubercular, if placed in unfavourable circumstances; and this was exactly similar to what took place in rickets. As regarded the use of the word "diathesis", it became merely a question of terms; but what was wanted was a word to show that, in the one case, we had to deal with a general disease, just as much as in the others. Dr. Fagge had asked whether pigeon-breast could come from any other condition than rickets. This question could be answered at once in the affirmative; for there were two distinct kinds of pigeon-breast—the one being due to softening of the ribs at their growing extremities, leading to a falling in of the bones during inspiration, with the production of the rickety pigeon-breast; the other due to bending of the solid ribs, at their angles, during forcible expiration, and consequent pushing forward of the sternum, which might occur in children without a sign of rickets, and which was quite as common a condition as the other. The tenderness of the muscles, to which allusion had been made, had been recognised for a very long time; and it was well known that the abdominal muscles might be just as tender as the muscles of the limbs. He had never microscopically examined the muscles in a case of acute rickets, but he had often done so in more chronic cases; and he had failed to find any other changes than thinness and pallor of the fibres. Dr. Fagge had spoken of the excretion of uric acid by rickety children. This condition of the urine was, however, so common in children suffering from all sorts of diseases, that he did not think the point was of any value. The question of the connection between rickets and syphilis was not raised now for the first time. A strong argument against any definite relationship between the two diseases was the fact that, in syphilis, it was the early children in a family which were chiefly affected, the tendency becoming less marked as time went on; in rickets, on the other hand, it was, in the poorer classes at any rate, the later children who were most affected, and the tendency to the disease became more marked as time advanced. Again: it had many times occurred to him, in his practice, to attend the rickety children of persons whose word was thoroughly trustworthy, and who absolutely denied the presence of any syphilitic taint. The argument, drawn from a condition closely resembling rickets, in the lower animals, was also a very strong one. As regarded the condition and shape of the skull in rickets, there could be no doubt that the bones of the skull were often very seriously affected in rickets, not only in the back of the head, but in the front also—the frontal bone being greatly enlarged, especially the frontal eminences, which may be so large that a well-marked groove was formed between them. This enlargement was due to a great development of cellular cavities in the bone, filled with a soft highly vascular material. Mr. Haward had stated that the changed appearance of the skull was one of shape rather than of size, and was just such as would result from a flattening of the skull by pressure on the top. That this was not strictly correct, however, was proved by the fact that a rickety skull was abnormally long from before backwards; whereas, a flattened skull would show its increase in size transversely. He believed that increase in size of the anterior lobes of the brain had a great deal to do with this condition. Referring to the chemistry of the disease, he called attention to the facts which had been pointed out by some foreign chemists. The first was that rickety bone, on boiling, did not yield ordinary gelatine, but contained a large quantity of animal matter, differing essentially from gelatine. The other was that the urine of rickety children contained large quantities of lime-salts, amounting to at least six times the normal quantity. He thought these statements were worthy of further investigation. In speaking of the changes in the liver and spleen, he thought that Dr. Dickinson's account of the microscopic appearances did not explain everything. The liver in thin sections looked just like transparent glue, and the spleen had much the same appearance. This appearance could scarcely be accounted for by the development of connective tissue, for that was a common enough condition from other causes; but, when it was due to other causes, this peculiar transparency was not seen. Dr. Gee had stated that rickets very rarely began after twelve months of age; this was, however, by no means an absolute rule: for he had seen cases in which rickety symptoms had set in as late as seven or eight years of age.—Dr. BARLOW showed a skull, presenting well-marked cranio-tabes, taken from a child aged seven months, the first child of a healthy woman with abundance of milk. The child was suffering from congenital syphilis, but did not present a single *ante mortem* or *post mortem* sign of rickets. In addition to the cranio-tabes, the skull presented the thin layer of bony deposit on the frontal bones, to which much importance had been attached by M. Parrot in syphilitic children. He remarked that it was rare to find cranio-tabes before the age of three months, by which time the rash and other signs of syphilis had generally disappeared. He showed a living specimen, in which the cranio-tabes and the rash were present together. In the production of cranio-tabes, there were three factors: 1. Morbid softening of the bone; 2. A weakly child leaning its head against the nurse's arm, or lying on a pillow, and so causing pressure from without; 3. Pressure of the brain from within. Cranio-tabes had never been found in the new-born child, and it would thus appear to be an acquired condition. As regarded the relationship between cranio-tabes and rickets, there could be no doubt that many children with cranio-tabes became rickety; but it must be borne in mind that a very large proportion of children suffering from congenital syphilis were exposed to the conditions leading to rickets.—On the motion of Mr. CLEMENT LUCAS, the debate was adjourned till the next meeting of the Society, on December 21st.

Living Specimen of Osteitis Deformans.—Mr. TREVES showed a woman, aged 48, suffering from this disease. Her mother had been crippled with rheumatism for six years before her death. The patient had never suffered from rheumatic fever or other serious illness. She had had twelve children and two miscarriages—the last child, who died of rickets when two years old, having been born after the onset of her present condition. Five years ago, she complained of aching pain in the legs, which became weak. Four years ago, deformity began—the lower part of the left tibia being more prominent than the right. The left tibia was now much larger than the right, in every direction; the left leg being two inches larger in circumference than the right. The

right tibia was, however, also affected, and the right femur was greatly enlarged. There were no changes in the other bones, except a slight bending of the spine in the upper dorsal region.

Specimens exhibited by Card:

Dr. TURNER: Anatomical and Microscopical Specimens of Rickety Bones.

Dr. DREWITT: Microscopical Specimens of Rickety Bones.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, DECEMBER 9TH, 1880.

WILLIAM BOWMAN, F.R.S., President, in the Chair.

The Operation of Peritomy in the Treatment of Pannus.—Mr. CRITCHETT read a paper on this subject. He gave the following reasons for introducing the subject to the notice of the meeting. First, during a long career, many cases of vascular opacity with granular lids had come before him, in which the disease had remained for many years unrelieved; although the patients had been under treatment for considerable periods at various institutions. Secondly, the operation of peritomy had fallen into unmerited neglect, and was seldom practised. He then gave a brief sketch of the leading symptoms of the disease, and alluded to the type of patients in whom it most frequently occurred; he having found that it was most frequent in young adults who had been ill-nourished and neglected; and that it was frequently propagated by direct transmission; so that constitutional poison and local cause contributed in varying degrees to its development. It often existed in a very aggravated degree for many years; and the treatment was, as a rule, directed to removing the granular condition of the lids. This might be partially effected by the application of caustics and astringent lotions; but such treatment was rather palliative than curative; and not unfrequently, during its progress, the case would relapse, and the symptoms become even more intensified. Mr. Critchett recommended, although it might seem contrary to the pathology of the disease, that curative treatment should, in the first place, be directed to the vascular web which in these cases covered the upper third or upper half of the cornea; since he believed that the exciting cause of the relapses lay rather in this morbid condition, and that the granular state of the lids was kept in activity by the existence of the above-mentioned vascular membrane. He, therefore, in every instance, began his treatment by performing peritomy, since he found that, when sufficient time had been allowed—usually from four to six months—for the resulting cicatrix to become dense, white, and atrophied, thus cutting off the vascular supply to the partial pannus, the web gradually disappeared, the cornea became transparent, and the granulations either disappeared or became much more amenable to ordinary treatment. He was anxious to dwell on this last point, because, for a certain period after the performance of an operation, no benefit, but rather the contrary, would usually be observed; and it was only on the completion of the last atrophic stage of the cicatrix that the curative influence was established. He earnestly commended the operation to the attention of his colleagues.—Mr. HIGGENS had performed peritomy in several cases similar to those mentioned by Mr. Critchett, but without apparent benefit. In most of these cases, however, he had not followed the subsequent history of the patient for so long a time as was mentioned by Mr. Critchett.—Mr. JAMES ADAMS had performed peritomy many times for this condition, but had ceased to do so, not because he was dissatisfied with the operation, but because he wished to see what was the history of granular lids when left to themselves. He thought it doubtful whether pannus was due to granular lids, because pannus was absent in many extreme cases of this kind, whilst in other cases it occurred very early in the disease.

Eye-Symptoms in Locomotor Ataxy.—Dr. HUGHLINGS JACKSON read parts of a paper on this subject. He first alluded to the great number of very different symptoms in this disease, referring to the fact that some of them were found in other diseases. At present, we had to study the symptoms as they occurred, in association or in sequence. In this paper, three well-marked non-ocular tabetic symptoms were considered in connection with certain ocular symptoms. Twenty-five cases in different stages furnished the material for the communication. *a. Non-ocular Symptoms.—1. The Lightning Pains.* There was a succession of sudden, small, severe, short pains. As Pierret and Buzzard had pointed out, these pains might occur about the head, although they occurred mostly in the legs, trunk, and arms. Charcot and others had observed eruptions in the parts seized by pains. Buzzard had published the case of a patient (whom he permitted Dr. Hughlings Jackson to see) who, with every batch of pains, had a small crop of herpes; this patient had double optic atrophy and Westphal's symptom (absence of so-called patellar tendon-reflex), as well as the pains; he walked well. An interesting point in this case was, that the patient had for several years crops of herpes before batches of pain, and then always both together. It was most important to note that pains were denied by some patients who, nevertheless, had them. Many patients saw no relation betwixt their pains and their amaurosis or ataxy, especially if the pains came years before. Thus, one patient strenuously denied having any pains, but it came out that he had had sciatica; really he had had true lightning-pains. He had optic atrophy and Westphal's symptom. Many of those who denied pains would admit that they had long been subject to rheumatism, or to neuralgia, or to "flying gout", and would describe these things so as to render it sure that they were lightning-pains. It was often difficult to get a patient to fix his mind upon his pains. A patient, aged 54, had recently continuous severe pain in the toes and sides of his feet. This he admitted to be one of the symptoms of his disease, but ignored lightning-pains, which he had on and off for twenty years. These pains were, he would have it, only gout. It was difficult to get him to attend to the questions about them. He had had incontinence of urine nine years; difficulty in walking, according to his account, six months; according to his wife's, for about eighteen months earlier; his gait was only slightly ataxic. There was Westphal's symptom. The ocular symptom was, that his pupils, which were small, did not contract to light. A patient might have for very many years the pains, before any of the striking symptoms of tabes dorsalis. Dr. Jackson had recently seen a patient, about sixty years of age, who had pains, which he concluded to be "lightning", for about twenty years. His gait was normal. The patient had, of late years, attacks of what he called sickness, but really faintness with intense depression, for hours. These might have been the "gastric crises" of Charcot, or might possibly have depended on derangement caused by very large quantities of opium he had taken for relief of pain. Hearing his account of pain, Dr. Hughlings Jackson looked for Westphal's symptom, and found it. He had an ocular symptom too. The pupils did not contract at all to light, and, he thought, very sluggishly during accommodation. He did not doubt that this was a case of posterior sclerosis. Charcot and Bouchard reported a case in which pain had been the sole symptom. The necropsy showed commencing sclerosis of the posterior columns.—*2. Westphal's Symptom* ("absence of knee-phenomenon"; "loss of patellar tendon-reflex"). It was well known that smart tapping just below the knee in healthy people made the leg jump up. As Westphal and Erb pointed out, this did not occur in the great majority of cases of tabes; the jumping up upon the tapping was usually called patellar tendon-reflex, but, as this name involved a disputed theory, he would call the loss of this so-called reflex "absence of the knee-phenomenon", or "Westphal's symptom". It was by no means easy to be sure of the absence of the knee-phenomenon. It was well known that, in cases which were evidently not cases of tabes, Westphal's symptom was present; thus, in atrophy of the quadriceps, the knee-phenomenon could not occur. Buzzard had published a case of diphtherial paralysis in which there was Westphal's symptom; the knee-phenomenon returned when the patient was rid of his paralysis.—*3. The Ataxic Gait.* Under this head, the author believed the so-called disorder of co-ordination to be a double one—paresis of some movements, and over-action of others. He illustrated by the duplex effects of paralysis of ocular muscles. A similar explanation had since been given by Pierret.—*b. Three Eye-symptoms:* One great question of interest was, the frequency with which eye-symptoms were the earliest symptoms. Since the Argyll Robertson's symptom did not inconvenience the patient, it was hard to say whether it was ever first or not. Excluding from consideration for the moment Argyll Robertson's symptom and Westphal's symptom, Dr. Jackson found in nineteen cases that the earliest symptoms were as follows: in ten cases, pains; in six, double vision; in one, abnormal gait; in one, optic atrophy; in one, mental symptoms; probably the last was a case of general paresis. The pains were often neglected in taking note of the earliest symptoms; manifestly, this made the case seem to begin months or years later than it really did.—*1. Paralysis of Parts supplied by Oculo-motor Nerve-trunks.* Several cases were alluded to; one under this head in a man, aged 63, who, twelve months before, had had paralysis of parts supplied by the left third nerve. Dr. Jackson could find no symptom of tabes, except Westphal's symptom; and this made him feel sure that this patient had tabes. This patient's pupils acted well to light and during accommodation. He had no pains of any sort anywhere; he complained only of a heaviness in his head.—*2. Alterations of Pupils.* The common condition described was what was called the Argyll-Robertson pupil; the pupil did not act to light, and did act during accommodation. This had been observed in tabes by Hempel, Vincent, Erb, and others. It was a double condition, negative and positive, and in this way resembled the so-called disorder

of co-ordination of locomotor movements. Erb called the condition an inactivity of pupil, "reflex pupillary immobility"; and advanced an hypothesis as to its fundamental community of character with Westphal's symptom. That hypothesis, however, had been previously made by Buzzard; he pointed out that, both in Westphal's symptom and in Argyll Robertson's symptom, there was loss of a reflex movement when the more voluntary movement is retained. Buzzard's hypothesis seemed to harmonise with the explanation suggested as to the peculiarity of the gait. It was not merely an affair of light and pupil. It was well known that brisk cutaneous irritations caused the pupil to enlarge; pinching a comatose man will often enlarge his pupils. Erb said that the pupil inactive to light, in cases of tabes, was not affected by such procedure; he said also, that it was not affected during the lightning-pains. Frequently the tabetic pupil, when inactive to light, was also myotic. In all cases, the size, as well as the immobility, of the pupil must be considered; and it must be remembered that the senile myotic pupil contracted to light. Although much impressed by Buzzard's generalisation, Dr. Jackson adopted no theory on the duplex condition of the pupil. He showed a diagram copied from a paper by Erb (Seguin's *Archives of Medicine*, October 1880), which gave that physician's view of the central conditions corresponding to the double pupillary condition. The following case was, in his experience, a very rare one. A woman, aged 26, was sent to him simply because her right pupil was larger than the left. It had been so three years. The right pupil was dilated, and absolutely motionless to light, and also during accommodation. Yet her ciliary accommodation on this side was perfect; this was severely tested by Mr. Couper. She could read No. 1 Jäger from fourteen inches up to five, or by effort to four. The field was perfect. The fundus was normal, except that the veins were large and convoluted at the disc, probably physiological; the media were clear. Her sight with this eye was perfect. The pupil of the left eye was most active, and of normal size. The left disc was slightly paler than the right; the veins as on the right; macula normal; doubtful slight limitation of nasal part of field. She could read Jäger 2; but the centre syllable of a long word seemed blurred. She seemed to be in perfect health, except for the ocular abnormalities. It occurred to Dr. Jackson to test her knees. Neither he nor Mr. Couper found the smallest trace of the knee-phenomenon. There were no other symptoms of tabes of any kind. Argyll Robertson's symptom might be found in general paresis of the insane—at least, reflex pupillary immobility; less frequently was there myosis; and the size of the pupils was more often unequal. Erb had found the pupillary condition in patients who had no other nervous symptoms, as well as in nervous affections which could neither be classed as tabes nor as general paresis. Again, it was not said that the action to light may not be present in very well marked cases of tabes. A man aged 65 had, as he was told by Pagenstecher, paralysis of the right external rectus in 1874. There was a return of double vision, from some cause, in 1876. He was subject to pains in his legs; his gait was ataxic; there was Westphal's symptom. He was obliged to carry a catheter to draw off his urine. This patient's pupils acted to light. This was observed by Mr. Laidlaw Purves also, to whom the patient was sent for deafness. The following statement referred to cases from the pupil point of view. There were thirteen cases in which there was no atrophy. In ten of them, the pupils did not act to light (in one case, the pupil on but one side was inactive, and was so in all ways). In nine of the ten cases of inactive pupils, there was Westphal's symptom. Now as to paralysis of the oculo-motor nerves in the same thirteen cases: in one case with normal pupils and Westphal's symptom, there had been paralysis of the third nerve; in one case of inactive pupils with Westphal's symptom, there had been temporary double vision; in another case with inactive pupils and Westphal's symptom, there was paralysis of one sixth nerve.—3. *Optic Atrophy.* Tabes dorsalis, like general paralysis, rarely occurred in women. When clinical assistant at the Moorfields Hospital about twenty years ago, Dr. Jackson was struck with the fact that many of the men who had white atrophy of the optic discs had also pains in their legs; the pains were lightning-pains. Later, on making a distinction of the kind of atrophy, he concluded that the pains were a symptomatic link betwixt "uncomplicated amaurosis" and locomotor ataxy. This relation had been previously noticed. In the *Medical Times and Gazette* (September 1st, 1866), he wrote: "We have—(1) amaurosis without pains in the legs; (2) amaurosis with pains in the legs only; (3) amaurosis with pain in the legs and difficulty in co-ordinating the legs; (4) pains in the legs and difficulty in co-ordinating the legs, without amaurosis; (5) amaurosis without pains in the legs, and with difficulty of co-ordination. I could now put five patients in a room showing the above set of symptoms." The term amaurosis meant, then, atrophy which did not follow neuritis. He mentioned what he observed, not with any view to priority, having none, but because what he then said, fourteen years ago, was denied, and the authority of Duchenne, that the amaurosis in locomotor ataxy presented quite the ordinary features of atrophy of the optic nerve, as it occurred from other causes, was quoted against him. The atrophy was now more particularly described as grey degeneration; and was supposed, by Charcot and others, to be parenchymatous. The peculiar limitation of the field of vision in cases of the atrophy in tabes was significant, when it was considered that the developed disease was in great part one of the locomotor system. It would seem to correspond roughly to certain ocular deviations from cerebellar disease, in the way that hemiopia did to lateral deviation of the eyes from cerebral disease. In all cases of optic atrophy, we should inquire for the pain, test the knees whether gait be abnormal or not. The pains were often bridging symptoms betwixt so-called uncomplicated amaurosis and tabes. Charcot said that in 1868 he pointed out that the great majority of women admitted into La Salpêtrière, for amaurosis, had, sooner or later, manifestations of tabes. He mentioned one case in which the amaurosis preceded the pains ten years. Gowers had seen a case of tabes in which optic atrophy preceded other ataxic symptoms twenty years. In the twenty-five cases mentioned, there were twelve of optic atrophy. In two, there was also ocular paralysis, and in one a history of it. In nine, there was Westphal's symptom. In one of the three without it, there had been no pains; gait was slightly ataxic. In the second, there had been double vision ten years ago; there is now paresis of the left third nerve. This patient had pains; his gait was normal. The third case was one of atrophy of one disc, with limitation of the field outwards and downwards; the patient saw green as grey, and red as reddish-brown. He had pains; his gait was good.—Dr. GOWERS thought the absence of dilatation of the pupil, on pinching the skin, mentioned by Erb, was due to paralysis of the sympathetic rather than to loss of reflex action, and was, therefore, not analogous to the loss of tendon-reflex.

Specimens.—The following living specimens were exhibited:

Mr. JAMES ADAMS: Peculiar Opacities in the Vitreous Humour following Injury.

Dr. STEPHEN MACKENZIE: 1. Case of Scurvy, with Retinal Hæmorrhage and Degeneration; 2. Case of Idiopathic Pernicious Anæmia, with Retinal Hæmorrhage.

Dr. A. D. DAVIDSON: Case of Congenital Absence of One Eyeball.

Dr. ALLEN STURGE: Case of Paralysis of both Third Nerves, of the Right Fifth (Motor and Sensory), the Right Facial and Auditory Nerves, associated with Left Hemiplegia.

Mr. MCHARDY: Case of recent Rupture of the Choroid.

Mr. WORDSWORTH: 1. Case of Rupture of both Eyeballs, with Dislocation of the Lenses under the Conjunctiva—caused by the same Injury: Recovery of Good Sight; 2. Case of Peculiar Granular Calcareous-looking Opacities upon the Iris after Needle-Operations for Soft Cataract in a Boy.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

WEDNESDAY, NOVEMBER 17TH.

J. W. F. SMITH-SHAND, M.D., Vice-President, in the Chair.

Ovariotomy in Aberdeen.—Dr. ALEXANDER OGSTON gave an account of the progress of ovariotomy in Aberdeen, with special reference to the value of antiseptics. The first case in Aberdeen was one on which Mr. Baker Brown (having visited the town for that purpose by special request) operated, using the clamp. The case was completely successful, and was the only *successful* case in Aberdeen for several years. The late Dr. Keith operated in hospital once; and three other surgeons had performed the operation, including the reporter himself; but, notwithstanding that the operations were in every case performed with the greatest care and according to the best known rules, the patients all died. In one of these cases, special attention was directed to ablution, and no one was allowed to be present who could have been a cause of infection; but still the patient died two days after operation, with temperature 107° Fahr., and with all the symptoms of blood-poisoning. For some time no further attempt was made there to operate on abdominal tumours; but in April 1879 a case presented at the hospital, and it was resolved to perform ovariotomy with the best antiseptic precautions. The spray was used from the beginning; everything was carbolised; all hæmorrhage was stopped before the peritoneum was opened; adhesions were carefully removed; tapping was had recourse to before withdrawing the cyst; the pedicle was burnt through by Baker Brown's cautery clamp; and the stump dropped into the cavity of the abdomen. The case did well, the temperature never rising above 100.6° Fahr. The next case was that of an old woman with a solid tumour of the size of a large turnip, lying on the upper part of an ovarian cyst. In this case, the wound had to be enlarged three inches above the um-

bilicus before the solid tumour (fibroid) could be removed. Here the temperature after operation was never above 100.4° until the wound was healed. After that, she had an attack of bronchitis, and the temperature rose to 103°; but she recovered perfectly. In this case also, as in all the others, the antiseptic treatment was carried out to the fullest extent. In July 1879, the first really difficult case was operated on. This was in a girl aged 21. Here the adhesions were very hard, and difficult to break down; but there was not much bleeding. The parietal adhesions were all broken down before the tumour was diminished by tapping; and, after the tapping, when the tumour was drawn out, the omentum was found firmly adherent, and was brought out along with it, and the omental adhesions then broken down. There were no intestinal adhesions. The tumour consisted of a number of small cysts, and much fluid escaped from these into the peritoneum; but this was thoroughly cleared out and emptied, and the case did well. Temperature was never more than 100.4° Fahr., and she went out cured in a few days. Here, as in all the others, Dr. Thomas Keith's plan of purging and starving before operation answered very well. The intestines were found small and empty, and did not get in the way or protrude. The next case occurred in March last, and was that of a young woman aged 22. It was simple, and devoid of special interest. The temperature never rose above 100.6° Fahr. In July of this year, Battey's operation was performed in the hospital, on a woman forty-six years of age. Her history was that, from the time she was a young girl, she had always suffered ovarian pain, and had tried nearly every variety of treatment. She had occasionally improved for a week or two, and then had fallen back; and had spent much of her time in bed. She had used as many as four or five morphia suppositories daily, and had thus for a long time been the slave of opium. In this case, the abdomen was opened, as usual, under spray, and with the other antiseptic precautions. Both the ovaries were drawn out; and, without using the clamp, they were transfixed with carbolised silk, and cut away. For fifteen days the case did well, the temperature never being beyond 100·4° Fahr. The wound in the abdomen then began to gape, the catgut stitches giving way; but the peritoneal wall remained entire; and, though the temperature rose to 103.6°, and septicæmic symptoms were marked, there was complete recovery after cauterising with chloride of zinc. As to the further results of this operation, the reporter believed the patient had been relieved of all excessive pain, and had given up the morphia. She still, however, had a certain amount of uneasiness. The next case was one in which ovariotomy was performed for the removal of a tumour partly solid and partly cystic. The incision had to be made from the ensiform cartilage to the pubes. There were considerable omental adhesions to be broken up before the mass (weighing twenty-two pounds) could be removed. The other ovary was diseased, and was therefore taken away. Everything went on well. A boy was the next patient whose abdomen was opened. Here the tumour was believed to be omental; it was movable, and seemed within the peritoneum. On incision, however, the tumour was found to be post-peritoneal, being a sessile movable cyst; and, as it was supposed to be connected with the kidney, the operation was abandoned; the boy recovering without a bad symptom. The last case was one of simple ovarian tumour without adhesions. After operation, the temperature never rose above 100.4°. The reporter said he had learnt much from these cases. As usual, many things that had been written regarding such like cases, if new, were not true, and, if true, were not new. 1. *Resonance in the flanks* was not diagnostic of ovarian dropsy, for sometimes ascites had the flanks resonant. 2. *Groups of cells proliferating* were not certain signs of malignancy. He had found these cells in a case of simple chronic peritonitis. 3. *Cells in the liquid belonging to ovarian cysts* could not certainly be said to be characteristic. It was said these cells were like those of cylindrical epithelium, and indicated ovarian origin; but there were no such cells found in the fluid in any of the cases reported above. Indeed, the ovarian character of the fluid was best known by its *stickiness*. All chemical tests had failed. The great lesson of the cases seemed to the reporter to be *the value of the antiseptic treatment*. The cases operated on in the hospital after antiseptics were introduced all recovered; whereas those operated on before antiseptics were introduced all died, although they had at least equal skill and care bestowed on them.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.—Mr. Joseph Marshall, of West Heslerton Hall, Yorkshire, bequeathed £200 to the Bradford Infirmary, and £100 to the York County Hospital.—The Royal Hants County Hospital, Winchester, has become entitled to £100 under the will of Mr. John Deverell, of Purbrook Park, Portsdown.—The Grocers' Company have given £100 to University College Hospital.—Earl Cadogan has given £50 to the Hospital for Women.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, NOVEMBER 26TH, 1880.

A. H. McCLINTOCK, M.D., President, in the Chair.

President's Address.—The PRESIDENT delivered the inaugural address for the session 1880-81. The Society, he said, was about to enter on the second half century of its existence; it could not, therefore, be wondered at that none of those who had nursed the Society in its infancy should have survived to its fiftieth birthday. Since his predecessor in that chair delivered the opening address twelve months ago, the last of the founders of the Society, Charles Benson, had passed away. Since then, the Society had also to lament the death of two of its most illustrious members, Sir Dominic Corrigan and Alfred Hudson. The President then traced the history of the advances made in midwifery by surgeons, from Ambrose Paré down to the present day, showing that all substantial improvements in treatment were due to surgery; medicine having aided but little in the triumphs of modern gynæcology. Medicine and surgery had each advanced, but in different directions; whilst the former had greatly improved in accuracy of diagnosis and in prophylaxis, the latter had made the most rapid strides in the direction of treatment. Nowhere had this advance been more remarkable than in the treatment of the diseases of the genito-urinary organs of women. And to the introduction of anæsthetics must be attributed much of this result, they alone rendering it possible.

Acute Laryngitis while convalescing from Small-pox.—Mr. KENDAL FRANKS read a paper on this subject. Laryngeal complications were common in small-pox. The nature of the affection, and its severity, depended on the time of its appearance. The less severe the form, the earlier it was likely to appear. The varieties might be classed under three heads: 1. Pustular laryngitis, which appeared about the sixth day, and seldom became serious; 2. Acute laryngitis, which came on between the ninth and twelfth days, with excessive inflammation and exudation into the submucous tissue (it was very frequently fatal, but might become subacute, and be followed by recovery); 3. Croupous or diphtheritic laryngitis, coming on about the tenth day, with acute inflammation of the larynx, etc. So rapidly and certainly fatal was this form of disease, that Dr. Mackenzie said that treatment was almost useless. Mr. Franks then related the details of a case illustrating the second variety, which had come under his care in the Adelaide Hospital. The patient, a woman aged 37, had had small-pox eleven weeks previously. Laryngeal symptoms of a slight degree had shown themselves on the eleventh day of the sickness, but had yielded to treatment. She was then for four weeks in the convalescent ward. When she applied at the Adelaide Hospital on account of her throat, the space through which she breathed was no larger than a crow-quill, owing to the swelling of the larynx; she had, therefore, to be fed with enemata; and, as the symptoms of dyspnœa became more urgent, Mr. Franks had to perform laryngotomy. The highest point the temperature reached during the case was 101°. For seven days, she was fed entirely *per rectum*. The case terminated satisfactorily, but was extremely slow, and illustrated well the tedious course of treatment necessary in such cases. After the acute symptoms had disappeared, tincture of iodine was used with great benefit to reduce the tumefaction of the laryngeal mucous membrane. The comparative impunity with which tincture of iodine might be employed in laryngeal tumefaction was worthy of note.

Multiple Calculi.—Mr. CROLY exhibited thirty-three perfectly formed calculi which he had lately removed, at one operation, from the bladder of a man who had been for five years suffering from symptoms of stone. The lateral operation was performed, and occupied fifteen minutes; each stone had to be removed separately. The largest stone weighed two ounces, and all the other thirty-two together weighed only two ounces; yet each individual stone was perfectly formed, and consisted of a centre of oxalate of lime, with an exterior of phosphates.

Tumour of Lower Jaw.—Dr. KILGARRIFF exhibited a portion of the lower jaw with a tumour adherent, which he had removed the day before. The mass weighed ten ounces, and extended from the incisors on each side to the middle third of the horizontal ramus of the lower jaw. It had been growing for three years, but, during the last six months, had more rapidly increased in size, and interfered much with the motions of the jaw. The tumour was a hard fibroma, and was intimately adherent to the bone.

Naso-Pharyngeal Tumour.—Mr. BARTON exhibited a tumour which he had removed a few weeks previously from the upper and back part of the left side of the pharynx of a woman, aged 22. The girl stated that the tumour had always been in her mouth, but, until lately, had given her no trouble. She now complained of a pain and feeling of fulness in the head, and of difficulty of swallowing. The tumour, which

was 32 *millimètres* in length, 15 *millimètres* in breadth, and 20 *millimètres* in height, hung from the pharynx behind the velum, by means of a pedicle. It was white, and contrasted markedly with the red mucous membrane around it. It was removed by means of the wire *écraseur* with some difficulty, owing to a cartilaginous mass in the pedicle. The tumour was found to be covered with true skin, containing epidermis, corium, hairs, sebaceous and sudoriferous glands, etc. In the centre, it resembled an ordinary fatty tumour, except that there existed the mass of cartilage in the pedicle. A couple of white patches could be seen with the laryngoscope, on the surface of the mucous membrane near the site of the tumour; these were considered to be similar in nature to the skin covering the tumour. Mr. Barton said that, as far as his knowledge extended, such a skin-covered tumour growing from the pharynx was unique.—Mr. ABRAHAM, to whom Mr. Barton had given the tumour for microscopical examination, pronounced its structure to be such as Mr. Barton described, and exhibited microscopic sections showing the true skin and hair-bulbs, etc., contained in it.

Ovarian Tumour.—Mr. CROLY exhibited a bilocular ovarian tumour which he had removed on November 3rd from a woman, aged 44. It had been growing for six months. The operation was performed strictly in accordance with the antiseptic method, and primary union was obtained, and the patient convalescent without the formation of a single drop of pus.

Disease of the Ulna.—Mr. CROLY exhibited the ulna of a patient, which he had removed a few days before in two pieces, the radius being left intact.

REVIEWS AND NOTICES.

THE ADVANTAGES AND ACCIDENTS OF ARTIFICIAL ANÆSTHESIA: A MANUAL OF ANÆSTHETIC AGENTS. By LAURENCE TURNBULL, M.D., Aural Surgeon to Jefferson College Hospital, etc. Second Edition. London: H. K. Lewis. 1880.

WE learn, from a preface, that the first edition of this work was rapidly sold; and that the second contains new experiments, especially with hydrobromic ether, and as to the action of anæsthetics on the blood. "There will be found, also, many more practical suggestions as to the employment of anæsthetics that are safe; and the rules for their adoption, or reasons for the rejection of some of them in different cases, grouped, and made convenient, so that the student can memorise them." This sentence expresses at once the object of the book, and shows the curiously involved style of the writer; and our own experience, after reading it, is of anything but clear grouping or convenient memorising. There are, however, a number of observations and opinions collected; and some practical hints may be obtained from them.

Alcohol has been employed internally—about one pint for a strong adult, in tablespoonful doses, every twenty minutes as an anæsthetic, in minor amputations, teeth extraction, etc. "Dr. Lysett uses it almost entirely in his operations."

The account of methylic alcohol—its use by inhalation, and its reduction of temperature—is taken from Dr. B. W. Richardson (Cantor Lectures, 1875). Locally applied, cold alcohol (−5° cent. or 23° Fahr.) will anæsthetise, so that cutting is painless (Horvath).

Of ether, the physical characters are first given; then the mode of administration by towel-cone and sponge; then comes a heading, "physiological action", but after the statement that the brain is first affected, then the "anterior or motor centres", next the sensory and motor functions of the medulla oblongata, the rest of the section tells us simply not to inhale after a full meal, especially of hard-boiled eggs, or ham; but to take a biscuit or glass of wine, *or* a scruple of bromide of potassium.

There are many striking examples of "convenient grouping" throughout the volume. Cases which negative ether are said to be—(1) aged persons with emphysema, or cardiac disease; (2) those who faint from slight causes; (3) habitual drunkards; (4) "the fourth class is from limited action of the lungs by adhesions" (*sic*). In our experience, the first two, perhaps three, classes are just those wherein chloroform cannot be used, and ether may be fairly tried. It seems scarcely worth while to inform us that, "in anæsthesia by ether, the real danger to be avoided is over-inebriation"; or that "sulphuric ether is not free from danger, but it always gives warning before the death of the patient". The conclusions of the Medico-Chirurgical Committee, of Dr. J. Morgan (1872), of the Boston Committee (1861), are quoted; and Mr. Cautley Dawson's paper, with list of ether-deaths, is copied entire from the BRITISH MEDICAL JOURNAL of March, 1878. The author objects to Dawson's theory of cold causing spastic contraction of capillaries, but offers the feeble substitute "that ether-vapour fills the lungs entirely, and deprives the blood of its required oxygen".

Under "Rhigolene", we find mention of Leramendi's method of utilising ether-spray. He found that, after an application of from one to two minutes, when the skin was red, if a short and shallow incision be made through the papillary layer, there is suddenly produced an anæmic zone, which enlarges outwards; and, if the spray be directed for a few seconds on this part, it becomes perfectly bloodless and anæsthetic.

Ether mixed with camphor, and applied, will also cause local anæsthesia. Dr. B. W. Richardson's breast-excision by scissors, reported *verbatim*, fills up a few pages. Of gasoline (*sic*), all we are told is, that it is new and cheap, and will answer all purposes of ether at one-fourth the cost; and then the camphor and ether formula is given over again with a variation.

Under "Internal Administration", we learn that ether has, for tænia, proved useful either alone *or* combined with oleo-resin of male fern, and on the same page we begin hypodermic injection for sciatica, and return to inhalation for asthma, and sprays for chorea. We can assure Dr. TURNBULL that he is mistaken in asserting that, "applied to the spine, it will relieve the most violent convulsive attack of chorea"; relief is exceptional.

Hydrobromic *ether* (twenty minims with glycerine and mucilage) is said to have the "soothing effects of bromide on the brain, and the same effects in relieving headache and tinnitus aurium—*i. e.*, when there is no permanent organic change in the ear". Locally applied, it relieves otalgia, without irritating: it also acts well by inhalation; and, though the author has not used it for protracted operations, his present experience of twenty-one cases is certainly favourable, and deserves further observation. Dr. Levis, indeed, has already corroborated it in protracted and major operations; and notes the rapidity of action of this ether, and the quickness of recovery from it; he styles it the best anæsthetic yet known"; and the only death yet recorded as connected with it occurred in Dr. Marion Sims's practice, when five ounces were taken, and diarrhœa and suppression of urine led to death twenty hours afterwards. In describing the action of chloroform, the explanation favoured seems to be that of Ranke—that the nerve-cell is slightly coagulated by it; and, in toxic cases, the nerve-trunks hardened. Schiff is quoted, to the effect that ether paralyses first the respiration, and after that, the blood-vessels and the heart; while chloroform can paralyse the latter without first paralysing the respiration. Hence, artificial respiration with chloroform is useless; compression of the abdominal vessels, and lowering of the head may, however, do good.

Nitrite of amyl has clearly answered well in some chloroform dangers; and Balliet recommended the addition of sixteen drops to each ounce for inhalation. Sanford calls this "chloramyl", and adds two drachms of amyl to the pound of chloroform. A pure specimen (Squibb's) gives a clear solution, which is readily taken. Turpentine has been used with the same object—of preventing cardiac failure.

The use of mixed vapours and nitrous oxide is described in a series of extracts, which contain nothing new; but the account of inhalers is interesting. Allis's, which favours free evaporation, from many thin slips of bandage in a circular case, is largely used in America; but Clover's forms are also popular.

While the book is deficient in methodical arrangement and in style, it is one which indicates that much labour has been spent in its preparation, and which contains a great deal of useful and interesting information on the subject of anæsthetics.

ST. MARY, NEWINGTON.—Dr. Iliff's report for 1878 on this metropolitan parish, being published in the annual statement of the vestry for 1878-9, has got to be unduly delayed in appearance. Dr. Iliff records a higher number of deaths (2,662) than has occurred for many years, and a death-rate (28.32) which is abnormally high. The reasons for this do not appear in the report, though it would have been well to have indicated in some way the conditions which have led to so large a mortality. Zymotic diseases caused 586 deaths, constitutional diseases 487, local diseases 1,258, and developmental diseases 293 deaths. Small-pox caused 27 deaths, measles 45, scarlet fever 41, diphtheria 17, croup 25, whooping-cough 183, enteric fever 25, and diarrhœa 136 deaths; the circumstances of the occurrence of none of these diseases being mentioned in the report. The infantile mortality was high, no fewer than 721 children dying under one year of age, and 1,220 under five years. Appended to the report is a lengthy essay by Dr. Iliff on the prophylactic virtues of vaccination against small-pox, a vast array of striking and conclusive facts being brought forward to prove the author's case. We are glad to learn that this part of the report has been reprinted in a separate and handy form; for it is only by popularising the real facts about vaccination that the mischievous perversions of the antivaccinators can be effectually combated.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 18TH, 1880.

THE ACTION OF ANÆSTHETICS.

THE Report of the Committee appointed to investigate the action of Anæsthetics is to-day laid before our readers. The results of this inquiry are so important and so far-reaching, as to demand the most serious consideration from every one whose lot it is to administer anæsthetics. The Committee, which included Professor McKendrick, Dr. Coats, Dr. Ramsay, and Mr. Newman, has already submitted three preliminary reports, which have appeared in former numbers of this JOURNAL. In conducting these investigations, two lines were followed: first, to discover wherein the special dangers of chloroform consist; and, second, to attempt to find some safer anæsthetic. Observations made on rabbits showed that chloroform had a most disastrous action on the heart, as well as upon the respiratory centre; that, while ether might be administered for an indefinite period without affecting the heart, no sooner was the inhalation of chloroform commenced, than the right ventricle began to distend, and, in course of time, the cardiac contractions ceased. In every respect but one, ether was superior to chloroform. It had, however, one disadvantage—viz., the length of time which was required to obtain its action; and, on this account, the Committee proceeded to search for some other anæsthetic. Of a considerable number of substances which were made trial of in the course of this inquiry, ethidene-dichloride appeared to yield the most promising results; and, consequently, the actions of this compound were submitted to more special investigation. So long ago as the year 1858, attention was directed to ethidene-dichloride by Dr. Snow, who had employed it in several cases; and since then it has been made use of by Liebreich, Langenbeck, and various other observers in Europe and in America. The Committee were fortunate enough to be able to make trial of anæsthetics in the wards of the Western Infirmary, Glasgow; and they were thus enabled to compare the action of ethidene and chloroform on the human subject. They give details of fifty unselected cases in which each drug was administered to produce anæsthesia during some surgical operation. From the tabular statements so obtained, we may extract some important facts. The average dose of ethidene was 1.8 cubic *centimètres* for each minute during which the patient was under the influence of the anæsthetic; while, in the case of chloroform, the dose was somewhat smaller, the corresponding figure being 1.7 cubic *centimètres*. The time required to anæsthetise with chloroform was 1.1 minute greater than that necessary in the case of ethidene; and sickness appears to have been more prominent during the administration of chloroform than during that of the other anæsthetic. The most important difference in the action of the two anæsthetics, as observed at the bedside, consists in their influence on the pulse-respiration ratio. Charts are appended to the report which represent this in graphic form. In only one case did the pulse fall to 64 per minute during the administration of ethidene; and, in a large number of instances, the pulse and respirations were peculiarly regular. This was not the case as regards chloroform, the pulse frequently falling to 64, 60, 56, and, in one instance, to 48 in the minute; while the rate of respiration often rose much above normal; and, on one occasion, reached to a rapidity of 72 per minute. Such are the most striking clinical facts brought out in this report. The remaining pages contain the results of experimental observations on animals. As regards the action of chloroform and ether on the blood-pressure, the results are, in great measure, a confirmation and amplification, by means of more delicate instruments, of those obtained by the Committee of the Royal Medical and Chirurgical Society, the report of which was published in 1874. With chloroform, there was, at first, a slight transient rise in the blood-pressure, followed by a gradual but irregular fall. When ether was administered, the primary rise was better marked and more prolonged, and the depression which followed it very slight. The report before us adds to this the effect of ethidene on the blood-pressure, and shows that this substance stands in an intermediate position between the other two anæsthetics; causing more lowering of pressure than ether, but less than that produced by chloroform. The same relation between these three anæsthetics is observed in regard to respiration: complete arrest of the pulmonary circulation being obtained most rapidly by chloroform, and with the smallest dose; least rapidly by ether, and with the largest dose; ethidene standing intermediate, whether as regards the time required, or the dose needed to produce the arrest of pulmonary circulation.

On a consideration of the physiology of the effects of anæsthetics on the circulation in the lungs, we shall not enter. This subject is fully dealt with in the latter part of the Committee's Report; but we think that we have already given sufficient material for very serious reflection. In the face of the constantly recurring notices in medical journals, and even in the public prints, of deaths during the administration of chloroform, it cannot fail to be patent to everyone that there is danger in the administration of that drug. It will be observed that it does not affect our argument whether such deaths were unavoidable, or were the result of faulty administration, or of administration of an insufficient quantity, as we believe to be not unfrequently the case. The fact remains that deaths do occur; and, in such circumstances, is it not the duty of the medical profession to endeavour to find a more safe anæsthetic? and, further, if, as this valuable report goes to show, ethidene-dichloride be a safer drug, is it not, then, incumbent on our profession to make use of it? Ether, while safe, has the alleged disadvantage of needing to be given in large quantities, and for a considerable time. Ethidene has no such disadvantages, and it may be given with the same feeling of security as attends the administration of ether. The Association may well be gratified with the result of its Committee's labours, and may feel that the encouragement and aid which it gives to scientific work, by means of its annual grants, are of substantial service to the cause of humanity.

OUR SOLDIERS AND THEIR BARRACKS.

AT a recent ordinary meeting of the Royal Institute of British Architects, a paper on the Modern Barrack was read by Mr. E. Ingress Bell (of the War Office). The paper was a timely one, being apparently suggested by the fact that much is being done in this direction, in connection with the "Military Forces Localisation Act" of 1872. Old barracks have been enlarged, and new ones built, at fifty-four stations in the United Kingdom, accommodating twelve thousand men, and costing a quarter of a million sterling, exclusive of the land on which they are built.

The question of barracks is a very important one, both in the interests of the army for whom they are constructed, and of the people generally, for whose defence the army exists. The author traced the history of the barrack movement from the time of the Revolution down to the present day; pointing out that, at that time, when the army was first placed on a legal footing, there were no barracks but those at Whitehall for the Guards, and a few in Scotland. The reason was, the strong antipathy of the nation to a standing army. Even so late as 1766, Blackstone wrote: "Nothing should be more guarded against in a free community than making the military form a body distinct from the people. The soldiers should be intermixed with the people.

No barracks should be allowed." The crowning objection was the use to which they had been put in Ireland. When, at last, it became absolutely necessary to provide for the housing of the soldiers, Mr. Pitt brought in a measure; and an enormous number of barracks were built at the close of the last century, 1793-97. Being constructed on a hasty and ill-considered plan, they were for the most part monuments of ugliness, as well as defective in sanitation. Such as they were, however, they remained until the great sanitary movement which succeeded the close of the Crimean war. The several commissions which were formed made exhaustive inquiries into the matter, and showed the many serious shortcomings of the existing structures. It was shown that the excessive mortality of the troops (double that of the civil population) was due mainly to the defective sanitation of the barracks. The result was the promulgation of a series of recommendations prescribing the space to be allotted to each man, the removal of the offensive urine-tubs, the proper warming and ventilating of the rooms, the provision of separate quarters for married people, as well as wash-houses, baths, etc., and a proper system of drainage and water-supply. Mr. Bell then gave a description of the special requirements necessary for a good barrack, particularly with reference to the new brigade-depôt barracks. Each barrack-room is designed to hold one-eighth part of the rank and file composing a brigade-depôt, viz., twenty-eight men. Seven hundred and twenty cubic feet of space are given to each man. The married men have each a living-room, a bedroom, and a kitchen. The non-commissioned officers' quarters constitute a little club, furnished with comforts, aids to study, and means of wholesome recreation, for the like of which the city clerk scarcely knows where to look. The average cost of a barrack in the last century was £12 per head; the cost of the new Chelsea Barracks was £225; and of the new brigade-depôts, £200 per head. The improvements in cavalry stables are also very considerable, every horse in stalls being now allowed 1,200 cubic feet of space, and in loose boxes, 2,500 cubic feet. The new barracks of Inverness and Reading were cited as good examples of the modern system; and reference was also made to the parallel movement in France, where the labours of Trélat, Tollet, and others are carrying out great and much needed improvements. The paper was illustrated by a large number of plans lent by the Secretary of State for War.

An interesting discussion followed, in which Mr. Charles Barry, Dr. Balfour, F.R.S., and others took part. The remarks were chiefly directed to the questions of cost and ventilation. The cost seemed to the meeting to be inordinate, but Mr. Bell pointed out that it included the great number of accessories required for a barrack. Thus, an ordinary barrack required a space of ten acres, exclusive of a training-ground and camping-ground for the militia; and, upon this space, a great number of different buildings had to be constructed. The barrack of the last century, which cost only £12 a head, was a very different affair, being merely a collection of large rooms, with few or no conveniences. Mr. Bell described the system of ventilation, consisting of warmed air from a Galton's stove, cold-air inlets, and outlet-shafts; and he stated that there was no one of Her Majesty's subjects at the present day who was more scientifically provided for in all that conduces to health and physical well-being than the common soldier. Dr. Balfour related some of his experiences with the Guards in former days, when the barracks at Hyde Park and the Tower were so crowded, that it was no wonder that many men died of phthisis. In Tobago, the men had only 220 cubic feet each, and Tobago ranked high in the list of mortality. Dr. Balfour, however, considered that the improvement in the health of the soldier was not entirely due to the improvement of the barracks, but was also brought about by other things, such as the Limited Service Act of 1847, which caused the army to be composed of younger men. On this subject, we must point out that the comparison of the mortality at all ages showed so greatly against the army, that Dr. Balfour's argument is hardly conclusive.

There can be no question that a great improvement has taken place in the health of the army, and that the death-rate has, for the most part, fallen below the general civil rate. But this is not enough; for, the soldier's life being a selected life, his death-rate ought to be as low or lower than that of the best civil lives. Great as has been the advance, much remains to be done, even although the soldier may be considered "the most scientifically provided for of Her Majesty's subjects". In the vital point of ventilation, for instance, there are probably even now few of the barracks that fulfil completely the modest requirement of the regulations, viz., that the air shall be changed effectively twice in the hour; and certainly not one that effects the change three times in the hour. But, until this is done, and until adequate space is provided, it cannot be said that the soldier is really scientifically housed; and, until he is so, it is hopeless to expect that we shall get rid of phthisis and other maladies, which ought ultimately to disappear from a thoroughly hygienic army. We do not say this in a captious spirit, but as a protest against a "rest and be thankful" policy. Our army is small, but it is valuable and costly; nothing, therefore, ought to be left undone to make it the healthiest and most efficient in the world. It is, however, extremely difficult to get money voted, but above all spent intelligently. When new barracks were being built, why was there not sufficient money asked for to give every man 1,000 cubic feet of air-space, so as to make it possible to have efficient ventilation? We rush only too readily into costly and useless wars, the price of which would do more than accomplish what is proposed for the army as a permanent good. The Zulu and Afghan affairs alone will cost us a sum that would have built entirely new barracks, giving each man 1,000 cubic feet of space, for the whole of our army, at home and in the colonies.

PROPRIETARY ASYLUMS.

How pleasant are the words of a prophet which turn to blessings instead of curses, as those of Balaam did of yore, and those of the President of the Medico-Psychological Association did at the annual meeting of that learned body. The report of his address is to be found in the new number of the *Journal of Mental Science;* and the manner in which the angel of truth constrained him to a very comprehensive agreement with the views which we have expressed, is one among many of the thickly gathering evidences of the reality of the abuses we have denounced, and of the urgent need of the reforms we demand, in the treatment and protection of the insane. Mr. Mould states very fairly and forcibly: "I think it must be allowed that the whole grievance of the indictment against proprietary asylums (that is, of the well managed ones) is, that the proprietors having a direct interest in the detention of the patients, it is a continual battle of pocket *versus* principle, and principle *versus* pocket. This is not a very exalted view of human nature; neither is it a true one; but it does obtain, and it is necessary for the confidence of the public that it should be fairly met, freely discussed, and the remedy, if necessary, be applied with strict impartiality, and full consideration given both to the interests of the patients and of the asylum proprietors." And the method proposed for the solution of this somewhat difficult problem is the very one which we have so strenuously advocated. "If we could get rid of all this feeling and prejudice about the insufficient evidence for reception, the undue or unjust detention of patients in asylums, by transferring the custody of all patients from private to public trust, it would be a very simple and even remunerative matter for the State at once to purchase all the private asylums, and to convert them into public hospitals—such of them as were capable of being so converted—and to find proper provisions for those patients whose misfortune it had been to reside in unsuitable residencies." Turning the tables upon Mr. Dillwyn, he would, however, confer the option of the bargain upon the proprietor. This would require consideration, otherwise it might end in compelling the public to purchase all the worthless rubbish offered, and debar it from acquiring that which it might seem worth while to hold. It is but just, however, to remark that the President of the Medico-Psychological Association would apply searching and comprehensive reforms to the asylums which might remain in proprietary hands. He would not only subject them to the same rules and regulations as the public hospitals for the insane, but he

would compel them under penalties to provide equal accommodation for their patients. He would also require that the accounts of all proprietary asylums should be audited, and the expenditure for food, clothing, salaries, wages, and other expenses, separately stated, distinguishing the cost of lodging and maintenance from the charge made for skilled medical and other attendance; and he would have these accounts sanctioned by the Commissioners, or by some other public officers, who should certify that a proper sum had been expended on the maintenance of the patients.

These suggestions of change, the source of which our readers will scarcely fail to recognise, are of such obvious necessity, that the wonder is that the Commissioners have never taken the trouble to carry them out. Now they would only serve as feeble props of the edifice, whose foundations have never been secure, and whose dilapidations are too great to be patched, far less repaired, by these tardy processes. It is open to remark, that, while the detailed cost of every pauper lunatic in the kingdom is made known to the whole public, even the gross expenditure of the asylums under the absolute control of the Commissioners is not known even to themselves. Of the supply of food and medicine, and care, a most imperfect official estimate can only be taken from general observation; for, upon the vital question of expenditure, the Commissioners have been content to remain in trustful ignorance.

On the questions relating to certification, also, the President adopted our views, and even went so far as to confess that he had discovered and practised a method of evading the law by taking care to afford no evidence of profit in the treatment of lunatics not under certificates; and he declares that "the relief to the patient on recovery, and to the relatives during the progress of treatment, has been intense, and the gratitude pleasant to witness, simply from the natural feeling that the patient has not been for all time *branded as a legally certified lunatic*". Lord Shaftesbury, in a speech, also reported in the journal referred to, lays the greatest possible stress upon the necessity for the early treatment of the insane. But has his lordship fully considered the dire impediment to early treatment presented by the certification system, which, authorises detention, but does not ensure treatment, and which inevitably tends to postpone treatment until detention may seem essential? Thus it is that the certification system is an active agent in the manufacture of incurable lunacy.

It is pleasing to observe that the proprietors of asylums were delighted with their President's address, the "sympathy and kindness" of it being "especially grateful" to them. The brilliant bargain suggested was perhaps also soothing, and we trust they may realise it. It is plain that they are becoming accustomed to criticism, and are now not quite so susceptible as when we first tried to open their eyes to the anomalies of their position. Dr. Roth says that the first step to cure a crooked spine is to make the patient see and believe that their spine is crooked, which is rarely the case to begin with. Afterwards, the will or determination to be straight has the greatest influence; but the knowledge of crookedness must come first; and this it is always an unpopular and unpleasing, however necessary, a duty to afford.

THE INDIAN MEDICAL SERVICE.

THE Warrant of the 16th November, published in the *London Gazette* of the 3rd instant, revising the rules for the promotion, relative rank, and allowances (?), of the Indian Medical Service, establishes the following grades of medical officers for the Indian military forces: 1. Surgeon-General; 2. Deputy Surgeon-General; 3. Brigade-Surgeon; 4. Surgeon-Major; 5. Surgeon. These grades carry with them the relative rank, according to date of commission, of major-general, colonel, lieutenant-colonel, major, and captain, respectively. With the exception of the presidency of courts-martial, "such relative rank shall carry with it all the precedence and advantages attaching to the rank with which it corresponds", and shall "regulate the choice of quarters and the rates of prize money". There is, therefore, as regards rank, a substantial assimilation of the Indian to the Royal service. But we fail to find that, if a surgeon-major or brigade-surgeon happen to attain the distinction of honorary physician or surgeon to the Queen, he would thereby be entitled to the rank of deputy surgeon-general, as he would had he belonged to the sister service. This omission should be repaired. Again, we do not quite understand why a step of honorary rank, on retirement, after twenty years' service, should be given only "on the recommendation by the Government of the Presidency" to which the officer belongs. The same *Gazette* which notifies his retirement on pension should contain his honorary promotion, as, we believe, is the case with the majors, colonels, etc., of the Indian Army.

We approve the rules laid down for promotion, which, whilst allowing a moderately wide field for selection on the ground of ability and merit, will no longer tolerate such wholesale and heartless supercession as characterised the inauguration of the recent so-called reorganisation. Thus, it will not be possible, under the terms of this Warrant, to supersede all the deputy surgeons-general, as was lately done in promoting Dr. Cunningham from the rank of surgeon-major to that of surgeon-general, and in raising Dr. Payne from the rank of surgeon-major to that of surgeon-general for Bengal. The preferment to the rank of brigade-surgeon, with effect from the 27th of November, 1879, is a graceful concession, and will be warmly appreciated.

But we seize this opportunity of strongly urging upon the Marquis of Hartington that the matter of rank and promotion disposed of in this economical Warrant, though well enough as far as it goes, will neither suffice to appease the wide-spread discontent pervading the ranks of the Indian Medical Service, nor to materially improve the quality of candidates for the Indian department at Netley. It is useless to confirm the military rank of the heads of the three presidential medical departments with one hand, and to withhold from them its substance with the other. In truth, so long as the officers of the Indian Medical Service, however able and distinguished they may be, are regarded as ineligible for the military surgeons-generalship—now occupied, without exception, by officers derived from the British service, and are thus, through the late changes, absolutely debarred from the chances of military distinction in the field—just so long will this discontent continue to exist. The surgeons-general now administering the medical affairs of the Indian armies, European and native, should, in common fairness and justice, be selected alternately, as vacancies occur, from the Indian and British services. If Indian military officers—to wit, Lord Napier of Magdala, and Sir Neville Chamberlain—are not considered to be disqualified to fill the highest posts in India, under the Horse Guards, why should Indian military medical officers be regarded as ineligible for the highest posts in their department, acting directly under the Director-General of the Army Medical Department in Whitehall Yard? Further, the alternate appointment of deputy surgeons-general to the administrative circles, as vacancies occur, should be equalised. As things are at present, the duties of administration in the unhealthy stations are mainly assigned to the deputy-surgeons-general belonging to the local services.

Moreover, in the matter of unemployed pay, pension, leave during sickness contracted in and by the service, honours and decorations, the Indian medical officers stand at a great disadvantage with their brethren of the British service. If the prestige, efficiency, and popularity of the service are to be resuscitated and maintained unimpaired; if it be an object of the first importance, equally to the good government of the people of India, and to the preservation of the health of the armies of India, that it should stand so well with the great medical schools of Great Britain as to attract to its ranks men marked for their professional learning and accomplishments, then, we hope, Lord Hartington will lose no time in issuing another warrant, regulating, in terms which cannot be misinterpreted: 1. the distribution of the military surgeon-generalship in each presidency alternately between the Indian and British services; 2. the impartial appointment of deputy surgeons-general to healthy and unhealthy stations, as vacancies take place; 3. the pay, in view of the abolition of unemployed pay; 4. pensions, in order to harmonise them with those of the British service, at least

up to the rank of brigade-surgeon; 5. the furlough rules, so that all leave due to sickness contracted in and by the service may be allowed to count for pension; and, 6. eligibility to honours and decorations with a more generous hand than has hitherto been the practice.

We are grateful for the favours repeated or granted by the present Warrant, as far as it goes; and, if all the other grievances, the chief of which we have just enumerated, were redressed with equal fairness, there would not be much room left for complaint. But, considering the collapse which has already set in, from the rude shock of the late disorganisation (called reorganisation only by its promoters), the rapidity of recovery must, in the nature of things, be proportionate to the speed with which the remedies indicated are applied. One thing is manifest: until the many existing grievances, altogether unaffected by the Warrant under consideration, are thoroughly redressed, it is idle to expect a return of the popularity of the Indian Medical Service in the schools and colleges from which, in times past, it has been so successfully recruited.

THE EDINBURGH COLLEGES.

THERE has, we hear, been a feeling growing for some time past amongst the junior Fellows of the Royal College of Physicians of Edinburgh, that the conditions on which the College admits members and fellows are extremely unsatisfactory. The reproach has many times been levelled at this College, that its arrangements admit of the mere sale for so much money of its memberships and fellowships; and this reproach is felt by many of the junior fellows to be one which it is very hard to meet, under existing regulations and circumstances. About two years since, a resolution was brought forward, that members be admitted only after examination; the motion was carried, and referred to a committee, whose report, unhappily, lapsed on some technical grounds. A year ago, some of the more active of the fellows returned to the charge, and another committee was appointed, which again reported in favour of admission by examination. This report has, we are very glad to hear, been read and approved of at two meetings of the College by a majority of about two to one. The Edinburgh College of Surgeons has adopted a similar course, and their committee has reported in similar terms.

This intelligence will be received with great satisfaction in England, and by the whole of the profession. It has long been felt that the mode of admission of members and fellows of the Scotch Colleges was a reproach to the profession at large, and laid open these eminent institutions to the charge of venality, which, however indignantly rejected, could not be adequately refuted, and left behind them unpleasant reminiscences, from which the character of the whole profession and all medical colleges in Great Britain must suffer. This state of things is one which arose under circumstances which it is now needless to discuss, and has been defended by arguments which, however ingenious, are entirely unsubstantial. There can be no doubt that the sale of diplomas, however it may be hedged about by formal requirements, certificates of respectability, and previous certificates from other institutions, is not intrinsically a reputable trade, and can only be defended by past usage, and by the assurance that it is conducted only under circumstances which imply careful safeguards against its abuse. These, however, belong to the class of apologies, which, in fact, admit the case to which they assume to reply. They should be pleaded in extenuation, they cannot be accepted in any stronger or higher sense. In these days of medical reform, it has long been apparent that the charges levelled against the system under which a sale of diplomas was authorised could not but affect the character of all existing diplomas; and there can be no doubt that the character and reputation of Scotch diplomas generally have suffered by the regulations to which we refer. The character of corporations at large, and the value of British diplomas, will be increased by the step which the Colleges of Physicians and Surgeons of Edinburgh are now, it may be hoped, about to take. We cannot speak quite positively on the subject, for we hear, at the last moment, that sudden opposition is again aroused. It may be hoped that, for the sake of consistency, and in view of principles which neither corporation can persistently disregard, the resolutions will be carried, and that the Colleges of Edinburgh will stand before their constituencies in the satisfactory position of having purged themselves of the last remnants of an old and venal system, which has only been rendered tolerable thus far by the discretion and character of those by whom it has been administered.

The examinations of the Edinburgh Colleges are undoubtedly very much improved. The rejections recently have, we believe, amounted to about two-fifths; and the whole standard is raised. The step which it is now proposed to take of stopping the sale of diplomas, however respectably such sale may be guarded, will undoubtedly add solidity and strength to the reputation of the Colleges, and improve their position in reference to any coming Reform Bill.

THE DISCUSSION ON RICKETS.

THE discussion on rickets, which has occupied two nights at the Pathological Society, has been again adjourned. Judging from what we have already heard, we cannot, we fear, anticipate that any very useful conclusion will be drawn as to some of the most important points raised in Dr. Fagge's able opening: or that our knowledge of facts will be much increased. Still, the members cannot but be glad, even at the cost of listening to some unimportant remarks, to have these opportunities of hearing the results of the ripe experience of eminent men, and the acute observation and minute research of younger men, on a matter of unquestionable importance. Such debates as these are especially useful in reminding those who are apt to dogmatise over-much on medical subjects, how little firmly fixed knowledge some possess on such subjects; and they should also warn against the substitution, in default of such knowledge, of words for facts. Much of the discussion can be reduced, like a good deal of some of its predecessors in the London societies, to a combat over words; and exemplifies how greatly a want of a common understanding as to the connotation of important terms tends to make controversy barren. An instance of this is to be found in the allusion to the question whether rickets is a diathesis. In order to establish his statement that rickets is a diathesis, Sir Wm. Jenner was forced to class together, as comparable morbid processes, the getting of syphilis, and "getting weak". "A father", says he, "acquires syphilis, and begets a child with syphilis; a mother gets weak, and bears a rickety child." Examined closely, after getting behind this screen of words, Sir William Jenner's belief seems not to differ much from that of those who choose to say that rickets is not a diathesis; unless, indeed, he intended to convey that rickets, in the same sense as syphilis, is hereditary; but, then, for clearness' sake, he should have said so.

With regard to difference of opinions and conflicting statement of facts, we have Dr. Dickinson saying that there can be no reasonable doubt that "the swelling of the viscera is as much a part of the rickety condition as that of the bones"; while Drs. Gee and Fagge see nothing special in this phenomenon, but regard it as a result of the general state of health which produced the rickets. And Sir Wm. Jenner totally disagrees with Dr. Dickinson as to the material nature of the morbid changes observed in the viscera.

A still greater drawback, perhaps, to a clear and instructive discussion of the matter would seem to be in the want of agreement as to what should be called rickets, even for the sake of argument. For Dr. Fagge and others seem almost of the opinion that certain histological changes in osteogenous tissue alone, unaccompanied by what are now the classical symptoms of rickets, would warrant the diagnosis of rickets, so that there are children who only deserve to be called rickety when they are dead. But many would hold that the clinical side of the picture of rickets, liable to variations as it is, is sufficiently marked to raise its importance far above the scanty histological, and even chemical, knowledge we have of the diseased tissues. Such scantiness appears, too, in a strong light when Dr. Norman Moore tells us that he finds the quantity of earthy salts the same in rickety and

healthy bones. But, *à propos* of this and the criticism we have made regarding the definition of terms, may we not expect some future speaker to tell Dr. Moore that he put no rickety bone into his crucible at all?

No light has been thrown, and we agree with Dr. Fagge in not expecting it, on the exact causation of rickets. Though we may believe, and with reason, that there is one exciting cause for such a well recognised set of symptoms, and may further incline to the doctrine of malnutrition as that cause, yet the conditions of life, as Dr. Fagge says, are too little capable of isolation from one another to allow a separate study of their effects. Perhaps this obvious difficulty is the reason why this important subject has been so little touched upon by speakers in this debate.

The only fresh point, and, therefore, the most remarkable, in this discussion, is that raised by the admirably prepared tables of Drs. Barlow and Lees, with regard to the relationship of cranio-tabes to syphilis or rickets. And we are by no means desirous of detracting from their work, which is all the more to be praised for being, as we take it, an attempt to demonstrate a fact, and not to support a theory, when we feel constrained to say that the relationship which these gentlemen may be credited with having almost proved, is not so important in its further bearings after all; all truths, however small, are valuable. But even if cranio-tabes be admitted to occur solely in syphilis, we must remember that it has not been regarded as a symptom so important or necessary in the diagnostic aspect of rickets as to cause the upholders of rickets, as a malady apart from syphilis, to lament over its exclusive appropriation by the syphilologists. We are of opinion, still, that not M. Parrot himself has, as yet, made out even a *primâ facie* case for the fusion of origin of two such clinically different groups of symptoms as those which, till now, we have been wont to call respectively syphilis and rickets.

A SITE in the public cemetery has been granted by the Communal Council of Rome to a cremation company.

THE death of Dr. L. E. Geraud, a well-known physician of Nice, at the age of thirty-six, is announced.

The *Nord Deutsch* of December 5th announces that an epidemic of trichinosis has broken out at Durgelstadt. A number of cases have occurred, some of which have ended fatally.

WE publish, in another column, tables which will, we believe, be found of great interest, showing the reported deaths from anæsthetics in the United Kingdom of which we have been cognisant during the last eleven years.

A SERIOUS increase in the mortality of Paris during the week ending December 9th is announced; 1,051 deaths, against 941 in the preceding week. Typhoid fever, diphtheria, and measles contributed to this excess of mortality returns.

ON the 30th September, the charters of the Eclectic Medical College of Pennsylvania and the American University of Philadelphia were forfeited, the counsel for the defendants confessing judgment of ouster in favour of the Commonwealth.

A GENERAL meeting of the constituents of the Metropolitan Hospital Sunday Fund will be held on December 20th next, at 3 o'clock, at the Mansion House, to transact the annual general business, to elect Council for the year 1881, and to determine the date of the next Hospital Sunday. It is proposed, also, to alter Law 12, so that the Committee of Distribution shall have power to set aside two per cent. of the total amount of collections for the purchase of surgical appliances.

IN consequence of the general and strong feeling among the friends of Mr. G. D. Pollock, that the occasion of his retirement from the position of Senior Surgeon to St. George's Hospital is an appropriate opportunity for some public recognition of his eminence in the profession, and the kindness and rectitude of his character, a meeting of Mr. Pollock's colleagues, and some other friends, has been held, at which it was decided to call a public meeting, the date of which will shortly be announced, for the furtherance of this object.

DR. BROWN-SÉQUARD, who has recently brought before the Society of Biology an extremely interesting series of observations, indicating the somniferous and anæsthetic influence of chloroform, when applied to the skin of guinea-pigs, showed, at the sitting of November 20th, that the effects are not produced through the blood, but through the nervous system; since, after division of the spinal cord, the effects were found to be absent when the chloroform was applied behind the seat of the medullary lesion, but to be present when it was applied in front of the lesion.

GUY'S HOSPITAL.

THE following is the reply of Dr. S. O. Habershon and Mr. Cooper Forster to the resolution sent them by the members of the Brixton Medical Book Society, a notice of which appeared in last week's issue.

"December 6th, 1880.

"Gentlemen,—We sincerely thank the members of the Brixton Medical Book Society for the resolution passed at their meeting on December 3rd. We highly appreciate the sympathy of our professional friends in the painful and difficult position in which we have been placed as seniors on the staff of Guy's Hospital. We could no longer remain in office without sacrificing the honour and the just claims of our profession.—We are, gentlemen, yours very faithfully, S. O. HABERSHON, J. COOPER FORSTER."

INFANTILE DIARRHŒA.

IN his interesting report for Brighton, Dr. Taaffe makes some special remarks on this subject. The total deaths from diarrhœa amounted to 116; and of these, 88 were of children under one year, and 18 under five years. Of 91 children who died from diarrhœa, 19 only were nursed by the mother. Of 88 under one year, 66 were fed by the bottle—13 of these on condensed milk; 3 on the same with farinaceous food; 1, milk and tea-biscuits; 1, cows' milk, Nestle's food, and arrowroot; 1, baked flour and milk; 1, baked flour and water; 1, Ridge's food; 1, bread and arrowroot; 1, mother's milk and Ridge's food; 1, the same and biscuits. From a similar inquiry as to feeding made in 1875, Dr. Taaffe learnt that, of 61 children dying from diarrhœa, 11 only were nursed by the mother; and, in several of these, the nursing had been prolonged to between one and two years. "From these facts, it may be deduced that improper feeding and nursing are amongst the principal causes of infantile mortality from diarrhœa. Not only is the kind of food injurious, but, from experience in the out-patient room at the Children's Hospital, I find that most infants have food given them from hour to hour. If you ask how often the baby is nursed, the answer almost invariably is, 'Whenever it wants it'; and that, in many cases, means constantly. How is it possible that infants can be reared by such improper feeding? Take an adult, and give him a meal every hour, and see that he will soon suffer from derangement of stomach and bowels. No infant should be fed more than once in four hours during the day, and twice in the night; and, for six to seven months, the food should be the breast, or milk (two-thirds) and water (one-third) sucked from a bottle. In using condensed milk, care must be taken to dilute sufficiently. Diarrhœa amongst the poor is much more fatal than amongst the rich; 81 of the whole number occurred in St. Peter's (poor) District; 13 in Kemp Town. But improper feeding does not give the whole explanation, for it goes on through the year, and it is principally in summer an epidemic of diarrhœa occurs. Why is this? The only explanation I can at present offer is, that the bowels and stomach are in a state of subacute congestion for months previously; and climacteric or other epidemic influences, whatever these may be, act secondarily in determining the advent of the disease. An additional cause is want of attention to ventilation, so that the air becomes

foul." To spread knowledge of this kind amongst the public is of the highest importance, and not the least of benefits to be expected from the appointment of officers of health.

HOW SMALL-POX IS SPREAD.

At the last meeting of the Tottenham Local Board, Dr. Tyndall Watson reported the outbreak of small-pox in a block of wooden houses known as Ward's Alley. The house where the disease had occurred consisted of two rooms, the space of each room being little over nine hundred cubic feet, and it had been occupied by a man, two grown-up sons, a son-in-law, daughter, and a little girl. On examining the house, Dr. Watson found that the windows of the house had not been opened for a long time. In such an overcrowded, badly-ventilated place, it is small wonder hat the disease soon spread to all the inmates, although each one was sent, without delay, to the Edmonton Hospital. That so gross a case of overcrowding should have remained undiscovered, or at least unremedied, until it became associated with the spread of disease, is by no means creditable to the Tottenham Sanitary Authority.

DIPHTHERIA AT THE CHILDREN'S HOSPITAL.

A very remarkable, though unfortunatety completely negative, report has been made by Mr. W. H. Power, into the circumstances attending the outbreak of diphtheria in the Great Ormond Street Hospital for Sick Children, in March of this year. The outbreak in question was without parallel in the history of the hospital. In-patients have heretofore rarely been attacked by diphtheria; and when this has happened, it has been under circumstances consistent with extension of the disease from antecedent cases, under treatment in particular wards. In the recent outbreak, in-patients of four out of the five general wards of the hospital were almost simultaneously attacked by diphtheria or scarlatina, and this under circumstances that seemed to exclude, at least in the majority of cases, antecedent human infection. Mr. Power's inquiry, though thorough and searching, has not succeeded in demonstrating a cause of the diphtheria. Its failure in that sense has doubtless been chiefly due to the complexity of the conditions inquired into. Invasion of the hospital by diphtheria could not, of course, be considered apart from a nearly simultaneous invasion of certain of the wards by scarlatina; nor could the fact be overlooked that, among the after occurrences of illness there were—besides diphtheria, scarlatina, and sore throats of an anomalous sort—cases also of whooping-cough and measles, apparently originating in the hospital. Amongst other perplexing circumstances, for which explanation had to be sought, were the following. Both wings were simultaneously invaded by diphtheria, whilst there was invasion (coincident nearly with diphtheria in point of time) of the south wing by scarlatina. Four (three medical and one surgical) out of the five general wards of the hospital, were nearly simultaneously invaded by diphtheria or some throat-illness. The scarlatina, both on invasion and afterwards, was limited to two wards of the south wing. The five initiatory cases of throat-illness in the several wards invaded, had all been resident in the hospital for thirteen days and upwards before attack; all of them, but one, for nineteen days or more before they fell sick—a circumstance that seems to indicate that the children did not themselves introduce infectious disease to their several wards. In Louisa Ward, scarlatina was followed, after intervals varying from twelve to eighteen days, by scarlatina, measles, and diphtheria. In Alexandra Ward, diphtheria was, within three days, followed by cases of scarlatina and by acute albuminuria. In Alice Ward, diphtheria was quickly followed by diphtheria and sore-throat, and whooping-cough; and, after an interval of nearly three weeks, by an additional case of diphtheria. In Victoria Ward, diphtheria—notwithstanding treatment there of several cases of throat-disease, and one of acute albuminuria, brought from other wards—was not followed by any illness until the lapse of fourteen days, when two cases of diphtheria and one of sore-mouth occurred simultaneously. In Helena Ward, follicular tonsillitis was not followed by infectious illness of any sort. In seeking for a cause for these anomalous outbreaks of infectious sickness, the evidence as to their possible causation (1) by infection from antecedent human cases in the several wards of the hospital; (2) by mediate infection by human or other agency (as, *e.g.*, the administrative staff, visitors, laundry arrangements); (3) by polluted air inside and outside the hospital (preliminary inquiry by a subcommittee of the medical staff having led to suspicion that the outbreak had been related to dust which had permeated the hospital during the demolition of buildings in its neighbourhood); and (4) by articles of food, such as water and milk, was all carefully sifted and considered, but with absolutely no positive issue. Thus, Mr. Power finds it necessary to close his report without having arrived at any definite answer to the question, how diphtheria was produced in the hospital: a disappointing, but apparently inevitable, result.

THE ADMINISTRATION OF GUY'S HOSPITAL.

In another column will be found a short notice of a meeting, held under the presidency of Mr. Arthur Cohen, Q.C., M.P., by the inhabitants of Southwark, to consider what steps shall be taken towards improving the lay administration of Guy's Hospital. The practical resolutions arrived at were: to apply to the Government to take general measures for the supervision of the administration of this, and possibly of other, great endowed hospitals. The special reforms pointed to, as immediately desirable, were the representation, on the governing bodies, of the local municipal bodies of the district, for whose benefit this charity is mainly administered; and also, the introduction of an adequate representation of the medical officers of the hospital among the governors. It is very satisfactory that such a movement should be taken up so energetically by the residents of the district; and it has thus far better chances of success than it would have been likely to have, had the movement been of a professional character. We are glad to learn that one good result, at least, has been achieved by what has occurred: viz., that the power of the treasurer has been greatly limited; and that, practically, he is now continuously controlled by the Taking-in Committee and other committees of governors. The Taking-in Committee includes two members of the medical staff, deputed by their brethren, and the result of its work has so far been satisfactory.

THE PROTECTION OF MILK-SUPPLY.

Dr. Meymott Tidy; Dr. Wynter Blyth, Medical Officer of Health and Public Analyst for Marylebone; Dr. Dudfield, Medical Officer and Public Analyst for Kensington; Mr. Wigner, F.C.S., Secretary to the Society of Public Analysts; Professor Voelcker; Professor Brown; Professor Simmons; Dr. Quain, F.R.S.; Mr. T. Spencer Wells; Dr. Ord; Lord Vernon; Sir Brandreth Gibbs, Secretary of the Royal Agricultural Society; Mr. Jacob Wilson; Mr. Jenkins, and a number of other well-known chemists, physicians, and practical agriculturists and dairymen, inspected, on Wednesday week last, the premises of the Aylesbury Dairy Company; minutely examining their extensive freehold premises, erected specially for the safe reception and distribution of milk; their model dwellings for the isolation and medical supervision of their *employés;* and their system of checking, testing, and supervising the character of the milk, from the moment it is given from the cow till its delivery at the house of the consumer. The special feature of interest was the new laboratories which have been recently erected on the premises, for the purpose of carrying out a continuous system of testing, by analyses, the milk as received and delivered. Over these laboratories has been appointed Dr. Vieth as resident chemist—a gentleman who, after receiving thorough chemical training in the best continental laboratories, has for several years given undivided attention to the subject of milk-analysis at the Government dairy-farms of Schleswig-Holstein, the most famous institution of the kind, in the laboratory of Dr. Fleischmann. Dr. Vieth is already well known for his researches on the subject; and the apparatus which he employs for the purpose were inspected with much interest and approval. They include some novel and valuable means of facilitating the rapid and exact analysis of milk. Those who made this inspection expressed, without exception, their unqualified admiration and approval of the singularly comprehensive and careful arrangements which have been made on these premises for

carrying out the supply of pure milk of high quality, and guarding it with all the resources of science and sanitary care. It is a great satisfaction to be able to add, that the example which has been set by the directors of this company, at the expense of much care, labour, and money, has been not only approved by the most high and critical authorities, but has, in its broad outlines, been followed with good results in Glasgow and in Bristol, and is, we believe, about to be followed in several other large towns. The protection of milk from adulteration, and from the introduction of germs of disease, is a subject well worth the attention of medical officers of health and medical men. The constant recurrence of epidemics of scarlatina, typhoid, and diphtheria, traced by medical officers of health, after critical inquiry, to the distribution of milk which has not been duly protected from infection by adequate safeguards at the farm and at the dairy, indicates that the danger is one which is neither unreal nor rare; and we cannot too warmly recommend medical officers of health, and all who are interested in regulating the food-supply and limiting the outbreaks of disease, to study the model which has been established at so much pains at St. Petersburg Place, Bayswater.

FOG AND SMOKE.

DR. ALFRED CARPENTER'S lecture on Fog and Smoke, on Wednesday of last week, at the Society of Arts, was largely attended. He dealt at length with the whole question, and concluded with the following summary.

"I have put before you my own views under three heads. They are: 1. The causes of the intensity of town fogs. I refer these to fuel-smoke, which I contend to be an unnecessary adjunct to fire. That the method now used for warming our houses and cooking our food is wasteful in the extreme, and five-sixths at least of the developed heat is lost, and much of the fuel passes away unconsumed. 2. The means which should be adopted to prevent these causes continuing in operation. These means should be the production of gas at a cheap rate, so that it might be used for cooking, and in many cases for heating purposes also. In reference to this point, I would observe that the use of gas for lighting purposes will pass away; it would be to the interest of the companies that heating power should be developed in the gas manufactures rather than lighting; and that it would be promoting the object we have in view, if the sale of coal was prohibited in the metropolitan district, unless it had been previously deprived of its smoke-producing quality; that a tax upon fire-places not so constructed as to consume their own smoke would effect this object, which might also be assisted by a heavier tax upon the untreated coal when sold for public consumption in the metropolis; that the proceeds of these taxes should be used by the local authority in extinguishing the present commercial companies who manufacture gas and distribute water; that the use of closed stoves should be encouraged as much as possible. 3. The steps which should be taken to promote these objects would be best met by urging upon the Government the propriety of appointing a Royal Commission to inquire into the whole subject, and who should formulate the grounds upon which legislation should be established, and prepare the way for the introduction of a Bill into Parliament for the purpose."

SMALL-POX IN LONDON.

THE fatal cases of small-pox in London, which had been 19 and 10 in the two preceding weeks, were 12 last week, of which 6 were recorded in the Metropolitan Asylum Hospitals at Homerton and Stockwell, one in the Highgate Small-pox Hospital, and 5 in private dwelling-houses. No fatal case of small-pox occurred in the West group of districts; the 12 recorded being distributed pretty equally in other parts of the metropolis. The five cases in private dwelling-houses included one in Hackney, one in Bethnal Green, and three in Deptford. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased in the six preceding weeks from 77 to 246, further rose to 338 on Saturday last; the new cases of small pox admitted to these hospitals, which had been 99, 57, and 67 in the three previous weeks, were 132 last week, and exceeded the number in any week since May 1878. The Highgate Small-pox Hospital contained 30 patients on Saturday last, against numbers increasing steadily from 7 to 21 in the five previous weeks.

SMALL-POX AND POLITICS.

SMALL-POX is committing dreadful ravages among the Indians who people the sparsely settled districts on the north shore of the Gulf of St. Lawrence. Information recently received by the Canadian Government, shows that they are dying by hundreds. A panic has seized the survivors, and they have fled from the dead and dying, leaving the former unburied, and the latter uncared for, to seek refuge in the woods, where there trails are marked by lines of corpses. The worst feature of the case, according to the *New York Medical Record*, is, that when a doctor was sent by the local authorities to relieve the condition of the distressed savages, it was found that he was a political opponent of the Board, and he was at once recalled, and the panic-stricken district left to itself, until a medical man of their own political bias can reach it.

UNION OF DIVIDED EDGES OF PERITONEUM.

THE antivivisectionists are making the most of an expression used by Dr. Keith in a letter to ourselves published in this JOURNAL, July 31st, 1880, p. 187, which is quoted as follows:—

"'As to the other point in Dr. Clay's letter, of which so much has lately been written—the uniting of the peritoneal surfaces in closing the wound—*little or no importance need be attached to it* as affecting the mortality.—I am, yours truly,—THOMAS KEITH. Edinburgh, July 25th, 1880.'—After this, nothing that Mr. Spencer Wells, or Dr. B. W. Richardson, or Dr. Walker of Peterborough, may say will avail. We will not add another word."

It is rather amusing in these days to be gravely informed that, because one surgeon believes a peculiarity in practice to be of little or no importance, no other surgeon can possibly believe that it is of great importance; and that because Dr. Keith has once expressed his opinion that uniting the peritoneal surfaces in closing the wound, is of little or no importance the far larger experience of Mr. Wells, and the majority of ovariotomists who follow his example, must be set aside as of "no avail". But it is really a serious question that surgeons should make up their minds which line of practice they will adopt, and ascertain how far Dr. Keith's own practice is in accordance with his published opinion, of which the antivivisection party are making use, which appears likely to be very mischievous. Now, we believe we are correct in stating—and Dr. Keith can correct us, if we in any way err in the statement—that he almost always includes the peritoneum in his sutures. And we have seen a letter from him to an old friend in London, dated on the 8th inst., in which he says: "There is something to be said on both sides of the question; but, perhaps, it is better always to unite the surfaces." This is the lesson which Mr. Spencer Wells learned by his experiments on a very few dogs, rabbits, and guinea-pigs, before he ventured to test the practice on women. For this he is persistently abused by the antivivisection party; but this must be a very small matter compared to the gratification any surgeon must feel, when he knows that he has introduced an improvement in practice which has been almost universally accepted at home and abroad; and is believed by his fellows to have had a share in leading to a lower death-rate after an important operation, and to a saving of human life, not only in our own time, but in future ages. Of late years, the practice of uniting divided edges or surfaces of peritoneum is not limited to openings made in the abdominal wall for the removal of tumours, herniotomy, enterotomy, etc.; but is followed in uniting the peritoneal edges of the ovarian pedicle, and of the uterine wall after removing uterine tumours, or performing Cæsarean section. In the last number of the *Dublin Journal of Medical Science*, Dr. Macnaughton Jones, in a very able critical review, says: "As in ovariotomy it is essential to bring the peritoneal edges and the surface of the opening carefully together, so in removal of a uterine fibroid it is indispensable to bring the uterine peritoneal edges together." This is the view taken by as competent a critic as any the antivivisectionist party can produce; and we heartily join in the wish of Dr. Jones that, "It may be reserved for Mr. Wells to do for this operation that which he has done for ovariotomy—to prove that abdominal section for fibroid tumours is a justifiable surgical procedure."

NURSING SISTERHOODS IN HOSPITALS.

We published, in our last impression, an important suggestion from Dr. Burney Yeo of King's College Hospital, on the subject of the influence and operation of nursing sisterhoods in hospitals. This subject, as is pointed out in the letter to which we refer, is one which at the present moment occupies an unusual share both of professional and public attention. The struggle at Guy's Hospital, which has so long engaged the public mind, and so deeply stirred the sympathies of the profession, expresses something more than a mere altercation between the medical and lay authorities of a particular institution. It expresses a feeling, long growing in the profession, and, with a few notable exceptions, widely shared outside the profession, that, whatever nursing systems may be introduced into our great hospitals, they can only be satisfactory when they are introduced with the sanction and hearty co-operation of the medical officers. It is as well that it should be generally and clearly recognised, that this wide question really underlies the whole dispute at Guy's. Are the nurses in our great medical charities to be unreservedly under the direction of the medical officers? or are we to see introduced into these institutions a new authority, which, while it escapes the just influence of public opinion and the wholesome checks of professional responsibility, aims at disturbing the relations of the responsible medical officers, not only to the nurses, but even to the patients; and at replacing a clear, precise, and undivided authority by a mixture of clashing opinion and divided influence? The object of the suggestion to which we are now calling attention is to remove this important question from the *particular* to the *general*; instead of leaving the "burthen and heat of the day" to be borne exclusively by our brethren at Guy's Hospital, that the whole profession should take up the question and calmly investigate it. It is impossible to regard the question as affecting Guy's Hospital alone; it applies to all hospitals which are, or may become, under the influence of nursing sisterhoods. We should be wholly misunderstood if we were supposed to be advocating an investigation into the influence and operations of nursing sisterhoods in hospitals in any spirit of antagonism to those bodies; on the contrary, we heartily sympathise with their best aspirations, and would warmly aid them in their legitimate work. But we must as frankly admit that we clearly see the necessity of carefully defining their position in our large hospitals and medical schools, and of fixing their duties and limiting their authority, not by *lay*, but by *medical* opinion. We shall, therefore, be pleased to see the whole subject taken up by the medical officers of our hospitals generally, and investigated carefully, in no unfriendly spirit towards the nursing sisters, but with a just appreciation of the value of their labours, and a desire to discover how these may best be utilised, without disturbing the harmony which has hitherto existed between the medical and lay authorities of these institutions, and without interfering with the just authority of the medical officers, the scientific study of disease, and the best interests of the sick.

TYPHOID FEVER AND DEFECTIVE SEWERS.

Last week, we referred to the report presented by Dr. Kelly to the Worthing Local Board on the recent prevalence of enteric fever at that place, and gave particulars of the larger of two outbreaks which have occurred there this autumn, and which was clearly due to infected milk. The earlier and smaller outbreak points, however, an equally significant moral, and a reference to it may, therefore, be of interest. It appears that, from August 28th to September 11th, typhoid fever appeared in four houses in two roads both draining into the upper part of one sewer, which was unventilated. In one road, where the houses were small, and in many cases dirty and damp, the sink-pipes were inside the houses, and in direct communication with the drains. Of the five cases of fever in this street, four were amongst very young children, and one was an adult woman. In the other road, which contains larger and more convenient houses, there were still greater defects. In two cases, the soil-pipe from the closet, which was very badly laid and jointed, came down inside the house, and then passed beneath the kitchen-floor. The sink-pipes passed directly into the drain, and foul smells were often noticed in the house. In each of these houses, two inmates had enteric fever. In a third house, where sewer-gas entered the dwelling, all four inmates in succession had the fever. In the fourth case, the soil-pipe was ventilated by a rain-water pipe, the open end of which was on a level with, and close to, the window of a room where two children slept. Both these children had the fever. For all these cases, Dr. Kelly thinks a very heavy thunderstorm in the early morning of August 26th is responsible. Nearly an inch and a half of rain fell in rather more than an hour, and, the tide being high, the drains and sewers were rapidly filled, at a time when the outfall of the main sewer was closed by the tide. Sewer-gas would at such a time be driven backwards towards the dwellings; and in those dwellings where there was no ventilation of the soil-pipes, or where the sink-pipes were in direct communication with the drain, the foul air would be carried into the houses. There were no ventilators to relieve the pressure, and the position of the houses towards the higher parts of the main sewer, of which they form two blind extremities, would cause the sewer-gas to be driven more rapidly. After September 17th, the disease appeared in no fresh houses in these roads, but seven other persons fell ill who lived in the houses where the original cases broke out; so that, in all, fifteen cases occurred in seven houses, with two deaths.

DIARRHŒA AND UNSANITARY CONDITIONS.

There can be little doubt that bad and improper feeding of infants is responsible for much of the mortality from diarrhœa which is observed every summer. In other seasons, the same evil influences are at work; but their effects are manifested in deaths from atrophy, debility, marasmus, wasting, and other causes, synonymous with starvation and neglect. When high summer temperatures arise, however, the children who are already wasted by debility are attacked by diarrhœa; and, being too weak to resist it, are struck down by a disorder which equally attacks stronger and better cared-for children, but does not kill them. This, at least, is the experience of health-officers, whose opinions are of value; and it probably underlies the generally received view that bad feeding is one of the factors of infantile diarrhœa. Yet, even this theory cannot explain many of the phenomena of the disease; and, certainly, one factor that cannot be overlooked is unwholesome sanitary surroundings. On the principle, axiomated by Mr. Simon, in his famous "Filth" Report, that "young lives are finer tests of foul air than are the older and more acclimatised population", it seems impossible to separate diarrhœa, as one of the chief causes of infantile mortality, from the unsanitary conditions with which many of its victims have been surrounded. Thus, at Bradford, last quarter, no less than 80 per cent. of the deaths from diarrhœa occurred in back-to-back houses, where the air must always be stagnant and unwholesome. Pure air is, indeed, according to Mr. Butterfield, the exception in the houses where the majority of diarrhœal deaths at Bradford occurred; and, probably, the same would be found to be the case in other places, if their experience could be learnt. The fact, that diarrhœa mostly occurs in the summer time, when it can conveniently be ascribed to the "high temperature", should not put investigators off their guard as to the evil influence (rendered, indeed, more intense, by the heat of the atmosphere) which "filth", in its broadest sense, has in the production of the disease, and in its fatal issue.

CHOLERA IN MADRAS.

Last year, there were 6937 deaths from cholera in the Presidency of Madras, or a rate of 0.43 per thousand of the population, as compared with 46,743 deaths in 1878. Of the total number, 4,683 occurred in the four months from June to September inclusive. The maximum mortality occurred in June, which, judging from the mean monthly number of deaths for the preceding thirteen years, is usually the month during which cholera is most severe. During the cold season of 121 days there were 290 deaths, or 2.4 per day: whilst in 1878 there were 3,025, or 25 per day. In the 61 days of the hot and dry season, there

were 1,240 deaths, or 20.3 per day: in the rainy season, 4,683, or 38.4 per day: and in the hot and moist season 724, or 11.9 per day. For the Presidency generally, the mean daily mortality for all seasons, and from all causes was 1,062, and of this daily number 19 were from cholera. In 1878 the daily mortality was 1,460 and the daily deaths from cholera were 128. Of the total cholera deaths, 4,140, or 59.60 per cent. occurred in Sind, and 96 per cent of the Sind deaths were in the three districts of Kurrachee, Hyderabad, and Shikarpur. The Sanitary Commissioner, from an examination of the cholera statistics in the Presidency for the last fourteen years, has formed the theory that a severe cholera epidemic occurs every three years; and that, according to this "rhythmic surgence" of the cholera wave, the year 1881 is likely to be the next one which will prevail epidemically.

SOOTHING SYRUPS AND DIARRHŒA.

In his last report on the health of Luton, Mr. Horace Sworder, the medical officer of health, throws out a suggestion which may explain to a certain extent the very heavy incidence of summer diarrhœa upon children of the working classes. At Luton, where there is much demand for female labour, infants are much neglected, and very frequently quieted with "soothing syrups" and other similar mixtures, all of which contain opium. During the third quarter of this year, diarrhœa was very prevalent at Luton amongst all classes; but, whilst a total of fifty-three deaths occurred, hardly one of these was amongst the children of parents in good circumstances. The latter did not escape diarrhœa, but have medical advice earlier, and get the disease checked in a stage when it is more amenable to treatment. Improper feeding, overcrowding, want of cleanliness, and other causes, are common amongst the children of the poor, and influence the disease unfavourably; but, as Mr. Sworder observes, "it would be interesting to know how many infants may have become intolerant of the most potent antidiarrhœa remedy (*i.e.*, opium), by having small doses frequently administered to quiet them, while their mothers are working hard for daily bread; so that, when the remedy is given in ordinary doses, the usual effects are not produced".

WOOLSORTERS' DISEASE.

Some interesting experiences, tending to confirm the theory of the identity of woolsorters' disease in man with anthrax in animals, have been observed at Harden, near Bradford, where the cases of splenic fever occurred amongst the cows and sheep drinking the washings from a hair-factory where several cases of woolsorters' disease had appeared amongst the workers (see p. 139). After these animals had been attacked by anthrax, Dr. Greenfield sent from the Brown Institution three steers previously inoculated with anthrax material taken from a guinea-pig, as the result of which they had suffered from the disease in a mild form. Dr. Greenfield's object in placing the animals at the Harden farm was to see whether or not they would take the disease in a natural way after inoculation, and when exposed to the infection that had killed the former animals. The steers, however, successfully resisted the disease, and were removed about a month ago. The occupier of the farm subsequently placed certain heifers (which had been on the premises for six weeks previously) in the two fields in which the other animals had died, and which had been irrigated by the water used for washing mohair at the mills. The irrigation had, however, ceased for some months, owing to the closure of the mills. Nine days after placing the herd in these fields, one of the heifers died. It appeared one afternoon to be as well as usual, but the next day was found dead in the field. The health-officer of Bradford and Dr. Bell made a *post mortem* examination of the body, and especially of the heart and spleen, when appearances were found closely resembling those found in splenic apoplexy. The closure of the mills for so long a period may, of course, be used as an argument against the assumption that the poison contained in the hair-washings gave anthrax to this animal; but it seems more logical, judging from the effects produced on a former occasion, in animals grazing in the same fields, to suppose that the poison of woolsorters' disease was still lurking there, and induced anthrax in the particular heifer in question.—The following case is reported at Leicester. We shall expect to have more scientific details. Henry Slater, a man fifty years of age, employed at Messrs. Donisthorpe's establishment, has died of woolsorters' disease. The deceased was at work on Saturday; as, however, he did not feel well, a doctor was called in on Monday, but the virus had taken too strong a hold to prevent coma, and death ensued. A similar death to the one now recorded, occurred a few months since.

M. LÉVEILLÉ.

M. Jean Baptiste Léveillé, the well known anatomical artist, died at his house in Paris on the 10th instant, aged 69. His facile pencil has illustrated both French and English anatomical and surgical works for upwards of half a century; and, unfortunately, his mantle does not appear to have any very worthy successor to fall upon. In the later numbers of Bourgery's great work will be found some of the earliest specimens of Léveillé's skill; and the original steel plates of Bernard and Huette's *Operative Surgery* were also drawn by him. Hirschfeld's great work on the nerves, brought out in conjunction with Léveillé, was the *chef d'œuvre* of his maturity, and will long maintain his reputation as an anatomical artist. In addition to much work for French authors, M. Léveillé was employed by more than one English author; and among the works he illustrated, wholly or in part, we may mention Dr. Sibson's *Medical Anatomy*, Dr. Savage's *Anatomy and Surgery of the Female Pelvic Organs*, and Mr. Christopher Heath's *Course of Operative Surgery*.

ANCIENT ALUM WELL AT HARROGATE.

According to a paper read by R. H. Davis, at the last meeting of the Chemical Society, this old well was noticed by Dr. Garnett in 1791 as containing alum and iron. Up till 1870, the well seems to have been forgotten; in that year, however, it was brought to light again, during some excavations made for increasing the supply of sulphur-water. It is a pale reddish-brown water, strongly acid to litmus, and very astringent to the taste. The well is surrounded with sulphur-wells, and is of comparatively superficial origin. The author gives an analysis of the water in grains per gallon:—$Fe_2(SO_4)_3$, 78.76; $FeSO_4$, 69.33? $Al_2(SO_4)_3$, 89.47; $CaSO_4$, 56.91; $MgSO_4$, 57.38; K_2SO_4, 3.14; Am_2SO_4, 2.19; NaCl, 33.9; SiO_2, 3.27. Total residue, 397.25.

THE SANITARY CONDITION OF NEWBURY.

The Town Council of Newbury have been greatly hurt to find that an inhabitant of the borough is discontented with the progress they are making towards the sewerage of their district, and that, in consequence of this gentleman's representations, an official inquiry into the authority's default has been made by the Local Government Board. From the evidence given at the inquiry held by Mr. J. T. Harrison, it is clear that the Town Council, even on the admission of their own officers, have unduly and improperly delayed the consideration of the question. Dr. Woodforde stated that, from time to time, since 1876, he had made reports to the authority, as to the defective drainage. He had pointed out that there was no proper outfall for the sewer, which practically was an open cesspool; he had stated that the present system of drainage was most defective and dangerous to health. He produced returns of deaths that had occurred from "drain diseases", and stated that there had been cases of a milder type, not fatal, but still attributable to defective drainage. Bad water was to be found all over the town. Of 84 samples which he had analysed, not more than 15 could be described as satisfactory. Evidence to the same effect was given by the Surveyor; and the Government Inspector took no pains to conceal his strong opinion that the authority had been very negligent. The Town Council have now definitely engaged, however, to submit a scheme of drainage to the Central Authority before Lady-day next, hoping no doubt, in this way to stave off the otherwise inevitable compulsory order to do the work.

SELENIUM.

At the present moment, when selenium has become an object of interest in connection with the photophone, a few details as to its *habitat* and characteristics may not be without interest. The region of Cachenta, in the province of Mendoza, a part of the Argentine Republic, contains numerous lodes of selenite of copper, lead, and silver, with hydrosilicate of copper, oxide of iron, and argillaceous rock. The results of an analysis of one of these lodes, made at the laboratory of the Paris School of Mines, is as follows: Silver, 1.96; copper, 28.00; lead, 11.10; iron, 8.40; selenium, 28.80; tellurium, 1.80; sulphur, 1.30; silica and clay, 10.00; oxygen and loss, 5.64; total, 100.00.

FOOTBALL ACCIDENTS.

On Saturday, three accidents in the football field occurred respectively at Sheffield, Mexborough, and Ecclesfield. Mr. Joseph Hunter, at Sheffield, had his arm and three ribs broken; at Mexborough, a young man named William Hewitt had his arm broken and leg dislocated; and at Ecclesfield, a player was accidentally injured by a kick in an exciting scrimmage.—The Mayor of Southampton has forbidden the use of the public grounds for football, until the existing rules are modified with the view of preventing injury to the players.

TIGHT RINGS.

Treatises on operative surgery are absolutely silent on the constriction, by rings, of fingers swollen from one cause or another, and on the method of removing them. The accident is, nevertheless, of common occurrence, causes great pain, sometimes gives rise to great uneasiness, and may even threaten the safety of the finger itself. As a rule, in these cases of constriction, the ring is cut unnecessarily, for want of a simple method of removing it, notwithstanding the popular plan, which comes to us by tradition, and is thus described by Oribasius, vol. iv, p. 251, Daremberg's edition. He writes: "Sometimes the finger is constricted by a ring; and it is necessary to remove the ring without delay, by giving it a rotatory motion; bathing at the same time the finger with warm water, and greasing it with some kind of fatty matter. If the ring do not yield to these efforts, the following operation is recommended. A thick and twisted thread is sharpened at one end in the same way as cobblers sharpen their threads, and passed between the finger and the ring, whilst the rest of the thread is rolled round the finger. When this thread is unrolled, the ring moves towards the tip of the finger, whence it can be removed. If the ring resist this treatment, it is then necessary to cut it." Aetius, who lived at the end of the fifth and the beginning of the sixth centuries, repeats the recommendations of Oribasius. A writer in the *Concours Médical* suggests some improvements on the plan, so as to reduce the volume of the finger by ischæmiatising it, in the same way as ischæmia is produced with Esmarch's bandage. In the first place, the finger is coated with fatty matter; then a thin thread, about a yard and a quarter long, is taken; one end is placed under the ring, and passed above it with a pair of pincers to the length of about three inches. The end of the thread being thus fixed by the ring, the rest of the thread is taken to the top of the finger, round which it is rolled in close overlapping lines, not leaving any space between them. This done, the second end of the thread is also passed under, and brought up above the ring. Then, this end being taken between the fingers, the rest of the thread is unrolled resting on the ring, which is thus gradually brought up to the point, where it is easily removed. If a first trial do not always succeed, it is rare for the ring not to yield to efforts twice or thrice repeated. Should this be the case, the ring, of course, must be cut on a cannulated sound with a file or divider.

AMPUTATION AT THE RIGHT HIP-JOINT: USE OF DAVY'S LEVER.

On December 5th, 1880, Mr. Hughes of Plymouth amputated at the right hip-joint, in a girl aged seven, for extensive disease of the head and shaft of the femur. The patient could ill afford to lose any blood, as the disease had existed for eighteen months, and her urine was albuminous. Mr. A. H. Bampton, House-Surgeon to the South Devon and East Cornwall Hospital, controlled the hæmorrhage with the greatest ease by means of Davy's lever; only three ounces of blood were lost—(principally venous, and what was necessary to enable the operator to see where the arteries were. The operation was not performed under the spray, on account of the sinuses. The abdominal aortic tourniquet was quite inapplicable in the present case. Mr. Jackson and Mr. Edlin assisted. The girl is progressing favourably.

ADULTERATION OF ESSENTIAL OILS.

At a meeting of the Midland Medical Society, held recently in the Medical Institute, Birmingham, Mr. Postgate read a paper on the "Adulteration of Essential Oils", in which he urged that the inspection which was now applied to tea at the ports should be extended to drugs and other commodities. As showing the necessity for this, he gave a number of instances in which adulteration had been carried on. He had found adulteration of the essential oils of peppermint, caraway, cassia, cinnamon, etc.; and also of santal-oil, castor-oil, and other analogous articles.

SCOTLAND.

The Royal Scottish Academy has generously offered several valuable paintings, on loan, to be hung in the Edinburgh Royal Infirmary. The managers have willingly accepted the offer.

The Senatus Academicus of St. Andrew's University have appointed Professor Campbell as their Assessor in the University Court, in place of Principal Shairp, whose term of office has expired.

UNIVERSITY OF GLASGOW.

The Brunton Memorial Prize of £10, founded in 1879 in memory of the late Duncan M. Brunton, M.A., M.B., a distinguished graduate of this University, who died in 1877 of fever, contracted in the diligent discharge of his professional duties in the Royal Infirmary, Paisley, and to be given to the most distinguished graduate in medicine of each year, has this year been awarded by the Senate to John Lindsay Steven, M.B., House-Physician to the Western Infirmary, Glasgow.

ABERDEEN ROYAL INFIRMARY.

On Monday, the Court of the President and Managers of the Aberdeen Royal Infirmary, at their quarterly meeting, appointed Dr. John G. Hall fourth or Junior Surgeon to the Infirmary. The other candidate was Dr. F. F. Maitland Moir. At the same meeting, important financial statements were made.

STIRLING ROYAL INFIRMARY.

The annual meeting of the subscribers to this institution was held on the 13th instant; and, from the report of the directors, it appears that the number of cases treated during the year was 1,619, as compared with 1,881 the previous year. Of this number, 1,463 were out-patients, as compared with 1,689, and 228 in-patients, as compared with 192. The income, including last year's balance, was £1,657, and the expenditure £672, leaving a balance of £985. The directors purpose making an addition to the Infirmary, in the shape of an operating-room communicating with the main building by a covered way.

HOSPITAL FOR INCURABLES, EDINBURGH.

The Longmore Hospital for Incurables, situated in Salisbury Place, Edinburgh, and of which notices have appeared in the Journal during its construction, was formally opened on December 10th for the reception of patients. The ceremony was a public one, and was presided over by the Lord Provost. Sir Robert Christison spoke, and gave an account of the institution of the hospital, showing how the want of it had been long felt; how cautiously it was necessary for the first founders to proceed until after the death of Mr. John Longmore, W.S., when it was found he had left a large sum of money, a portion of which his trustees had assigned to the hospital. Since the opening of the old building, 106 incurables had been aided, of whom 44 were

from Edinburgh, 43 from other parts of Scotland, while the remainder were from other countries. The new hospital will accommodate 50; but at present the directors do not see their way to receive more than 25 patients. The public subscriptions have amounted to from £700 to £800 *per annum*. It may be mentioned, that Mr. Longmore left £33,000 to be used in giving relief to patients suffering from incurable diseases. His trustees gave £10,000 to aid in erecting the new hospital, and they contribute £300 annually for its support; so that, in attaching his name to the hospital, the directors are publicly and permanently acknowledging how largely it is indebted to his benevolence. The trustees have given sums varying from £100 to £500 to other schemes of a similar kind, such as the Glasgow and West of Scotland Incurable Hospital, the Keith Cottage Hospital, and the Perth Hospital for Incurables. Dr. J. O. Affleck is visiting medical officer to the Longmore Hospital. There is no resident medical officer; but Mr. Adam Jardine, M.B., has been appointed assistant to the medical officer.

PROFESSOR MCKENDRICK ON MESMERISM.

On the 10th instant, in the Physiology Class-room of the University, Professor McKendrick delivered an address to the University Medico-Chirurgical Society, of which he is the honorary president. The subject of the lecture was Modern Views of Mesmerism and other allied Nervous States. The first part of Dr. McKendrick's remarks was taken up with an account of the different explanations that had from time to time been given of these different nervous phenomena; while, afterwards, he gave his own views, illustrating his observations practically, by throwing a hen, and then a guinea-pig, into the hypnotic state, and by depriving a frog of the power of movement by simply tying a thread round its leg. The address was listened to with great interest by a large audience.

TUTORIAL CLASSES.

Considerable discussion has followed the abolition of the tutorial class in gynæcology, lately conducted by the assistant to the professor of midwifery. The managers of the Royal Infirmary considered that its continuance was not calculated to improve the wellbeing of the patients in the institution, and put an end to it. In taking this step, they have the approval of a large proportion of the teachers in the Edinburgh school.

UNIVERSITY OF ABERDEEN: NEW BURSARIES IN THE FACULTY OF MEDICINE.

The Commissioners acting under the Endowed Institutions (Scotland) Act have communicated their report to the Home Secretary, on the application by the Aberdeen Town Council for a provisional order, relative to the purposes to which the revenues of certain mortifications under their care are to be applied. The report was signed by all the Commissioners. The Commissioners point out that the petitioners and Professor Struthers very clearly demonstrated that the medical faculty is a very important part of the university; that it has increased very largely within the last twenty years; and that it is very poorly endowed in respect of bursaries, there being only two in this faculty as compared with 241 in the faculty of arts. After considering all the evidence, the Commissioners are decidedly of opinion that it is equitable and expedient to devote some part of the general funds of the university to so important a faculty as that of medicine has now come to be. In the faculty of medicine, the Commissioners direct that there shall be four bursaries of £20 each, to be called the Mather Bursaries; and four of £20 each, to be called the Liddell Bursaries; and that the said bursaries shall be awarded after open competitive examination, and shall be tenable for four years. Two bursaries are to be competed for each year, beginning in 1880. The foundation of these bursaries is a most important gain to the medical students of the University of Aberdeen, and will go far to keep the Aberdeen school, in respect of bursaries, abreast of other universities. The want of bursaries has all along been felt by the medical faculty; and there can be no doubt that the evidence given by Dr. Beveridge and Professor Struthers before the Commissioners was of great use, in demonstrating the anomalous position of the faculties of arts and medicine as regards bursaries—the former having its hundreds to the units in the latter. This is the second windfall which has come to the medical faculty this winter. We have already notified the proposed foundation of the William Milne Bursary; so that this year at least three bursaries, and perhaps four, will fall to be competed for. The total number of bursaries now amounts to eleven; and it is confidently expected that, before the session is done, one or more new bursaries will be added to the list.

A NEW SOCIETY IN EDINBURGH.

The University of Edinburgh Natural Science Club held its first meeting a few days ago. It is composed of the younger graduates, lecturers, and university assistants. Professor Turner was elected Honorary President, and Mr. Patrick Geddes, F.R.S.E., Permanent Secretary and Treasurer. The chair will be taken by each member in rotation; and the object of the Club is to discuss recent discoveries in science, as well as to criticise papers intended for the learned societies.

THE CHEMISTRY OF SEWAGE-PRECIPITATION.

Dr. Wallace, city analyst for Glasgow, delivered a lecture on the above subject to the Chemical Section of the Glasgow Philosophical Society, on the evening of the 6th instant. At the outset, he described generally the composition of sewage, showing how its mixed character was one of the great difficulties of disposing of it; and he then related, at some length, the results of the treatment of the sewage by precipitation in a number of English towns. Discussing generally the question of purification of sewage by chemical treatment, he said, he thought it had been much misunderstood, and, consequently, discredited, simply because more was expected of it than it could do. Of all the substances proposed for precipitation, he considered that the one most capable of general application was lime; and he thought that it could be carried out very easily in the case of Glasgow, and at a moderate cost. His experiments, too, showed that the effluent after such a process of precipitation might safely be introduced into the Clyde at a point below the city, and would give rise to no nuisance.

EXTENSION OF REGISTRATION HOURS IN GLASGOW.

In reply to a memorial recently forwarded to him, and after consultation with the proper authorities, the Sheriff Principal has decided that the registrar's office should be open for two hours on three evenings of the week, for the benefit of the working classes. The extra hours thus added have been met by altering the morning hour for opening the offices from nine to ten o'clock.

POISONING BY OXALIC ACID.

On the 10th instant, the wife of a labourer, residing near Kelso, died from the effects of poison, having by mistake swallowed a compound consisting principally of oxalic acid used for silvering harness.

REGISTRAR-GENERAL'S RETURNS.

From the returns of the Registrar-General for the week ending December 4th, it appears that the death-rate in the eight principal towns was 22.1 per 1000 of estimated population. This rate is 1.3 under that for the corresponding week of last year, and 2.6 under that for the previous week of the present year. The lowest mortality was recorded in Perth—viz., 15.6 per 1000; and the highest in Paisley—viz., 42.5 per 1000. The mortality from the seven most familiar zymotic diseases was at the rate of 3.8 per 1000, being 0.7 less than that for the last week. There was one death from small-pox in Greenock. It occurred in an unvaccinated merchant seaman, aged 40, who had been lodging in Antwerp until November 16th, and only arrived in Greenock on November 21st. Acute diseases of the chest caused 155 deaths, being 11 less than the number for last week. The mean temperature was 43.7, being 6.3 above that of the week immediately preceding, and 16.6 above that for the corresponding week of last year.

THE GREENOCK PAROCHIAL AUTHORITIES.

THE Greenock "pauperisation" difficulty, to which reference was recently made in the JOURNAL, has recently been solved under the following circumstances. A servant girl, being attacked with measles, was removed by the sanitary authorities to the Infirmary, when the usual claim for half the expenses incurred in her case was lodged with the parochial authorities. The latter thereupon intimated to the girl's father that she had applied for relief "as a pauper"; and, at the same time, application was made to the registrar for particulars of her birth, with the statement, "This is a pauper case". An action was brought by the girl against the inspector of poor for damages for having described her as a pauper, and for having recorded against her the untrue statement that she had applied for parochial relief. When the case was called, the inspector tendered an apology, and gave an assurance that no such charges of pauperisation would in future be made. The case was accordingly withdrawn; and it is satisfactory to know that, in future, the salutary working of the Public Health Act will not be interfered with.

IRELAND.

A MORNING concert in aid of the funds for erecting a Cottage Hospital in Randalstown, was held on the 8th inst., at Shane's Castle. A bazaar for the same charitable purpose took place in another portion of the building during the concert, and both were very successful.

MEDICAL SOCIETY OF QUEEN'S COLLEGE, CORK.

THE annual general meeting of this society, which was formed last year for the practical study and discussion of subjects connected with medicine and surgery, was held last week at the college. It was stated that the society had been very successful, and it was determined to award prizes, at the termination of the year, for the best papers read, and the most complete set of pathological specimens exhibited, during the session. The following office-bearers were duly elected for the ensuing year:—*President:* Stephen O'Sullivan, M.D., F.R.C.S.I. *Vice-President:* C. Yelverton Pearson, M.D., M.Ch. *Council:* T. J. Crowley, P. J. Galway, H. H. Charles, C. J. Holmes. *Treasurer:* William E. Hadden. *Honorary Secretaries:* Frederick E. Adams, G. A. Rountree.

VISITATION AT QUEEN'S COLLEGE, CORK.

AN important visitation was held last week at this College, to consider an application by Mr. Moxley, a medical student, against a sentence of rustication for twelve months, and deprival of scholarships, passed in May last by the Council. The visitors were Dr. McClintock, the President of the Royal College of Surgeons in Ireland, Mr. Justice Fitzgerald, and the Master of the Rolls. Mr. Moxley read a long statement, setting forth the reasons of his appeal. He referred to Mr. Parnell's arrival from America, and the intention to present him with an address by the students of the College; and alleged that no steps had been taken by the President or Council to prevent that meeting, although aware of the circumstances. He further stated that he and some other students antagonistic to this proceeding tried to get up an opposition meeting, but were prevented by the President; and subsequently, when the Council were considering the charges against some of the students with reference to the presentation of the address, he was removed from the building by the steward at the order of the President, which he charged as an assault. A correspondence ensued between Mr. Moxley and the President and Council, in reference to an intimation that the former intended to take legal proceedings against the President for the assault; and, finally, he was rusticated by the Council, and deprived of his scholarships, value £50. He referred, in his statement, to the early political life of the President; and made a personal attack on that gentleman, which it is unnecessary further to describe. The President, in reply, declined very properly to enter into the peculiar charges brought against him by Mr. Moxley; but, on the general question, stated that Mr. Moxley was the cause of the dissensions that took place among the students. The visitors delivered judgment the following day, the Master of the Rolls regretting the personal attack upon the President as wholly irrelevant to the issue. The political meetings held in that College were a gross breach of discipline, and could not be tolerated; and the President was perfectly justified in the manner in which he had treated Mr. Moxley; and the visitors upheld the decision of the Council. Mr. Justice Fitzgerald also supported the issue; and Dr. McClintock said it was with very great pain, but acting under the strongest convictions of conscience, that he felt bound to express his entire concurrence in the observations that had fallen from the Master of the Rolls. It grieved him to see that the gentleman who had appealed there was a young member of his own profession. He was additionally sorry for that. The punishment might seem, and no doubt was, strong; but he did not believe in his heart that it was beyond what the occasion of it deserved and called for.

HOME FOR PROTESTANT INCURABLES, CORK.

THE building fund of this institution laboured under a debt, which has now, happily, been removed by a very handsome donation of £3,000 from Lady Bentinck. Of this sum, £1,600 will be transferred to the building fund; and the remainder (£1,400) has been handed over to the endowment fund, the latter amount completing the capital sum of £5,000 invested in consols for the permanent benefit of the charity.

THE IRISH MEDICAL ASSOCIATION.

IN accordance with a suggestion that the members of the Council of this Association should dine together on the day of their quarterly meetings, the first of such dinners took place at the Shelbourne Hotel, Dublin, last Saturday. Dr. J. W. Moore, Chairman of the Council, presided, and was supported by the President of the Association, Dr. Chapman, and the President and Vice-President of the Royal College of Surgeons. The guests were—the President of the Queen's College, Cork; Mr. Purcell, Q.C.; and Mr. E. Stamer O'Grady. The country members, for the purpose of bringing more of whom together on such occasions these dinners were chiefly organised, had a solitary representative among the fifteen gentlemen present. A very enjoyable evening was, however, spent; and many subsequent similar *réunions* may be anticipated. There is to be a special general meeting of the Association summoned for Saturday, the 15th January, to consider the course that should be taken as regards the Vaccination and other Bills which the Association has taken so active a part in bringing under the notice of Parliament.

SANITARY IMPROVEMENTS IN DUBLIN.

A LARGE area in one of the worst districts of Dublin, known as the Coombe area, has just been cleared by the corporation, under the Artisans' and Labourers' Dwellings Act, at a probable cost of over £20,000. His Excellency the Lord Lieutenant has fixed to lay the foundation-stone of the new buildings, to be erected by the Dublin Artisans' Dwellings Company, on this area, on Monday next. It is much to be regretted that, under the system of compulsory purchase, as at present worked, the Act is so costly. As in London, so in Dublin, it is stated that nearly four-fifths of the outlay is an actual loss to the authorities.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

A DEPUTATION of the Corporation of Dublin, headed by the Right Hon. the Lord Mayor, M.P., and composed of the Lord Mayor elect, the High Sheriff, and a large number of the members of the Municipal Council, waited upon the Right Hon. W. E. Forster, M.P., Chief Secretary for Ireland, on the 8th instant, with reference to the above subject. The Right Hon. the Lord Mayor said that the Dublin Branch of the British Medical Association, at its last annual meeting, had adopted a strong resolution in favour of the notification to sanitary authorities of the existence of infectious disease; and that they had communicated with the Public Health Committee of the Corporation, who had passed a resolution in favour of the principles of their proposal. The subsequent steps taken by the Branch and by the Corporation, as

already reported in the JOURNAL, were then stated by the Lord Mayor, who said that the object of the deputation was to ask the Chief Secretary whether the Government would be able to introduce a general permissive Bill for the notification to sanitary authorities in Ireland of the existence of dangerons infectious diseases. They thought that, if a general Act were passed giving to the Local Government Board power to declare the provision in force within any sanitary district that desired it, the provision would soon be generally adopted. After a good deal of further conversation between the Chief Secretary and the Lord Mayor, Mr. Forster said that, as far as he could judge from what he had heard, the proposal looked as if it would be a most reasonable and a most useful thing to have done. He could not positively say that the Government would be convinced; but he thought it probable that they should be convinced that the thing ought to be done. The question was, how to do it? He thought the best plan would be for him to send over the arguments in favour of the measure, and then to see the Lord Mayor and the city members; "and if the Government", Mr. Forster continued, "shall be convinced—as it is very likely we shall be—of its utility, we could decide as to how a Bill should be introduced".

THE ADVANTAGE OF FEVER.

ON the present state of Ireland, a correspondent writes: "I am at present attending at a landlord's house, he being very ill of fever. A doctor from a disturbed district having come to see him professionally, said, by way of comforting the family: 'Faith, its a fine thing for a man to be allowed to die in his bed these times.'"

STIMULANTS IN WORKHOUSES.

THE Cork Board of Guardians recently requested the Local Government Board to sanction an arrangement by which all stimulants used in the workhouse hospitals might be regarded as drugs, be placed in charge of the workhouse apothecary for administration under the orders of the medical officers, and be charged like other medicines on the Parliamentary grant. In reply, the Local Government Board now state that they are not prepared to acquiesce in the proposal that the stimulants used in the workhouse be included in the list of medicines provided for the establishment. The issue of stimulants to pauper inmates of the workhouse, they remark, is already restricted by the regulation (Article 20) to cases in which the medical officer of the workhouse may give directions in writing for their use in individual cases. The guardians are also requested to bear in mind that no part of the cost of stimulants, such as wines and spirits, can be defrayed out of the Parliamentary grant for medical purposes.

THE REPRESENTATION OF IRELAND ON THE GENERAL MEDICAL COUNCIL.

VARIOUS conflicting views are being brought to bear on the Lord President of the Council, Earl Spencer, in making his selection of a successor to the vacancy on the General Medical Council caused by the resignation of Dr. Hudson shortly before his death. The *Lancet*, proposes that the Crown should appoint a "general practitioner" to the post—a class which, as a contemporary has shown, can hardly be said to exist in Ireland. The *Medical Press and Circular* urges that an Irish surgeon should be selected, on the ground that surgery, as distinguished from physic, has an utterly insignificant representation in the Council. Again, the Committee of Council of the Irish Medical Association have memorialised the Lord President not to follow the precedent of former Crown nominations by selecting a man merely because he is a distinguished member of the profession, probably effete and unacquainted with the general views and wishes of his brethren; bat some one the reverse of all this, and in favour of direct representation. Finally, the Obstetrical Society of Dublin—as represented by a deputation of some of its officers which waited on His Excellency the Lord Lieutenant last Monday—have memorialised his Excellency to use his influence to have a representative of obstetric medicine appointed as the Crown representative for Ireland. Their memorial quoted a long passage from Dr. Playfair's Address to the Obstetric Section, at the Cambridge annual meeting, on the requirements of obstetrics; and stated, that at present it is possible for a person to become a registered medical practitioner without ever having been present in the chamber of a lying-in woman. To the fact that their branch of the profession is not, and never has been, represented on the General Medical Council, the deputation attributed the present unsatisfactory state of affairs as regards instruction and examination in obstetrics. In reply to the deputation, his Excellency said that it occurred to him that it would be more advisable to select for the appointment a man of high standing in all branches of the profession, with a knowledge of all branches of medical science, rather than an expert in one particular department.

THE QUEEN'S UNIVERSITY IN IRELAND.

A DEPUTATION of the graduates of this university, for which the new Royal University is to be substituted, waited on the Lord Lieutenant last Thursday week, to protest against the position they would be placed in by such legislation. Dr. Corley, Dr. Thomson, and Professor O'Keefe, M.D., accompanied the deputation, and spoke of the great wrong that would be done by the extinction of the University. Several of its medical graduates, it was pointed out, had now high distinctions; no less than six professorships in Dublin medical schools being held by its alumni. The Queen's University also, had been a very successful experiment; and to extinguish it, would be unjust to the graduates who took out their degrees upon the faith that the institution would be permanent. The Lord Lieutenant, in replying, said there was no doubt but that the Queen's University had done good work. They had been thirty years before the public, and each year their work had been better than the year before; and they had had more undergraduates and more pupils taking degrees. He would have pleasure in forwarding their views to Mr. Gladstone.

PROPOSED VETERINARY COLLEGE FOR IRELAND.

ON Saturday last, his Excellency the Lord Lieutenant received a deputation for the purpose of bringing before his Excellency the advisability of the Government establishing a Veterinary College for Ireland. The deputation was introduced by Dr. Lyons, M.P., and included the President of the Royal College of Surgeons. Dr. Lyons stated that the number of veterinary surgeons in Ireland was totally insufficient to deal with the large property (valued at £61,597,184) in animals throughout the country. He was of opinion that a veterinary college, not affiliated with the Royal College in London, should be established under Royal Charter in Ireland. He did not think that more than £10,000 would be required to start the project. The absence of any veterinary school in an agricultural country like Ireland, was a serious disadvantage; and the present movement had the support of all classes. The Lord Lieutenant said he was greatly surprised that nothing of this sort existed in Ireland; and promised that he would assist the deputation in the attainment of its object in every way he could.

GUY'S HOSPITAL.

THE North of Ireland Branch of the British Medical Association having, at their meeting, in the Belfast Royal Hospital, on the 3rd instant, referred by resolution the consideration of the present position of the medical staff of Guy's Hospital in relation to the governors of that institution, and the bearings of the present dispute on the interests and honour of the profession generally to the Council, the Council met on the 10th instant, and passed the following resolutions unanimously:

1. "That we consider that Dr. Habershon and Mr. Cooper Forster, in resigning their appointments, have taken the only course open to them consistent with the honour, dignity, and interests of the profession; and that the profession will incur deserved reproach if it spares any effort to secure their honourable reinstatement."

2. "That, as the action of the Treasurer and Governors of Guy's Hospital, if not successfully opposed, establishes a precedent of a most

mischievous and far-reaching kind, the profession should combine to enforce the compliance of the Treasurer and Governors with the requirements of the staff in all matters relating to the nursing of the sick."

3. "That we regret that, for so far, we have observed no signs of such concerted action by the physicians and surgeons of other metropolitan hospitals as to encourage the junior staff to follow the example of their seniors, and no evidence of the existence of such *esprit de corps* as would effectually prevent any worthy member of the profession from accepting their places in case they should vacate them."

4. "That, in our opinion, a large and representative public meeting of the medical profession should be held in the metropolis, and that the policy of the profession in relation to the matters in dispute should be there delivered and afterwards unswervingly pursued."

AT a special meeting of the South London District of the Metropolitan Counties Branch, held on December 14th, it was unanimously resolved:

1. "That this meeting tender to Dr. Habershon and Mr. Cooper Forster their cordial sympathy in the circumstances which have led to their resignation of the offices at Guy's Hospital, which they have so long filled with distinction and usefulness."

2. "That, taking into consideration the general question of hospital management, as brought out by the disastrous events at Guy's Hospital and the York Road Lying-in Hospital, so similar in their general features, this meeting is of opinion that the Council of the Metropolitan Counties Branch is disqualified from taking steps to call a general meeting on the subject of the former institution; and, therefore, suggests to the Committee of Council of the Association, that any steps necessary should be taken immediately by that Committee."

ON Wednesday evening, December 15th, a largely attended meeting was held at the Bridge House Hotel, Blackfriars, "To consider what steps are desirable to be taken with reference to the present unsatisfactory position of Guy's Hospital." Mr. A. Cohen, Q.C., M.P., took the chair, and was supported by Messrs. A. Dunn, J. Berry, A. Hawkins, and the Rev. G. M. Murphy, and many of the leading men of both Southwark and Lambeth.—The CHAIRMAN said that Guy's Hospital was probably the greatest and most important institution in the borough of Southwark. Founded about 150 years ago, it had been enlarged and extended at the expense of about half a million sterling. They knew what relief it gave—they knew how the people, not only of that borough, but in all London, looked upon it—they knew it had a great medical school founded there, which, as a place of medical science, was looked up to, not alone by Englishmen, but by all other countries. It could not be denied that there did exist amongst the public at large a profound dissatisfaction with events which had come before the public of late in connection with Guy's Hospital. And as this touched the welfare, the interest, almost the honour of the borough he had the honour to represent, he thought it his duty to preside at that meeting.—Mr. A. HAWKINS, in moving the first resolution, said that, when he found that there were in Guy's Hospital 180 empty beds, he at once concluded that the objects which the good man, Thomas Guy, meant to be carried out by means of his immense fortune, were not being carried out. If the money had been spent in decorating a chapel, and if thousands of pounds had been spent on the treasurer's house, that was not carrying out the intention of Guy. Nor did he believe that it was in accordance with Guy's intention that money should be spent on Ritualistic practices. The government of the hospital was a self-appointed class government. What they all wanted was, to be convinced there was something wrong which needed righting, and then to place that wrong in the gaze of the public and the sunlight of the press. He moved: "That this meeting deeply regrets the state of matters existing at Guy's Hospital, which has led to the resignation of its two leading medical officers, and which must be most damaging to the sick poor, for whose interest it was instituted."—Mr. JOHN BERRY seconded the resolution, which was carried unanimously.—Mr. ROBINS (vestryman of St. George's) moved: "That Parliament be petitioned for the appointment of a Royal Commission to inquire into and report as to the present system and government of Guy's Hospital, with a view to its being placed on a more desirable and responsible basis; and that the borough members be requested to present and support the same."—Mr. JAMES MITSON (Chairman of the St. Saviour's Board of Guardians) seconded the motion, which was carried amid cheers.—The Rev. G. M. MURPHY moved: That, in the opinion of this meeting, it is desirable that the boards of guardians, the district boards, and vestries in the borough of Southwark should have one or more representatives on the Committee of Management of the hospital." That, he said, would be a clear advantage if carried out, because these boards were elected by a popular vote. If only half of what they had heard about Guy's Hospital was true, a very bad state of things must exist all over it. He was of opinion there should be a public audit of the accounts.—Dr. FORESDON, in seconding the resolution, said it ought to be known that the treasurer of the hospital was as great an autocrat as the Emperor of Russia. He had heard that the hospital was £17,000 short of its income this year.—The resolution was carried, with an addition, at the suggestion of Mr. BUSTIN, that the medical profession should be also adequately represented on the Committee of Management. A deputation was appointed to wait on the Home Secretary; and, with a vote of thanks to the chairman, the meeting was closed.

DEATHS FROM ANÆSTHETICS.

ON the next and following pages, we publish tabulated lists of the deaths during the administration of chloroform, ether, chloroform and ether mixed, and methylene dichloride, which have been reported in this JOURNAL, and in other medical periodicals, as having occurred in the United Kingdom during the eleven years 1870-80. For the tables, we are indebted to Mr. Burton of Liverpool and Dr. Jacob of Leeds.

An analysis of the diseases for which the operations were undertaken in cases where more than one death occurred shows the following result.

	Chloroform (120 cases).	Ether (11 cases).	Chlor. and Ether (7 cases).	Methylene (10 cases).
Operations on the eye	12	1	2	1
Extraction of teeth	5	0	0	0
Amputation of thigh	3	0	1	0
,, of leg and foot	5	0	1	0
,, of toes	2	0	0	0
,, of arm	1	0	0	0
,, of fingers	7	0	0	1
Dislocations of hip (1) and shoulder	7	0	0	1
,, ,, elbow and ankle	2	0	0	0
Fractured leg	5	0	1	0
Removal of tumours	10	1	1	0
Ovariotomy	2	0	0	1
Fistula	7	0	0	0
Abscesses	4	0	0	1
Calculus and lithotomy	3	0	0	0
Phimosis and paraphimosis	3	0	0	0

From this, it appears that the number of deaths from chloroform appears to follow rather the larger number of operations than the more severe; the large majority of operations and deaths being for comparatively trivial causes.

A glance at the list shows that Nos. 17, 22, and 70 of the chloroform list, and No. 1 of the mixed anæsthetic list, being deaths from suffocation by foreign matter in the trachea; and Nos. 20, 42, 45, and 54, being cases of self-administration, do not properly belong to a list of deaths from anæsthetics during operations. But the list shows, also, how imperfectly deaths are reported; as several of our large surgical centres, such as Guy's and St. Bartholomew's hospitals, where the number of chloroform-administrations must be very great, hardly figures in the list, although there is no reason to believe they have an immunity from such accidents. A search in the list of coroners' inquests held at the London hospitals would, doubtless, furnish some important information on this head. It would be very desirable to ascertain the total average number of administrations in the hospitals of England; as, in that case, we should have an unequalled opportunity of ascertaining the real mortality from chloroform.

An analysis of the table of deaths during the administration of ether shows that in only about one-third or less of the cases could the deaths be solely caused by the ether, even though we allow that, in Case 8, the carrying of the patient through an open court, for fifty yards, had nothing to do with the œdema of lung which supervened. In Cases 4, 6 and 9, the patients were in a state of dangerous collapse from intestinal obstruction. No. 7 was suffocated by blood in the trachea; and, in No. 3, a dangerous compound of hydride of amyl and ether was used. No. 5 appears to have died from nervous shock or fright, before more than three or four inspirations had been taken from an open inhaler.

Deaths from Inhalation of Chloroform in Great Britain and Ireland, reported in the BRITISH MEDICAL JOURNAL *in the Eleven Years* 1870 *to* 1880.

No.	Date.	Date of Publication.	Name, or Sex and Age.	Place.	Nature of Operation.	Apparatus.	Mode of Death.	*Post Mortem* Appearances and Remarks.
1	Dec. 29, 1869	Jan. 1, 1870, pp. 33 and 180	..	Middlesex Hospital	Necrosis of femur	..	..	
2	Dec. 23	Jan. 8, p. 39	Aged 14	Lincoln County Hosp.	Necrosis of tibia	..	..	Enlarged liver.
3	Jan. 11, 1870	P. 89	J. Plowman, 63	York	Amputation of foot	..	Pulse stopped early	
4	..	Pp. 164 and 199	..	Alloa	Ovariotomy	..	..	No morbid appearances.
5	..	April 2, p. 340	30	Accrington	Extract. of teeth	..	..	
6	May 3	May 14, p. 493	J. C., 42	Univ. College Hosp.	Vesical calculus	Clover's	Pulse and respiration stopped together	Heart relaxed, but not distended; fatty degeneration; valves normal.
7	April 12	April 30, p. 441	Male, elderly	Moorfields Hospital	..	..	Pulse ceased several seconds before death	Heart thin, empty and flaccid on left side; loaded with fat; fatty degeneration.
8	..	Sept., p. 338	Male, 34	..	Amputation finger	Piece of lint	..	
9	March 3	Mar. 11, 1871, pp. 259, 289	..	Edin. Roy. Infirmary	Disloc. shoulder	.	..	No organic lesion.
10	..	Mar. 25, p. 317	Male	Salop Infirmary	Fistula	..	Paralysis of heart	Heart healthy, except from immense amount of fat.
11	April 10	Ap. 22, p. 426	Male, 47	Swansea Hospital	Amputation of leg	Lint	Pulse ceased first	
12	..	April 22, p. 426	..	Wilmslow, Cheshire	Stiff knee	..	..	
13	..	May 20, p. 533	Col. Rogers	Cornwood	Dislocated ankle	..	..	
14	May 3	May 20, p. 538	Female, 49	London Hospital	Fractured femur; amputation of leg	..	Turned very livid	Valves healthy; left side contained but little blood.
15	May 31	June 10, p. 676	Male, 8	Gt. Northern Hospital	Dressing burn	..	Breathing observed to cease first	Blood dark. Right ventricle not distended. Left firmly contracted.
16	..	July 19, p. 124	Male, 37	Aberdeen	Rad. cure of hernia	Single fold of towel	Respiration and pulse suddenly ceased	Right heart contained 5 ounces fluid blood. Left, 4½ drachms.
17	Sept. 24	Sept. 30, p. 388	Male, 15	London Hospital	Strabismus	..	Death by suffocation	Sucked vomited matter into trachea.
18	..	Oct. 7, p. 421	Male, 34	Manchester Roy. Infir.	Fractured leg	Piece of rag	Pulse had ceased	Dilated heart.
19	..	Nov. 25, p. 619	Male, 33	London Hospital	Amputation of toes	..	Pulse had ceased	Right ventricle distended with blood; left ventricle flaccid.
20	..	March 9, 1872, p. 271	Med. student, 22	..	..	..	..	
21	Mar. 16	April 6, p. 368	Male, 26	Birmingham Eye Hospital	Iridectomy	Tin inhaler	Pulse ceased; respiration continued afterwards	Muscular substance of heart pale, soft, and flabby. Fatty degeneration. Right ventricle contained dark fluid blood. Left, empty.
22	..	April 20, p. 419	Female, 46	Keighley	Ovariotomy	..	Artificial teeth in larynx	
23	..	May 4, p. 472	Male, 48	Manchester Eye Hospital	Cataract	..	..	Right cavity of heart gorged with blood. Heart hypertrophied and fatty. Valves normal.
24	May 1	May 4, p. 483	Male, young	St. Bartholomew's Hos.	Dressing wound	..	Pulse ceased	
25	..	June 15, p. 646	Male, 36	King's College Hosp.	Disease of jaw	..	Paralysis of heart	
26	Aug. 21	Aug. 24, p. 225	Male, 53	Gt. Northern Hospital	Lithotomy	..	..	
27	..	Sept. 18, p. 357	Female, 16	South Lond. Ophthalmic Hosp., Southwark	..	..	..	
28	..	Oct. 5, p. 388	Female, 70	Brighton	Fractured leg	..	..	
29	Sept. 3	Oct. 5, p. 388	34	London Hospital	Abscess of foot	..	Pulse ceased	Left ventricle contained some blood. Right ventricle distended.
30	..	Oct. 12, p. 418	Male	Nottingham Gen. Hos.	Comp. frac. of leg	Mask	..	Heart pale, empty; of usual size.
31	Aug. 30	Oct. 12, p. 418	Female, 57	York	Tumour in breast	Sponge	Pulse ceased	
32	..	Nov. 30, p. 611	Male, 49	Bristol Infirmary	Catheterism	..	Heart stopped	Disease of heart and lungs.
33	..	Dec. 14, p. 656	Male, 28	Barrow	Amputat. of thumb	Napkin	..	
34	Dec. 14	Dec. 21, pp. 689 and 717	Male, 35	King's College Hosp.	Necrosis of leg	..	Heart stopped	
35	Feb. 18, 1873	Feb. 22, p. 205	Female, 45	West London Hospital	Fatty tumour	Double fold of lint	Heart ceased beating	Ventricles dilated. Valves atheromatous, but competent.
36	Feb. 17	Feb. 22, p. 207	Male	Sir Patrick Dun's Hosp.	Injury to foot	..	..	
37	..	Mar. 22, p. 321	Male, 15	St. Thomas's Hospital	Examin. humerus	..	Pulse stopped	
38	May 15	May 24, p. 595	Male, 60	Broadmoor Asylum	Rupt. of perinæum	Clover's	Pulse suddenly stopped	Right heart flaccid, full of blood. Left empty and contracted. Valves normal.
39		"Another chloroform death overdue."						
40	Dec. 1876	July 19, p. 59	..	Stoke-climsland	Amputat. of thigh	..	Pulse stopped	
41	..	Aug. 23, p. 231	..	Brighton	Extract. of teeth	..	Pulse ceased	Fatty degeneration of heart.
42	Sept. 9	Sept. 27, p. 385	..	..	..	..	..	
43	..	Sept. 13, p. 334	Male, 37	Guy's Hospital	Puncture of liver	..	Pulse failed	Heart apparently healthy.
44	..	April 11, 1874, p. 473	Male	University Coll. Hosp.	Explor. tumour of parotid	..	Pulse stopped	
45	April 13, 1874	April 18, p. 524	Male, 43	St. Mark's Hospital	Fistula	Square of lint	Pulse stopped	
46	May 6	May 16, p. 654	Fem., adult	Carlisle	..	Handkerchief	..	
47	June 13	June 20, p. 817	Male, adult	London	Tumour of nares	Clover's blowing apparatus	Syncope	
48	July 16	Aug. 1, p. 141	Male, 48	Gen. Infirmary, Leeds	Amputat. of finger	Lint	Respiration stopped; pulse feeble	Both ventricles contained a small quantity of fluid blood.
49	Dec. 15	Dec. 19, p. 782	Male, 14	Royal Free Hospital	Dislocation of hip	..	Fainted	All organs sound.
50	Feb. 19, 1875	Feb. 27, p. 277	Male, 56	Sheffield Public Hospital	Removal of tongue	Lint	Breathing ceased first	Left ventricle contracted; right relaxed; both empty.
51	July 14	July 24, p. 113	Female, 45	Addenbrooke's Hospital, Cambridge	Dislocation of humerus	Skinner's	Pulse stopped suddenly	
52	..	Oct. 9, p. 463	Male, 49	London	Disloc. of humerus	..	Paralysis of heart	
53	Oct. 6	Oct. 16, p. 500	Male, 56	Seamen's Hospital	Necrosis of femur	..	Pulse and respiration suddenly ceased	All cavities of heart contained much fluid blood.
54	..	Dec. 4, p. 711	Female	..	..	..	..	
55	..	Dec. 11, p. 739	Male, 42	Smethwick	Wound of eye	..	Pulse failed	
56	Nov. 26	Dec. 11, p. 739	Female, 48	London	..	..	..	
57	..	Dec. 18, p. 761	..	Glasgow	Amputat. of finger	..		
58	Jan. 22, 1876	Jan. 29, p. 144	Male, 23	Steevens' Hosp. Dublin	Phimosis	..	Circulation stopped	
59	..	Feb. 5, p. 174	Male, adult	Stafford	Amputation of arm	..	Pulse stopped	Heart unusually large.
60	..	April 1, p. 422	Female	Liverpool	Extraction of teeth	..	Arrest of heart's action	
61	.	April 8, p. 451	Male, 54	Leicester	Amputat. of finger	Piece of lint	Pulse and respiration ceased	Heart large and fatty. Cavities dilated, flabby, and empty.
62	July 5	July 29, p. 150	Male, 45	St. Mary's Hospital, London	..	Cone of flannel	Respiration said to have stopped first	Heart flabby and light-coloured in parts.

Deaths from Inhalation of Chloroform in Great Britain and Ireland, reported in the BRITISH MEDICAL JOURNAL *in the Eleven Years* 1870 *to* 1880—*Continued.*

No.	Date.	Date of Publication.	Name, or Sex and Age.	Place.	Nature of Operation.	Apparatus.	Mode of Death.	*Post Mortem* Appearances and Remarks.
63	..	Sept. 16, p. 381	Male, 45	St. Thomas's Hospital	Open. sinuses of hip	Lint	Pulse suddenly stopped	Advanced fatty degeneration of heart.
64	Oct. 25	Nov. 11, p. 627	Male, 8	Long Eaton	..	..	Pulse suddenly stopped	
65	..	Dec. 23, p. 830	Male, 33	Charing Cross Hosp.	Tenotomy	..	Pulse became feeble	Heart large. Right cavity filled with dark blood. Right ventriele thinner than normal.
66	Dec. 15, 1876	Jan. 13 & 27, 1877, pp. 61 and 120	Male, 43	Wolverhampton Hosp.	Amputat. of fingers	Lint folded once	Respiration ceased first	True fatty degeneration of heart.
67	1877	Jan. 20, p. 80	Male	University Coll. Hosp.	Carious bone	..	Pulse and respiration ceased nearly together	Marked fatty degeneration of heart.
68	..	Jan. 27, p. 120	Male, 52	Peterborough Infirm.	Hernia	Thin handkerchief	Respiration became shallow; pulse could not be felt	
69	..	Jan. 27, p. 120	Female	Staleybridge	Tumour of throat	..	..	Details not furnished.
70	..	Feb. 17, p. 210	Female, 43	University Coll. Hosp.	Ligature of carotid	..	Asphyxia from sucking in blood	
71	..	Mar. 17, p. 333	Male. 56	Derby Infirmary	Fistula	"Lint-holder"	Pulse ceased	No organic disease.
72	June 25	June 30, p. 825	Male, 27	Mercer's Hospital, Dublin	Cautery to knee	Skinner's	Pulse became very weak, and then stopped	Advanced fatty degeneration. Old pericardial adhesions.
73	..	Aug. 4, p. 143	Female, 23	Dawlish	Strabismus	..	..	Died some hours afterwards; cerebral hæmorrhage.
74	Aug. 11	Aug. 18, p. 233	Male, 38	London Hospital	Paraphimosis	..	..	Heart dilated and fatty. No valvular lesion.
75	1878	Feb. 2, 1878, p. 162	Male, 18	Devon & Exeter Hosp.	Phimosis	..	Turned livid, pupils dilated	
76	..	Feb. 16, p. 238	Male, adult	Liverpool Northern Hospital	Extirpation of eye	Skinner's	Failure of heart's action	Fatty degeneration of heart. Cavities contained some blood.
77	..	May 18, p. 709	Female, 10	London	Extraction of teeth	..	Circulation suddenly failed	
78	..	May 25, p. 763	Female, 34	East Suffolk Hospital	Fistula	Few folds of lint	Heart and pulse suddenly failed	Fatty degeneration of heart. Cavities contained some blood.
79	..	June 1, p. 797	..	Edinb. Roy. Infirmary	..	..	..	
80	..	June 1, p. 797	2nd death	Edinb. Roy. Infirmary	..	..	..	
81	..	Oct. 16, p. 606	Female, 38	Drumcondra	Dislocated elbow	..	..	Fatty heart.
82	Oct. 13	Oct. 26, p. 642	Male, 15	Newcastle-on-Tyne Infirmary	Reamputation of stump	..	No radial pulse to be felt	Muscular tissue healthy. Right ventricle widely distended.
83	..	Nov. 9, p. 699	Male, 3	Charing Cross Hosp.	Malformation	..	Pulse suddenly stopped	
84	1879	Mar. 8, p. 357	Male, 8	Rainham	Abscess of knee	..	Failure of heart's action	No disease of heart.
85	..	Sept. 27, p. 509	.	Middlesex Hospital	Delirium tremens	..	..	
86	..	Oct. 18, pp. 624 and 626	Fem., adult	Guidebridge	Tumour of breast	..	Pulse began to fall	
87	..	Oct. 18, p. 627	Male, 7	University Coll. Hosp.	Enucleation of eye	..	Respiration had ceased	
88	..	Nov. 29, p. 871	Male, adult	Hull Gen. Infirmary	Applying splint to leg	Towel	Suddenly ceased breathing	Had not inhaled any vapour for three or four minutes before death.
89	Nov. ..	Dec. 1 , p. 911		Edinb. Roy. Infirmary	Orbital tumour	..	..	
90	Dec. 3	Dec. 27, p. 1043	Male, adult	Liverpool Roy. Infirm.	Nerosis of leg	..	..	
91	Jan. 16, 1880	Jan. 31, 1880, p. 176	Male, 42	Brampton	..	Piece of lint	..	
92	Jan.	Jan. 31, p. 177		Edinburgh Infirmary	Wounded finger	..	..	Fatty liver.
93	..	March 6, p. 372	Male, 56	South Infirmary, Cork	..	..	Asphyxia	
94	May 30	June 12, p. 900	Male	Radcliffe Infirmary	Disloc. of shoulder	..	Syncope	Fatty heart and liver; emphysematous lungs.
95	July	July 17, p. 101	Male	Blackburn Infirmary	Hernia	..	..	
96	Aug. 24	Aug. 28, p. 352	Female, 5	Liverpool	Extr. teeth	..	Syncope	
97	Aug. 10	Aug. 28, p. 352, & Sept. 25, p. [illegible]	Male, 50	London Hospital	Amputation of leg	Skinner's inhaler	Syncope	Fatty heart; œdematous lungs; granular kidneys.
98	Sept.	Oct. 2, p. [illegible]	Male, 42	West London Hospital	Tumour of jaw	..	Syncope	Fatty heart.
99	Sept. 23	Oct. 9, p. 5	Male, 59	Hull	Lithotomy	Flannel on wire-work	Syncope	Fatty heart.
100	Nov.	Nov. 6, p. 749	Female, 12	Devonport Hospital	..	..	..	Heart small.
101	Dec. 4	Dec. 11, p. 43	Male, 43	Guy's Hospital	Amputation finger	Flannel on frame	Syncope	No necropsy.

Additional Deaths recorded in the "Lancet" and elsewhere.

No.	Year.	Sex and Age.	Place.	Operation.	Mode of Death.	*Post Mortem* Appearances and Remarks.
1	1870	"Lad"	University College Hospital	Amputation of thigh	Syncope	
2	1871	Male, 52	Westminster Hospital	Iridectomy	Asphyxia	
3	Do.	Male, 50	Plympton	Fractured femur	Asphyxia during struggling	
4	Do.	Male, 23	London Hospital	Amputation of toe	Syncope	
5	1874	..	University College Hospital	Submental abscess	Syncope	
6	Do.	..	Central London Ophthalmic	Iridectomy	..	All organs healthy.
7	Do.	Female, 18	Woolwich Workhouse	Pin in hand	..	Fatty heart?
8	Do.	Male	Leeds Infirmary	Dislocation of shoulder	Syncope after operation	(Not published.)
9	1875	Male, 34	Artillery Hospital	Amputation of leg	Syncope	
10	Do.	Female	Quarrybank	Abscess of abdomen	..	Pus in liver, pleura, peritoneum.
11	1876	..	Leicester Infirmary	Dislocated humerus	Syncope	
12	1877	.	Blackburn Infirmary	Perineal fistula	..	
13	Do.	..	Llanelly	Fistula	..	
14	1878	Male, 40	Sheffield Infirmary	Fistula	Syncope	
15	1879	..	St. Leonard's Hospital	Injury to elbow	Asphyxia	
16	Do.	..	Moorfields Ophthalmic Hospital	Strabismus	..	
17	1880	..	Liverpool Infirmary	Necrosis of tibia	..	Adherent pericardium.
18	Do.	..	West Norfolk Hospital	..	Syncope	Organs healthy. A little ether given at first.
19	Do.	..	Cirencester Cottage Hospital	Strabismus	Syncope	

Deaths during or after Administration of Ether, reported 1870 *to* 1880.

No.	Date.	Date of Publication.	Sex and Age.	Place.	Operation.	Apparatus.	Mode of Death.	*Post Mortem* Examination and Remarks.
1	1873	Mar. 3, p. 247	Male, 84	..	..	..	..	Died forty-eight hours after.
2	Oct. 1	Oct. 11, p. 441	Male, 14	..	Iridectomy	..	..	Lungs engorged.
3	1875	April 3, p. 584	Male, 16	Manchester Workhouse	Necrosis	Lint in cone of flannel	Respiration ceased	Robbins' "anæsthetic ether" used. Heart normal. Lungs not congested.
4	..	May 26, p. 658	Male, 60	London Hospital	Hernia	Clover's inhaler	Asphyxia	Heart flaccid. Lungs emphysematous.
5	1877	Nov. 17, p. 692	Female, 48	Lincoln Hospital	Cancer of breast	..	Fright	Death after two minutes. Cancer in lungs, liver, etc.
6	1878	May 18, p. 729	Male, over 50	London Hospital	Hernia	..	Asphyxia	Had been vomiting four days.
7	1875	..	Male	London Cancer Hosp.	Tumour of jaw	..	Asphyxia	Clot of blood in trachea.
8	?	..	Male, 35	Birming. Gen. Hosp.	Tenotomy	..	Œdema of lung	Death four hours after operation.
9	?	..	Male, 66	Leeds	Colotomy	..	?	Patient moribund from intestinal obstruction.
10	?	..	..	St. Bartholomew's	"Intest. affection"	..	..	Not published.
11	1880	..	Male, 45	St. Thomas's Hospital	Cancer of rectum	..	Pulse stopped; face at first pallid, then turgid	Heart healthy; œdema of lungs; extensive pleural adhesions.

Deaths under or after Use of both Chloroform and Ether, reported from 1870 *to* 1880.

1	1876	Sept. 16, 1876, p. 381	Male, 28	Guy's Hospital	Amputation of thigh	..	Choked by meat in trachea	Ether was given, as patient became intensely collapsed from the chloroform.
2	Aug. 18	Dec. 16, p. 753	Male, 13	Tipperary Hospital	Tenotomy	.	..	Chloroform and ether given alternately.
3	..	March 31, 1877, p. 396	Female, 21	Westminster Hospital	Amputation of leg	Lint	Became bluish in face, and pulse stopped	Narcosed by chloroform in three minutes, when ether was substituted. Right ventricle thin. Left, thicker, pale, but not unusually soft.
4	1877	Aug. 25, p. 266	Female, 46	Moorfields	Cataract	Clover's inhaler	..	Chloroform given, 3 to 4 min.; ether, 2 to 3. Heart flaccid; kidneys granular and fatty.
5	..	Mar. 29, 1879, p. 490	Female, 28	Guy's Hospital	Pin in throat	..	..	Ether given first, then chloroform; began to breathe badly in about one minute. Died next day from inflammation of lungs.
6	..	April 12, p. 562	Female, 8	Moorfields	Strabismus	..	Collapse	Seven hours after administration of mixed ether and chloroform.
7	1879	.	..	West London Hospital	Fatty tumour	.	Asphyxia	Chloroform given; then one ounce ether. Lungs engorged.

Deaths from Methylene Dichloride.

No.	Sex and Age.	Place.	Operation.	Cause of Death.	Remarks.
1	Female	Birmingham Women's Hospital	Ovariotomy	Syncope	A little ether was given for a short time.
2	Male	Charing Cross Hospital	Amputation of finger	Syncope	
3	Female, 45		Motion of arm	Syncope	
4	Male, 50	East Suffolk Hospital	Caries tibia	Epileptic convulsions	A little ether given.
5	Male, 51	Bath	Dislocation of shoulder	Syncope	
6	Male, 58	Middlesex Hospital	Abscess of buttock	Syncope	
7	.	Moorfields Ophthalmic Hospital	Caries of orbit	Syncope	
8	Male, 27	Do. Do.	..	Syncope	Organs healthy.
9	Male, 27	Central London Ophthalmic	Iridectomy	Asphyxia	
10	..	Guy's Hospital	..	..	No particulars given.

CORRESPONDENCE.

ETHER v. CHLOROFORM.

SIR,—Although I seldom give anæsthetics now, I can speak from a large experience of their administration, both before and after the happy revival of the inhalation of ether, which owed much of its strength, and owes much of its permanence, to your powerful and persistent advocacy. In a clinical lecture published in the JOURNAL, December 11th, 1875, I attempted to summarise what I believed to be the advantages of ether over chloroform as an agent for the production of surgical anæsthesia. Subsequent experience has strengthened the convictions I then stated in these words: "Can we produce as perfect anæsthesia by means of ether as by chloroform? Is ether safer than chloroform? I believe both these questions may be confidently answered in the affirmative." No known agent capable of affording complete surgical anæsthesia is absolutely safe. The line separating perfect surgical anæsthesia from death is so narrow, that it is probable that an anæsthetic satisfactory to the surgeon in its power of rendering all his procedures painless, and absolutely free from risk to life, will never be discovered. But, given sufficient anæsthetic power, relative safety is the first and by far the chief, if not the sole, legitimate ground of choice in the selection of an anæsthetic; at least, it would be if the selection rested with our patients. That ether-anæsthesia is sufficient for all surgical purposes, excepting certain operations in the neighbourhood of the entrances of the respiratory passages; and that, other circumstances being similar, a patient anæsthetised by ether is in less danger of immediate death than one anæsthetised by chloroform,—are propositions which are absolutely indisputable. The danger of chloroform lies in its lethal power as a cardiac depressant; the relative safety of ether rests in its action as a cardiac stimulant. The signs of danger in ether-inhalation are respiratory, noisy, and timely; in chloroform-inhalation, they are cardiac, silent, and sudden. Sooner or later, chloroform must give way to ether as a surgical anæsthetic, just as ether must drop out of use whenever another anæsthetic as efficient in annihilating pain, but safer to life, shall appear. One reason why the use of chloroform is slow to die out lies in the fact that it is easier for an inexperienced anæsthetist to get a patient "under" with chloroform than with ether. I hope neither a judicial condemnation in one of the courts of law, nor some other conspicuous catastrophe, will be needed to determine the final abandonment of chloroform-inhalation. I am glad the ether *v.* chloroform controversy has been recently renewed. It must be revived from time to time, if the present lamentable mortality from chloroform is to be removed.—I am, etc.,

JAMES SAWYER, M.D.Lond., M.R.C.P.

Birmingham, December 1880.

SIR,—As having a bearing upon this vexed question, the following case from my own practice during this present week may be of interest.

A few days ago, I went with two brother surgeons to amputate a breast, and administered ether throughout the operation. To get the patient off the better, a single half-drachm of chloroform was put into the inhaler at the beginning. The inhaler was an ordinary leather one, lined with flannel, and containing a sponge. The patient went off quietly and nicely, and all went well till the last artery was being tied.

At this juncture, the pulse and respiration ceased; a cold sweat just like death came in drops upon the patient; and for a few seconds death seemed very imminent. Indeed, for a few moments I thought she was dead. Ammonia was applied to the nostrils, cold water to the face, etc., when happily she rallied.

Nothing will induce me to give ether again at present, as I only gave three ounces.—Yours truly, RICHARD JELLEY.

Totnes, November 27th, 1880.

THE WORTHING INFIRMARY.

SIR,—I have read with much interest, in your number of the 11th instant, the leader upon Physicians to Provincial Hospitals, particularly that portion of it referring to the Worthing Infirmary, the statements concerning which are perfectly correct. You are quite right in your surmise about professional feeling in the matter. To that, and that alone, was due the rejection of the £2,000. I wish to inform you that the infirmary has *not* lost the munificent gift.

Immediately I heard of the refusal to accept the money, subject to my appointment, I begged my patient to strike out the obnoxious condition, and give it all the same. After no small amount of entreaty, she consented to do this. I thought that in all probability, in a few years, I should be dead and gone, and the infirmary would remain; and it would not have been a pleasant thing to have had my name associated, rightly or wrongly, with the loss of such a splendid endowment.

In conclusion, I must say that, considering I am senior to all three of the staff in age, length of practice, and qualifications, and, moreover, having formerly served on the staff for six years, it did not appear to me an unreasonable thing to hope for the appointment of physician. However, it has been ordered otherwise. All I can say is, I regret it. "Animam meam liberavi."—Yours faithfully,

JOHN GOLDSMITH, M.D. St. And.

Highworth, Worthing, December 14th, 1880.

THE TREATMENT OF SUNSTROKE.

SIR,—There are few subjects of more practical importance to tropical, and more particularly military, physicians, than the most efficient method of dealing with an affection so formidable as sunstroke. I am given to understand that some trials are being made in India to treat patients, whether struck down by the sun, or by that equally formidable form of heat asphyxia, common in crowded and over-heated ships and barrack-rooms in hot climates, by the application of heat. To take a man with a temperature, say, of 110° Fahr., and plunge him into a bath at a high temperature, as I hear has been done, does, I confess, appear to me to be *similia similibus* with a vengeance. But, as I know nothing of the results of this mode of treatment, I forbear to comment on it. I may, however, observe that, yesterday, I had a conversation with a medical officer of experience, formerly on the medical staff of this hospital, who has just returned from India. This gentlemen informed me that, on one occasion, after having been exposed for a considerable time to a high temperature, he became aware of the premonitory symptoms of an impending attack of heat-stroke, and that he at once took a hot bath, the effect of which was to calm his nervous agitation, and to remove the symptoms which alarmed him. It would be well if medical officers serving in India, who have made trial of this method of treatment, would give us the results, whether favourable or the reverse. Turning to the better known and generally recognised treatment of the reduction of temperature by the application of cold, I have been asked to invite the attention of military surgeons to a method which has been used with good effect by Dr. W. Collis, A.M.D., in medical charge of the 68th Regiment at Meean Meer. After the function of respiration has been restored by the free use of the douche, there is always a tendency to a rise in temperature again, often to as high a degree as at first, immediately followed by formidable symptoms. The plan long followed by me in India, and common there, has been to envelop the patient in a wet sheet, and to ply a fan or punkah over him, until the temperature has been reduced. One of our old Netley men, my friend Dr. Lethbridge of the Bengal service, who had great experience in the treatment of heat-asphyxia in one of the largest prisons in India, assured me, when I had the pleasure of seeing him at home some years ago, that he was successful in every case by following this method. Dr. Collis seeks to attain the same end in a different way, by placing and treating his patients in a refrigerating chamber, which he extemporises in the following way. He constructed, in one of the large wards of his hospital, by means of screens hung with "pundahs", *i.e.*, curtains, a chamber capable of containing two beds, with ridge ventilation, the doorways being also hung with heavy pundahs. A current of cooled air is introduced into the chamber by a tube connected with a thermantidote (a machine constructed like a winnowing fan, which drives air, cooled by passing through wet fragrant grass, into rooms); a basket containing ice suspended over the patient's head allows ice-water to trickle over him, and serves also to cool the air in the chamber. In this way, Dr. Collis was able to keep his patients in an atmosphere, in the rains, from 15° to 18° lower than that of the surrounding ward; while, when a hot wind was blowing, the difference between the temperature of the ward and the chamber was from 19° to 23° Fahr. Of the cases treated in this chamber—the numbers are not given—only one proved fatal; "and in that case the man was admitted moribund". It is noted that the reduction of temperature was very much more marked if quinine were not administered, this drug having a well-founded reputation for reducing temperature in this direction. It would not be difficult to have a refrigerating chamber, of a better construction than this, a permanent "institution" in every hospital in India, and, where it would be quite as useful, and save many lives, in our troop-ships and P. and O. steamers, that have to navigate the Red Sea at times when the temperature is almost past human endurance.—I am, sir, yours faithfully,

Royal Victoria Hospital, Netley. W. C. MACLEAN, M.D.

MILITARY AND NAVAL MEDICAL SERVICES.

IT is announced to be Mr. Childers' intention to unite the sanitary and statistical branches under one head. This abolishes an administrative appointment which has always been looked upon as one of the prizes of the department; and will not, therefore, be very warmly welcomed. There are, however, it is stated, good administrative and economic reasons for the step.

THE HEALTH OF THE BRITISH TROOPS IN MADRAS.

SIR ANTHONY HOME has made to the Military Department of the Government of Madras an interesting report on the sickness, mortality, and invaliding, in 1879, amongst the British troops serving in the Madras Presidency. From this report, it appears that, with an average strength of 10,507 men, the admissions into hospital numbered 14,737, and the deaths 173, or 16.47 per 1000. The average number constantly sick was 701, being 66.71 per 1000. The invalids sent home numbered 467, or 44.45 per 1000. Each soldier on an average passed 24.35 days in hospital; and the average duration of each illness was 17.36 days. Compared with the results of the preceding year, there was, in 1879, a greater prevalence of sickness, with a diminished intensity of that occurring, evidenced by a reduction of the death-rate of 4.95 per 1000 men, and a reduction in the invaliding rate of 1.32 per 1000. The largest excess of prevalence of sickness was in paroxysmal fevers. Ague was present as an epidemic at various stations in the command, and the number of men attacked by it was more than double the proportion of that for the previous ten years. The excess of sickness was also partly due to greater proportion of venereal diseases among the men, this being one-third higher in 1879 than in the previous ten years. Although small-pox prevailed epidemically in certain parts of the command, only one soldier was attacked. Twelve attacks of enteric fever were returned; and cholera, which appeared in 1878 amongst the troops in every circle, existed in 1879 at two stations only. Thirty-six cases of sunstroke were recorded, 13 of them fatal. Diseases of the heart were more prevalent than in the preceding year; but the rate of prevalence of diseases of the digestive system was lower by nearly thirty cases per 1000 than in 1878. Delirium tremens caused only 23 admissions into hospital; and alcohol-poisoning three. But Sir Anthony observes that "it is morally certain that, both directly and indirectly, the habit of drinking has caused a large proportion—a very large proportion—of the whole amount of illness from which the force has suffered. The disease under which the state of ill health caused by habitual drinking is ordinarily shown is dyspepsia. Of this, 705 admissions are returned; it is quite safe to assume that the half of them are due to drink. The diseases under which illness caused by a debauch of drink (as distinguished from habitual drinking) is usually shown, are simple continued fever and febricula. In the present year, the combined admissions from them were 1370; it would not, probably be an overstatement to say that one-fifth of this number were due directly to drink. The amount of indirect causation of disease by drunkenness cannot be guessed; nor can it be shown in how many instances accidental or other injuries had their origin in this habit."

MICHAEL NICHOLSON, an army pensioner, died at Ballinadee, this week, at the alleged age of 106 years.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

At a recent meeting of the Guardians of the Thetford Union, it was decided to add nine guineas *per annum* to the salary of Mr. J. R. Clouting, in consideration of the long distance (over eighteen miles out and home) which he had to drive through an almost unpopulated piece of country to visit one of the parishes in his district. The proportion of the original salary allotted for this parish was 18s. *per annum*. The average number of visits during the last six years has been eleven and a half, or sixty-nine visits for 108s. Within a few years additions have been made to the salaries of the medical officers of two other districts of the same Union, under precisely similar circumstances.

THE NOTIFICATION OF INFECTIOUS DISEASES IN AMERICA.

The importance to the public health of each case of infectious disease being notified to the local authorities immediately on its recognition, is becoming rapidly recognised in the United States, and an increasing number of American cities are taking powers for making such notification compulsory within their limits. Amongst other towns in this position are New York, Brooklyn, New Orleans, Bridgwater (Massachusetts), Milwaukee (Wisconsin), Wheeling (West Virginia), Pittsburgh, and St. Louis, together with the State of Michigan. The diseases to be reported at these places do not vary greatly, though some towns are more definite in their requirements than others. The notification has invariably to be made by the attendant physician; though at New Orleans, Bridgwater, Wheeling, and the State of Michigan, a similar duty is imposed upon householders. The penalty for not reporting is usually fifty dollars, as at New York; but at Bridgwater, the fine is a hundred dollars; at Milwaukee, two hundred and fifty dollars; and at Brooklyn, two hundred dollars, or imprisonment in the county gaol for thirty days, or both. It will be seen how stringent in these places the requirement of notification has been made—a stringency the more striking, as in no single instance is any remuneration attached to the giving of a certificate.

At New York, the regulations on this subject in the City Sanitary Code are very precise and definite. By section 131 of the Code, every physician must report to the Sanitary Bureau, in writing, every case of contagious disease which he has attended during the last twenty-four hours, though no more than two reports need be made in the same week concerning the same person. All deaths from contagious diseases must be reported to the Board of Health within twenty-four hours of the decease. By section 5 of the Code, a "physician" is held to include a dentist, a midwife, and "every other person who practises about the sick or injured" (which phrase would seem to include irregular practitioners and quacks). The contagious diseases to be reported may be any disease of "an infectious, contagious, or pestilential nature", but especially "cholera, yellow fever, small-pox, diphtheria, ship or typhus, typhoid, spotted, relapsing, and scarlet fevers", together with any new infectious disease, and any other publicly declared by the Board of Health. The keepers of boarding- or lodging-houses, inn-keepers, and hotel-keepers (sect. 133), the managers or principals of every public or private institution (sect. 134), the masters of vessels (sect. 135), every person knowing of any individual sick of contagious disease where there is reason to believe such individual is neglected or not properly cared for, as well as every physician hearing of any such sick person whom he has reason to think requires the attention of the Board of Health (sect. 136), must give notice to the sanitary authority of infectious cases within their cognisance. At Brooklyn, the rules are almost the same as those of New York; and at New Orleans, as we learn from a collection of the sanitary laws of Louisiana, for which we are indebted to Dr. Joseph Jones, the President of the State Board of Health, substantially the same principles have been observed. Section 27 of the Sanitary Ordinances of New Orleans, adopted by the City Council on June 25th, 1879, requires that "all practitioners of medicine, masters of any watercraft, hotel boarding or lodging-house keepers, principals or masters in any public or private schools, the chief officers or persons in charge of any public institution of charity or of punishment, and heads of families" shall report, within twenty-four hours, to the office of the Board of Health "all cases within their cognisance of Asiatic cholera, leprosy, yellow fever, typhus or ship fever, diphtheria, malignant scarlet fever, small-pox, varioloid, trichiniasis, or any other case that may at any time be specified by the Board of Health".

No particulars have reached us as to the actual working of these regulations in any city but Brooklyn. An interesting account of the use made in that town of the information as to infectious disease has, however, been published by Dr. J. H. Raymond, the Sanitary Superintendent of the Brooklyn Health Department. It appears that the city is divided into seven sanitary districts, each district having its inspector. Every case of contagious disease reported is visited by him. At his visit he ascertains the names of all the children living in the house, and the schools which they attend. These names are at once sent on post-cards to the schools, the principals of which are also notified each day, from the office of the Board of Health, of sickness in their scholars' homes. The inspector notifies the families in the house of the existence of contagious disease there, and leaves an instructional circular detailing the precautionary measures that need to be taken. He examines the plumbing work of the house and the privy; and if anything need attention, he orders the necessary work to be done. A very large proportion (not far short of a third) of the houses thus examined were found to be defective, some of the defects being of the most glaring kind. No serious difficulty seems to be experienced in the working of the clause in question; and it is difficult to understand why there should be any in the adoption of a similar requirement in our own country.

HOW NOT TO DO IT.

A striking example of the shortsightedness of local authorities has recently been observed at Burton-on-Trent. Last year, there were forty-five deaths from scarlatina in the borough; and, in the first half of this year, forty-seven more, with, of course, a corresponding number of cases non-fatal. The local Town Council, though clothed by the Legislature with the power of requiring each case of infectious disease to be reported to them, possess (as we pointed out on p. 290 of our last volume) no hospital, or disinfecting apparatus or mortuary; and, in the absence of these, were, of course, unable to make satisfactory headway against the epidemic of scarlatina. The corporation could not, however, be brought to regard the epidemic as pointing to the necessity of isolation-accommodation; and, somewhat churlishly, refused an offer of the Local Government Board to send one of their medical inspectors to advise them on the subject. The scarlatina at length died out, and, with it, the consideration of hospital provision; but, no sooner did a case of small-pox break out in the borough last month, than the Town Council took fright, and set up, in great hurry, a temporary hospital for the reception of cases. It is impossible to regard with equanimity such puerility as this. An authority sees no occasion for a hospital in the fact that, in a little over a twelvemonth, nearly a hundred persons die within its district of scarlet fever; but, when small-pox—a disease against which it is possible to guard in another way, namely, by vaccination—manifests itself, the authority becomes suddenly converted; and expends, without thought or deliberation, probably more money than it would have cost to provide beforehand a hospital which would not only at once have stamped out the small-pox, but might, had it been in readiness at the time, have saved the greater part of the misery, suffering, and death occasioned by the late serious epidemic of scarlatina.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

The following important letter on this subject appeared in the *Dublin Freeman* of December 2nd, in answer to some objections which have been raised on the score of invasion of privacy, and the like bugbears. Some opposition is healthy, and the sort of arguments used against the compulsory notification and registration of disease, are just sufficient to show that there is nothing really to be said against it, and that the voluntary arguments in its favour are not tempered by any serious objection.

30, Fitzwilliam Place, Dublin, December 1st.

SIR,—In the consideration of so important a subject as the above, it is desirable that the citizens for whose benefit the proposal to adopt the system in Dublin is now before the Corporation should not be unwittingly prejudiced against it, or misled as to its objects by unsupported assertions or quasi public-spirited vaporings. An endeavour has been made by the writers of certain letters in your journal to alarm the public by conjuring up certain dreadful consequences that would result should such an Act come into force. "Physick chambers of their families", it was said, "would be compulsorily invaded by our local sanitary authorities; large commercial establishments would be left without a customer; hotels without an inmate; professional men without a client", etc. The medical man who would venture to use his professional knowledge for the common good and in accordance with the law, was held up to opprobrium as a "sanitary informer", "a sanitary policeman out of uniform", "the tool of the sanitary authority"; and, in fine, a betrayer of professional honour and of his clients' secrets.

The Edinburgh Local Act has been explained by Mr. Charles Dawson, M.P., in the Corporation and in your columns. Although the method in which the information is given in Edinburgh viz., direct intimation by the medical attendant is not that approved by the Dublin Branch of the British Medical Association, the following extracts from a letter I have just received from Dr. Littlejohn, Medical Officer of Health in Edinburgh, show that in its working that Act is not open to the objections

that have been made against it by one of your correspondents.—"Edinburgh is a city of professional men and of hotels, and is, in truth, the educational centre of Scotland. And the Corporation, composed entirely of laymen, has been forced to adopt the plan of intimation of infectious diseases, which has proved so successful, without a single complaint from any professional man, legal or medical. And, instead of hotel-keepers reclaiming against the clause, they regard it as of the greatest benefit. No case of infectious disease can be treated secretly in hotels, endangering the health of other inmates, who may carry the seeds of disease far and wide, blasting the reputation of the hotel. Due intimation must be made of each case, and the hotel-keeper is put on his guard, and, to protect his interests and the health of his guests, insists on the removal of the case".

At first the members of the medical profession in Edinburgh, as in some instances here also, were opposed to the act; but their opposition, Dr. Littlejohn states, "was made in ignorance; and a year's working of the clause has established its utility, and the perfect satisfaction of the profession and the public with it".

As to the power which a clause in the Edinburgh Act confers on the medical officer of health of verifying by inquiry the diagnosis of the disease, as notified by the medical attendant, Dr. Littlejohn informs me that he has never had any occasion to put it in force. It was introduced into the Bill by the Parliamentary solicitor in London, consequently there is no "invasion" of domestic privacy. He further adds—"To think of trusting to ignorant, distressed, poor householders to give intimation is simply ridiculous. To be of service, the intimation must be speedy. Allow a day or two to elapse, and efforts to stamp out the disease become fruitless".

The idea of the compulsory removal to hospital of cases of infectious diseases occurring "in private families of the better class" is too absurd even to have been seriously suggested. On the other hand, should an infectious disease, such as typhus fever or small-pox, attack a domestic servant or an assistant in a commercial establishment, occupying, as is often the case, a room in which one or more other persons sleep, the power to remove such a source of disease to hospital, and the provision by the sanitary authority, if required, of suitable accommodation for the other occupants of the room during its gratuitous disinfection, would often be the greatest boon to the public. It has never been shown in any of the seventeen towns of England and Scotland that have compulsory notification of infectious diseases that it has proved objectionable or injurious to private families, or that it has endangered the comfort and prosperity of the citizens. Even the few opponents of the measure cannot deny that enormous advantages have resulted from its adoption, in checking the spread of infectious diseases, and, hence, in diminishing mortality.

The notification, however made, is in all cases a confidential communication, and does not become "public property". Instead of the fulfilment of the duty of notifying in the way approved by the Dublin Branch of the British Medical Association being displeasing to the public, or an act which would expose the medical attendant to obloquy or pecuniary loss, I believe it would soon be gratefully recognised as one of the greatest of the many unselfish services ever rendered by the medical profession in the cause of humanity.—I am, sir, your obedient servant,

GEORGE F. DUFFEY, M.D.,
Hon. Secretary, Dublin Branch, British Medical Association.

OUTBREAK OF DIPHTHERIA AT BRATTON CLOVELLY.

THERE has been an outbreak of diphtheria at Bratton Clovelly, in the Okehampton rural district. Dr. Linnington Ash, the medical officer of health for the district, complains that notice of the outbreak had not been given to him before it had been raging three weeks, and that he had heard nothing of it in any shape except through the sanitary inspector of the Tavistock Union a few days since. The disease had now spread at an alarming rate. As this malady was not checked at once, there were about seventeen cases to deal with instead of perhaps one. He finds it difficult to trace the first case, but it appeared probable that it happened in the house of John Slade of Wrexhill Bridge, where two children died. All the children first affected attended Bratton school. From that time, the cases were numerous and widespread. It was found every case was directly or indirectly connected with Bratton school; and, therefore, there can be no doubt that this congregation of children was the means by which the infection was disseminated and conveyed to different families. There is nothing to be complained of in the sanitary arrangements of the schools, and the system of disinfection adopted. The water-supply of the village is from a pump, and is said to be abundant and good. There are a few private wells of doubtful purity. Printed rules and precautions had been circulated in the parish, means recommended for isolating the cases, and the school was closed.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ERITH.—There seems a promise of considerable sanitary improvement in this locality, since plans for the drainage of the whole district have been prepared. At present, building operations are going on very largely in the parish; but, as the greater number of the houses have been built where no drainage exists, they have all to be drained into cesspools. This is a vicious principle, and the sooner it can be abolished the better. A number of wells have been closed, in consequence of the water being unfit for domestic use; and the water of the West Kent Waterworks Company has been ordered to be substituted. The horrible effluvia of the glue, manure, and other offensive manufactories on the river side are much complained of by Mr. Jessett, and must undoubtedly affect injuriously the public health of the district. Last year there were 165 deaths, as against 142 in 1878. Fifty of these deaths (16 of which occurred in the Royal Alfred Institution) were of persons over sixty years of age, and no fewer than 32 of the latter were over seventy years old. The corrected death-rate is given as 12.5 per 1,000, or slightly higher than in 1878. Diseases of the respiratory organs were very fatal; but zymotic diseases (with the exception of scarlatina) do not seem to have been prevalent.

STROUD RURAL DISTRICT.—In reporting upon this district, Mr. Partridge, whilst observing that there has been a gradual improvement in it, and a greater regard paid to sanitary laws, states that the chief difficulty in the way of reform is "private avarice and selfishness on the part of owners of small properties, which prevents many essential works being carried out. A few shillings put in the pocket is considered far before the public good". More attention should, he thinks, "be paid to the water-supply of houses—the wells, closets, and houses being in most places close together. During the past two years, we have had much illness, and eleven deaths from drinking polluted water". The description given by Mr. Partridge of the condition of the several villages, amply bears out this criticism. The total number of deaths registered in the district in 1879 was 529, equal to a rate of about 18.2 per 1,000—an increase on the mortality of the previous three years. There were twenty-eight inquests, and twenty-seven uncertified deaths.

LIVERSEDGE.—The death-rate of this district for 1879 (19.39 per 1,000) was the lowest for the last five years, with one exception, and was 2.1 below the average. Scarlatina was prevalent during the earlier months, and killed 12 persons. Diseases of the respiratory organs were unusually fatal, the bulk of the deaths occurring in the first three and last two months of the year. The year, taken altogether, has, Dr. Sykes thinks, been a singularly healthy one; and he ascribes the low mortality partly to the cleansing effect of the large rainfall, and partly to the low temperature, "which has diminished the usual summer putrefaction, and fermentation of the extensive heaps of filth and rubbish the present middensteads are specially constructed to accommodate". Evidently the Local Board need—as, indeed, Dr. Sykes strongly urges them—to make a radical alteration in the excrement-receptacles of the district.

MEDICAL NEWS.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ANGLESEY, County of—Public Analyst. Applications, with testimonials, not later than January 1st, 1881.

ASYLUM FOR IDIOTS, Earlswood, Redhill.—Assistant Medical Officer. Salary, £150 per annum, with board and washing. Applications, with testimonials, to the Secretary, on or before December 20th.

BATH HOSPITAL, Harrogate—Secretary and Dispenser—Applications not later than December 20th.

DORSET COUNTY ASYLUM—House-Surgeon. Salary, £70 per annum, and £10 additional as Secretary. Applications, with testimonials, to the Chairman, on or before January 12th, 1881.

GRANARD UNION—Medical Officer for Granard Dispensary District. Salary, £100 per annum, with £16 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 1st January, 1881.

*KENSINGTON UNION—Medical Officer to Workhouse and Infirmary. Salary, £100 per annum. Applications, with testimonials, not later than December 23rd.

*KNIGHTON UNION.—Medical Officer for the Presteigne District. Salary, £40 per annum. Applications, with testimonials, not later than December 23rd.

*MACCLESFIELD GENERAL INFIRMARY—Junior House Surgeon. Salary, £70 per annum, with board and residence in the Infirmary. Applications on or before January 1st, 1881.

*NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY—Resident Medical Officer and Secretary. Salary, £100 per annum, with board and lodging. Applications, with testimonials, to the Secretary, on or before December 21st.

*NEWCASTLE-ON-TYNE DISPENSARY—Visiting Medical Assistant. Salary, £120 per annum. Applications, with testimonials, to the Honorary Secretary, on or before December 24th.

NEWPORT (Mon.) ODD FELLOWS MEDICAL AID ASSOCIATION—Assistant Medical Officer. Salary, £130 per annum. Applications, with testimonials, to the Secretary, on or before December 22nd.

NOTTINGHAM DISPENSARY—Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 20th; election January 3rd, 1881.

*PAISLEY INFIRMARY—House-Surgeon. Salary, £80 per annum, with board and apartments. Applications, with testimonials, on or before December 27th.

RADCLIFFE INFIRMARY, Oxford.—Junior Resident Medical Officer. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, before December 18th.

ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon. Applications on or before December 30th.

ROYAL BERKS HOSPITAL, Reading—Assistant to the House-Surgeon, with board and lodging. Applications, with testimonials, on or before December 21st.

*ROYAL HANTS COUNTY HOSPITAL—House-Surgeon and Secretary. Salary, £100 per annum, with board and lodging. Applications, with testimonials, to the Secretary, before January 5th.

*ST. LEONARD'S PARISH, Shoreditch—Resident Assistant Medical Officer—Salary, £100 per annum, with board, furnished apartments, and washing in the Infirmary. Applications, with testimonials, not later than December 21st.

*ST. THOMAS'S HOSPITAL—Surgical Registrar. Salary, £100 per annum. Applications to the Secretary on or before December 21st.

TOBERCURRY UNION—Medical Officer for Workhouse, at a salary of £60 per annum, and £20 yearly as Consulting Medical Officer of Health. Election on January 3rd, 1881.

UNIVERSITY OF EDINBURGH—An additional Examiner of Pathology. Applications and testimonials to the Secretary not later than January 17th, 1881.

*VICTORIA HOSPITAL FOR SICK CHILDREN—Medical and Surgical Registrar. Honorarium of sixty guineas per annum. Applications, with testimonials, on or before January 3rd.

*WALLASEY DISPENSARY—House-Surgeon. Salary, £140 per annum, with furnished residence, coals, and gas. Applications, with testimonials, to the Honorary Secretary, on or before January 7th, 1881.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ALTHAM, James, M.B., appointed House-Surgeon to the Royal Surrey County Hospital, *vice* H. Abercrombie Roome, M.B., resigned.

*CLARK, Andrew, M.D., appointed Consulting Physician to the Chelsea Hospital for Women, *vice* J. Lockhart Clarke, M.D., F.R.S., deceased.

GREENSILL, J. N., M.R.C.S., appointed Assistant House-Surgeon to the Darlington Hospital, *vice* S. Lowes, L.S.A., resigned.

HUMPHREY, Lawrence, M.A., M.B.Cantab appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, *vice* H. G. Orlebar, M.D., resigned.

HUTCHINSON, Jonathan, Esq., appointed Consulting Surgeon to the Chelsea Hospital for Women, *vice* T. B. Curling, F.R.S., retired.

KIDD, Percy, M.B., appointed Casualty Physician to St. Bartholomew's Hospital, *vice* V. D. Harris, M.D., resigned.

TAYLOR, Thomas Percy, M.R.C.S., elected House-Surgeon to the Essex and Colchester Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

POCOCK.—On December 14th, at The Limes, St. Mark's Road, Notting Hill, the wife of F. Ernest Pocock, M.D., of a daughter.

MARRIAGE.

COX—CROWLE.—On December 7th, 1880, at St. Mary Abbott's Church, Kensington, by the Vicar, Frederick Augustus Cox, M.R.C.S.Eng., of 3, Dean Street, Park Lane, W., to Elizabeth Patience (Bessie), only daughter of the late T. R. Crowle, of Kensington.—No cards.

DEATH.

MACLEAN.—On the 3rd of December, at Cairo, Egypt, Thomas Edwin Maclean, M.B., B.S. London University, M.R.C.S.England, aged 29.

DR. FRANCIS OGSTON, sen., has resigned the position of Officer of Health for the town of Aberdeen.

PUBLIC HEALTH.—During last week, 5,780 births and 3,383 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. The annual death-rate was 21 in Edinburgh, 22 in Glasgow, and 27 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Sheffield, 16; Leeds, 17; Plymouth, 17; Portsmouth, 18; Norwich, 18; Sunderland, 18; Birmingham, 19; Bristol, 19; Bradford, 19; Oldham, 19; Nottingham, 20; Leicester, 20; London, 20; Newcastle-upon-Tyne, 20; Brighton, 20; Wolverhampton, 21; Hull, 22; Manchester, 23; Liverpool, 24; and the highest rate, 27, in Salford. The annual death-rate from the seven principal zymotic diseases averaged 2.6 per 1,000 in the twenty towns, and ranged from 0.0 in Norwich and Plymouth, to 4.5 and 6.2 in Sunderland and Salford. Scarlet fever showed the largest proportional fatality in Sunderland, Bristol, Salford, and Liverpool; measles in Salford; and whooping-cough in Hull and Liverpool. In London, 1,398 deaths were registered, no fewer than 418 below the average, and gave an annual death-rate of 19.9. The 1,398 deaths included 12 from small-pox, 51 from measles, 61 from scarlet fever, 8 from diphtheria, 29 from whooping-cough, 9 from different forms of fever, and 16 from diarrhœa—being altogether 186 zymotic deaths, which were 76 below the average, and were equal to an annual rate of 2.6 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 367 and 334 in the two preceding weeks, further declined to 295 last week, and were no fewer than 202 below the average; 169 resulted from bronchitis, and 78 from pneumonia. Different forms of violence caused 58 deaths; 50 were the result of negligence or accident, including 18 from fractures and contusions, 6 from burns and scalds, 4 from drowning, and 13 of infants under one year of age from suffocation. Six cases of suicide were registered. At Greenwich, the mean temperature of the air was 47.7°, and 5.0° above the average. The general direction of the wind was W.S.W., and the horizontal movement of the air averaged 14.1 miles per hour, which was 1.4 above the average. No rain was measured during the week. The duration of registered bright sunshine in the week was equal to 9 per cent. of its possible duration. The recorded amount of ozone showed an excess on Sunday and Monday, while scarcely any was recorded during the remainder of the week.

THE SANITARY ASSURANCE ASSOCIATION.—A meeting of the members and subscribers of the Sanitary Assurance Association was held, December 14th, at the Langham Hotel, to receive the Report of the Provisional Committee appointed on November 1st. Sir Joseph Fayrer presided.—Mr. MARK H. JUDGE, read the Report of the Provisional Committee, which recommended the incorporation of the Association, and included a draft Memorandum of Association. The report adhered to the original intention of the Association, viz., that it desired to promote the establishment and maintenance of sanitary arrangements among all classes of the community; to grant certificates as to the sanitary condition of houses, etc., approved by its officers; and, while providing the best advice and supervision, to leave the actual carrying out of the necessary improvements to such persons as the subscribers might themselves select. The first resolution was proposed by Sir Joseph Fayrer, seconded by Professor Corfield, and carried unanimously as follows:—"That the Report of the Provisional Committee be received and adopted, and that the first Executive Council be now elected, with power to have the Association incorporated in accordance with the recommendation of the Provisional Committee, with such alterations and additions as they may consider necessary." The second resolution, proposed by Mr. G. J. Romanes, and seconded by Dr. G. V. Poore, was also carried:—"That Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S.; George Aitchison, F.R.I.B.A.; W. H. Corfield, M.A., M.D.; F. De Chaumont, M.D., F.R.S.; Mark H. Judge; T. Hayter Lewis, F.S.A.; H. Rutherfurd; and T. Roger Smith, F.R.I.B.A., be the first Executive Council of the Association." Professor Tyndall and Mr. H. Rutherfurd proposed a vote of thanks to Sir Joseph Fayrer for presiding, with the passing of which the meeting terminated.

THE PARKES MUSEUM OF HYGIENE.—On Saturday, December 11th, a course of lectures to Members of Building Societies was commenced at this museum. The subject of the lectures is, "Dwelling Houses;" that on Saturday, when the lecturer was Mr. Edward C. Robins, F.S.A., was specially devoted to Situation and Construction. Between sixty and seventy members of Building Societies were present. After a few words of introduction from the Curator, Mr. Mark H. Judge, Mr. Robins spoke for about an hour. As to sites, he admired those where the fronts and backs of the houses could face east and west. Places where rubbish had been shot should always be avoided; and with impervious soils, a bed of concrete should always be put over the whole area to be covered by the building and areas. Damp-proof courses should never be omitted in any walls, and though the Building Act allowed nine-inch external walls, he thought that for dwelling-houses all these walls should be fourteen inches thick. Concrete walls were approved, and the details of construction were fully explained,—the lecturer remarking that in proportion as they understood the true principles of architecture, so would their appreciation of the work of the architect be increased. It was as necessary to attend to repairs as to see that buildings were properly erected in the first place. Terra cotta, and artificial stone, both for rough and finished work, were highly spoken of; and at the close of the lecture Mr. Robins explained many of the articles exhibited in the museum.—Mr. Rutherford, Director of a Building Society, proposed a vote of thanks to Mr. Robins and the Executive Committee, and expressed a hope that before long they would be sufficiently well supported to enable the committee to arrange for the delivery of such lectures with better accommodation, so that a larger number might benefit from them. Mr. H. Rutt seconded, and the resolution was carried with acclamation.

LIEUTENANT EDWARD E. BRADFORD, R.N., specially promoted in the *Gazette* of December 10th for "gallant conduct in recovering the bodies of Lieutenant Bower and five seamen of H.M. schooner *Sandfly*, murdered by the natives of the Solomon Islands", is the eldest son of Mr. Edward Pradford of Harrow, F.R.C.S., Deputy-Inspector-General of Hospitals (Army), Queen's Honorary Surgeon, and Member of the General Medical Council.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

Charing Cross.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

Guy's.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

King's College.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

London.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W., 9; Dental, Tu., 9.

Middlesex.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

St. Bartholomew's.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

St. George's.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

St. Mary's.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

St. Thomas's.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

University College.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

Westminster.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. Pierce Gould, "A Case of long-standing Stone in the Bladder, without any kidney disease"; Dr. T. Lauder Brunton, "A Paper on the Action of certain remedies in the Treatment of Chronic Bronchitis and Phthisis".

TUESDAY.—Pathological Society of London, 8.30 P.M. Specimens: The President, 1. Rheumatism and Gout in the same subject; 2. Diseased Kidneys from a Pig. The President, for Mr. Robinson, Erythema—Lupus; Molluscum Fibrosum (living specimens). Mr. Lediard, Epulis containing Cartilage. Dr. Crombie, Specimens of Ainhum. The Discussion on Rickets will be continued by Mr. Lucas, Dr. Baxter, Dr. Barlow (on so-called Fœtal Rickets), Mr. Shattock (Osseous Lesions in the Fœtus), Dr. Longhurst, Mr. Spencer Watson, and Dr. Goodhart.

FRIDAY.—Quekett Microscopical Club. No meeting.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

We cannot undertake to return Manuscripts not used.

Mr. Tennyson and the Medical Profession.

Sir,—I should be very sorry to conclude from the quotations given by a correspondent in your last number that Mr. Tennyson holds a poor opinion of the whole medical profession. He may object to certain types of men to be found among physicians and surgeons (just as he objects to certain types of men to be found in other bodies), as, for example, those who lose sight of human sympathy in their otherwise admirable pursuit of science.

He may also object to those physiologists who pursue their researches by means of vivisection, without in the least expressing an opinion concerning the vast body of medical men who do not follow science in that particular way.

With regard to the quotations from *Maud* and from the *Northern Farmer*, they do not seem to express Tennyson's own opinion. The first one is the utterance of a man melancholy mad, who sees dripping blood in the red flowering heath; and who is giving an extreme picture of the vices of his age and time. The suggestion of the possible poisoning of the sick is placed between a statement, that "chalk and alum and plaster are sold to the poor for bread, and the spirit of murder works in the very means of life," and a reference to a "mammonite" mother, who "kills her babe for a burial fee." We do not, however, conclude that Tennyson considers murder to be a principal instinct of maternity.

The opinion of the Northern Farmer of his doctor is not more likely to be Tennyson's own than his opinion of his parson, or even of "godamoighty". "Do godamoighty knaw what an' doing a tuakin o' mea?" he asks, but there is no reason to suppose that the Poet Laureate himself considered that "godamoighty" was making a very grave mistake at the moment.—Yours, etc.,

Pendlebury, Dec. 13th, 1880. Stanford Harris.

Mr. Richard Jeffreys.—A journal of the sort is published. Write to Messrs. Burgoyne, Burbidges, & Co., Wholesale Chemists, London, E.C.

Suggestions regarding General Practice.

Sir,—I beg to submit the following propositions for the consideration of your correspondent "Suggester" and others, who may be anxious for the progress of medicine.

1. Certain changes might be made in the methods of conducting general practice, which would be advantageous both to the profession and the public.

2. These changes should be such as would diminish the routine and mechanical work of the medical man, and so secure to him time and energy for the study of the science and literature of his profession.

3. The following, among other changes, seem to be required: the discontinuance of the practice of dispensing; an increase of professional fees; a great diminution in the number of professional visits.

4. The proper persons to bring about these changes are the general body of medical men—not the medical and surgical corporations.

5. There is a sufficient amount of intelligence and breadth of mind within the profession to effect these and other necessary changes.

6. The intelligence and breadth of mind within the profession are obscured by the ignorance and narrowness of mind, which are also abundant within it.

7. The intelligence and breadth of mind in the profession should not allow the ignorance and narrowness of mind to drag the whole body down to the stupid level; but should make very great efforts to raise the whole body to the intelligent level.

8. The Metropolitan Counties Branch of the British Medical Association should take the initiative, and, by a competent discussion of the needed reforms, create a public opinion on the subjects sufficiently powerful to carry them into effect.

9. Failing the Metropolitan Counties Branch, one or other of the large provincial towns should thoroughly discuss the questions, and so give an effective lead to all the other Branches of the Association.

I refrain from arguing these propositions at length, not wishing to ask for an undue amount of your space; but I may say that, when these topics were brought before the North London District by me a few weeks ago, they were considered by the meeting to be eminently ripe for discussion.—I am, sir, yours faithfully,

Grosvenor Road, N., December 1880. G. W. Potter, M.D.Edin.

Senex.—We should not have space for the answer, which may be obtained by reading the various text-books.

International Antivaccinationists.

A few hair-brained fanatics, who make so much noise here as antivaccinationists, dissatisfied with the crushing repulse with which they have been met in this country, are carrying their campaign abroad. It is not probable, however, that the ministers in France will be deceived as to the character of this senseless crusade of a few irrational beings, or that an international movement will have relatively any greater weight than the national movement. There will be found in every country a few irrational persons who indulge in crusades against reason, and by widening the scope of territory it is possible to add to their number. Frenchman, however, must remember that Mr. Peter Taylor, M.P., and his half-dozen coadjutors, represent nobody or nothing in this country but their own crotchets.

Dr. Hotham G. Orlebar. Duly received.

Prevention of Cleft Palate by Lime during Pregnancy.

Sir,—The paper for which "E. M. S." asks, relative to the use of lime during pregnancy, to prevent congenital cleft palate, is by Thomas P. Tuckey, M.B., and is to be found in the *Practitioner*, December, 1878, page 408.—I am, etc.,

Richard Neale, M.D.

60, Boundary Road, South Hampstead, N.W., Dec. 15th, 1880.

P.S.—Ringer's experiments with regard to the influence of jaborandi as a galactogogue conclusively prove its vast value (*Lancet*, vol. i, 1875, p. 158); also Dr. Sumrall (*Medical Times and Gazette*, January, 1880, p. 24) reports a case proving the same.

Baron Liebig's Leguminous Cocoa.

We have already spoken in approval of this excellent combination of cocoa and leguminose; and we are glad to find that its dietetic advantages are confirmed by further professional experience. From documents submitted to our notice, we find that Dr. C. P. Kempe, of Ladbroke Grove, has used it successfully in a case of recovery from pneumonia, where no other nutriment could be retained on the stomach, from its irritable condition. The patient gained strength rapidly on the cocoa, which was taken thrice a day. Other medical men testify to its utility as an article of diet in tabes mesenterica and the wasting diseases of children, in diabetes, dyspepsia, and biliousness, in consequence of the peculiarity of the way in which it is prepared.

Calculator.—The surgeon in question publishes, and has made it a rule throughout his practice to publish, all his cases in continuous series; the observation appears to us, therefore, to be out of place.

Paraffin Splints.

SIR,—When Mr. John Glaister says that Dr. Macewen, of Glasgow, first drew the attention of the profession to paraffin splints in August 1877, he clearly has omitted to notice that their introduction is of a much earlier date. If he will turn to the *Medical Times and Gazette* for November 3rd, 1866, he will find a full description of the use of paraffin for this purpose, and full details of the process, by yours truly,

LAWSON TAIT.

Birmingham, December 4th, 1880.

MR. ENOCH ROBINSON writes, with reference to a reply to "Puzzled," in last week's number, virtually to acknowledge that, "in the attempt to make the memorial as brief as possible," he attributed to Mr. Ernest Hart, as the author of the *Truth about Vaccination*, opinions which were obviously those of Dr. Dixon of Bermondsey. We do not profess to understand, how for the sake of conciseness it is necessary to ascribe opinions to one writer, that evidently belong to another; and would suggest to Mr. Robinson, whether on future occasions, it might not be better to sacrifice brevity rather than accuracy.

Gloves for Cold and Wet Weather.

ŒCONOMICUS writes:—It is evident that in our variable climate no kind of gloves will ever do for long. For fine days, and walking, a pair of dog-skin, calf, or cloth are best; for driving, a thick pair of leather ones specially covered with extra pieces for the friction of the reins; for very cold days, thick worsted or whipcord ones (procured at Bury's Broad Street, Birmingham); and for best or visiting purposes, the best kid are well adapted. A pair of each sort I keep in stock in a glove box in my hall, next hat stand, and each morning select the pair most adapted for the day's work; often I change three or four times a day. The same may be said of clothes. I have five or six suits, and four or five great coats. A cold and wet day, and no very important or aristocratic patients to see, an old suit and great coat are best adapted. A fine day, and important cases to see, it is well to dress better, lighter clothes and better ones must be worn; whilst for night-work, and low midwifery, something that can never be made worse than it is. I have in the same way hats adapted to the most continuous rains, or for the brightest day.

J. S. H. (Sittingbourne)—Dr. Sayre has published a full account of his method of treating spinal deformities, and the cases for which it is most applicable, in a volume on the subject issued by Messrs. Smith, Elder, & Co., 15, Waterloo Place, S.W.

DR. HADDON is referred to proceedings of the Committee of Council of October 13th, reported in the JOURNAL, page 679, where he will find that a subcommittee was appointed, including all the gentlemen named, to consider how best the object of obtaining collective action could be obtained.

School-Ships for Boys of the Upper and Middle Classes.

SIR,—With reference to the above, I made a similar suggestion in 1869 (*vide Lancet*, April 26th). Perhaps the committee of the training ship *Worcester*, for which they have not sufficient use and funds, would be disposed to combine the two, making it serviceable for both purposes.—Yours faithfully,

W. H. TAYLER, M.D.

Tudor House, Anerley, S.E., December 8th, 1880.

DR. PAUL DE LA RANCÉLE asks through Dr. Bankart, of Exeter, for indication of the best sources in which to study the vital and meteorological statistics of Ireland and Scotland. He writes: "I wish to obtain documents on these different points, of a really scientific character, with the object of making a climatological study of Ireland and a demographic study of Scotland and Ireland. Can statistics of the great hospitals of Edinburgh, Glasgow, and Dublin, be obtained specially relating to diseases causing death?"

ERRATA.—In the JOURNAL of last week, p. 929, column i, line 4 from bottom, *for* "Ventnor", *read* "Ryde". In page 956, column i, between lines 4 and 5 from bottom, *insert* "Ireland (North), John Moore, M.D., Belfast".

Easy Test for Arsenic in Fabrics.

THE following plan is recommended by Dr. Henry Barnes, in the *Practitioner*, as an easy plan to detect arsenic in paper-hangings or any other suspected fabric. Immerse the suspected paper in strong ammonia on a white plate or saucer; if the ammonia becomes blue, the presence of a salt of copper is proved; then drop a crystal of nitrate of silver into the blue liquid, and if any arsenic be present, the crystal will become coated with yellow arseniate of silver, which will disappear on stirring.

Management of the Third Stage of Labour.

SIR,—I desire to elicit the experience of some of my brethren with regard to their management of the above stage of labour. I was taught that of "expression", and always try it, but only once succeeded in seeing "the uterine surface of the placenta expelled first". Those with whom I have conversed know what is meant by "expression", but have no practical knowledge of it. Dr. Playfair tells us, in very simple language, how to perform it. Nothing could apparently be easier; but why any difficulty in effecting it? "*When the uterus is felt to harden*"—in italics—then "strong and firm pressure should be made", etc.; but I have never felt this hardening. I give a drachm of ergot after delivery, and have waited half-an-hour for it to take effect, but have neither felt the womb to contract, nor, on questioning the patient, has she experienced any pain. I must add that the ergot is from the Apothecaries' Hall, and, therefore, trustworthy. My experience is, that if there be pains after delivery (or, in other words, uterine contractions—the placenta is expelled easily enough; but if not, then "expression", or ergot, or both of them, fail to produce them, and the introduction of the hand into the uterine cavity becomes a necessity. Traction on the cord seems to me as if it would result in my obtaining possession of the cord, but not of the after-birth.—Yours faithfully,

PLACENTA.

SURGEONS should decline to practise in the town, unless he have the full permission of the representatives of the practitioner for whom he is now acting as *locum tenens*. A *locum tenens* often binds himself not to practise subsequently within a definite radius of the practitioner whom he assists; and even in the absence of such stipulation "Surgeon" will do well to observe its spirit. Were it known that he would return to the town, the practitioners' representatives could not dispose of the practice to advantage only as in "Surgeon's" complete absence; and he is in honour bound to do nothing which can militate against the interests of his employer's friends, especially when that employer is suffering bodily illness. If "Surgeon" has, in a few weeks, rendered himself so appreciated by the patients that they desire him to remain with them, he may reasonably suppose that he could do equally well elsewhere. The wide world is open to him for practice; and it is desirable that he should not remain in, nor subsequently return to, the place where he now is, when once his present engagement shall have ceased.

Parish or District Nurse.

SIR,—The cost of maintaining a district nurse is usually about £75 to £85 *per annum*. The cost varies with the locality. Experience seems to prove that it is best to put the district nurse on board wages. If her rooms are furnished, then 20s. a-week is usually allowed for board and lodging. Were I to give the rules, it would occupy too much space. Mr. Lee Jardine had, therefore, best write to the Honorary Secretary, the Cottage Hospital, Brockley, Northamptonshire, who will send him what he requires on this head.—I am, etc.,

HENRY C. BURDETT.

Seamen's Hospital, Greenwich, S.E.

DR. A. P.—Shall have early publication.

Hospital Drainage and Ventilation.

SIR,—I shall be glad to show "T." the system we have adopted at the Home Hospital, Fitzroy House, Fitzroy Square; and to give him particulars of other systems if he will write to me, and send his name and address.—I am, etc.,

HENRY C. BURDETT.

Seamen's Hospital, Greenwich, S.E., December 1st, 1880.

COMMUNICATIONS, LETTERS, etc., have been received from:—

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BOOKS, ETC., RECEIVED.

Peruvian Bark. By C. R. Markham, C.B., F.R.S. London: J. Murray, Albemarle Street. 1880.

Handbook of Chemical Physiology and Pathology. By F. C. Vaughan, M.D. Third Edition. Ann Arbor Printing and Publishing Company. 1880.

A Practical Treatise on the Diseases of Women. By T. G. Thomas, M.D. London: H. Kimpton. 1880.

Report of the International Congress on the Education of the Deaf. London: W. H. Allen. 1880.

Food for the Invalid. By J. Milner Fothergill, M.D. London: Macmillan and Co. 1880.

Lectures on Surgical Disorders of the Urinary Organs. By R. Harrison, F.R.C.S. London: J. and A. Churchill. 1880.

Transactions of the Clinical Society of London. Volume 30th. London: Longmans, Green, and Co. 1880.

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ABSTRACTS OF LECTURES

ON

FURTHER INVESTIGATIONS ON ANTHRAX AND ALLIED DISEASES IN MAN AND ANIMALS.

Delivered at the University of London, December 1880.

By W. S. GREENFIELD, M.D., F.R.C.P.,
Professor Superintendent of the Brown Institution.

Lecture I.

Dr. Greenfield again took up the subject of anthrax and anthracoid diseases, because investigations by himself and others during the past year have thrown new light upon many of the problems relating to these diseases, and have led him to reverse some of the views previously entertained. Moreover, they have revealed facts which he believes to be novel and important.

Anthrax was the disease in which a bacterial virus was first discovered, and this has been the means of stimulating other investigations in this direction; and it can now be demonstrated that analogous organisms are met with in several other diseases, such as relapsing fever, fowl-cholera, and malarial fevers.

Therefore, a study of these organisms—especially with regard to modifying or destroying their virulence—is of the greatest practical value in the investigation of this and other like maladies. Dr. Greenfield's experiments have shown this to be the case with the *Bacillus anthracis*, and others have come to similar conclusions respecting other diseases. He has proved beyond doubt that the disease affecting human beings known as woolsorters' disease is a form of anthrax, and he ventures to assert that it is prevalent where as yet its existence is unsuspected. The subject is, therefore, no longer one of purely scientific interest, but it concerns all practical physicians to be acquainted, both with the nature and symptoms of the disease, and with the means by which it may be prevented.

In his lectures last year, he said that Dr. Burdon Sanderson and Mr. Duguid had already found that, when anthrax poison had been passed through guinea-pigs, it did not prove fatal to bovine animals. He, therefore, proposed to further investigate the value of this result, and endeavoured to find out whether any protective influence was induced. For this purpose, he inoculated some bovine animals, either with the blood of a guinea-pig which had died of the disease, or with the early cultivations of the *Bacillus anthracis*. The results he obtained will best be seen by the following experiments, which are typical of the results obtained, and were confirmed by other similar experiments.

First, inoculation was made by subcutaneously injecting into a cow, A, a small quantity of the second generation of *Bacillus anthracis* derived from a guinea-pig. Twenty-four hours after the inoculation, a slight swelling appeared at the seat of inoculation. In forty-eight hours, the temperature (*per rectum*) rose to 104° Fahr.; the animal was drowsy, stupid, and partially off its feed. In the evening, the temperature fell to 102.4° Fahr., but the following morning it was 106.4° Fahr., and varied during the three succeeding days between 105° and 107° Fahr. The animal appeared during this time seriously ill. On the sixth day, the œdema subsided; on the eighth, the temperature fell to 104° Fahr.; and on the ninth, to 101°; after which, the animal speedily recovered.

The second inoculation was performed six weeks after the animal's recovery, by the subcutaneous injection of the spleen of a guinea-pig, rubbed down with salt solution. The following day, the temperature rose nearly 1.4° Fahr., and the animal appeared slightly unwell, but there was no local swelling, and, on the third day, it appeared perfectly well.

In order to prove that this resistance was not accidental, Dr. Greenfield inoculated this animal a week later (the third time), with a negative result. But, as a check to the correctness of this result, he inoculated at the same time a fresh cow, B, with a portion of the same material. In this case, no local œdema followed, nor did the temperature rise much, and the animal appeared to be unaffected; but, on the fourth morning, it was found dead, and the *post mortem* examination revealed all the characteristic lesions of anthrax (splenic fever).

It was also found that these results could not be obtained with any degree of certainty with the sixth or seventh generations of the bacillus, or, in other words, although the rods and spores of the bacillus were present in the fluid, they appeared to be innocuous.

In the blood of a man who died of sudden disease, Dr. Greenfield found a few very long ($\frac{1}{100}$ to $\frac{1}{12}$ of an inch long, and about $\frac{1}{20000}$ in diameter) motionless curved rods. The curvatures apparently depended upon the movement of the fluid in which they floated. By means of reagents, or with special illumination, they could be seen to be made up of shorter segments, about the usual length of anthrax-rods commonly met with in the blood of other animals. No spores were detected, either in the rods, or free in the fluid. When rodents were inoculated with this, it gave rise to symptoms and lesions exactly corresponding to those produced by inoculation with bovine splenic fever. A heifer, which had been unsuccessfully inoculated with very late cultivations (eighth and thirteenth generations), was made very ill, with local swelling and high temperature for several days, by injecting this blood under the skin; whereas another heifer, which had been previously successfully inoculated with a third generation of cultivated bacillus, practically presented no symptoms whatever, the temperature only rising about 1° Fahr. for a day or two; this again very conclusively demonstrating the protection afforded by previous inoculations. The same two heifers were again inoculated a month afterwards, one with the blood from the spleen, the other with the pericardial serum taken from a cow that had died from splenic fever, but with negative results, although inoculation of guinea-pigs with this fluid caused rapid death from anthrax.

Dr. Greenfield not only demonstrates that primary inoculation protects the system against secondary inoculations, but also against natural infection; for, he says, he sent three animals so protected to Bradford, where they were placed on a sewage-meadow, on which cases of splenic fever occurred just before and during the time the animals were there and which was irrigated with water in which wool infected with anthrax had been washed; but they remained there perfectly healthy for four or five months, and were removed in good condition. When the owner of the meadow noticed that these animals remained healthy, he ventured to put some of his own stock on again; but, no sooner had he done so, than one of them died from splenic fever.

Whilst Dr. Greenfield was conducting his investigation, others, viz., MM. Pasteur and Toussaint, were also working with the same object; and the fact that each was working quite independently, renders their conclusions the more important. M. Toussaint first obtained his inoculating material by defibrinating the blood of anthrax animals immediately after death (by whipping it), and then filtering it through several layers (ten or twelve) of paper; but he found that this method was accompanied by danger to the life of the animal, because the bacilli were found to pass through the filter, and was, therefore, of no practical value. He then had recourse to heat, and found that, by submitting defibrinated blood to a temperature of 55° Cent. (131° Fahr.), he was enabled to inoculate animals without producing any ill-effects, although, to ensure complete protection, several inoculations with this heated defibrinated anthrax blood were necessary. In addition to this, he now considers that the addition of ½ per cent. of carbolic acid previously to heating it is beneficial, this, according to Professor Lister, being insufficient to produce any antiseptic effect, and merely serving to coagulate the albumen.

M. Pasteur has, quite recently, published experiments similar to those made by Dr. Greenfield, and with very similar results; but he does not seem to suggest any method of modifying the intensity of the poison.

M. Chauveau has observed that splenic fever is very rarely met with in Algerian sheep, although it is far from being uncommon in the cattle—apparently showing that Algerian sheep have a natural power to resist the action of the virus. He also says that, when ewes are inoculated during the last months of gestation, the lambs are entirely insusceptible of anthrax. Dr. Greenfield has had an opportunity of confirming the observations of Brauell and others that the blood and tissues of the fœtus of an animal dying from anthrax do not contain bacilli, while those of the mother swarm with them. When these two facts are taken into consideration, it would appear that the immunity of the parent may be transmitted to the offspring *in utero* without communicating the contagium (*Bacillus anthracis*).

M. Chauveau has also endeavoured to find out what becomes of the bacilli or "bacteridia" after they have gained access into the circulation. For this purpose, he injected from 15 to 70 c.c. of anthrax blood into the jugular veins of animals, so that it might diffuse itself with the general circulating fluid. Half an hour after inoculation, he abstracted a little blood from the ear, and found that the bacteridia were fewer in number than they should have been, had they regularly mingled with the circulatory fluid. From two to six hours after, he could find none. In another animal, which died, sixteen hours after inoculation, of typical splenic fever, the bacilli were found in the spleen

and in the blood of all vessels. In another animal, he found them in the capillaries of the lung and spleen, but not in such numbers as are usually found in animals dying from anthrax. In four other cases, the animals died forty-six hours after inoculation, with meningeal hæmorrhage, caused by the local proliferation of the bacilli in the vessels and perivascular sheaths and meshes of the pia mater. In two of these cases, a few rods were found, after prolonged search, in the liver and spleen; and M. Chauveau found that inoculation with blood from the pia mater produced typical anthrax, whilst that from other parts of the body did not.

M. Chauveau thinks (and Dr. Greenfield agrees with him) that, at present, it is impossible to give a satisfactory explanation of the cause of the immunity produced by inoculation. He, however, objects to M. Pasteur's view of exhaustion of the necessary pabulum; for he found that the danger of producing splenic fever in protected animals varied in proportion to the quantity introduced. Therefore, he thinks, there must be something in the blood which has the power of resisting the action of the bacilli; and this is more easily overcome when a large quantity is introduced than when a small quantity. Dr. Greenfield, in summing up this subject, says that hitherto nothing has been adduced to invalidate the conclusion of M. Bouley that the material which M. Toussaint employs for inoculation is only a fluid containing the bacilli in small quantity, and with its virulence diminished to a variable and uncertain degree by his method of preparation; so that, in fact, all animals actually suffer from, and some succumb to, anthrax itself, the mortality being 20 per cent in sheep thus inoculated.

With regard to the pathology of anthrax, Dr. Greenfield observes that it is very striking that, both in his and others' experiments, increased temperature and marked local swelling appear to be constant in all cases of inoculation which end in recovery, and are of protective value; whereas the absence of these is attended with fatal results—at least, so far as he is able to judge. He does not consider the local swelling to be a simple inflammation, but rather a true specific lesion, just as the vesicle in vaccinia and the chancre of syphilis. It may be looked upon as of favourable omen, showing that the virus is expending its action locally, and not becoming absorbed into the system. He has, however, failed to find any bacilli in this exudation; and he attributes this to their presence in such small quantities as to escape observation. Bacilii may be very scanty in tne exudation of similar infiltrations of rodents; but inoculation with the latter is very deadly, and produces all the lesions of anthrax.

In concluding his lecture, Dr. Greenfield made a few remarks respecting what he had said in his previous lectures concerning the disease known as "quarter ill" or "black leg"; and gave the result of some experiments conducted by MM. Arloing, Cornevin, and Thomas, showing that, by injecting the fluid obtained from mild cases of the disease *directly into the veins* of healthy animals—taking special care not to allow any of the fluid to gain access to the connective tissue—it conferred an immunity against future attacks of either the inoculated disease. The active organism differs from *Bacillus anthracis*, both in its microscopical appearance and in its action when introduced into the subcutaneous tissue, and the results of their experiments fully confirmed those which Dr. Greenfield had made last year in the same disease.

Lecture II.

Dr. Greenfield commenced his second lecture by saying that his experiments with a view of modifying the intensity of the virus, were begun before he arrived at any protective results by means of inoculation, and long before the publication of the experiments of Pasteur on fowl-cholera. He had, in common with many others, entertained the belief that the anthrax bacillus was virulent so long as it maintained its morphological characters; or, in other words, so long as the organism was living, it was capable of producing anthrax when inoculated in a living animal. He has now, however, found that, although the bacilli maintain their physical characters and mode of growth when cultivated in aqueous humour, they diminish in virulence, and cannot be relied upon to produce the disease after a certain period. His experiments upon various kinds of rodents show that the first, second, and third cultivations produce anthrax with scarcely any diminution in intensity, even when only half a cubic *millimètre* of the fluid is injected. The fourth and fifth generations, although fatal sooner or later, are slower and less certain in their effects if equal quantities are used. From the sixth to the eighth, they are less certain, even with larger quantities; and in some cases, they prove innocuous. After the eighth generation, the toxic effects are but little marked unless large quantities are used. It will be seen that these results are very similar to those he obtained on bovine animals, the differences being only those which might be expected from their greater dower of resistance. No symptoms were produced in bovine animals with any cultivations later than the fourth generation; whilst in every case, marked symptoms were produced (in animals which had not been previously inoculated) when the first, second, and third cultivations were employed. Moreover, the effects of inoculation with actively growing cultivations of the generations later than the seventh were perfectly *nil*, and did not confer any appreciable degree of protection upon the animal so inoculated.

In some of the inoculations of rodents, very peculiar effects were observed, viz., death was produced slowly, apparently by a sort of chronic anthrax-poisoning, and the bacilli were only detected in certain parts, especially in the lungs and pleural serum only. In one case (a mouse) inoculated with the fourteenth cultivation, it lived three weeks; and after death, bacilli were found in the pleural serum only. This, he observed, is of importance in reference to woolsorters' disease, but must be reserved for further investigation.

He cultivated the bacillus for several (twenty-five) successive generations in aqueous humour, and the only difference he noticed was that the later generations, as they became acclimatised to the fluid in which they were cultivated, appeared to grow more freely and voluminously than the earlier generations.

Speaking of the methods which he adopted to guard against error in the cultivations, he says that it has been suggested that the cultivations might have become contaminated with other organisms. This is always the case in some instances, owing to the difficulty met with in avoiding the introduction of other bacteria, especially micrococci. These micrococci are, however, easily discovered (by the practised naked eye) owing to the turbidity they produce, and with the microscope, and they also prevent the growth of the bacillus. The presence of micrococci does not absolutely prevent all growth of anthrax bacillus, for the two grow together up to a certain stage; and he is not sure that the two could not be cultivated simultaneously, provided there was a sufficient supply of oxygen. Again, it has been suggested that, owing to the difficulty of preventing the ingress of allied organisms (so numerously present in the air) it is possible that the later cultivations in reality contained a different bacterium, and not those of anthrax bacillus at all. This objection he has combated by preserving slides showing the organisms from successive cultivations. Drawings have been made of them, as well as some photographs by Dr. Maddox. These show very conclusively that there is no diversity of their physical characters. Moreover, it would be strange, if the *Bacillus anthracis* was always replaced, at a particular stage, by an organism whose morphological characters and mode of growth were identical with itself; the more so, when the spores of other bacteria and fungi continually present in the air do not succeed in finding admission.

Dr. Greenfield then referred to some recent experiments by Dr. Hans Buchner, which were brought under the notice of the profession in England by Professor Lister, at the Cambridge meeting of the British Medical Association. These experiments involve two main points—viz., the modification produced in the *Bacillus anthracis* by the method of successive cultivations; and the origination of the bacillus, and with it the disease, by artificial cultivation from the hay-bacillus. Although Dr. Buchner's method of modifying the bacillus—viz., by cultivating it in a solution of meal and peptones—differs from Dr. Greenfield's (viz., in aqueous humour), still his results are closely analogous. For, although he could produce the disease up to the thirty-sixth generation, he had to use an excessively large quantity of the material. The origin of his experiments seems to have been to determine whether or no the bacillus was actually the virus. It is very difficult to disprove, by actual experiment, that the virus is something produced by the bacillus; because it is very difficult to separate the bacilli by filtration or otherwise. If, however, in successive generations, we cannot retain the morbific properties unchanged, we can, by computation, arrive at results which are conclusive proof that the disease is directly dependent on the growth of the bacillus. Buchner has estimated that the quantity of such a morbid poison would not be more than the tenth-quadrillionth part of a *milligramme* at the seventh cultivation, even if the original material had been entirely composed of it.

The resemblance between the bacillus of hay infusion and that of anthrax was long ago pointed out by Cohn, and several experiments have been made to obtain the latter from the former. Dr. Greenfield, in his lectures last year, observed that several unsuccessful attempts had been made to cultivate the hay bacillus into the anthrax bacillus; but he did not despair, and, if success were possible, a step would have been taken in the solution of the mystery of contagia far exceeding any yet gained; and he suggested that *Bacillus anthracis* might be only a bacillus which had acquired specific properties. Buchner's experiments appear to have attained these results; the details of which have been so thoroughly analysed by Professor Lister, and published in the British Medical Journal of September 4th, 1880, that we need

not repeat them here. Dr. Buchner, as well as Dr. Greenfield, failed to cultivate *Bacillus anthracis* in hay infusion, as did the latter also in gelatine-water and several other fluids.

So far, then, Dr. Greenfield thinks he has succeeded in demonstrating that the virus of splenic fever (the *Bacillus anthracis*) is capable of modification in its physiological and pathogenetic properties by means of cultivation in certain indifferent fluids; and that, generation by generation, its power of producing disease becomes enfeebled, so that it acts less rapidly and with less certainty; that its morphological characters remain unaltered, although its power of growth is in no wise impaired. On the other hand, according to Dr. Buchner, it appears that the virulent property is not absolutely lost, but only held in abeyance; and that, when it is cultivated in another medium, its virulent properties may be restored. He also proves that the virulence may extend to a much longer succession of generations if a suitable medium is used; and that, when lost, it can be restored by cultivation in certain media. We ought also to bear in mind that, when any mild cultivation of anthrax produces death, however slowly, it will, by reinoculation in an animal, increase its virulency; and, if continued through a succession of animals, its original virulency will be restored.

Dr. Greenfield then alluded to the somewhat analogous results obtained by M. Pasteur with the so-called *fowl-cholera*, a disease which is very prevalent and fatal in some parts of France. It is a form of blood-poisoning attended by engorgement of the lymphatic glands of the neck and mediastinum, with a somnolent condition and other symptoms. It does not appear to spread by contagion from bird to bird, but by the excreta of diseased birds becoming mixed with the food, and inoculation takes place through the alimentary canal, usually in the mouth and pharynx. It is highly probable, says Dr. Greenfield, that this particular form is only one of a number of fatal diseases of this class amongst poultry; and he hopes, at some future time, to bring before us some evidence of another epidemic disease which occurs amongst fowls around London, and which appears to be due to a micro-organism of allied, although different, characters.

The organism of fowl-cholera was first discovered by M. Perroncito, of Turin, and was subsequently investigated by MM. Toussaint and Pasteur. M. Toussaint thinks that the disease is nothing more than a form of septicæmia, which may be produced at will, and which acquires special properties when communicated to fowls; for he can obtain exactly similar lesions and a similar micro-organism to those of fowl-cholera or septicæmia by injecting the blood from cases of septicæmia in other animals. M. Pasteur succeeded in cultivating the organism—which, he says, is a micrococcus, and not a bacillus—in neutral urine; and later, in a decoction of fowl's muscle, the latter being specially favourable to the maintenance of the virulence of the organism; and by special methods of cultivation he was able to modify—or, as he prefers to call it, attenuate—the potency of the virus. He found that, when the cultivations were made at short intervals, the effects produced were equally fatal; but if a period of three, four, five, or eight months were allowed to elapse between the successive generations, the effects were strikingly modified, *i. e.*, as the period between the generations was increased, so the effects became less certain and longer in being produced. M. Pasteur considers this modification to be due to the slow action of oxygen on the parasite; because, he says, if they are hermetically sealed, they retain their virulence for a long time; but if they are exposed to pure air, they gradually lose their virulence, and even become inert. But Dr. Greenfield does not consider this explanation conclusive; for he thinks that other conditions which are associated with the presence of oxygen ought also to be considered; and asks whether these results may not be due to vital phenomena, rather than to cosmical influences. He is inclined to attribute these modifications to conditions common to the whole cycle of plant-life, rather than to mere chemical action. Other facts seem to bear out this view; for whether the action of these pathogenic bacteria depend upon a virus excreted by them, or upon some direct influence exacted by them, all analogy warrants us in the belief that these are largely governed by the vital activity of the organism, and the soil and surroundings which are the conditions of its growth.

In conclusion, Dr. Greenfield pointed out that the above facts assist very materially in proving that the bacillus is the essential virus of anthrax, and the micrococcus that of fowl-cholera. He also exhibited various apparatus used for the cultivation of bacteria; and described the methods of use, and the modes of preservation suitable for these organisms and fluids supposed to contain them.

A CHILD, aged 2 years, residing at Pollockshaws, sucked the heads of a quantity of lucifer matches on Thursday last week. She was taken ill, had some medicine, and apparently got well; but, on Friday, she took ill again in the afternoon, and died soon afterwards.

A CASE OF EPILEPTIFORM NEURALGIA TREATED BY STRETCHING THE INFRA-ORBITAL NERVE: WITH REMARKS.

By W. J. WALSHAM, F.R.C.S.,
Demonstrator of Anatomy and of Operative Surgery at St. Bartholomew's Hospital; Surgeon to the Metropolitan Free Hospital and Royal Hospital for Diseases of the Chest.

A. B., a woman, aged 50, but looking ten years older, was admitted into the Metropolitan Free Hospital under my care on January 23rd, 1880, suffering from well-marked epileptiform neuralgia, chiefly confined to the infra-orbital branch of the fifth cranial nerve of the right side. Her family history was good. There was no hereditary tendency to nervous affections. She had been married twenty-six years, and had had nine healthy children, seven of whom were living. She had always had good health until ten years ago, when she first began to suffer attacks of pain in the parts corresponding to the distribution of the infra-orbital nerve. The attacks, which had never lasted more than a few seconds at a time, at first only occurred at distant intervals during the day, and did not prevent her performing her ordinary domestic duties; and occasionally she had intervals of complete cessation from the attacks for several months together. From year to year, however, they became more frequent, and the intervals of complete cessation from them shorter, till October 1867, when she was compelled, on account of their frequency and severity, to take to her bed, and there to remain for six months. During this time, she had six teeth extracted on the affected side, but obtained no relief. She somewhat improved during the summer, and was able to get about the house a little; but, in October 1878, she again took to her bed, and did not leave it until the following June, when she went into a general hospital. During these nine months, she only once got up for one afternoon, and then was so much worse for the exertion, that she did not again venture to do so until she was taken to the hospital. She remained as an in-patient for eight weeks, the attacks decreasing in frequency and severity under the influence of some medicine which, she said, deadened the pain and made her feel drowsy. The improvement lasted a short time after her discharge, but she subsequently had a relapse, and became as bad as before, her life being a misery to herself and her friends. On her admission into the Metropolitan Free Hospital, the attacks were occurring at frequent intervals, both day and night, and were excited on the slightest provocation, such as any mental emotion, swallowing solid food or hot or cold fluids, washing her face, or exposure to the least current of air. Slight pressure over the infra- or supra-orbital foramen, or on the gums, or pinching the cheek, lip, etc., was sufficient to bring one on. The attacks, which usually lasted for about half a minute, were limited to the right side of the face. They began in the upper lip in the labial branch of the fifth nerve, spread to the side of the nose, *i.e.*, to the nasal branches, and thence proceeded to the lower eyelid, *i.e.*, to the palpebral branches. There was also pain in the supratrochlear and supra-orbital branches of the ophthalmic, but this was of a subordinate character. During an attack, there was a slight twitching in the levator anguli oris, and the eye on the affected side became suffused with tears. The patient was emaciated and exhausted; the pulse was small and feeble, and intermitted every thirtieth beat. Dr. Champneys, who kindly examined the heart for me, reported it healthy.

On January 24th, she was ordered one-thousandth of a grain of aconitia (Hopkins and Williams') three times a-day. After three doses, the pulse intermitted every third beat, and the aconitia was consequently stopped. It produced no other noticeable symptom, nor did it relieve the pain. The same treatment, repeated a day or two afterwards, was followed by the same symptom, without any alleviation of the pain.

On February 3rd, I exposed the infra-orbital nerve just below the spot where it emerges from the bone, separated it from its companion artery, passed an aneurism-needle under it, and stretched both the proximal and the distal parts with considerable force. The wound was sponged out with carbolic acid lotion, the edges were brought into contact and secured with fine sutures, and then sealed with collodion. Immediately after the operation, the sensation of the parts supplied by the nerve was found to be nearly perfect, except that there was some slight numbness. The patient passed a good night. She had a few slight shooting pains, but no severe neuralgic attack.

From February 5th to 11th, she had a sharp attack of erysipelas of the face, head, and neck. After this, she progressed favourably with-

out any pain till the 21st, when she had another similar attack of erysipelas, during which she had two or three attacks of severe pain, each lasting about half an hour. This pain was continuous, did not occur in spasms, and had not the characters of her previous epileptiform seizures.

From this time, she convalesced favourably, without any pain whatever, and was discharged March 4th. When last heard of, five months after the operation, she had had no return of pain.

REMARKS.—The case offers another example of the hitherto intractable nature of epileptiform neuralgia. During the ten years the patient had suffered from it, she had tried almost every known remedy in the way of drugs (tincture of aconite, belladonna, strychnia, bromide of potassium, cannabis Indica, morphia, iron, iodide of potassium, croton-chloral-hydrate, arsenic, and salicin). Galvanism had also been tried. She had not had aconitia; and, as this remedy is stated by Gubler (*London Medical Record*, 1877, page 150), in his hands, never to have failed, even in cases of long standing, I gave it a trial before resorting to stretching. Although administered in very small doses, it had such a marked effect upon the pulse, that I felt it would be unwise to continue it; and in this opinion I was supported by my colleague Dr. Champneys, who saw the patient with me. It certainly did not cause any alleviation of the pain. Acupuncture of the corresponding parts on the side opposite that on which the pain was felt — highly spoken of by Dumontpallier, Charcot, Westphal, and others—as I expected, did not have the least effect. In the performance of the operation, I followed the dictum laid down by Dr. T. Grainger Stewart, of making traction upon the distal as well as upon the proximal part of the nerve, by pulling the lip and cheek downwards, and at the same time holding the nerve at its point of emergence.

The question, perhaps, of most interest in this and in similar cases of nerve-stretching for neuralgia is, whether or not the pain will return. There seems to be a general impression among surgeons that it will return; and Baum, writing in 1878, suggests as a cause for the small number of cases then published, that the operation had probably not been generally successful. When we remember, however, that nerve-stretching was only performed for the first time in 1872, and that a new operation always takes time to find general favour with surgeons, it does not seem very surprising that so few cases should have been published. Since Vogt, in 1877, collected the then recorded cases of nerve-stretching, amounting to only fifteen, I have, from various sources, obtained notes of thirty-three more, making altogether forty-eight. Of these, twenty were for neuralgia of various forms, and three for neuralgia of the epileptiform variety. Many of these cases were published, as is unfortunately too frequently the practice, within a few days or weeks after the operation, and others at periods too short to furnish any reliable data as to the question of the return of the pain. In all, however, relief from pain was obtained, and in none of them had any return of pain been experienced at the date of publication. In Mr. Bartlett's case, the patient had been free from pain for eighteen months after the operation; in Mr. Callender's, fourteen; in Mr. Spence's, seven; in Dr. Stewart's, five; and in my own, nearly five.* The length of time, then, that has elapsed between the operations and the date of their publication, although hardly sufficient to enable us to say whether the cure will be permanent, encourages us to hope that it may be so. But, even should the relief be only temporary, the fact that the operation has procured a respite, varying from five to eighteen months in different cases, seems alone sufficient to give it the foremost place as a remedy for obstinate neuralgia.

Another point of considerable interest in the case of A. B. was the occurrence of attacks of pain during convalescence; and it is remarkable that, in several of the cases collected, a similar phenomenon was observed. The pain, however, did not recur in the parts supplied by the nerve that had been stretched, but in parts supplied by other nerves; or, when the stretching was confined to a single branch, in a different branch of the same nerve. Thus, in Dr. Massing's case, in which the sciatic nerve was stretched, the pain recurred in the parts supplied by the anterior crural and long saphenous. In Dr. Stewart's case, in which the infra-orbital branch of the fifth was the nerve operated on, it returned in the parts supplied by the mental branch; in Mr. Higgens's, in the infra-orbital; in my own, chiefly in the infra-orbital. In Mr. Spence's, the pain returned in the parts supplied by the same nerve. In five of these cases, when the secondarily affected nerve was stretched, the recurring pain ceased. Dr. Stewart suggests that, to avoid this return, all the branches of the affected nerve should be included in the operation, and not only the one in which the pain is chiefly localised. In my own case, I should have followed Dr. Stewart's advice, and stretched the supra- as well as the infra-orbital at the same time, had I not been anxious to see whether the pain would recur in the other branches, and, if so, whether it would not subsequently cease of its own accord. I felt, moreover, that it could but add considerably to the discomfort of the patient, if not to what there might be of risk in the operation, to stretch both branches of the fifth at the same time, while I could but repeat the operation in the affected branch should the pain return and become permanent. As related in the history of the case, the pain did cease; and it seems equally possible that it might have done so in Mr. Higgens's and in Mr. Spence's cases, in which the second operation was performed on the sixth and fifth days respectively. It is true that, in Dr. Stewart's and Dr. Masing's cases, the recurrent pain had lasted some months, and it is quite possible that it would not have disappeared without a second operation. But, again, there is the fact that, in another case of Dr. Masing, in which the sciatic nerve was stretched for hyperæsthesia and muscular spasms, the hyperæsthesia, which reappeared, but in the course of other nerves, ceased spontaneously after some months' duration.

The beneficial effects which nerve-stretching undoubtedly exercises on neuralgia is somewhat difficult to account for—especially when, as in tic and sciatica, the cause of the neuralgia is involved in obscurity. The benefit derived from stretching in painful stumps, and in other instances where the nerves are apparently involved in cicatrices, etc.—although even here the explanations that have been offered are not altogether satisfactory—is more easy of explanation. In the case of neuralgia of obscure origin, the evidence at present extant seems to point rather to the benefit depending upon some alteration in the irritability and nutrition of the nerve-trunk, or of its peripheral terminations, than to any primary effect which the stretching may induce in the nerve-centre, or in the conducting power of the nerve. For it has been shown, by experiment, that, "in the simple laying bare and stretching of a spinal nerve, the traction is not conveyed to the central organ"; but, conversely, "that the centripetal stretching of a nerve-stem is conveyed to its peripheral terminations, and may thus act on the parts which it supplies". With regard to the cranial nerves, I have myself found that when, on the dead body, the infra-orbital nerve is exposed and stretched, no effect is produced on the trunk of the superior maxillary, where it leaves the skull at the foramen rotundum. It has been further shown, that "a nerve is only elastic and stretchable within certain limits, the limits of the normal elasticity only corresponding to the physiological limits of the motions of the human body; and, consequently, that the conducting power of the nerve cannot be altered within those limits, and the limits cannot be passed without rupture of the continuity of the nerve". Now, as, in the majority of the cases, there has been no paralysis of the parts supplied by the nerve immediately after the stretching, it follows that in these cases the continuity of the nerve cannot have been broken; and hence, that the relief obtained does not depend upon a primary alteration in the conducting power of the nerve.

In the face of these considerations, it would seem that we must look for the cause of the relief obtained by nerve-stretching in some alteration in the irritability and nutrition of the nerve-trunk, or of its peripheral terminations. Such an explanation is suggested by Vogt, who believes that the irritability of the nerve is lessened by the separation of the sheath; and its nutrition, and consequently its function, materially modified by an alteration in the vascular supply, brought about by stretching the blood-vessels of the sheath. It has been further shown, by Valentine and others, that stretching reduces the reflex excitability of the peripheral terminations of the nerve.

This explanation of Vogt seems more probable than that of Mr. Callender: "That the stretching is of use by numbing the nerve for a short time through breaking the transit of the abnormal impressions conveyed along the fibres of the nerve, so that, in the interval thus gained, the centres may have resumed their natural control." Against this, there is, moreover, the fact that the same effect is not permanently obtained by the complete division of a nerve, which should surely exercise—if mere breaking of the transit of the abnormal impressions were the reason—an effect as beneficial as, if not more so than, simple stretching; since, in the division of a nerve, the transit of such impressions will be completely cut off. As is well known, however, dividing, or even cutting, a piece out of a nerve has often no effect whatever on the pain, which, even though it may cease for a short time after the operation, will often rapidly return—in some cases even before the continuity of the nerve has been restored.

The benefit derived from nerve-stretching would seem to show that neuralgiæ of obscure origin depend rather upon a peripheral than upon a central cause. Dr. Anstie, among others, was strongly in favour of the view that all neuralgiæ have a central origin. He believed them to depend either on an atrophy, or tendency to atrophy,

* It may be well to state that since this paper was written, and as I have not again heard from the patient, although she promised to let me know if she had a relapse, I think I may conclude that she is still free from pains.

in the posterior or sensory roots of the painful nerve, or in the central grey matter, with which it comes into closest contact. But, as cessation of the pain is almost immediate when the nerve is stretched, and as it has been shown that the stretching of a nerve does not primarily influence the centre, it would appear that, at any rate in these cases, the neuralgia should be ascribed to change of function in the trunk, or in its periphery.

A morbid condition of the spleno-maxillary ganglion has been recently suggested as a cause for intractable facial neuralgia; and the ganglion has been several times removed with, it is said, good results. It is, however, not improbable that, as the superior maxillary nerve must be stretched in the operation, the benefit obtained depended on the stretching of the nerve, rather than on the removal of the ganglion.

THE IMMEDIATE CURE OF INGUINAL HERNIA BY A NEW INSTRUMENT.

By W. DUNNETT SPANTON, M.R.C.S.Eng.,
Surgeon to the North Staffordshire Infirmary.

(Continued from page 921.)

Appendix of Cases.

Case I. *Right Oblique Inguinal Hernia.*—W. H., aged 18, a farmer's son, living in Shropshire, working on the farm, was seen at Hanley on December 12th, 1877. He was a healthy muscular lad, had always enjoyed excellent health, but, for about a year, had been the subject of right oblique inguinal hernia. I saw him in consequence of strangulation of the hernia, caused by lifting some heavy baskets from a market-cart. After fomentations and a dose of opium, the hernia was reduced by taxis; and, keeping him quiet until December 5th (four days after), I performed the operation for radical cure, in the manner already described. The rupture was small, and the opening of the internal ring was small also. Ether was administered by Mr. W. A. Frost, who assisted me, and the operation was performed without any difficulty. He suffered no pain worth mentioning, and had no constitutional symptoms. No medicine of any kind was given until on the third day a dose of castor-oil; after which time, the bowels acted naturally. On the tenth day, the instrument was removed, both of the openings in the skin at that time discharging a little pus, and the scrotum and testis of the same side being swollen. There was a firm band of adhesion along the whole line of the inguinal canal. The wounds quickly healed under the application of terebene oil, and a hard thickened plug remained, completely closing the hernial opening, so that no impulse could be felt on coughing. He wore a truss for better security. I saw him about two months afterwards, when the adhesions remained quite firm. About six months afterwards, he felt so secure, that he gave up wearing the truss; and, during some violent exertion in the hay-field, there was a partial giving way of the adhesions, with a tendency to a return of the hernia. He has since that time worn a truss, and had no further trouble. In this case, I think I was rather too timid, and failed to take as secure a hold of the abdominal rings as I ought to have done; but, as a test-case, the result was so far a source of satisfaction to me, inasmuch as it showed that the operation could be carried out without a symptom to cause any uneasiness.

Case II. *Congenital Hernia in a Child.*—T. B., aged 4 years, was healthy and strong, and had a right congenital rupture. On admission into the North Staffordshire Infirmary, on October 2nd, 1878, there was a large scrotal hernia of the size of a large duck's egg; and two fingers could be easily passed through the hernial opening. He had worn a truss for some time, but it was quite impossible to keep up the hernia, and it would even force down under the pressure of the fingers. On October 7th, 1878, chloroform being administered, I operated, some of my infirmary colleagues being present. In this case, there being no proper sac, the scrotal fascia and tunica vaginalis formed the invaginated plug; and it is noteworthy that, with the free communication with the general peritoneal cavity which existed, there was no sign whatever of peritoneal irritation. The child suffered from chloroform-sickness for some hours, but afterwards progressed most favourably. He made no complaint of pain except when disturbed, and no constitutional symptoms showed themselves. Considerable œdema of the scrotum followed; and, on October 13th (six days after operation), there was free suppuration from both the openings. The instrument was removed under chloroform. A hard thickened mass of tissue occupied the inguinal canal, and, on straining or coughing, no impulse could be felt. On the 18th, the wounds were quite healed, and the child was in perfect health. The opening was securely closed, and remains so.

Case III. *Right Oblique Inguinal Hernia.*—A. S., a warehouseman, aged 15, was admitted into the North Staffordshire Infirmary under my care on October 29th, 1878. Three weeks before admission, while lifting a weight, he first noticed the hernia. There was a small right inguinal hernia, which had never been strangulated. The general health was good. After the usual preparation, I operated under ether on November 9th. Considerable pain was complained of after the operation, which was at once relieved by loosening the bandage, and the administration of a hypodermic dose of morphia. He had no sickness. On November 12th, there was considerable œdema of the scrotum, and some purulent discharge from the wounds, especially the lower one. He slept well, and the general health remained good. On November 18th, he complained of some abdominal pain on the right side, with tenderness in the right inguinal and iliac regions. There was a slight erysipelatous blush in the same neighbourhood, with moderate discharge of pus. The temperature rose for the first time to 101.2° Fahr. After an enema, the bowels acted; the instrument was removed, and a warm-water pad applied, with immediate relief. From this date, the pain, swelling, and discharge gradually subsided, so that, nineteen days after operation, he was able to be shown to a meeting of the Staffordshire Branch of the British Medical Association. He left the hospital about a fortnight afterwards, when the occlusion of the inguinal canal was so complete, that no truss seemed to be needed. In this instance, much more irritation was set up than in either of the preceding ones. The result showed, however, that it was purely local; and this, of course, within certain limits, is likely to prove beneficial rather than injurious in its ultimate effects.

Case IV. *Left Inguinal Hernia.*—Annie B., aged 9, living at Stoke, was admitted, under my care, into the infirmary on December 7th, 1878. She was a ruddy, healthy-looking, plump girl. Her mother stated that while playing, about a year previously, the hernia appeared. It was readily reduced on lying down, was about the size of a small hen's egg, and had never been strangulated. The hernial opening admitted one's finger easily. With the ordinary preparations, the operation was performed on January 1st, 1879, under chloroform, and with strict antiseptic precautions under carbolic spray. Carbolised gauze was used to protect the point of the instrument. The temperature never rose beyond 99° Fahr. There was an entire absence of sickness or other constitutional disturbance. On January 4th, the bowels acted naturally. On the 8th, the instrument was removed (the temperature rising on that day, affording us a good indication for doing so). There was some induration along the track of the screw, and a few drops of pus at each opening. On January 13th, the wound was again dressed under spray. There was very slight discharge; a firm cord was felt along the line of the inguinal canal. There was no tendency to any protrusion. On January 16th, the antiseptic dressings were left off. The wounds were quite healed, and firm. She was kept in bed a few days, and a pad and bandage applied. She left the hospital ten days afterwards, perfectly well, and not requiring a truss. She has continued sound up to the present time.

Case V. *Right Oblique Inguinal Hernia.*—S. T., aged 11, a schoolboy, was admitted into the infirmary, under the care of my colleague, Mr. Folker, on January 7th, 1879.* Six months before admission, the hernia was caused by a strain. The tumour was small, the internal ring easily admitting the point of the finger. On January 11th, the operation was performed under chloroform. On the 14th, there had been no complaint of pain; the discharge was slight, and the temperature and pulse normal. On the 17th, there was some œdema of the scrotum, and increased discharge, with slight pain. Castor-oil was ordered. On the 18th, the instrument was removed, some little difficulty being encountered in taking the gauze off the point. On the 26th, he was allowed to get up, with a pad and bandage applied. The inguinal opening was firmly closed by a hard band, and there was not the slightest impulse to be felt. On February 10th, he left the hospital cured. The boy came to the infirmary three weeks afterwards, to show a "lump" which had appeared where the hernia had been. This was found to be fluid—an artificial hydrocele of the cord, in fact—which was conclusive in showing, not only that the internal ring was closed, but the external opening effectually closed also. The fluid has since gradually become absorbed, and there exists now only a fibrous cord along the track of the inguinal canal.

Case VI. *Right Congenital Inguinal Hernia.*—W. B., aged 3, was admitted, under the care of Mr. Folker, on April 1st, 1879. The internal ring easily admitted the index finger. The left ring was closed, and both testes had descended. Operation, having been delayed, in order to improve the child's general health, was performed on May 10th, under chloroform. The next day, the little fellow wanted to get

* For the notes of this and the following cases I am indebted to our house-surgeon, Mr. G. Russell, M.B.

up; he had no pain, and was only annoyed at the confinement. At night, he became feverish, and had some abdominal pain, with retention of urine, requiring the use of the catheter. On May 12th, there was no pain nor further retention. On May 17th, the discharge was profuse. The instrument was removed; the opening being completely occluded. On June 2nd, he was allowed to get up; no pad or truss being needed, as there was no tendency whatever to a return of the hernia. He left the infirmary on June 5th quite well, and has remained so.

CASE VII. *Large Right Inguinal Hernia.*—T. K., aged 26, a potter, was admitted, under my care, on April 28th, 1879. The patient had a large right inguinal hernia, which had existed about two years; and he was suffering also from nodular scrofulous disease in each testicle, the right one being as large as a goose-egg. His general health being unsatisfactory, cod-liver oil and iodide of iron were ordered, with Scott's dressing to the testis. On June 7th, his condition being much improved, and the size of the testes diminished, the operation was performed under carbolic spray, chloroform being given. The hernial sac was thick, and very adherent to the surrounding tissues; but invagination was effected without much difficulty, the inguinal canal being open enough to admit two fingers. Next day (June 8th) he was free from pain; no sickness; temperature, 99° Fahr. On June 9th, the dressings were changed. The wounds were quite quiet; temperature, 98.4° Fahr. On June 11th, he was again dressed; temperature, 99.4° Fahr. On the 14th, there was very slight suppuration from each opening; temperature, 98° Fahr. On June 16th, the instrument was removed easily; there was free suppuration from both openings. His general condition was good. The bowels acted spontaneously. The patient was restless and fidgety, so that the dressings were disturbed rather frequently. The temperature yesterday was 100° Fahr.; to-day, 99.8° Fahr. On the 19th, the upper wound was closed; there was very slight suppuration. A firm cord could be felt along the line of the inguinal canal, which was securely closed. The swelling of the testis was greatly diminished. (Incidentally, this is an interesting fact, and is probably explained by the blood-supply being diminished from pressure on the vessels of the spermatic cord.) On July 3rd, he was allowed to get up and walk, a pad and bandage being applied. The temperature varied; the highest record being 100° Fahr., until June 23rd, when it was normal. On July 10th, the wounds were firmly closed; there was no impulse on coughing. He was discharged cured. He has reported himself since, keeping quite sound, but wearing for security a light pad-truss.

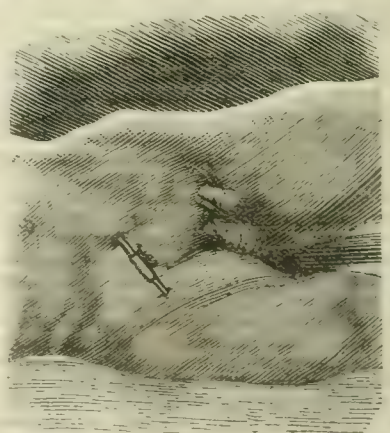
CASE VIII. *Right Inguinal Oblique Hernia.*—George W., aged 8, was admitted under the care of Mr. Folker on June 12th, 1879. The hernia was about the size of a hen's egg, the hernial opening easily admitting the index finger. On June 21st, the operation was performed under chloroform. After the operation, vomiting occurred; and he complained of some pain, which was relieved by an opiate. On June 23rd, the dressings were changed. There was no discharge. The patient was rather restless, but slept well. On June 26th, the scrotum was red and swollen. There was slight discharge, and rather more pain. On June 30th, the instrument was removed. The discharge was profuse, and the scrotum still œdematous. On July 5th (fourteen days from operation), the discharge had ceased; the wounds were rapidly healing; the swelling was subsiding. On July 9th, the wounds were healed; no discharge. The swelling was gone. There was no impulse on coughing. On July 16th, the patient was quite well, and the wounds quite sound. A few days afterwards, the hernia showed a tendency to return *behind* the cord; the anterior part of the inguinal canal remaining firmly closed.

CASE IX. *Congenital Right Inguinal Hernia.*—L. R., aged 3, a healthy little fellow, was admitted under the care of Mr. Folker on June 24th, 1879. After the usual preliminary preparation, he was operated on June 28th, under chloroform. On the 29th, the temperature was 99° Fahr.; on the 30th, 98.4° Fahr. July 1st. He had been very "good" since the operation, not requiring any opiate, nor any special attention. Temperature 100.2° Fahr. On July 4th, castor-oil was given, which acted twice, causing no pain. The discharge was more free. Temperature 100.2° Fahr. On July 6th, under chloroform, the instrument was removed; the India-rubber covering the point being much more easily managed than the gauze used in the previous cases. Temperature 100° Fahr. On July 9th, the discharge was much less. All swelling and irritation had subsided. The bowels acted daily. On July 14th, there was no discharge. He was allowed to get up. The openings were quite firmly occluded.

CASE X. *Right Inguinal Hernia.* Wm. J. T. aged 9, was admitted under the care of Mr. Folker on July 17th, 1879. No cause was assigned for the rupture, which was first noticed about a year before. It was of the ordinary oblique kind, and about the size of a hen's egg, reaching into the scrotum. On July 19th, after the usual preparation, the operation was performed under chloroform. Much sickness followed, and considerable straining. Temperature 98.2° Fahr. On July 20th, there was no complaint of pain; no sickness. Temperature 99° Fahr. On July 26th (seventh day), the instrument was removed. There was some discharge from both openings, but less than in some of the previous cases. An enema was ordered, as castor-oil, previously given, had been inoperative. The temperature was 99° Fahr.; it had been, on the 25th, 99.8° Fahr. On July 28th, there was little discharge, and no surrounding irritation. The patient felt "quite well". On July 31st, the line of the canal was hard and dense, and appeared most effectually closed. There was no impulse on coughing.

CASE XI. *Left Inguinal Hernia.*—Wm. Jas. D., aged 13, was admitted on July 17th, 1879. About two years previously, the rupture was occasioned by lifting a very heavy weight, and was now about the size of a hen's egg. On July 22nd, the operation was performed, after the usual preliminaries, under chloroform. In this case, a steel instrument was used. On July 23rd, there was no sickness; but he complained of some slight pain. Temperature 99° Fahr. On July 26th, the discharge was rather free; and surrounding irritation was more marked than in most of the cases—due, possibly, to the employment of a steel instead of a plated instrument, but also in some degree to the fact that the point of the screw pressed rather firmly on the scrotum. It would have been better, perhaps, if another turn had been made in the operation, so as to place the point beyond the skin of the scrotum. On July 28th, the discharge was more profuse. The temperature yesterday was 99.4° Fahr.; to-day, 98.4° Fahr. On July 28th, the patient was rather feverish. The temperature had risen to 101.4° Fahr. The instrument was removed quite easily, the India-rubber slipping off very readily. On July 31st, he was quite comfortable. The discharge was slight. He had no pain. Temperature 99.4° Fahr. A firm hard swelling was felt along the spermatic canal; and there was no impulse whatever on coughing.

CASE XII. *Right Oblique Inguinal Hernia.*—John B., aged 11, was admitted to the Staffordshire Industrial School, under my care, on July 25th, 1879. The cause of the hernia was unknown; but the rupture was first observed about two years before, and was about the size of a small orange. No truss had been worn. On July 26th, after the usual preparation, the operation was performed under chloroform. On July 28th, he complained but little of pain, though an irritable subject. There was slight purulent discharge, and some œdema of the scrotum. Temperature 100.4° Fahr. There had been no sickness since the operation. He had a rather troublesome cough (which he had had some time); but there was no tendency to any reappearance of the hernia. He was ordered some linctus, to be taken frequently. On July 29th, the temperature was 100° Fahr.; on the 30th, 98.6° Fahr. On July 31st, the line of the inguinal canal was quite hard and firm; the instrument still in. The temperature was normal. On August 4th, the instrument was removed. The hernial canal was firmly occluded. He was discharged well on September 27th. He has been working on a farm since, and remains quite well.



From a photograph taken three days after operation.

CASE XIII. *Right Inguinal Hernia.*—Elizabeth W., aged 20, a domestic servant, a healthy strong young woman, was admitted into the North Staffordshire Infirmary, under the care of Mr. Alcock, on July 15th, 1879. When lifting a heavy weight, she noticed a swelling suddenly appear in the right groin, which, on admission, was found to be a hernia about the size of a hen's egg, which disappeared in the

recumbent posture. On July 31st, the operation was performed under ether, No. 2 screw being used. She progressed without any unfavourable symptom. The instrument was removed on August 8th, the opening being firmly plugged. She left the Infirmary on September 18th, quite sound.

THE RADICAL CURE OF HERNIA.

By GEORGE WHYTE, M.D., Elgin.

VARIOUS modifications of Mr. Wood's operation for the radical cure of inguinal hernia have, from time to time, been suggested in the pages of the various medical journals; the principle adopted in all being the same—viz., bringing together the pillars of the inguinal canal; while, at the same time, the invaginated sac, with its coverings, is used as a plug to fill up the canal, and so prevent descent of the bowel. To carry out this principle, and to secure this result, various surgeons have adopted and advocated different modes of procedure. Having read, in the issue of the BRITISH MEDICAL JOURNAL for December 11th, 1880, a paper on this important subject by Mr. Dunnett Spanton, in which he proposes to obliterate the canal by means of a screw-like instrument, I thought it might be interesting to publish the following case, upon which I operated over two years ago, as the method adopted appears to me to have some special advantages.

J. H., aged 10, a seven months' child, had double congenital inguinal hernia. When he first came under my care, the bowel on both sides descended half-way to the knees. It was, however, easily reduced in the recumbent position, and my three fingers could be passed into the abdomen. His parents informed me that an operation (apparently Wiitzer's) had been previously performed when he was a child, but that the "plug" was forced out by crying—the only effect being to make matters worse instead of better. Trusses of various kinds had been persistently and perseveringly tried, but the bowel always slipped down. As the parents were afraid to let the boy go to school, or even mix with other children, they were most anxious that something should be done; so, after giving a further trial to trusses, without benefit, I performed the following operation.

The boy, having been confined to bed for a few days, had his bowels well cleared out by enema on the morning of the operation. Chloroform having been administered, and the right rupture reduced, I began by doing what is really the first part of Professor Wood's operation—viz., incising the skin over the fundus of the tumour, and separating it from the coverings of the sac. The forefinger of the left hand, smeared with carbolised oil, was then passed into the canal, pushing before it the sac with its coverings. The edge of the internal oblique muscle was now felt for and clearly defined, and the inner pillar of the canal elevated on the tip of the finger. A curved needle, with a long and strong handle, was now taken in the right hand, and passed through the abdominal wall, piercing the inner pillar of the canal, and the invaginated sac and coverings, on to the tip of the finger, along which it was passed until the eye appeared at the external wound. Dr. Adam, who was kindly assisting me, then threaded the needle with a specially prepared carbolised ligature. The needle was now partially withdrawn until it freed itself from the pillar, over which it was brought into the canal again on to the finger, and unthreaded. The outer pillar of the canal was now defined, and pressed forward with the finger, and the needle again passed through the abdominal wall and outer pillar on to the finger, out of the wound, and threaded; then partially withdrawn, and passed over the pillar into the canal again, and unthreaded as before. I next passed the needle through the abdominal wall, at a point lower down, through the conjoined tendon, on to the finger and out at the external wound. The ligature from the external pillar was passed through the eye of the needle, which was then passed over the conjoined tendon and out at the external wound, and again unthreaded. It was next passed through the skin over the lower part of the outer pillar, through Poupart's ligament, and threaded with the ligature from the inner pillar, and passed over the pillar and out at the external wound as before, and unthreaded. I had thus applied subcutaneously a ligature like a boot-lace to the inner and outer pillars of the inguinal canal, and through the invaginated sac, in such a manner that, when the two ends were pulled upon, the pillars were approximated, and the invaginated sac retained as a plug. Before withdrawing my finger, I washed out the canal with carbolic solution. I then flexed the thigh, and gradually tightened and tied the ends of the ligatures and cut them off. The external wound was closed with carbolised gut-sutures, which were passed deeply, and a suitable dressing and bandage applied. A similar operation was performed in the left side. The patient was then put to bed, and an opiate given.

The after-progress of the case was in every way satisfactory. A light truss was recommended to be worn as a precaution. Two years have now elapsed since the operation, and the boy can enter into all the rough sports of the school without in any way inconveniencing him.

The above operation, though perhaps a little tedious in recital, would not be difficult to those who meet with such cases oftener than falls to the lot of a country surgeon. It appears to me to offer some advantages over both Professor Wood's and Mr. Spanton's method—the most important of which is, that, by using carbolised silk or gut ligature, the sources of irritation in the wound are reduced to a minimum. The wire in the former, and the screw-like instrument in the latter method, must cause a good deal of pain and irritation, which would be better avoided, especially in children.

I am quite aware that the above case, or rather, I should say, two cases, go for little; but, as the success has been marked, I have been tempted to publish them, in the hope that the method may receive a further trial from those who have more opportunities.

SURGICAL MEMORANDA.

THE TREATMENT OF FINE STRICTURES.

THE first difficulty in the treatment of fine strictures is invariably the greatest; when we have once succeeded in passing any instrument into the bladder, difficulties diminish as we proceed. It occasionally occurs, however, that a filiform bougie has, with perseverance, been conveyed into the bladder, and repeated failures result when attempts are made to pass a bougie of a larger size. This difficulty can frequently be overcome by first passing the filiform bougie into the bladder, and then passing a second down to the stricture. The second bougie is then held firmly against the stricture by an assistant, whilst the operator withdraws the first bougie about a couple of inches; he then grasps the two bougies between his finger and thumb, and passes both instruments simultaneously through the strictured part of the urethra. The two bougies may either be retained or withdrawn, according to the method of treatment the surgeon has in view. If they be retained, they cause no inconvenience to the patient, and in some strictures afford considerable benefit. On another occasion, a third bougie may be added on the same principles as the second; the first two being withdrawn a couple of inches, and the third passed through the stricture in company with the other two. It will, as a rule, be found that, after three bougies have penetrated the stricture in this manner, a No. 2 or No. 3 bougie can then be passed without difficulty, and the subsequent treatment be conducted on ordinary principles.

I have frequently demonstrated in hospital the advantages of this plan of treating fine strictures, and I am confident that others will find their efforts to dilate obstinate strictures facilitated, should they think proper to adopt it.

WALTER WHITEHEAD, F.R.C.S.Ed.,
Surgeon to the Manchester Royal Infirmary.

PYÆMIA FOLLOWING GRADUAL DILATATION OF STRICTURE OF THE URETHRA: RECOVERY.

THE report of the following case presents two points of special interest: 1. It shows that the simple gradual dilatation of an ordinary uncomplicated stricture may be followed by pyæmia; and, 2. It proves the very interesting clinical fact that pyæmia, attended by the formation of numerous secondary abscesses attacking the extremities and integuments alone, runs a chronic course, but tends eventually to recovery.

Mr. S., aged 55, consulted me on October 21st, 1879, for the relief of a stricture, with all its unpleasant concomitant symptoms. As he desired to follow his usual avocations, I determined to employ the gradual dilatation process, as less likely to cause any constitutional disturbance, or otherwise interfere with his convenience. Fortunately, I had at hand a splendid, well finished, new set of French olivary bougies. After a patient and prolonged trial, I succeeded in introducing a No. 2. The stricture was a bulbo-membranous one, and uncomplicated. The kidneys were healthy. At intervals of two or three days, I introduced bougies of increasing size, two or three at a sitting, till I reached a No. 12, when the withdrawal of this instrument was followed by a slight bloody discharge. The stricture must, of course, have been more or less lacerated, though I feel confident that force was not used. Then followed a great deal of constitutional disturbance. I ordered half a grain of opium at bedtime; alkalies and hyoscyamus three times a-day. The medicines gave but temporary relief; I was, therefore, not altogether taken unawares, on December 10th, to find the supervention of "severe recurrent rigors and sweating of pyæmia, accompanied by local signs of secondary suppuration". Vomiting set in, and persisted for twenty-four hours. The temperature varied suddenly from 100 to 104. [illegible] presented all the clinical symptoms of a well-marked [illegible] case of pyæmia. Fortunately for

him, there was only slight and transient congestion of the lungs. The viscera were not attacked perceptibly; the disease appeared to expend its virulence on the scrotum, penis, and extremities, where five or six abscesses formed in rapid succession. The first appeared on the penis and scrotum, the second on the right arm, the third on the right forearm, the fourth on the right leg, the fifth on the integument on the dorsum of both feet, the sixth on the left forearm. These abscesses involved the cellular tissues and muscles, deeply in some cases. As soon as secondary mischief manifested itself, the part was kept constantly smeared over with a mixture of glycerine and extract of belladonna. When fluctuation was felt, a free vent was given to horribly offensive pus. The knee, ankle, elbow, and wrist joints were stiff and exceedingly painful. No destructive inflammation or formation of pus, however, resulted. The finger-joints were immovable, in a state of semiflexion, and some of them have not recovered their normal suppleness to this day.

After a short time, the urethral irritation, pain, and scalding subsided; but, when he was restless and delirious at night, chloral draughts were given; when adynamic, stimulants in properly regulated quantities; when the fever left him, a mixture of tincture of perchloride of iron and quinine was administered three times a-day. He took milk-diet by preference. The abscesses that continued intractable were syringed out with a weak solution of carbolic acid. The joints that remained stiff were well rubbed with cod-liver oil to make them supple, and then moved forcibly in all directions several times a-day. This treatment, with the curative effect of time, helped my patient in a great measure to recover the usefulness of his limbs. He was able to leave his bed in April, and to resume his avocations by June.

The stricture is, I regret to say, narrowing slowly again, but Mr. S. puts off what he considers to be the evil day of surgical interference.

M. COLLINS, M.D., Scarborough.

CLINICAL MEMORANDA.

GOUT.

FEW will be found willing to dispute Mr. Budd's proposition, that there is a law of compensation between the various organs of the body; when, however, he propounds a new pathological doctrine founded upon this basis, he is perhaps a little too sanguine. Our physiological knowledge of the lymphatic system, and of its functions in our economy, is not exact enough to warrant our laying down hard and fast pathological rules in regard to it. Mr. Budd's application of Chrzonszczewsky's experiment, where, after tying the ureters, he discovered urates in the connective tissue corpuscles, is extremely ingenious. He is, however, hardly justified in drawing a deduction of his own, and ignoring the interpretation put upon the fact by the eminent Russian physiologist. Chrzonszczewsky, if I remember right, considered that the experiment proved the origin of urates from the connective tissue corpuscles; while Mr. Budd quotes it as conclusive evidence that matter is drained away into the lymph-channels when the kidney is unable to excrete it. The corpuscles, too, can hardly be called lymphatic, as the views of Recklinghausen are now pretty generally accepted, which maintain that the spaces in fibrous tissue are the true starting-points of the lymphatic vessels.

Apart from the physiological facts, we cannot see how Mr. Budd can answer certain objections to his novel theory. How is it, we would ask, that other noxious material circulating in the blood, and requiring elimination, does not produce the same train of symptoms? What is the subtle connection between uric acid, in particular, and the lymphatics? If the disease be due to the breaking down of an eliminative system, and subsequent congestion of the part, why should one agent alone be able to produce it? In spite of objections, there can, however, be no doubt that Mr. Budd has advanced a bold and original theory, and one capable of far wider application. Pathologists will welcome any rational explanation founded upon a true scientific basis, and not dependent upon pure hypothesis, or upon deductions from organic chemistry.

REGINALD R. HOARE, F.R.C.S.,
Clifton House, Aston Road, Birmingham.

ON RESTORING THE HEART'S ACTION WHEN IT HAS CEASED TO BEAT.

ON reading Dr. Jago's article, it reminded me of an experiment in my college days. I do not remember what induced me to kill a mouse by a blow on the head, and rip it open, to see the heart beat. It did not. I pricked it with a needle, and set it a-going. It stopped after a time; then I gave it a second prick, and a few pulsations were distinctly seen. When I was in petticoats, my father was sent for to a girl in a fit. He was out; and, when he came home, was informed of the fact. "How long since? and any second message?" Being told, he thought he need not go. My mother suggested he "ought to go", which he did. He found the girl dressed in her grave-clothes, and "laid out" on a linen-covered table. He examined her, and found some warmth over the heart. He ordered hot water to be brought, not scalding hot, and poured it into a jug, tore her shroud open, stood on a chair, and poured a continuous stream of hot water, until the throbbings of the heart were distinctly seen. That girl was the mother of several children before I left Scotland, in 1848. My mother used to laugh, and take her share of the credit of her restoration to life. An old man here, Robert Robinson, several years before his death, took a fit, and apparently expired on the floor, where he was lying, pulseless and breathless. The heart had ceased to beat; and I was told that "he was beyond any doctor's power now". I felt some warmth over the heart, and tried my father's remedy; and, to the wonder of spectators, the septuagenarian revived, and lived several years afterwards. Hot water can easily be obtained; and no one can object to such an experiment.

J. C. REID, M.D., Newbiggin-by-Sea.

THERAPEUTIC MEMORANDA.

LOCAL APPLICATION OF POWDERS.

UNDER the head "local mercurial fumigations", the JOURNAL of December 4th contains engravings of an apparatus used for that purpose by Mr. Charles Roberts, who remarks that other powders may be applied in the same manner. This last statement I can confirm, from many years' use of similar and even simpler contrivances for projecting powders into the fauces, mouth, larynx, etc. Anyone who has seen a chemist's wash-bottle, has seen the instrument figured (p. 882); and anyone who knows how to bend a glass tube over a lamp, may make one for himself. The instrument may, moreover, be still further simplified; for the bottle may be dispensed with altogether, and a tube of suitable size and shape fitted with an ordinary puff-ball. For intra-laryngeal applications, there are many insufflations, the last of which I have elsewhere described, though I often use more suitable contrivances. For more accessible parts, suitable sizes of tube fitted as stated will mostly suffice. Had time permitted, it was my intention to enter fully on this subject at Cambridge, in illustration of the paper from which an extract appeared in the JOURNAL of December 4th. But it is more important to urge again the therapeutic value of powders in various conditions of mucous membrane. An insoluble substance thus applied to healthy membrane, provokes some irritation and increased secretion. The mucus thrown out envelops the powder, and it is soon removed. In morbid conditions, the result will be modified. Soluble powders will be to some extent dissolved in the secretion, and thus we have superadded the effects of a solution of the substance. Omitting for a moment the shock of the impact on the part where felt, we may classify these local remedies as astringent, absorbent, anodyne, stimulant, caustic, and special stimulant. It is not a suitable method for applying caustics, and few stimulants are useful in this way. But the other classes are well represented; tannin and gallic acid are favourite astringents; bismuth and zinc oxide, absorbents; morphia mixed with starch or other inert powder is, perhaps, the most used anodyne; of special stimulants, iodoform (to which I have already drawn attention in the JOURNAL) is very valuable, and I have long been employing powders containing this drug, by the simple plan described above, in diseases of the throat, nose, mouth, etc.

In conjunction with the late Mr. Hinton, I extended the use of this method of medicating the fauces in throat-deafness and other aural cases. In diseases of the nasal passages, this and other modes of medicating the parts may be usefully resorted to, as often stated by me, especially in a paper on ozæna at the Medical Society of London (1871). In more accessible parts, surgeons are daily using such remedies with advantage. In diseases of the throat, nose and mouth, it is necessary to remember that the powder employed will find its way into the stomach; and, therefore, its effects on that organ, as well as on the system generally, must not be forgotten.

PROSSER JAMES, M.D., 3, Dean Street, Park Lane.

PRESENTATION.—At a largely attended meeting of medical students, Dr. J. Halliday Croom, Lecturer on Midwifery in the Extra-Academical School of Medicine, was presented with a handsome timepiece, bronzes, and illuminated address, in recognition of his valuable teaching in practical midwifery.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 10TH, 1880.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

A Case of Pneumonia, with Remarks on the Physical Signs of the Disease.—Mr. W. J. TYSON (Folkestone), contributed this paper. The case illustrated certain points in the physical signs of the disease—viz.: the lateness of the appearance of dulness, bronchial breathing, and bronchophony in many cases of pneumonia. A. B., aged 63, on Sunday, April 4th, 1880, drove in an open cart the distance of forty miles; the day was cold, and he himself was thinly clad. During the drive, he felt a distinct fit of shivering. The next day he was obliged to leave off work at noon, and remained indoors the rest of the day. Tuesday and Wednesday he felt ill, and on Thursday morning he had a temperature of 103°, his pulse was 108, and respiration 30. His chest was carefully examined, but no abnormal physical signs could be made out. He was expectorating a little tenacious mucus. He complained of pain in his chest, but in no definite spot. His urine contained albumen. On Friday and Saturday, his temperature varied between 102° and 103°. On Sunday, there was slight dulness in the middle third of the right lung behind; also some bronchial breathing was heard. On Monday, the 12th (eight days after the chill), there was well-marked dulness, bronchial breathing, and broncophony. On Tuesday, the dulness had increased in extent, and moist crepitations were heard, with inspiration and expiration. The chest was not again examined, on account of the feebleness of the patient. He died on Thursday (15th), eleven days from the commencement of his illness. In another case, which had occurred at Guy's Hospital, under Dr. Pye-Smith, in August 1876, the patient had died on the seventh day. The right apex was in a state of grey hepatisation; the middle and the lower lobes of the same lung were unaffected. The left lung and other organs were healthy. In this case, the dulness did not appear until the sixth day, and she had died on the seventh day. Other cases, with lately discoverable signs, had come under his care. The following paragraph occurred in Ziemssen's *Medicine*: "Usually up to the third day after the chill, the percussion note over the affected part becomes dull; the respiration of a blowing character; bronchophony now makes its appearance." Mr. Tyson believed that the physical signs—such as dulness on percussion, bronchial breathing, and broncophony—occurred later in the course of this disease than was usually supposed; or, perhaps it would be more correct to say, that there was a large percentage of cases with the above lately discoverable physical signs than was usually supposed. The characteristic physical signs of the disease might escape recognition from the inflammation having commenced in a central position in the lung. Yet, it was just as important for the treatment of the case to diagnose a central pneumonia as one of peripheral origin, the former being as dangerous in its prognosis as the latter—so that it became necessary in many cases to diagnose pneumonia by symptoms instead of by signs. A well-known author had said, referring to pneumonia, that if the patient had had a chill, pain in the side, rusty sputa, and high temperature, there was scarcely any room for doubt; and, even in central pneumonia, these symptoms were generally present. In other cases, in which the only symptoms present were high temperature and abnormally quick breathing, the relation of the pulse to the respiration appeared to be the most diagnostic point, in absence of any other affection of the heart and lung.—Dr. F. TAYLOR supported the author in the opinion he had expressed that a great number of such cases occurred in practice. Last year, a patient was seen at Guy's Hospital with pneumonia, but in whom there were no physical signs of the disease to be found until she coughed up a quantity of rusty sputa in the presence of the physician examining her. On the fourth day after admission, the signs became clearer, and thenceforward rapidly developed.—Dr. A. CLARK considered the paper an important contribution to the literature of pneumonia, the varieties, peculiarities, and he would venture to say caprices, of which were too imperfectly recorded. Experienced clinicians, however, recognised the facts on which Mr. Tyson insisted, and three cases in illustration of their truth occurred to him. 1. A gentleman for nearly seven days showed no signs of the disease, save a slight increase of temperature, and breathing a little hutriedly. On the seventh day, the symptoms became marked and urgent, and thenceforward to recovery, the history of the case was normal. 2. An old gentleman, aged 80, one day caught a chill, and slight feverish attack, accompanied by general malaise, succeeded; and for many days this, with somewhat hurried respiration and irregular temperature, constituted the signs of illness. On the twelfth day, however, slight friction-sounds below the angle of the right scapula were heard; then dulness and marked friction developed. The patient ran the ordinary course of pneumonia, and recovered. 3. This patient was for six days feverish only, but on the seventh or eighth day the usual signs of pneumonia appeared. Practitioners, therefore, did recognise that cases like this were met with, nor was it necessary that physical signs should exist to direct the diagnosis of pneumonia aright. Chill, alteration of temperature, and disturbed breathing should suffice to guide the conclusion of the attendant.—Dr. HABERSHON concurred that general rather than special physical signs must guide diagnosis in certain cases of pneumonia. He believed, with Dr. Clark, that, when the disease commenced near the root of the lung, the symptoms were masked by the healthy intervening portion of the organ. When, however, the disease spread to the surface, all obscurity disappeared.—Dr. CLARK explained that he wished to convey the impression, that, because in a large percentage of pneumonia no typical signs presented till near the end of the course run by the disease, therefore general indications must direct the physician's opinions.—Dr. DE HAVILLAND HALL related cases in which absence of physical signs had for five days made him doubtful of their nature. He considered such cases of late appearance more severe than others, because the disease was more extensive, requiring to spread from within ere its presence was physically demonstrable.—Dr. BURNEY YEO suggested a constitutional origin for these cases.—Dr. GOODHART said he should regard these cases as instances of blood-poisoning. He remembered making a *post mortem* examination on an old man said to have had fever for some days, and only a slight amount of pneumonia existed. This patient had probably taken cold, and would doubtless have ranked as a case of late appearance of physical signs had he lived long enough. As it was, blood-changes occurred, by which he was poisoned in an early stage of the disease.—Mr. TYSON replied that cases such as he had described must be regarded as pneumonia, because of the symptoms sooner or later appearing. In a case under his care, a child, aged 5, for six days was feverish simply, and then all the signs of pneumonia presented. His object in writing the paper read had been to call attention to the insufficient description of the disease contained in standard works on medicine.

A Case of Aphasia, with Hemiplegia on the left side and Tumour on the right side of the Brain in the Third Frontal Convolution.—Dr. HABERSHON read notes of this case. The patient was a man, aged 52, who had had symptoms of langour for a year before admission. Seven weeks previously, he had a sudden difficulty with his speech; he tried to say something, and could not speak the right word. This grew worse until three weeks ago, when weakness of the left arm and legs was noticed. On admission, there was partial left hemiplegia, the pupils were slightly contracted; urine free from albumen; bowels confined. His wife stated that he had always been left-handed. He was treated with iodide of potassium and mercury, but in a few days he became quite unconscious; and, though he rallied for a short time, and appeared to understand questions, he became restless, trying to get out of bed, then comatose, and died thirteen days after admission. At the *post mortem* examination, a gelatinous-looking lobulated tumour was found on the right side of the brain, occupying the region of the island of Reil, and involving much of the hinder part of the third frontal convolution. It measured an inch or more on the surface, and extended two inches into the brain-substance, so as to reach the lenticular bodies of the corpus striatum. The section had an orange tint, with numerous ecchymoses, and at the margin some yellowish gelatinous material. It was composed almost entirely of small round lymphatic corpuscles, but in some parts showed nothing but compound granulation-corpuscles. There was broncho-pneumonia at both bases, and atheroma and calcareous change in the cardiac valves and aorta. The kidneys were rather granular. Dr. Habershon drew attention to the case as illustrating the view, that the faculty of speech was associated in the brain with the muscular education of the most used arms: since the patient was left-handed, and suffered from aphasia, when a tumour developed in the right third frontal convolution. Some points in the history of his children seemed to indicate a syphilitic origin for his complaint; but the result showed that the tumour was a glioma.—Dr. F. TAYLOR reminded the Society of the case he had reported at its last meeting, that of a child in whom diphtheria followed scarlet fever, and who had right hemiplegia, but spoke freely, though Broca's convolution was injured. This child had had from birth distortion of the right arm, and was left-handed.—Dr. HUGHLINGS JACKSON had seen a number of cases of right hemiplegia, with aphasia; but in no instance where aphasia coexisted with left hemiplegia had he known a *post mortem* examination made. In his experience, tumours of the brain rarely led to aphasia, except of a temporary kind after convulsive seizures. The tumours were of slow growth. In his opinion, the majority of the cases alleged to disprove Broca's theory were instances of tumour; and he recollected some years ago recording such a case, in which he subsequently made the discovery that the patient had

been left-handed. No *post mortem* examination was made. More recently, he had recorded the case of a man in whom left hemiplegia coexisted with aphasia, but this individual also was left-handed. In no case of the kind had a *post mortem* examination been made. He noticed that Dr. Habershon's patient was said to understand the expressions used in speaking to him, although unable himself to speak in return; he was not wordless, but speechless. Both sides of the brain were instructed in words, and served to reproduce them automatically—so that, when one was affected, the other retained the power of appreciating what was said, the left side alone being endowed with the faculty of imitating speech movements. Even aphasic patients often preserved the power of uttering some few words or phrases—*e.g.*, a man accustomed to signalman's duties on a railway, who had been suddenly paralysed while on duty, constantly repeated "Come on"; this probably being the last expression he had employed before his seizure. Again: patients had been known to say "Good-by" on parting from friends, though quite unable to repeat the words at other times, showing an appropriate fitting of speech to acts. The final conclusion forced by such considerations was that both sides of the brain were educated in the use of words, but only one side in the expression of them.—The PRESIDENT said he had a patient under treatment who made the constant answer, when spoken to, "God bless my soul"; and another, a lady, who, though quite understanding what was said to her, was unable to convey her own thoughts in words.—Dr. HABERSHON had no doubt that his patient understood what was said to him while he remained conscious, but was incapable of expressing his ideas in return.

A Case of Villous Growth of the Male Bladder successfully removed by Perineal Incision.—Mr. DAVIES-COLLEY reported this case. Henry W., aged 32, a shipwright, had suffered from hæmaturia for eight years. At first, blood was passed only occasionally and in small quantities. Latterly, the flow had increased; and he had been so weak that, for sixteen months he had been unable to work. He was admitted into Guy's Hospital last March. There was a continual desire to micturate, and a feeling as if something always remained behind in the bladder. Blood was passed sometimes at the beginning, sometimes at the end, of micturition. No stone could be detected, and all efforts to find villous masses in the urine failed. No tumour could be felt *per rectum*. On April 16th, he was placed under ether. Mr. Davies-Colley then opened the bladder by the usual incision for lateral lithotomy. At first, nothing could be felt. Then a slight projection was made out on the left side of the fundus, and a cord-like process running from it. In a short time, the free end of this process, with a soft pinkish tuft of villi attached to it, was seen at the deeper part of the wound. This was seized with the forceps, drawn out, and the pedicle cut with a pair of scissors close to the wall of the bladder. No other growth could be felt. There was but little hæmorrhage during the operation, and some which occurred in the evening was readily arrested by the injection of iced water into the bladder. He made a rapid recovery. In two weeks the urine ceased to flow from the perinæum, and soon afterwards the wound healed. When Mr. Davies-Colley last saw him (two months after the operation), there had been no return of the hæmorrhage; the irritability of the bladder had ceased, and he was in the enjoyment of perfect health. The tumour grew from the posterior wall of the bladder, at a point about three inches from its neck, and one inch to the left of the middle line. It consisted of a fibrous stalk, one-sixth of an inch thick and two inches long, terminated by branching filaments from half-an-inch to three-quarters of an inch long. These filaments contained capillary loops, invested by many layers of epithelium of a cylindrical type. Professor Humphry had recorded, in the *Medico-Chirurgical Transactions*, a case in which he had successfully removed a fibrous polypoid growth from the male bladder. He mentioned a similar success in Professor Billroth's practice. The chief difficulty in the male subject was to ascertain the presence of a tumour as the source of hæmorrhage. In Mr. Davies-Colley's patient, the diagnosis depended solely upon the long-continuance of the bleeding, and the absence of other causes. Perhaps the fact of blood passing sometimes at the beginning, at other times at the end, of micturition, might assist in the detection of a growth. No doubt the villi were in this case sometimes washed into the prostatic part of the urethra, where they were squeezed, so as to give rise to a flow of blood before the urine; while, at other times, hæmorrhage into the bladder was set up by the pressure of its muscular walls upon that part of the growth which lay in its interior.—Mr. CLEMENT LUCAS said the case showed the unsatisfactory nature of the treatment of such cases until recently. The removal of villous growths from the bladder was frequently an easy matter, the diagnosis being chiefly difficult. It could only be certain when a part of the growth was brought away. A patient of his had been troubled eight years with a vesical growth, but had been much relieved by astringent application.—Dr. HABERSHON explained that the patient, when under his care at Guy's Hospital, had been extremely prostrated; and it was clear that hæmorrhage was not from the kidneys, but the bladder; and he was transferred to Mr. Colley's care in consequence.—A patient he once had, an aged gentleman, was troubled with a disease of uncertain nature, attended with hæmorrhage and pain, which remained obscure until a fine specimen of villous growth, passed *per urethram*, decided it. Relief followed, and had continued. It was possible that ease was often afforded by sloughing of portions of these growths.—Dr. A. P. STEWART described a case in which a villous growth of the bladder, giving rise to constant profuse bleeding, had escaped detection during life, in consequence of its situation behind the pubes.—Mr. TEEVAN said Mr. Davies-Colley's was the first and only successful case of the kind. Diagnosis of such tumours was difficult. He considered cutting into the bladder a legitimate operation for removal of these growths, and had successfully performed it four times. He suggested external urethrotomy and the median operation for lithotomy as favourable modes of procedure. He did not think such cases necessarily terminated fatally.—Mr. BARKER considered the success of the operation would depend on the nature of the growth, whether it was or was not pedunculated, and admitting of entire removal. "Villous growth" was a term too indefinitely employed in describing these tumours.—Mr. DAVIES-COLLEY replied that the growths removed successfully by Humphry and Billroth were not villous at all. Humphry's was a polypoid growth from the mucous membrane. Diagnosis was generally possible with the catheter; but he found it more satisfactory to use the washing-bottle employed in litholapaxy, and so suck out the villous growth.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 21ST, 1880.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Late Occurrence of Rickets.—Dr. DREWITT showed a boy aged 10, the son of healthy parents, and one of a family of six children, all the others being healthy. The boy had been healthy until the age of eight years. He then began to complain of aching in the legs; and shortly afterwards nearly all the long bones began to bend. On admission at the Children's Hospital a year ago, he was in a very "crumpled-up" state. There was tenderness of the shafts of the tibiæ and ulnæ, and enlargement of the ends of the long bones, including the clavicles and ribs. He was given cod-liver oil and a generous diet, but continued to get worse until iodide of potassium was substituted for the oil, since which time he had considerably improved.—The PRESIDENT remarked upon the fact that iodide of potassium had done so much good, in the absence of any history of syphilis.—Mr. W. ADAMS thought that many of the chief characteristics of rickety children were absent in this case. The femora were not only bent, but very much shortened, being scarcely half their ordinary length. The tibiæ were very little bent. The forearms, on the other hand, were very much bent; this might possibly be from crawling. He thought the case was a transitional one between rickets and mollities ossium or arthritis deformans.—On the motion of the PRESIDENT, the case was referred to a committee composed of Mr. Hayward and Dr. Fagge, for report.

The Pathology of Rickets.—The PRESIDENT, in resuming the discussion, regretted that it had been chiefly confined to an interchange of opinions, rather than to the citation of facts. He should have liked to hear statements of facts on some of the following points: (1) the chemistry of the urine in rickets; (2) the microscopical and chemical condition of the blood; (3) chemical analyses of the bones in different stages of the disease; (4) the nature of the so-called rickety condition in the lower animals, with specimens; (5) the nature of the so-called fœtal rickets and congenital rickets; (6) the condition of the permanent teeth in persons who had been rickety in childhood, with a view to determine whether the second set of teeth were modified as well as the first. One of the points to which special attention had been paid by the speakers, was the connection between syphilis and rickets. It had long been asked whether abnormal conditions of the skull might not be due to hereditary syphilis, as well as to rickets; but the merit of having first described the syphilitic lesions of the skull was due to M. Parrot; and Dr. Taylor of New York had described a morbid condition of the long bones in hereditary syphilis. There could be no doubt that hereditary syphilis could produce a general periostitis of long bones, leading to a condition of the bones resembling that seen in rickets. The flat bones also might become soft and vascular, which might lead not only to thickening of the bones, but, under certain circumstances, to atrophy; as in the case of the skull, in which pressure from within the brain, or from without by the pillow, might lead to cranio-tabes. This condition might probably be due to both syphilis and rickets. Both diseases made the skull vascu-

lar and soft; both were associated with tenderness, making it difficult for the child to move; hence both might end by the production of the same condition. It was probable that syphilis and rickets often coexisted in the same patient; but he firmly believed that the two diseases were essentially and totally distinct from one another, due to entirely different causes; and that to class them together in one category was to be guilty of a grave clinical error. Sir William Jenner had referred to the use of the word "diathesis" in connection with rickets, and had expressed his opinion that rickets ought to be included in the diatheses. He fully agreed with Sir William Jenner in this respect. For him, the word diathesis meant a condition of poor health resulting from any cause, and tending to manifest itself by special forms of disease; and under this definition rickets would certainly come. If the word were confined to the specific poisons, then, of course, rickets could not be included. He would ask Dr. Fagge whether there was any good reason why there should not be a class of diatheses due to defective nourishment, and in which would be included not only the rickety, but the scorbutic, tubercular, gouty, and leprous diatheses. All these might result from deficient food, defective food, or defective assimilation. Because we could not in every case find that there had been deficient food, we must not at once conclude that these cases were not due to malnutrition; for it was probable that in some instances there was a natural tendency to malassimilation of food. Dr. Fagge had quoted Vogel in support of the heredity of rickets; but this would not exclude its dietetic origin, for the tendency to gout was hereditary, and yet gout was greatly influenced by diet. If rickets were in some cases hereditary, it might be that the organs of assimilation were hereditarily weak. The arguments against the dietetic origin of rickets were doubly strong in connection with mollities ossium. But was it not possible that the latter disease was due to defective assimilation? Mollities ossium had been termed the rickets of adults, and Trousseau tried to show the connection between the two conditions; but in reality little or nothing was known of its real nature and relationship. No one had hinted that a liability to rickets extended throughout life. Trousseau said that both were cured by the same remedy—*i. e.*, by cod-liver oil; and he quoted cases of mollities ossium in which the patients were cured by this drug. This was strongly in favour of the disease being one of defective assimilation. Trousseau laid stress upon the oil being the *brown* oil; and he (the President) was strongly inclined to support him in this view, for he was by no means sure that the highly refined oils, so much used at present, had the same medicinal value as the old-fashioned brown oil. If rickets were looked upon as a diathesis, this did not shut out the influence of cold, bad ventilation, and other bad hygienic conditions in its production. He believed, then, that malnutrition was the main factor in the causation of rickets and of mollities ossium; and he would ask whether it was not possible to include all forms of bone-softening in one category, by referring them all to this cause. He could divide the symptoms of mollities ossium into the following classes: 1. Intra-uterine mollities—the so-called intra-uterine rickets; 2. Mollities ossium of infants—the ordinary infantile rickets; 3. Mollities ossium of adults—the disease known by that name; 4. Mollities ossium of pregnancy; 5. Mollities ossium of insanity; 6. Mollities ossium of senility. It was not difficult to explain why the conditions should be so much more common in infants than at any other period of life, because at that early period the child had absolutely no chance of selecting its food; if its mother's milk were defective, it had no chance of supplementing it; and, at an age when it required especial care in its nourishment, it must take just what was given. It was easy also to see why the disease at this period should have its special characteristics, such as the enlargement of the ends of the bones; because at that early period the epiphysal cartilages were undergoing rapid growth, and hence would be peculiarly liable to have their nutrition modified. Later in life, these cartilages disappeared, and hence we should not expect to find them affected. Dr. Fagge had referred to the nervous symptoms in rickets. It was a curious thing that, in certain forms of insanity in adults, mollities ossium was of frequent occurrence. It had been sometimes thought that this was due to some modification in the nervous influence over bone-nutrition. Might it not more probably be that the nervous modification and the bone-change were both due to the same cause, rather than that one was a cause of the other; and that this cause was defective assimilation? He believed that it was only the severer cases of rickets that were noticed, and that the great majority of slighter cases were unrecognised. From this it resulted that rickets was looked upon as a pathological entity; but, if the slighter cases were studied, it would at once become evident, not only that rickets was not a specific disease, but that it was not even a well-specified disease. The fact that rickets was present at birth did not prove its heredity, for the child had to derive its nourishment from the mother during fœtal life; and, if the mother were badly nourished, the child would tend to be so also. The child of a feeble mother was often healthy at birth, for the child seemed to have a power of drawing sufficient nourishment from a weak mother; but, after birth, when the child had to depend for its nourishment, not on a copious supply of maternal blood, but on a small supply of milk, of poor quality, it would often become rickety. In order to prove the heredity of rickets, it would be necessary to trace it to the influence of the father; and the only case of the kind that had come within his cognisance was the case of mollities ossium mentioned by him at the last meeting of the Society, in which a father suffering from this disease had had two very rickety children. It was, however, uncertain, in this case, whether there might not be other causes for the rickets. There was no *à priori* impossibility in the hereditary transmission of weak tendencies, which might culminate in the production of rickets.—Mr. LUCAS preferred to call the disease *dietetic* rather than *diathetic*. He believed that, in every case, there was insufficient, or altogether improper, diet; and that this was the cause of the distended abdomen constantly seen in rickety children. He had rarely found the liver much enlarged; but, both in rickets and congenital syphilis, the spleen was often large. Rickety children under nine months would generally be found to be bottle-fed; those over twelve months, to be breast-fed. He believed the condition might be hereditary, for there was always a tendency for conditions such as those produced by rickets to be transmitted from father to son; and, again, the children of rickety parents would be more likely to become rickety, under adverse circumstances, than those of healthy parents. He had seen a case in which rickets came on at the age of twelve years. He believed that in children who crawled the enlargement was greater at the wrist than at the ankles; the opposite being true of children who walked; but, even in these latter, the wrist was enlarged in consequence of their frequent falls. That the ribs were so much enlarged was due to the fact that they were constantly moving. Might not laryngismus stridulus be due to some pressure on the recurrent laryngeal nerves? There could be no doubt that the rickety head was enlarged. In seventeen cases of rickety children, whose average age was 4.72 years, the average circumference of the skull was 21.22 inches; whilst in healthy children, whose average age was 6.05 years, the average circumference was 19.95 inches. The skull was long, broad, and flat at the top, and there was a marked increase of width between the eyes, due to enlargement of the base. He believed that a protuberant occipital bone, with a hollow above, in an adult, indicated antecedent rickets.—Dr. BAXTER had made a synoptical table, based upon the examination of one hundred and twenty successive cases of rickets. He had examined into the age and health of the parents; evidences of phthisis, and of rickets in the family; number and health of the previous children in a family; circumstances and health of the mother during her pregnancy; surroundings amidst which the child had been brought up, especially the amount of sunlight; the previous diseases of the child, especially congenital syphilis; and the food. None of these supposed factors in the production of rickets had been found to bear any definite relationship to its occurrence, except the nature of the food. As regarded the position of the child in the family, in 19 per cent. it was the first child, in 13 the second, in 19 the third, and in 13 the fifth. Congenital syphilis was certainly present in 13½ per cent., doubtfully present in 12 per cent. In twenty-three cases of cranio-tabes there were evidences of syphilis in 75 per cent.; this observation was of especial value, because at the time it was made he had no idea that there was any connection between the two conditions. In 92 per cent. of his rickety cases, farinaceous food had been given for varying periods before the age of twelve months. In 42 per cent., it had been given from birth; in 30 per cent., at the age of three months; 4 per cent., between three and six months; and in 16 per cent., between six and nine months. In many of the cases, though not in all, the first onset of the disease dated from the time when farinaceous food had been first given. Of the cases in which farinaceous food had been given, the condition could, in several, be traced to maternal feebleness; in one case, the mother suffered from severe arthritis deformans. In only one case could no cause whatever be discovered. In consequence of this close connection between feeding with farinaceous food and rickets, he had made a number of experiments on young animals, including puppies, kittens, rabbits, guinea-pigs, and white mice, which he had placed on a diet of starch-jelly, with a variable amount of added milk. The animals had survived for various periods, not exceeding ten months—the starch-jelly, for the most part, passing through the intestines unaltered. In no single case had he found any characteristic lesion of rickets, the animals showing only the signs of inanition—the bones, like the rest of the body, being in a state of atrophy. It was possible the animals did not live long enough for the production of rickets. He had never seen spontaneous rickets in the lower animals; and he believed that the condition called rickets in them was quite different from human rickets. If the starch hypothesis were tenable, what was the *modus operandi* of its cause? It was conceivable that the starch might be changed

into some body acting as a poison in the system; but of this, there was no evidence. Did it pass through the intestines unchanged? Against this, was the absence of signs of inanition in rickety children. Sixty per cent. of his cases were well or richly, and 27 per cent. were moderately well nourished; but, as a rule, in all of the cases, plenty of cow's-milk had been given, as well as the starch. Where no milk was given, scurvy occurred, and not rickets. Another theory of the action of starch was, that it interfered with the assimilation of fatty matter. This was the most probable theory, and it was borne out by the great value of cod-liver oil in these cases. In reference to the occurrence of fœtal rickets, he had never seen or read of a case which appeared to be identical with the disease in infants after birth, nor did he think that post-infantile rickets was the same as the infantile disease. He thought that those who held the starch hypothesis of the origin of rickets might well refuse to abandon it, until it was positively proved that fœtal and adult rickets were identical with infantile rickets.—Dr. BARLOW described a case of so-called fœtal rickets. There was no family history of rickets. The neck was short and thick, and the limbs very stunted, the arms reaching only to the umbilicus, and the legs measuring five inches in length. The epiphyses of the humerus were greatly thickened, and were cartilaginous throughout; but their appearance was quite different from that of a typical rickety long bone. The radius was very oblique in its direction, and bent into an S-shape. The head of the femur was concave in the flexor aspect; there was an absence of the ossific centre in the lower epiphyses; and an invasion of fibrous tissue from the periosteum at the junction of the shaft and epiphyses. The ribs presented distinct nodosities; but instead of being at the junction of the ribs and cartilages, as in true rickets, these nodosities belonged to the bone, and consisted of a bony cup, which surrounded the end of the cartilage like a sheath. There was a similar cup at the vertebral end of the rib. There was complete ankylosis between the basioccipital and the basisphenoid. The condition in this fœtus differed from the rickets, as follows. 1. The epiphyses were enlarged generally; in rickets, it was the line of ossification only which was enlarged. 2. Fibrous tissue from the periosteum intruded between the shaft and the epiphysis. 3. The shafts of the bones were hard and compact; there was no thickening of the periosteum, or rarefaction of the medullary parts of the bones, such as occur in rickets. 4. The stunted growth of the shaft seen in this case was never seen in rickets. 5. The microscopical characters of the growing ends of the bones differed materially from those found in rickets. Eberth had shown that the conditions described in this case corresponded closely with those found in cretinous children.—Mr. SHATTOCK gave an account of nine cases in which osseous lesions were found in the fœtus. Of these, five were from the Museum of the Royal College of Surgeons, and three from St. Bartholomew's. In all these specimens, there were shortening of the limbs, curvatures of the bones, and, in most cases, synostosis of the basi-occipital and post-sphenoid bones. In those specimens in which the soft parts still remained, the facial characteristics of cretinism were seen, such as depression of the root of the nose, flattening and upturning of its tip, thick rounded alæ, etc.; and the general accumulation of subcutaneous fat, such as was recorded of nearly all cases of cretinism, was also present. The histological appearances of sections of the femur of the most typical of these specimens showed the line of ossification to be irregular; the cartilage-cells in front large, round or oval, and collected in groups without a serial arrangement. Calcification had extended irregularly into this cartilage without the production of primary areolæ; and the proper alveolar formation had been effected by excavation of the calcified cartilage by means of the advancing medullary tissue. Both Eberth and Muller described cretinism in the calf; and there was a fœtal bitch puppy in the Museum of the Royal College of Surgeons which presented the characteristic cretinous habit. These specimens, as a whole, exhibited much that was in a general way like rickets, viz., the shortness of the long bones, the comparative enlargement of their growing ends, their deformities of curvature, and the thickening of the flat bones. The essential error of nutrition would appear to consist in histological spoiling of the cartilage concerned in the ossification process, which failed to furnish a medium for bone-formation. And the histological accounts of such cases contained evidence of analogy between this condition and that of rickets; and a progressing rickets (for in all these cases the osseous substance had been found firm), but a sufficient analogy to render it probable that some such cases illustrated recovery from rickets, which had often already passed away *in utero*. Nevertheless, there were a very few cases on record in which the bones of the fœtus had been observed unusually soft; and in some of these (to judge from the multitudinous fractures recorded of them), it was less probable that the condition had been one of rickets than one of those as yet obscure forms of disease which rendered the bones fragile rather than flexible. As Dr. Crisp pointed out (at the first meeting for the debate) with relation to rickets, so it might be said, from similar comparative evidence, that cretinism, whether a sequel of rickets or a distinct condition, was not of necessity associated with syphilis. But that syphilis might be added to such a condition, was not to be denied; and there was evidence, perhaps, of this association in the first of the specimens noticed, where, besides the general changes common to all the cases, were superadded the marks of diffused peritonitis and cranio-tabes. But as to whether cretinism was a sequel of rickets or not, comparative pathology added no new knowledge. The facts in comparative pathology ran parallel with the human.—Dr. LONGHURST agreed with those speakers who had laid stress upon the importance of diet in the causation of rickets. He had attended syphilitic children largely, under conditions in which rickets was rare, and had very seldom found the two diseases to coexist. He thought that tubercular children were rarely rickety. He had noticed that children in mountainous regions were rarely rickety; but the same children, moved into towns, often became rickety.—Mr. SPENCER WATSON thought that if syphilis and rickets were identical, it was curious that in adult life it was not more common to meet with the teeth of congenital syphilis, associated with signs of rickets. He believed in the paramount influence of diet in the production of rickets. He quoted letters from several Indian medical officers in proof of the statement that rickets was very rare in India; and that, when it occurred in the children of soldiers, it was in damp climates, necessitating confinement in huts.—Dr. GOODHART said there were three views as to the occurrence of large spleen in rickets: 1. That there was none—which was abundantly disproved by *post mortem* experience; 2. That the enlargement was an integral part of the rickety condition; 3. That the enlargement and the rickets, though not necessarily associated, were due to the same cause. He inclined to the latter belief. The change in the spleen was one of chronic congestion, leading to a large increase of hyaline fibroid change, which, in extreme cases, might become contagious, and give rise to the glue-like appearance mentioned by Sir W. Jenner. The enlargement of the spleen was not common; he had only seen thirty-seven cases in eight years' experience. The condition of the spleen in congenital syphilis was quite different from that in rickets, being special to that disease. The blood in rickety children contained red corpuscles of several sizes, and much granular matter. Might not rickets be a blood-disease before it was a bone-disease? Modification in the blood might occur in fœtal life, just as it occurred after birth; and hence fœtal rickets might easily arise.—Dr. FAGGE very briefly replied, and the Society adjourned.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, DECEMBER 1ST, 1880.

DAVID LITTLE, M.D., President, in the Chair.

Hydatid Tumour of the Liver.—Dr. EDGE showed a boy, aged 4½, with hydatid tumour of the liver. It had lately been tapped by means of the aspirator, and appeared to be undergoing cure. The patient was shown on account of the acknowledged rarity of the disease in young children.

Local Atrophy of the Heart.—Mr. STOCKS showed the heart of a woman, aged 27, that had undergone local atrophy at the apex of the left ventricle, sufficiently to render its wall translucent to the extent of about a quarter of an inch in diameter. To the inner surface of this spot adhered a fibrinous clot about an inch long, irregularly conical, its apex floating loosely in the ventricle. The probable cause of this atrophy was want of nutrition, caused by the existence of only one coronary artery, which arose by two mouths in the aortic sinus nearest the pulmonary artery. The two short trunks immediately coalesced, forming one artery. This was considered to be a congenital malformation. The immediate cause of death was syncope.

Copaiba Resin as a Cure for Sciatica.—Dr. MARCH (Rochdale), who, a few months ago, called attention to the fact that copaiba balsam could cure cases of chronic sciatica of a severe kind, mentioned some instances to show that the resin of copaiba, a much more agreeable medicament, has the same power. He believed that this beneficial action was best seen when the disorder had become a pure neuralgia, having persisted after the removal of the exciting cause, whether this had been constipation, rheumatism, syphilis, gout, or anæmia. He, therefore, recommended that copaiba resin should not be administered till other remedies, specifically indicated, had failed to cure.

Conglomerate Mass from Stomach of Idiot, forming Cast of Cavity.—Dr. SHUTTLEWORTH exhibited a remarkable specimen, taken from the stomach of an idiot girl, who died in the Royal Albert Asylum, Lancaster. The patient, aged 10, was of low grade of intellect, and ill-developed physically. She had a voracious appetite, and had at times

been observed to swallow garbage. About a month before her death, she was noticed to be losing flesh, and she became very irritable. During the last fortnight of her life, she vomited occasionally after her dinner, but her breakfast and supper (consisting of milk-porridge) were usually retained. On the day before her death she had been well enough to walk in the grounds as usual; but, during the night, sickness occurred, and the next day she died of peritonitis. The *post mortem* examination disclosed the following appearances. The body was somewhat emaciated. The cranial and thoracic viscera were healthy. The abdomen was distended by gas. There were signs of recent peritonitis, with about half a pint of effusion. The stomach measured eighteen inches in length, from the cardiac to the pyloric extremity; it weighed thirty-one ounces, and was distended by an almost solid mass of vegetable fibres (straw, twigs, fragments of matting, thread, etc.), so interwoven and moulded, as to form a cast of the stomach and duodenum. The small intestine contained some chyme; the large intestine was full of fæces. Dr. Shuttleworth remarked that the case was interesting, as showing how, in an individual of low nervous organisation, obstruction of the stomach by a gradually increasing mass might for a long time be tolerated without any obvious symptoms of irritation. The obstruction, as shown by the state of the bowels, could not have been complete, and had probably resulted from the accumulations of a considerable period.

Chronic Atrophy of Stomach, with Extreme Dilatation and Superficial Erosion.—Dr. SHUTTLEWORTH said this specimen was interesting, as showing, like the last, how, in an idiot, extensive stomach-disease might exist without giving rise to active irritation. It was taken from an imbecile girl, aged 7, who died in the Royal Albert Asylum, after a residence there of three months. When admitted, she was noticed to have an abnormally large abdomen, and was said to be of costive habit. The abdominal distension appearing to be due to flatus, she was treated with carminatives, etc.; but her general health appeared good, and she took her food well. She did not suffer at all from sickness till the day before she died, when she "heaved" against her dinner. At night, she vomited several times, and died rather suddenly, as if from syncope. The following were the *post mortem* appearances. The body was fairly nourished. The cranial and thoracic organs were healthy. The diaphragm was pushed up to the level of the fifth rib. On opening the abdomen, the stomach was found immensely distended, globular in form, and almost as large as the child's head. The coats of the stomach were much attenuated; and internally, towards the cardiac end, there was a patch of blackish discoloration as large as the palm of the hand, studded with superficial ulcerations or erosion. There appeared to be some constriction of the duodenum by the head of the pancreas, but no other abnormality was observed in the bowels. In this case, the immediate cause of death would seem to be fatal syncope from encroachment of the stomach upon the cardiac space; there was some injection of the mucous membrane, and there had no doubt been some gastritis, but no tenderness was evident during life on palpation, etc.

Caries of Skull with Hernia Cerebri.—Dr. SHUTTLEWORTH exhibited the calvarium and brain of a girl, aged 19, who died in the Royal Albert Asylum, with a carious opening in the skull two inches in diameter, from which protruded a cerebral hernia, during life of the size of a small orange. The tumour sprang from the junction of the ascending frontal and superior frontal convolutions, the centre (according to Ferrier) of complex movements of the arms and legs; and it was noteworthy that, during the progress of the disease, the girl lost the power of dressing herself and of walking, though her general intelligence somewhat improved. The girl was of scrofulous family, but had no syphilitic history; and the affection of the skull, which commenced in March 1879, was not the result of violence or accident. Treatment by pressure with a leaden fillet, perforated with holes, at first repressed the hernia, and there seemed some prospect of the scalp closing over the aperture; but, epileptiform seizures supervening, this had to be abandoned. The girl lived till May 1880, fourteen months from the time the cranial affection showed itself, and then died, exhausted from abscesses which formed in several parts of her body, one being in connection with the anterior superior spine of the right ilium.

Nocturnal Incontinence of Urine.—Mr. WALTER WHITEHEAD drew attention to a surgical arrangement which he had found effectual in checking the nocturnal incontinence of urine in boys, when the infirmity had resisted the remedies in ordinary repute. The apparatus consisted of two parts; the first was a length of *bougie à boule* sufficiently long just to enter the bladder, and of a diameter suitable to each case, and not too large to make it difficult of introduction by the patient. The bougie was provided at the top with a silver band, to which was soldered two small rings, one on each side, to allow the attachment of silk cords for the purpose of retaining the bougie in the urethra. The second part of the apparatus was devised to obtain a fixed object to which the silk cords could be made secure, and thus prevent the escape of the bougie from the urethra. This was accomplished by attaching four tapes to four equally distant sections of an ordinary ring-pessary, made of India-rubber, and containing a circle of watch-spring. The penis and scrotum were passed through the centre of the pessary, and the tapes passed, two between, and round the thighs, and the other two round the back, and the four made to cross in front and behind after the manner of a spica-bandage, and the free ends tied in pairs on the two sides of the body. The rings in the pessary were then connected by a few inches of silk to two similar rings fixed in front of the pessary—one on each side. The bougie was recommended to be introduced when the patient was in bed, and removed before rising in the morning. It was found that boys of seven years of age could insert the bougie themselves; consequently no difficulty arose during the night, should the bladder require relief in the ordinary manner. Mr. Whitehead suggested that, as boys were more subject to nocturnal incontinence of urine than girls—the only anatomical difference in the two sexes that would account for this being that, in the female bladder, there was no sphincter proper, whereas in the male it was a prominent structure—it appeared most natural to conclude that a neurosis connected with this sphincter must be held responsible for the immediate cause of this distressing affliction; and that the stimulus of the bougie in contact with the sphincter maintained the integrity of its function during sleep, and thus prevented those moments of temporary abeyance of nerve-power which constituted the incontinence.

REVIEWS AND NOTICES.

HEALTH. By W. H. CORFIELD, M.A., M.D., F.R.C.P., Professor of Hygiene and Public Health in University College. Pp. 361. London: C. Kegan Paul and Co. 1880.

UNDER this monosyllabic title, Dr. CORFIELD has gathered together in one volume twenty lectures delivered by him at the rooms of the Society of Arts, under the auspices of the Trades' Guild of Learning and the National Health Society. The lectures are reproduced almost exactly in the words in which they were delivered, and thus have all the disadvantages as well as advantages attaching to oral utterances. The style is carefully adapted to the audiences before whom the lectures were delivered, being simple, even homely, and abounding with familiar illustration; but sentences which, perhaps, sound in a lecture-room forcible and picturesque, are apt to appear in print as crude and ungraceful. Whatever may be the manner of the book, however, its matter is of excellent quality. No new lessons are, indeed, inculcated; but old ones are taught in a way so plain and convincing, that he must be stupid indeed who fails to comprehend them. Whilst it is not possible to discover in the lectures anything that has not been said often before, yet the way in which the facts are grouped, and their meaning explained, is unusually skilful. The lectures seem naturally to divide themselves into two series: the one relating to the health of the individual; the other to the health of communities. Under the first head may be ranged the lectures on the general anatomy of the body, the bones and muscles, the circulation of the blood, respiration, nutrition, the liver and the excretory organs, the nervous system, the organs of the senses, and the health of the individual. Under the second may be ranged those on the air, lighting and warming, ventilation, foods and drinks, drinking-water, climate, houses and towns, small-pox, and communicable diseases. Both series are of their kind extremely good. From the first, the learner may get a very accurate general notion of the physiology of the body, and of the functions of its several parts. It would have been an advantage, certainly, to those who will study Dr. Corfield's book for information on this subject, if there had been drawings to illustrate the explanations in this part of the volume. For instance, a description — necessarily long — of the functions of the heart in the circulation of the blood is not easy to follow by an unlearned person—and for such the book is primarily intended—without a diagram or two to help him. The second class of lectures need no such adventitious aid; and they are at once concise and complete. The scope of the book may be very well gathered from the titles of the lectures. As an introduction to the study of hygiene, both public and private, and as a model for those local health-lectures which are greatly needed, and for which Canon Kingsley used to argue strongly, it may fairly appeal to a large circle, both of professional and of unprofessional readers.

STAFF-SURGEON GARLAND W. L. HARRISON (1870) has been promoted to the rank of fleet-surgeon in Her Majesty's Fleet, with seniority of the 7th December.

NOTES ON BOOKS.

Medical Book-keeping on the A B C System. B. Allsop, Saltaire, Yorkshire.—Probably, there is nothing which is a greater bugbear to the principal, his assistant, or it may be his wife, than the existing system of medical book-keeping, which entails a large amount of labour and expenditure of time on either of the three who has to carry it out. In a large practice, such time may be estimated by weeks; therefore, any modification of such system, whereby the labour is minimised, will be hailed as a boon by the busy general practitioner. The firm above mentioned has forwarded to us proof-sheets of a new form of day-book and ledger, which have been suggested by a medical gentleman in extensive practice, and appear to us to meet the want required. The day-book is ruled for a month. The names of all patients are entered on this sheet as they arise, and, by a system of simple symbols, which every medical man may arrange for himself, those who require attendance, who have been visited, who have been prescribed for, etc., may be readily entered, and carried forward to the column at the end of the month, where the gross amount debited to them may be at once taken to the ledger, and entered in the proper column or space; this latter is ruled for four years, so that the patient's name need not be entered more than once during that period, and is arranged in divisions of six months, so as to meet the views of those who send out their accounts half-yearly. In carrying forward from the day-book, all that is necessary to do is to extract therefrom the amount of attendances, etc., during the month or months, as might have taken place. The special advantage of the system is, that the aggregate number of attendances, and the amount of the account, can be got at, with the smallest expenditure of time and labour. We therefore confidently recommend the scheme to the notice of general practitioners. Messrs. Allsop will, on application, forward descriptive information as to their new system, and will, if desired, interpolate spare leaves for prescriptions, etc.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

WHOLE MEAL FLOUR.

A VERY active movement is in course of introduction into general use, of completely ground whole meal flour. The objection to this form of whole meal flour is the colour of the bread which it makes, and the relative heaviness, due, probably, to the increased quantity of silicates, and the grinding up of the hard husk with the white meal. We have already called attention to the greatly improved method of producing a fine white flour containing the entire nutritive properties of the wheat, introduced by Professor Horsford, and which is now being largely sold by Messrs. McDougall, 10, Mark Lane, London, under the name of McDougall's patent self-raising flour. The phosphates removed by the ordinary process of milling, and in the removal of the bran, sharps, and middlings, are restored; while the fine colour and flavour which makes bread and pastry acceptable to the English eye and palate are retained. The nutritive value of the flour is increased ten per cent. by this method, and it is, in our belief, much more likely to take the public taste than flour milled with the husk and external coating of the grain.

STALYBRIDGE.—The "annual report" for this district—which is, in fact, nothing more than a commentary on the death-statistics—is for the twelve months ended March 20th, 1880. It cannot be too often insisted upon, that annual reports should be made up to the end of the calendar year; otherwise they become valueless for statistical purposes, especially when they are made up to such an arbitrary date as this. In the period reported upon, there were 760 births and 491 deaths in the borough. Mr. Roberts-Dudley seems to be easily satisfied with his figures; for he says that "only 45" of the total number of deaths were from zymotic diseases, and "only 118" deaths out of the same number were amongst children under one year of age. Both these proportions are unduly high, and deserved special consideration in the report. It would be well, too, if future annual reports gave more particulars about the sanitary state of the district than the half-dozen lines stating the number of notices served by the inspector of nuisances during the year.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 25TH, 1880.

WE would beg the attention and kindly consideration of our readers and subscribers to the suggestion which will be found in another column, of Christmas offerings to the British Medical Benevolent Fund, one of the most valuable institutions of the kind connected with the profession, and one in which the members of the British Medical Association will always feel a particular interest. We should be glad to bind more closely the ties which associate the British Medical Association with this valuable and beneficent organisation, and with that view shall be glad to publish from week to week lists of contributions. We hope during the ensuing year to be able to devise some plan by which the connection between our Association and the British Medical Benevolent Fund may be made much more fruitful in good, much more extensive, and much more productive than it has been of late years. With that view we shall at the earliest opportunity publish a list of contributions, and shall be happy from time to time to find space for further lists. We hope that the Christmas offering may show that the hearts of our associates are at this season inclined to mercifully consider the wants of those whose physical sufferings prevent them from sharing its happy influences, but whose sufferings may be mitigated and soothed by the free-will offerings of those who can give freely of their abundance, or who, with yet more gentle self-denial, can spare something from their more modest competence to gladden the hearts of the sick, the distressed, the widowed, and the orphan. The good gifts of the British Medical Benevolent Fund are distributed with the utmost discrimination, and without any office expenses, by an organisation which consists almost exclusively of voluntary workers.

DISTRICT, CRIMINAL, AND PRIVATE LUNATIC ASYLUMS IN IRELAND.

THE disturbed and anarchical condition of Ireland generally is likely to withdraw attention from many important social reforms. And yet it may be well to keep these reforms in view; for some of them may be accomplished during the settlement that must follow the present agitation; and the necessity for them will certainly become more urgent whenever tranquillity is restored to the country. Social convulsions break through those "silken chains" by which much of "strong madness" is fettered in all highly organised communities; and mental wreckage is the inevitable sequel of popular storms. It is to be anticipated, therefore, that a large increase in the number of lunatics will have to be dealt with whenever the present troubles are assuaged; and that the asylums which are at present, the inspectors tell us, overcrowded in the proportion of twenty, and even forty, per cent., will be utterly inadequate to meet the requirements of their districts. Rearrangement will then become imperatively necessary; and, with rearrangement, may well come the redress of grievances, and the rectification of errors—not, we trust, on the lines indicated in the report of the Poor-law Commission of two years ago, but rather in such a manner as will assimilate the Irish lunacy system to that of England. Irish asylums should be made into hospitals more and more; their responsible management being entrusted to their medical superintendents, aided by competent medical assistants; the diet and clothing of their inmates should be regulated by a regard,

not so much to the food and raiment of the peasants of the localities in which they are placed, as to the reasonable requirements of sick and afflicted persons; party feeling and the reporters of local newspapers should be eliminated from their committee-rooms; and a strong board, commanding public and professional confidence, should be formed in Dublin, to supervise them and watch over their interests. The Inspectors of Asylums have, doubtless, exercised a very salutary influence on these institutions in the past; but it seems to us that a regularly constituted Board of Commissioners in Lunacy is as desirable in Ireland as in England and in Scotland; and that the formation there of such a board, composed of experienced men, would lead to very valuable results. Lunacy, which involves special medical and scientific considerations, ought to be kept apart from pauperism, on the one hand, and from crime, on the other; but this will scarcely be possible, unless a board of the kind we have indicated be formed. There are now 12,819 officially recognised lunatics in district, criminal, and private asylums and union workhouses in Ireland; and their interests and welfare may very properly engage the attention of a special department of the public service. This truth is, we think, brought out very clearly in the Twenty-ninth Report of the Inspectors of Asylums in Ireland, which has been published recently.

Much interesting information is contained in this report, and an earnest desire for the welfare of the insane is discernible throughout it; but, unfortunately, we cannot speak in favourable terms of its style or scientific pretensions. We have rarely, if ever, perused a public document, presented to Parliament, which was composed in so slipshod a fashion as this Irish report, or which embodied more debatable matter. Many of its sentences are unintelligible; many are ungrammatical; many are so involved as to require repeated reading for the extrication of their meaning. Its reflections have the twang of the headings in a child's copy-book, and its conclusions are unaccountable. We should be glad to know what is to be made of the following sentence:

"Taking the relative ages of the whole into consideration, a distinct and progressive contrast is noticeable, one, too, of a satisfactory character, for, enumerating, on the one hand, the simply idiotic, and the idiotic or imbecile labouring under epilepsy, those under thirty years amount only to 500 between both sexes, while those over that age reach 1,198." And not less baffling is the following: "There can exist no doubt, even after making every allowance for the irresponsibility of lunatics, that where deeds of violence, particularly if eventuating in the death of our fellow-creatures, are perpetrated, a deep and just public prejudice prevails against the commixture of the innocent insane with those designated criminal, *not* but that dispassionately and professionally inquiring into the particulars of each case, in very many, and even the most painful, the deed may be regarded as simply indicative of the delusion which led to its perpetration." These are by no means singular or extreme instances of incomprehensible entanglement of language. From many pages of the report, similarly knotty constructions might be quoted, or examples of grammatical blunders like that contained in the following complete sentence. "The charges incidental to the maintenance of the poor being so complex, and embracing so many varied items of outlay, that however accurately made out, it would be all but impossible to apportion the cost to a nicety of any individual group."

But the science of the Inspectors is as extraordinary as their literature. Their notions of pathology are revealed in their reference to the case of a criminal lunatic, in whose brain no gross morbid appearances were discovered on *post mortem* examination. "In this instance", they remark, "it would seem that the malady was solely dependent on a disordered action of the mind, or, according to Reid, 'of that which in man thinks, feels, and reasons', without the coexistence of any cerebral or bodily disease whatever". After such a profession of faith, we are not surprised to find them enlarging on what they call "occult influences", respecting which their ideas are thus lucidly and beautifully expressed. "As in the development of physical diseases locality would seem to exercise some *occult* influence, or at least one not admitting a definite explanation, so a not unlike analogy obtains in regard to mental disorders, of which some notable instances may be adduced. The Clonmel District Asylum contained, at the close of the year, 394 lunatic inmates, of whom 94, or all but a fourth, were within the degree of second cousinship." Interspersed with such sage observations, are many excellent maxims, which might have been culled from *Proverbial Philosophy*. Thus, the Inspectors think it incumbent on them to inform Earl Cowper, in the familiar language of Pope, that "the proper study of mankind is man", and to remind him that "discontent is the companion of idleness". The latter reflection, however, seems to be only partially correct; for their official experience, recorded in another part of the report, must have satisfied them that discontent is also the companion of compulsory industry and forced labour. Speaking of a class of prisoners in Irish gaols, they say: "Tired of prison life, both males and females belonging to this section render themselves so obnoxious in gaol, that they are certified, from their unaccountable behaviour and contempt of punishment, to be insane." With true Irish inconsistency, however, these refractory persons are not a whit more amenable when relieved from prison discipline. "They are no sooner settled down in the asylum", continue the Inspectors "than they assert their sanity; and on our visits of inspection, twice or thrice in a month, never fail to demand a return to penal servitude as their right." Some people will regret that their constitutional privileges should be withheld from them; but the inspectors are evidently not inclined to sanction their return to that penal servitude which they so highly value, and propose to devise for them an intermediate state, which shall be in perfect harmony with their idiosyncrasies. "In either locality (gaol or asylum) they are, in great measure, out of place", observe the Inspectors, "so much so, that at the request of Mr. Burke, the Under-Secretary, we are about to discover, if possible, some suitable abode for them." Much interest must be felt in the voyage of discovery which has thus been undertaken; and the suitable abode for criminal agitators, when it is found, will be regarded with considerable curiosity.

The Inspectors of Irish asylums seem to be themselves, in some measure, aware of the shortcomings and eccentricities of their report to which we have called attention, and which are too glaring to be overlooked. Somewhat apologetically, they comment on the manner in which the ingenuity of the compiler of a report is taxed to vary the phraseology, and avoid repetitions, after he has been engaged in writing reports for thirty years. We would assure them that novelties of style and startling effects are not expected in the reports of departments of the public service; and that the simplest and baldest statement of facts would have been preferable to this remarkable medley which they have presented to the Lord Lieutenant.

INNERVATION OF THE HEART IN THE VERTEBRATA.

M. VIGNAL has recently communicated to the Biological Society of Paris the results of investigations which he has been making into the nervous supply of the heart in the vertebrata. At the meeting of the Society on October 30th, he (M. Vignal) made known the following facts concerning the nervous system of the heart of the European tortoise. The nerves of the heart of the tortoise accompany the superior venæ cavæ. They divide into several small branches, at a distance of five *millimètres* from the sinus of these veins. At that point are a large number of unipolar ganglion-cells placed laterally. The cardiac nerves reach the sinus; they divide again, and anastomose, thus forming a rich plexus giving off several branches. The branches of the plexus are entirely covered by ganglia, varying in form and size, some composed of two or three cells, others of one hundred or two hundred. These cells are of two kinds: bipolar and unipolar. The cardiac nerves give off branches to the sinus, which form a plexus on the posterior surface and sides of the auricles. This plexus sends very fine branches to terminate in the muscular fibres of the auricles. Finally, on the upper third of the ventricle, a third plexus anastomoses with the two described, and gives

off branches to the muscular fibres of the ventricle. The posterior portion of this plexus presents a large number of small ganglia, composed almost solely of bipolar cells; unipolar cells are rare. The ganglia of the ventricle of the heart of the tortoise are motor; those of the auricles inhibitory. The ventricular ganglia, when not stimulated, are incapable of determining contraction of the ventricles, but this contraction takes place when the ganglia are under the influence of external stimulus. The auricular ganglia unaided determine contraction of the auricles; but under the influence of external stimulus, the inhibitory ganglia have full sway and the contractions cease. The ventricular ganglia being principally composed of bipolar cells, and the auricular ganglia of unipolar cells, likewise those of the sinus, the bipolar cells must be regarded as motor, and the unipolar as inhibitory.

At the meeting on November 19th, M. Vignal made known the results of his researches on the nervous system of the rabbit. They are as follows.

1. Numerous small branches, composed almost solely of non-medullary fibres, with a few medullary, are given off from the cardiac plexus, and form round the base of the pulmonary veins a close and complicated network. This plexus is situated between the layers of the muscular fibres of the auricles. It spreads over their entire surface, and that of the auricular processes. Ganglia present themselves on small branches, especially on those near the pulmonary veins. These ganglia are each composed of several hundred cells. The cells which form the ganglia are of two kinds; the most numerous have one nucleus and one process; the other two nuclei and two processes apparently present all the distinguishing features of the sympathetic cells of the rabbit. Several nervous branches, given off by the portion of the auricular plexus near the pulmonary veins, contribute to the formation of the right and left coronary plexus. Other ganglia, composed of only a few cells, are observed in the superior portion of the two coronary plexus, at the base of the ventricle, in the auriculo-ventricular sulcus. The cells which compose these ganglia are all unipolar with one nucleus. M. Vignal affirms that, in the course of his investigations on the nervous system of the rabbit, he has not seen a single cell in the auriculo-ventricular ganglia presenting the distinguishing features of the ganglion-cells of the sympathetic system; nor has he observed ganglia, similar to those which Remak has described, in the coronary plexus of the heart of the calf.

2. M. Ranvier has demonstrated that the greater part of the cells of the ganglia of the auriculo-ventricular sulcus, also those of the auricular septum of the heart of the frog, are composed of spiral fibres. These spiral fibres seem to be characteristic of the sympathetic cells of the frog. The ventricular ganglia (Bidder's ganglia), on the contrary, contain very few cells with spiral fibres. If the auricles be separated from the rest of the organ, and an external stimulus be brought to bear on them, they cease to pulsate; thus the auricular ganglion-cells are inhibitory. If the ventricle, with its ganglia (Bidder's ganglia), be cut off from the auricles, its contractions, arrested under the influence of external stimulus, are resumed. These phenomena indicate that ventricular ganglion-cells are motor. The nervous system of the heart of the rabbit also presents two kinds of cells: those of the sympathetic system, and those of the cerebro-spinal system. The differential features of these cells are more easily observed on the rabbit than on the frog. If the ventricle of a rabbit's heart be cut off from the auricles—the line of section being the auriculo-ventricular sulcus—and its contractions be reproduced when under the influence of a stimulus, we are authorised to believe that the cells with one nucleus—that is to say, the cells of the cerebro-spinal system—are motor; also, as a stimulus arrests auricular contractions, we are authorised to believe that the cells having two nuclei—that is to say, the cells of the sympathetic system—are inhibitory cells. In order to verify these deductions, M. Vignal divided the spinal cord of a rabbit at the level of the third dorsal vertebra, in order to lower the temperature of the animal, and thus experiment on its heart, as on that of a cold-blooded animal. The results of this experiment were not fruitful, although the animal's temperature was lowered to that of the surrounding atmosphere. When the ventricle was separated from the auricle, its contractions ceased almost instantaneously, and it was impossible to reproduce them. Auricular contraction lasted so short a time, that observation was out of the question. The only phenomenon M. Vignal observed—and this he considers open to objection—was the almost instantaneous arrest of cardiac contractions, consequent on the ligature of the pulmonary veins.

3. In conclusion, M. Vignal declares that, notwithstanding the failure of the experiment, he considers the cells with two nuclei to be inhibitory cells; those with but one, to be motor; and adds that, although his researches are as yet incomplete, he may affirm that the distribution of the cardiac ganglia of the cat, the dog, the pigeon, the sheep, and, finally, man, differs but slightly from that of the rabbit.

FOOT-AND-MOUTH DISEASE AND CREMATION.

THE outbreak of foot-and-mouth disease, recently reported, calls the attention of our sanitary authorities to the advisability of adopting the cremation rather than the burial of diseased cattle. Pasteur has shown that the soil of fields where cattle dying of "charbon" or splenic fever have been buried remains permanently infected with the disease, and becomes at any moment the origin of new outbreaks. Mr. Spencer Wells recently pointed out, in his paper at the last meeting of the British Medical Association, the observations of our own Darwin "on the formation of mould", made more than forty years ago, when he was a young man, are curiously confirmatory of the recent conclusions of Pasteur. In Darwin's paper, read at the Geological Society of London, in 1837, he proved that, in old pasture-land, every particle of the superficial layer of earth, overlying different kinds of subsoil, has passed through the intestines of earth-worms. The worms swallow earthy matter, and, after separating the digestible or serviceable portion, they eject the remainder in little coils or heaps at the mouth of their burrows. In dry weather the worm descends to a considerable depth, and brings up to the surface the particles which it ejects. This agency of earth-worms is not so trivial as it might appear. By observation in different fields, Mr. Darwin proved, in one case, that a depth of more than three inches of this worm-mould had been accumulated in fifteen years; and, in another, that the earth-worms had covered a bed of marl with their mould in eighty years to an average depth of thirteen inches.

Pasteur's recent researches on the etiology of "charbon" show that this earth-mould positively contains the specific germs which propagate the disease; and that the same specific germs are found within the intestines of the worms. The parasitic organism, or *bacteridium*, which, inoculated from a diseased to a healthy animal, propagates the specific disease, may be destroyed by putrefaction after burial. But, before this process has been completed, germs or spores may have been formed which will resist the putrefactive process for many years, and lie in a condition of latent life, like a grain of corn, or any flower-seed, ready to germinate, and communicate the specific disease. In a field in the Jura, where a diseased cow had been buried two years before at a depth of nearly seven feet, the surface-earth not having been disturbed in the interval, Pasteur found that the mould contained germs, which introduced by inoculation into a guinea-pig, produced charbon and death. Further, if a worm be taken from an infected spot, the earth in the alimentary canal of the worm contains these spores or germs of charbon, which, inoculated, propagate the disease. And the mould deposited on the surface by the worms, when dried into dust, is blown over the grass and plants on which the cattle feed, and may thus spread the disease. After various farming operations of tilling and harvest, Pasteur has found the germs just over the graves of the diseased cattle, but not to any great distance. After rains, or morning dews, the germs of charbon, with a quantity of other germs, were found about the neighbouring plants; and Pasteur suggests that, in cemeteries, it is very possible that germs capable of propagating specific diseases of different kinds, quite harmless to the earth-worm, may be carried to the

surface of the soil, ready to cause disease in the proper animals. The practical inferences in favour of cremation are so strong, that, in Pasteur's words, they "need not be enforced."

LEGISLATION FOR DENTISTS.

Although the Bill for regulating the practice of Dental Surgery has now been in existence for two years, still very little is popularly known as to its character, or the way in which it affects the general public. It is a measure of considerable public importance, and in many points resembles the earlier Acts passed for the better organisation of the medical profession. Prior to 1878, anyone and everyone, who chose, was at liberty to call himself, or even herself, a dentist. After Sir John Lubbock's Bill became law, it was necessary for all these practitioners to apply to the General Medical Council, and give such particulars as were necessary for the publication of a Dental Register: this register is issued by the Council every year, and eighteen hundred and fifty-six copies are sent all over the United Kingdom, to be deposited in the various local law courts. This is necessary for the purposes of justice, as no dentist can now recover a fee for professional services, unless his name be on the Register, whilst the annual publication of the list is rendered necessary, in order that those who may be concerned in a case can ascertain whether any particular person has had his name removed from the Register, by order of the General Medical Council. Such is a contingency not at all unlikely to arise for the next year or two, as it is no secret, that a number of names that should never have appeared, have found a place on the list. All these irregularities are of course inevitable in the first working of a new Act, but they will soon be remedied, and the public placed in possession of a Register, that will be subject to but slight alterations from year to year. This compulsory registration, though of extreme value as a means of recording the names and addresses of all legal practitioners, is by no means the most important part of the Act. The clause rendering a proper education essential for all dental students is likely to prove of far greater importance, as it will give an annual supply of well educated dental surgeons to fill the places rendered vacant by the death or retirement of the senior members of the profession. It is not necessary to enter into the details of the prescribed curriculum, but it is of a nature very similar to that which is essential for the ordinary medical student, only those changes being made, which are essential to the special requirements of the dental surgeon. The licences in dental surgery granted by the various Colleges of Surgeons in the United Kingdom, must henceforth bestow upon their possessors a definite and valuable professional position, and the public will learn by a reference to the Dental Register who is possessed of this diploma, and also who may be practising simply under the claim to be admitted to the roll of dentists, as having commenced practice prior to the passing of the Act. So far, Parliament has done its share of protective legislation, guarding the patient on the one hand from the unscrupulous charlatan, and the dental surgeon on the other, from necessary association with ill-educated or totally uneducated pretenders to professional skill. It must, however, after all, rest for a while with the public to exercise that intelligent discrimination in the choice of a dentist which can alone make the operation of the Act thoroughly useful and efficient.

NERVE-STRETCHING IN LOCOMOTOR ATAXY.

Hitherto, little success has attended the employment of the various therapeutic measures designed to arrest the progress or relieve the symptoms of locomotor ataxy. Of all its symptoms, the most urgent in their demand for relief are the darting pains which characterise its early stages, and frequently accompany its entire evolution.

Encouraged by the success which has followed the operation of nerve-stretching for neuralgias of various origins, Langenbeck, more than a year ago, stretched both sciatic nerves, and afterwards both crurals, with the result not only of obtaining complete disappearance of the pains, but also cessation of the motor inco-ordination. A second case was reported by Esmarch, who stretched the nerves in the axilla for pains in the forearm; and, in this case, too, the motor inco-ordination disappeared completely. A third case has been published by Erlenmeyer, in which stretching both sciatic nerves failed to influence beneficially either motion or sensation.

A fourth case was shown recently to his class by M. Charcot, at the Salpetrière, an account of which is published in *Le Progrès Médical* (No. 50). The patient was under the care of M. Debove. He was in an advanced stage of the disease, having been bedridden for eighteen months. The pains were very severe, preventing sleep, situated in the upper as well as the lower extremities; and had required constant injections of morphia, in large doses. The motor inco-ordination was limited to the lower extremities; the patient could not stand at all. The patellar reflex was absent on both sides; there was extreme myosis, without visual defect, in both eyes. Cutaneous sensibility was deadened; there were no anæsthetic patches. There was loss of the sense of the position of his lower limbs. The left sciatic nerve was selected for operation, on account of the pains being more severe on the left side. It was exposed in the middle third of the posterior aspect of the thigh, and violently and suddenly elongated. The wound was dressed antiseptically. The operation was performed without chloroform, as experiment has shown that pinching a nerve violently causes momentary arrest of the circulation and respiration; and it was feared that this arrest might be dangerous to a patient under chloroform. However, the patient did not suffer much pain, owing to the extent to which he was saturated with morphia. The results were very remarkable. The darting pains had ceased completely, and the motor inco-ordination had nearly disappeared; but the tendon reflexes and the myosis remained unaltered. The patient could touch M. Charcot's hand with either foot when held a couple of feet above his bed; and, when assisted, could stand upright, and even walk a few paces.

M. Charcot remarked that we do not know how this operation effects this result; but this matters little. The point of importance is, that nerve-stretching appears likely to be an operation of much service to the unfortunate sufferers from ataxy.

At a recent meeting of the Kensington Vestry, it was stated that the guardians had refused to consent to a public mortuary being erected by the vestry on their land at Notting Hill, and it was resolved to take steps for the purpose of constructing a mortuary in the parish churchyard, at the rear of the Town Hall, with the consent of the churchwardens.

At a meeting of Guy's Hospital men, recently held at 2, Mansfield Street, it was resolved that a testimonial be presented to Dr. Habershon and Mr. Cooper Forster—subscriptions limited to one guinea—on their retirement as senior physician and senior surgeon to Guy's Hospital. The secretaries are Mr. Henry Morris, 2, Mansfield Street, W.; and Mr. Frederick Durham, 38, Brook Street.

We are requested to mention that, at a committee meeting of University College Hospital, it has been resolved to throw open the well organised and complete baths of that institution on two days a week to the public, on payment of a stated fee. Patients bringing a written recommendation from a medical practitioner will be allowed the use of the mercurial, sulphur, and other baths, on payment of a charge of 2s. 6d.

It has not unfrequently been observed that the disturbance of old and filth-sodden soil for sewerage or other purposes has been followed by an explosion of infectious disease; the germs that had been lying latent in the earth being apparently awakened to new vigour by contact with the upper air. An instance of this kind is reported from Vera Cruz, in Mexico, where yellow fever has recently been prevalent. It is stated that the city was entirely free from this disease until the pavements were torn up to repair a street-railroad—a belt half a mile long by twelve feet wide—through the centre of the city. Simultaneously with the commencement of that work the disease appeared.

SCARLATINA IN THE HUNTINGDON DISTRICT.

DR. H. F. PARSONS has presented to the Local Government Board a report on a very extensive prevalence of scarlatina in the Huntingdon sub-district in the early summer of this year. The district has for several years been without any noticeable prevalence of the disease; so that a large proportion of the younger children were, at the commencement of the epidemic, unprotected against it by a previous attack. Hence, when scarlatina had once established itself, it would tend to spread for a while in geometrical progression, each infected house becoming a centre of origin to others, until the more susceptible individuals had passed through the disease. The earliest cases at Huntingdon appear to have been amongst children attending the British School in the spring; and, in April, the disease began to spread widely through the town. The fever was at its greatest prevalence in June; and, up to the end of August, about two hundred and fifty cases had occurred, fourteen of which were fatal. Meanwhile, it had been imported into the adjoining district of Godmanchester; where, up to the same period, about eighty cases had occurred, with ten deaths. The extension of the disease is, no doubt correctly, ascribed mainly to personal and unchecked intercommunication between the sick and the healthy. In some cases, families living near together were attacked soon after each other, the children being known to have played together or visited each other's houses. The greatest prevalence of the disease was, in certain streets, lanes, and courts, inhabited by labouring people, and in a bad sanitary state. The unwholesome conditions of the neighbourhood probably assisted in the spread of the disease, and must certainly, if it should occur, place the patient under circumstances less favourable to recovery. The steps adopted to prevent the spread of the epidemic seem to have been of a very inefficient kind. Handbills were issued giving directions as to isolation and disinfection, and setting forth the penalties of exposure of infected persons or things; but no proceedings were taken against those who infringed the law in this respect, nor were fumigations at all generally employed. At Huntingdon, the authority possess a building (imperfect and out of repair, it is true, but still better than nothing) for the isolation of infectious disease; but no use was made of it during the recent epidemic, although it must be presumed that there were many cases in which hospital isolation would have been advantageous. Moreover, it is recorded that a tradesman in whose house a lodger was ill of scarlet fever, spent a whole day in trying to find out whether he could get the young man removed to any hospital; and when, at last, he found out that, in order to obtain admission to the Corporation Hospital, he must make application to the town clerk, the patient was too ill to be moved.

SCARLATINA AT SUNDERLAND.

SCARLATINA has lately begun to be excessively prevalent at Sunderland, where, indeed, the mortality from this disease has, for the last five years, been steadily increasing. In a recent report to the Health Committee, Dr. Yeld refers to the causes tending to propagate and spread the disease, which may, he thinks, be divided as follows: 1. The non-isolation of the first case appearing in a family: 2. The indiscriminate intercommunication of the healthy with the sick: 3. Children being allowed to attend school and public places of resort during the convalescent stage of the disease, and very frequently wearing the same clothes that they wore during the period they were suffering from the disease: 4. Children attending school from infected houses: 5. Children being allowed to attend funerals, and even to view the bodies, of those who have died from the disease: 6. The transmission of infected clothing and bedding from one house to another: 7. The want of early information of the outbreak of the disease in any house being forwarded to the local sanitary authority, the earliest information received being, in the vast majority of cases, that from the registrar of deaths. In speaking of isolation, Dr. Yeld attempts, with but imperfect success, to justify the pitiable disproportion between the number of cases isolated at the Borough Hospital and the number of deaths. Whilst there have been, in the last three years, seven hundred deaths from scarlatina in the borough, only sixty-eight cases of the disease were, during that period, received into the hospital. Dr. Yeld observes that "everyone knows that the 'House of Recovery' was not built for the special purposes of a hospital; and that it was an old mansion purchased, and converted as far as practicable into a hospital". He admits that "the hospital is not what an infectious hospital ought to be for a town like this"; but he thinks "it can scarcely be expected that the local authority will pull down and rebuild, and incur a heavy charge upon the rates, until medical men, and parents and others, are fully alive to the advantages to be derived from the isolation of infected persons, both by themselves and the public". This is, as it seems to us, not the right way to look at the matter. It is for the sanitary authority to encourage, and, where needful, to compel, isolation of patients in hospital when they cannot be treated at their own homes with safety to their neighbours; and to leave the initiative to others is distinctly what the authority should not do, if it really desire to afford proper isolation-accommodation for its constituents. It is to be hoped that, in view of the recent increased prevalence of scarlatina in the borough, the Health-Committee will reconsider its present position, with a view to making isolation in hospital more popular to, and more generally adopted by, the inhabitants of the town.

OPENING OF THE BIRMINGHAM MEDICAL INSTITUTE.

THE spacious and beautiful buildings in Edmund Street, Birmingham, which have just been completed, and which have been designed as the home of the Birmingham Medical Institute, were formally opened on Friday, the 17th instant, by the Mayor of the town (Alderman Chamberlain), at a crowded meeting of members and subscribers, held in the large library of the institution. The chair was occupied by Mr. D. W. Crompton, Consulting Surgeon to the Birmingham General Hospital, to whose untiring efforts the successful establishment of the Institute, and the completion of its buildings, are in large part due; and an address was delivered on the occasion by Dr. Risdon Bennett, President of the Royal College of Physicians. In an admirable and scholarly discourse, Dr. Bennett insisted upon the importance of literary culture in the training of the medical practitioner; pointed out the characteristics of a good public medical library; enlarged upon the various objects which the Institute is designed to fulfil; and dwelt upon the advantages of formal discussions amongst bodies of practitioners upon professional topics, and especially upon practical therapeutics. After the meeting, the orator of the day was entertained at a dinner in the Grand Hotel, at which about seventy persons, including the mayor and other leading citizens, were present; Mr. Crompton occupied the chair, and the vice-chairs were filled by Dr. Wade and by Dr. Underhill of West Bromwich. The Institute is opened practically free from debt. It affords to the profession a well stocked lending and reference library of medical literature; a reading-room, well supplied with British and foreign periodicals, and ample accommodation for the meetings of the local medical societies. Members pay an annual subscription of one guinea. The honorary secretaries are Mr. Priestley Smith and Mr. W. G. Archer.

HOSPITAL SUNDAY FUND.

THE annual general meeting of the constituents of the Hospital Sunday Fund—that is to say, the minister and two lay members of each contributing congregation—was held at the Mansion House on Monday last. The Lord Mayor presided. He congratulated the meeting on the great success of the fund last year, and hoped that, in his term of office, it would be equally well supported. The report showed that the fund amounted last year to £30,423, being the largest collection since its institution in 1873, and that the number of contributing congregations was increased by forty-nine. To eighty hospitals, £26,646 had been awarded; to forty-six dispensaries, £2,443; and £300 had been set apart for the purchase of surgical appliances. The working expenses amounted to 3½ per cent. The Bishop of London, in moving the adoption of the report, said he joined in the general satisfaction at the

success of the fund. At the time of its institution, eight years ago, there were many doubts as to whether it would answer. All doubts had been dispelled, and, throughout the metropolis, the fund had been supported with an amount of unity as encouraging as it was unexpected. Of its continued prosperity, also, there was no doubt, for the fund last year collected £3,000 more than when it was first started. He believed that the hospitals and dispensaries were satisfied with the amounts awarded them, and he rejoiced that, among all religious denominations, there was the greatest unity in regard to the fund. The Rev. Professor Marks seconded the resolution, and read a letter from the Chief Rabbi promising, as heretofore, the liberal help of the Jewish congregations. The resolution was adopted unanimously. On the motion of the Rev. Canon Spence, seconded by the Rev. Dr. Rigg, it was ordered that, in future, 2 per cent. instead of 1 should be set apart from the fund for the purchase of surgical appliances. At the instance of the Rev. W. P. Cope, it was referred to the council to consider the expediency of framing a scheme which should enable surgical aid and kindred societies to participate in the benefits of the fund. The names of the Rev. Daniel Moore, the Rev. R. Rhodes Bristow, Alderman Sir F. Wyatt Truscott, and Mr. J. D. Allcroft, were added to the council in the place of others who had died or retired. At the suggestion of the Bishop of London, and with the unanimous consent of the meeting, Sunday, June 19th, was fixed for "Hospital Sunday" next year. Cordial votes of thanks to Sir F. Wyatt Truscott (late Lord Mayor) and to the Lord Mayor, closed the proceedings.

INFANT MORTALITY.

THE *Sanitary Record* states that infant mortality, measured by the proportion of deaths under one year to births registered, showed, during the last month, a further considerable decline; and averaged 149 per 1,000, against 290 and 186 in September and October. In the twenty largs towns, the death-rate of infants averaged 146 per 1,000, against 276, 246, and 174 in the three preceding months. Infant mortality during November did not exceed 137 in London, while it averaged 155 in the nineteen provincial towns, among which it ranged from 112 and 121 in Plymouth and Newcastle, to 198 and 208 in Salford and Norwich. Among the smaller urban sanitary districts, infant mortality showed a proportionally large excess in Ashton-under-Lyne, Lincoln, Merthyr Tydfil, Middlesbrough, Preston, Southport, Tredegar, and Willenhall. The rate of infant mortality in Preston has shown a marked excess during the past five months; that in Merthyr Tydfil was due to exceptional fatality from measles.

SANITARY WORK IN THE PORT OF LONDON.

THE first report of Dr. Collingridge, the newly appointed health-officer of the Port of London, has just been issued by the Court of Common Council. It relates to the two half-years ended June 30th last; the reports of the late Mr. Harry Leach having extended no further than the middle of 1879. Dr. Collingridge had had, at the date of reporting, too little experience of his duties to enable him to do more than give a summary statement of the action taken in his department during the previous year; but it may be expected that in future reports he will give more detailed attention of the various matters of importance that are constantly cropping up in the extensive district under his charge. During the last six months of 1879, 7,898 vessels of all classes were inspected by the sanitary officers of the port; 3,576 of this number being in the river, and 4,322 in the docks. In 243 instances, it was thought necessary to recommend cleansing or improvements in ventilation. In the course of the half-year, 63 sick seamen were referred to the Seamen's Hospital. The number of vessels inspected shows an increase of almost a thousand over the number for the first half of the year; while a decrease is shown in the number that required cleansing and structural alterations. There was, also, a considerable decrease in the number of sick men referred to hospital. During the first six months of the present year, 7,601 vessels of all descriptions were visited and inspected—3,898 in the river, and 3,703 in the docks. In 244 instances, cleansing, whitewashing, etc., was carried out, and, in 17 cases, structural alterations. Five vessels were fumigated on account of infectious disease; 23 parcels of deceased seamen's effects, brought from foreign ports, were disinfected; and 69 sick seamen were referred to hospital. In only two of the seven training ships moored in the Thames, and containing altogether between two and three thousand boys, were any cases of infectious disease observed in the course of the half-year; and the sanitary condition of most of those establishments remained very satisfactory during this period. Dr. Collingridge is continuing the investigations begun by Mr. Leach into the sanitary condition of the Thames, upon which subject he promises a report on a future occasion.

UNCERTIFIED DEATHS.

THE Poplar and Fulham Board of Works have added their requests to that of Wandsworth, for some action by Government with regard to the large number of deaths that are at present registered without being certified by any medical practitioner. It is clearly important that an earnest endeavour should be made to amend a state of things which permits of some twenty-five thousand persons being annually consigned to the grave with no better voucher as to the cause of their death than the statement of the person present at the decease. The subject has not only a scientific and public-health importance, but is one of distinct and immediate concern to the criminal authorities; and it is to be hoped that Sir William Harcourt will be induced to view it in this light.

FRANK BUCKLAND.

WE greatly regret to have to chronicle the death of Mr. Frank Buckland, in his fifty-fifth year. Frank Buckland was an old and popular student of St. George's, a contemporary of Mr. Holmes, and house-surgeon in 1852. Always jovial, friendly, honest, and sagacious, at the hospital as at Oxford, where he graduated M.A. in 1848, he showed the strongest bent towards natural history from its "curious", anecdotal, and social side, rather than from the scientific point of view. He entered the Guards as medical officer for a few years, but soon retired, to give himself up entirely to popular zoology, natural history, and pisciculture. There were traditions at Oxford of his emulating Lord Byron by keeping a tame bear as a pet in his rooms; and the friendship of animals was a kindly cult, which became a ruling passion of his life. Petting animals was akin to his personal affections. Insects, fishes, birds, vermin, domesticated pets, and tame carnivora were alike welcome to his hearth and heart. He was never tired of watching their ways, studying their modes of life and of expressing their feelings. Sport from his point of view of the animals; zoology from the side of the friendly historian of the beasts; pisciculture from its commercial side,—were his traditional topics. *Land and Water*, which he founded, has always been a pleasant, well-informed, and widely sympathetic chronicle of the creatures which inhabit the elements from which he named his journal. Frank Buckland will be much missed by a large circle of attached friends and readers. His services to pisciculture had been recognised by numerous honours, medals, diplomas, etc., and more substantially by his appointment as one of Her Majesty's Commissioners of Fisheries.

ARCHIVES D'OPHTHALMOLOGIE.

WE have received the first number of a new bimonthly periodical bearing the above title. It is edited by Drs. Panas, Landolt, and Poncet; and published by Delahaye et Cie. of Paris. The first number is well printed, well illustrated, and contains several articles of merit. A valuable feature in this publication will be the promised "revue bibliographique", which is to be a half-yearly digest of the ophthalmological work done in Europe and America during the preceding six months. The *Archives d'Ophthalmologie* will fill a lacuna which has long existed in French special literature. Hitherto French ophthalmology has been represented almost exclusively by the *Annales d'Oculistique*, which, excellent in themselves, are edited and published in Brussels.

EAST LONDON HOSPITAL FOR CHILDREN.

THE East London Hospital for Children, at Shadwell, was reopened on December 1st for the reception of patients. It had previously been closed for three months, at the instance of the medical staff, for the purpose of a thorough reconstruction of the drainage, rendered necessary by a faulty original plan. This was suspected from numerous cases of illness, otherwise unaccountable, which occurred among the hospital residents, and proved by a careful inspection by Mr. Rogers Field, who has successfully remodelled the works, introducing his well known self-acting flushing tank.

WINTER IN THE RIVIERA.

DR. GOODCHILD writes to us from Bordighera:—The season has been, so far, unexampled in the memory of visitors for its extreme mildness. Wild flowers, which, in ordinary seasons, cease to bloom early in November, are still in flower; whilst early spring flowers, such as the violet, have already put in an appearance. Cannes, and all the other places upon the coast, are very full, with the exception of Nice; but villas are letting badly at Mentone and San Remo. A corporation of French capitalists has begun to make preparations, upon an enormous scale, to convert the little village of Ospedaletti into a watering-place. It is said that they have raised a subscription of £2,000,000 sterling for this purpose. The village, situated midway between Bordighera and San Remo, is exceedingly well sheltered, and is probably the warmest spot which they could have found. It will prove a formidable rival, in that respect, to the Eastern Bay of Mentone. Otherwise, it has no attractions; there are no walks or drives; whilst the scenery is uninteresting until you approach Bordighera, four miles distant. Reports, which have gained a wide circulation, both on the coast and in England, have been raised by the hotel-keepers at Nice, that typhoid fever is prevalent at San Remo and at this place. Here, no case has occurred within my memory; whilst not only is there none this winter at San Remo, but the only cases there which have come to my knowledge in previous seasons have been imported from Nice or Naples, places where the disease is endemic. A curious feature of the season in the West of France was the sudden cold which set in upon November 1st, after unusually hot weather. On the 4th of the month, it snowed heavily at Pau, doing immense damage to the trees, which had not at that date lost their leaves; whilst, on the 7th, snow still lay to the depth of three or four inches along most of the line between Pau and Toulouse. This cold was confined to the western half of the South of France, and did not seem to have reached as far east as Montpelier.

REMOVAL OF DUST.

FROM time to time, public attention has been called to the highly unsatisfactory manner in which this important operation is carried out in London. We are glad to see the matter is now being handled strongly by Mr. C. H. Campbell, of the parish of St. Mary Abbott's, Kensington. The visit of the dustman, beside involving, in a needless way, dirt and discomfort of various kinds, is fraught with the gravest danger to health; and that not only to the inmates of the house in which the noisome operation is carried on, but to all who may chance to come within reach of the poisonous elements which are disseminated by the barbarous system of shovelling the contents of the dusthole about, and then conveying the reeking stuff (which often contains a large proportion of more or less putrefied animal and vegetable matter) through the house, to be shot into an open cart, and transported through the streets. The remedy Mr. Campbell proposes is already in operation in many large cities. It is perfectly simple, cleanly, and effective. It only requires baskets, of suitable shape and size, to be placed in the dusthole or elsewhere handy, to receive the ashes, etc., daily as made; and, when full, the baskets can be carted away without disturbing the contents, and empty ones left in their place. Thus the present trouble and danger may practically be got rid of entirely and very promptly. Mr. Campbell's name is already well known in connection with some useful parish reforms; and it is much to be hoped he may succeed in the present case, which is certainly one deserving the utmost attention. The cost of the baskets is very small—five shillings to six shillings each—and two or three baskets suffice for an ordinary house; fairly used, they will last a very long time; thus there is nothing on the score of cost to retard the improvement. As the process is most expeditious, the saving of men's wages should almost, if not quite, cover the cost of baskets. But, in any case, the change should be made.

THE NOTIFICATION OF INFECTIOUS DISEASE.

THE Leckhampton urban sanitary authority have adopted a memorial to the Local Government Board, praying that a Bill may be introduced to compel all householders, hotel-keepers, boarding-house-keepers, and managers of schools to give notice of every case of small-pox, scarlet fever, typhoid fever, measles, diphtheria, or cholera, to the medical officers of health within twenty-four hours of its occurrence; to compel all lodgers or inmates of a house to give a similar notice to the householder or manager of the house; and to impose upon all Poor-law medical officers the duty of informing the health-officer of every case of "dangerous infectious disease" within twelve hours of its occurrence. The Local Board express their belief that some such measures as these "are essentially necessary for the promotion of the public health". It would doubtless be of considerable help if other authorities holding similar views would support the Leckhampton memorial.

PERITONEAL TRANSFUSION OF BLOOD.

THE transfusion of blood into the peritoneal cavity recommended by Ponfick, and supported by the experiments of Bizzozero and Golgi, has been recently practised in Italy with marked success. The case is reported in the *Annali di Ostetricia* of June last. The patient, who was moribund from hæmorrhage after parturition, was transfused with 200 *grammes* of defibrinated blood taken from a man by venesection, and injected into the peritoneal cavity. There was no reaction; and the patient made an excellent recovery. The method is one which seems to deserve trial in this country.

THE EXPOSURE OF GREAT ARTERIES BY ULCERATION.

C. LANGENBUCH, in the number of Volkmann's *Collection of Clinical Lectures* for 1880, discusses the cases in which great arteries are laid bare by ulcerative processes in the neck or groin, leaving the prospect of death from hæmorrhage imminent. He reports three such cases which he treated in the same way. In one case, a child aged 9, an extensive ulceration laid bare the surface of the side of the neck from the ear to near the clavicle, exposing completely the carotid artery and the jugular vein. The wound was dressed with lint dipped in highly concentrated solution of chloride of zinc, and thoroughly dried, and kept in place with cotton-wool and a bandage. After a few days, an uniform leather-like layer was formed, strongly adherent; and on this separating, at the end of eight days, a healthy granulating surface was found, which healed continuously. It is doubtful whether, in such cases, the chloride of zinc acts by drying and shrinking up the tissues and vessels, or whether any portions of the artery are actually destroyed; in any case, the firm hard crust which forms appears to allow time, by the compression which it exercises, for the formation of a thrombus in the vessels.

PHARMACY AND MEDICINE IN NEW ZEALAND.

ACCORDING to the census of New Zealand in 1878, referred to in the *Chemist and Druggist*, the colony contained two hundred and seventy-three chemists, druggists, and assistants, one of whom was a woman; there were two hundred and seventy-three medical men, five medical students, six irregular practitioners, fifty dentists, fifty-seven midwives, and nine others connected with medicine, including one aurist, one chiropodist, one dispenser, two doctors' assistants, one manufacturer of liniment, one medical galvanist, one professor of medicine, and a nondescript. The chemists are classified among professional men. The total population of the colony is 239,998 males and 183,414 females.

CREMATION IN JAPAN.

Miss Bird, in her dauntless and observant wanderings over *Unbeaten Tracks in Japan*, visited a cremation-ground at Kirigaya; and has given an interesting account of what she saw there, in the delightful volumes which contain the record of her experiences. It appears that, among Buddhists, especially of the Monto sect, cremation was largely practised till it was forbidden, five years ago, as some suppose, in deference to European prejudices. Three years ago, however, the prohibition was withdrawn; and, since then, the number of bodies burned has reached about nine thousand annually. The building or erection in which the process is carried on is made of "wattle and dab", with a high roof and chimneys, resembling those of "oast-houses" in Kent, and suggests a farm rather than a funeral pyre. The end of this building, nearest the road, is a little temple, much crowded with images, and small red earthenware urns and tongs, for sale to the relatives of deceased persons; and beyond this are four rooms, with earthen floors and mud-walls; nothing is noticeable about them, except the height of the peaked roof and the dark colour of the plaster. In the middle of the largest are several pairs of granite supports, at equal distances from each other; and in the smallest there is a solitary pair. This was literally all that was to be seen. In the large room, several bodies are burned at one time; and the charge is only one *yen*, about 3s. 8d.; solitary cremation costing five *yen*. Faggots are used, and a shilling's worth ordinarily suffices to reduce a human form to ashes. After the funeral service in the house, the body is brought to the cremation-ground, and left in charge of the attendant, a melancholy, smoked-looking man, as well he may be. The richer people sometimes pay priests to be present during the burning, but this is unusual. There were five "quick tubs" of pine, hooped with bamboo, and containing the remains of coolies, waiting in the larger room, at the time of Miss Bird's visit; and a few oblong chests in the small rooms, containing those of middle-class people. At 8 P.M., each coffin is placed on the stone trestles, the faggots are lighted underneath, the fires are replenished during the night; and, by 6 A.M., all that which was a human being is a small heap of ashes, which is placed in an urn by the relatives, and honourably interred. In some cases, the priests accompany the relatives on this last mournful errand. Thirteen bodies were burned the night before Miss Bird's visit, but there was not the slightest odour in or about the building; and the interpreter told her that, owing to the height of the chimneys, the people of the neighbourhood never experienced the least annoyance, even while the incineration was going on. The simplicity of the arrangement, Miss Bird remarks, is very remarkable; and there can be no reasonable doubt that it serves the purpose of the innocuous and complete destruction of the corpse, as well as any complicated apparatus; while its cheapness places it within the reach of the class which is most heavily burdened by ordinary funeral expenses. The cremation-ground is in a country made beautiful by red camellias, feathery bamboo, and cryptomeria; and Miss Bird saw nothing about it that was ghastly or distasteful.

OVARIOTOMY DURING PREGNANCY.

Karl Schroeder (*Zeitschrift für Geburtshülfe und Gynäkologie*), on the strength of seven successful ovariotomies during pregnancy performed by himself, and fourteen performed by Olshausen, with only two deaths, considers that ovariotomy, during pregnancy, is an operation not to be feared especially, and only to be avoided when especial contraindications are present. It improves the prognosis, he considers, for the mother, and probably does not injure it for the child. The operation is best performed during the earlier months of pregnancy; later, the broad ligaments are so full of dilated veins, that the treatment of the pedicle becomes more difficult and more dangerous.

PRIMITIVE GALVANISM.

In the course of his experience as a medical missionary among the Mongols, the Rev. James Gilmour has gathered some information, which leads to the inference that Mongol doctors are not entirely unacquainted with the properties of galvanism. It is said that they are in the habit of prescribing the loadstone ore, reduced to powder, as efficacious when applied to sores; and Mr. Gilmour states that one man, whose hearing was imperfect, had been recommended by a lama to put a piece of loadstone into each ear, and chew a piece of iron in his mouth.

SCOTLAND.

The Christmas holidays at the University of Edinburgh began on Friday, December 24th, and will terminate on Tuesday, January 4th, 1881.

A farmer has been fined £1, with £2 5s. expenses, for a breach of the Dairies, Cowsheds, and Milkshops Order of Council of July 1879, under the Contagious Diseases (Animals) Act, 1878, under the following circumstances. He had a daughter in his house suffering from scarlet fever and measles, upon whom his wife attended while she, also, was in discharge of her duties in the dairy.

Mr. J. Rogerson, of Merchiston Castle School, has intimated to the managers of the Edinburgh Royal Infirmary that the pupils of that institution are about to present to the Infirmary a fully equipped bed, and intend to contribute enough annually to maintain it. In the meantime, it will be placed in one of the wards of Dr. John Duncan, who is medical attendant to the school.

KILMARNOCK INFIRMARY AND FEVER HOSPITAL.

During the past year, there have been 412 cases treated in the Kilmarnock Infirmary and Fever Hospital. In the previous year, there were 488 admissions; the great discrepancy, however, between the two years is due to diminution in fever, of which there were only 50 cases last year, whilst there were 124 in the previous one. Among 54 cases of zymotic diseases, there were only 4 deaths. Scarlet fever had been the most prevalent; there had been 29 cases, but no deaths. Enteric fever caused 2 deaths out of 19 cases, as compared with 4 deaths and 97 cases the year before; there were only 2 cases of typhus fever, while there were 14 cases of measles and 1 death. In the ordinary medical wards, 159 cases were treated, of whom 12 died; and, in the surgical wards, 204 cases, of whom 4 died. The income for the year shows a balance of nearly £300 over the expenditure.

ROYAL MEDICAL SOCIETY OF EDINBURGH.

At a meeting of the above Society, held on November 26th, the following gentlemen were elected presidents for the year: W. Henry Dobie, M.B., C.M.; R. A. Lundie, M.A., B.Sc., M.B., C.M.; A. H. Barbour, M.A., B.Sc., M.B., C.M.; A. L. Macleish, M.A.

MUNIFICENT GIFT TO INVERNESS DISPENSARY.

We understand that Dr. Forbes of Milburn has just endowed the Inverness Dispensary with £6,000. The endowment will be under the management of trustees, the greater number of whom will be the magistrates of the burgh. £100 of the interest will be given to the medical attendant, who may be one of the local practitioners, and £20 (in addition to his present salary) to the superintendent; while the rest will be spent in the purchase of medicine, and in meeting the general requirements of the dispensary. Dr. Mackenzie is the present medical attendant.

THE GLASGOW SAMARITAN SOCIETY.

The annual meeting of this Society was held on the 15th inst., when a very gratifying report was read and approved. The chief aim of the Society is to administer such relief as does not fall within the province of a public hospital; so that its field of labour lies mainly among the patients and ex-patients of the Glasgow Western Infirmary and their families. Warm clothing, so necessary for those convalescing from sickness, is distributed to patients on leaving the infirmary, and steps are taken to obtain suitable employment for them. The cases that have

received relief for the past year number 560, and 308 were sent to convalescent homes. The income for the year amounted to £389, and the expenditure to £350, leaving a balance in hand of £39.

UNIVERSITY OF ABERDEEN.

THE University Court met on the 17th instant, and approved of a scheme proposing alterations in the ordinances regulating graduation in Medicine in this University. When Professor Huxley was Lord Rector, important improvements in the order of medical study and examination were suggested and approved by the Aberdeen Court; but these alterations, not meeting with the approval of the other Scottish universities, had to be withdrawn. Recently, again, similar alterations were proposed, but objection was taken to certain of these proposed alterations by the University Courts of Edinburgh and Glasgow; so that, in their present scheme, the Aberdeen Court has resolved to ask for those changes which the other universities are willing not to oppose, and which alterations have already been introduced in one or both of the Universities of Edinburgh and Glasgow. At present, the examination in materia medica is taken along with botany, chemistry, and elementary anatomy, at the end of the second year of medical study; and zoology, with advanced anatomy, physiology, and surgery, at the end of the third year. This is not a satisfactory arrangement; for zoology comes too late, and materia medica too soon. It is, therefore, proposed to allow the student to take botany and natural history at the examination term preceding the second winter session, and to transfer the examination in materia medica to the end of the third year. The titles of the examinations in anatomy are to be changed to anatomy and regional anatomy. The student will be examined in chemistry and anatomy at the end of the second winter session; on regional anatomy, institutes of medicine, principles of surgery, and materia medica, at the end of the third winter session; and all the other departments may be taken at the end of the fourth year. If this scheme is not objected to by either of the Scottish universities, it will then receive the sanction of the Privy Council, and come into operation at once. It will, indeed, be a great boon, both to the students and teachers of medicine in the University of Aberdeen. The medical curriculum in Aberdeen will then be as nearly an ideal curriculum as can be desired—there being a natural grouping of subjects, and permission to take the examination in the natural sciences sufficiently early in the course still to maintain their usefulness, without permitting the study of them to encroach unduly on the time devoted to other departments of study; and, lastly, the examinations will fall at regular periods in the course—before the second, and at the end of the second, third, and fourth years of study; *i.e.*, when the student has completed his attendance on the various subjects on which he is to be examined, and when these subjects are necessarily freshest in his mind. It was further agreed to recognise the lectures in Carmichael College, Dublin, as qualifying (subject to the usual conditions) for graduation in medicine in the University of Aberdeen.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS.

DURING the month of November, there were registered, in the eight principal Scotch towns, the deaths of 2,583 persons, of whom 1,294 were males and 1,291 were females. Allowing for increase of population, this is 20 under the average for the previous ten years. The death-rate in the various towns was, per 1,000 of the population: Perth, 19; Dundee, 21; Aberdeen, 23; Edinburgh, 24; Glasgow, 24; Leith, 26; Paisley, 29; and Greenock, 30. Of children under five years of age, there were 1,068 deaths, or 41 per cent. of the entire mortality—the various mortalities being: Perth, 21; Paisley, 35; Edinburgh, 37; Aberdeen, 40; Leith, 41; Glasgow, 42; Dundee, 43; and Greenock, 54. Zymotic diseases caused 481 deaths—equal to 18.6 per cent.; but this rate was (owing to the prevalence of scarlet fever) much exceeded in Glasgow, Edinburgh, and Leith—thus, in these three places, the percentage of deaths due to scarlet fever alone was 7.1, 20.1, and 17.2 respectively. Of 60 deaths from fever, 15 were registered as typhus, 41 as enteric, and 4 as simple continued fever. Whooping-cough caused 54, diarrhœa 40, measles 40, diphtheria 27, and croup 20 deaths. Apoplexy and paralysis caused 140, cardiac diseases 163, hydrocephalus 57, and premature birth delivery 60 deaths. Phthisis pulmonalis caused 227 deaths—equal to 8.8 per cent. of the entire mortality; while inflammatory affections of the respiratory system contributed no less than 25 per cent. of all the deaths. There were 75 deaths due to violent causes. Seven of the deaths were of people over ninety years of age, of whom 2 were males and 5 females, one of the latter being ninety-five years of age. There were registered, during November, the births of 3,378 children; of these, 1,710 were males and 1,668 females. The mean barometric pressure was less by 0.069 inch; the mean temperature less by 1.4°; the mean humidity less by 1; the rain-depth greater by 0.64 inch; and the wind pressure greater by 0.90 lb. than the average of the same month during the preceding twenty-three years. The lowest mean temperature (38.4°) was at Glasgow, and the highest (40.8°) at Leith.

EDINBURGH PROVIDENT DISPENSARY.

AT the annual meeting of the subscribers to this institution, held in Edinburgh last week, it was shown in the annual report that the number of cases treated at the homes of the patients was 2,043, while 1,002 had been treated at the dispensary. The number of midwifery cases attended was 555, while minor operations, such as extracting teeth, had been performed in 675 patients; thus 4,275 cases in all had been attended to during the year. The income for the year amounted to £39 16s. 3d., derived from the following sources. Donations, £9 15s.; from the city, for reporting cases of infectious disorders, £17 7s. 6d.; penny fees for prescriptions, £12 13s. 9d. The expenditure exceeded the income by £10 6s. 3d. It was stated that this is the first provident dispensary founded in Edinburgh; and if this be so styled on account of the penny paid for each quantity of medicine made up by prescription, it may be pointed out that, at the Western Dispensary, 90, Fountainbridge, Edinburgh, the plan of making each patient pay a penny for each prescription dispensed has existed for several years, has been thoroughly carried out, and produces to that dispensary about £30 a year.

HEALTH OF GLASGOW.

FROM the report of the medical officer of health for the fortnight ending December 11th, it appears there were 485 deaths registered, as compared with 509 in the preceding fortnight, being a decrease of 24, representing a death-rate of 21½, in place of 22 per 1000 living. The mean temperature during the fortnight was 47.1° Fahr. The number of deaths from pulmonary diseases was 179, and from fever 8—viz., 5 from enteric fever, 2 from typhus, and 1 undefined. The number of deaths from infectious diseases of children was 43—viz., 24 from scarlet fever, 11 from whooping-cough, and 8 from measles. The general features of the fortnight have been: temperature high for the season, with much rain, and frequent storms; a diminution in the mortality generally, arising chiefly from the decrease in the number of deaths from zymotic diseases of all kinds, and from diseases of the lungs. The epidemic of scarlet fever continues to decline in the poorer districts of the city, where it began. At the same time, the disease seems to have made its way, to some extent, among the better classes, where, however, the indications of its presence afforded by death are much rarer, though it attracts more public attention. There are, at present, in the Hospitals, Belvidere, 212 cases of scarlet fever, 84 of enteric fever, 39 of typhus, 23 of measles, 3 of whooping-cough, and 3 of chicken-pox; in all, 364 cases, as compared with 386 this day fortnight.

MALVERN COLLEGE.—The annual scholarships and exhibitions have been awarded as follows:—Frampton, Moore, J. C., Polehampton Ker, Spence, Saville, Wilson, Green, Buckle, Cooke, Milward, and L. Minchin, all of Malvern College; T. Pike, J. B. Luckham, C. R. Stevens, Rev. R. Dann, All Hallows School, Honiton; C. Benwell and S. G. Toller, Rev. C. E. Austin, Clifton House, Cheltenham; H. Rawson, Rev. W. W. Gedge, Malvern Wells; H. Barnard, Rev. S. Middleton, Weston-super-Mare; and J. M. T. George, Rev. J. H. Raven, St. Mary's, Beccles. The scholarships are of the value of £80 and £50, and the exhibitions of £30.

IRELAND.

THE President of the King and Queen's College of Physicians in Ireland, Dr. George Johnston, has issued cards of invitation to a dinner to be given by him in the College Hall on the 19th January.

WE are requested to state that the object of the special general meeting of the Irish Medical Association, to be held on the 15th proximo, is to consider a Bill to provide Compulsory Superannuation of Medical Officers of the Poor-law Service.

IT is stated that Dr. Dwyer, late of the Richmond Asylum, Dublin, has been appointed Resident Medical Superintendent to Castlebar District Lunatic Asylum, in the vacancy caused by the resignation of Dr. Carre, who has been transferred to Omagh Asylum.

CORK DISTRICT LUNATIC ASYLUM.

A SPECIAL meeting of the governors was held on the 13th instant, when, according to notice of motion, the board had under consideration the application of Dr. Tanner, assistant medical officer, for an increase of salary; and also the advisability of appointing an additional resident medical officer to the institution. The chairman mentioned that, since Dr. Tanner entered the asylum, there had been an increase of 131 in the number of patients; there being 749 in 1878, and 880 during the present time. Dr. Tanner then submitted a list of the duties of the assistant to the resident medical superintendent, which included the compounding all medicines for patients, officers, and attendants; taking stock once a week; writing out prescriptions in full in the medicine-book; checking all entries, contractors' orders, and monthly accounts; making morning visits with Dr. Eames; writing the correspondence with patients' friends; feeding four times daily patients requiring artificial feeding; dressing, bandaging, testing temperature-charts; notes of important cases, necropsies, night visits to hospital and male side of main buildings; and attending to all cases of sudden illness night or day. Dr. W. C. Townsend, visiting physician to the asylum, said it was quite absurd to think that Dr. Tanner could do the work at present, including compounding; and it appeared to him that, if they wished to make the institution a curative establishment, they should get additional medical aid, in order to have the work done as it ought to be. After some discussion, it was resolved that a second resident medical officer should be appointed, at a salary of £100 a-year, with apartments and rations; and the question of increasing Dr. Tanner's salary was postponed until a future occasion.

ARTISANS' DWELLINGS IN DUBLIN.

HIS Excellency the Lord-Lieutenant laid, on Monday last, the foundation stone of the new buildings which are to be erected by the Dublin Artisans' Dwellings Company on the Coombe Area. This area is one of those which have just been cleared of its ruinous and condemned tenement-houses by the corporation. The new buildings will cover about four and a half acres; the site being divided by two thoroughfares, at right angles, into four pretty equally sized squares, which will contain two-storey cottages in front, and one-storey cottages in rear. The squares will be hollow, and inside will be large open spaces, the entire of which will be laid down in asphalt by the corporation, who have also undertaken to asphalt the thoroughfares. The two-storey cottages will, it is contemplated, contain three, and the one-storey two, rooms, as well as a living room or kitchen, and a scullery, store-room, closet, and ashpit. Every cottage will have a supply of water for domestic purposes direct from the water-main. It is proposed to erect two hundred cottages, capable of accommodating one thousand persons, on this site. Since the formation of the Dublin Artisans' Dwellings Company, in 1876, it has erected six blocks of buildings, containing in all 280 dwellings, and providing accommodation for about 1,350 persons, at an expenditure of £35,000. The company was formed by a few gentlemen, in a philanthropic spirit, with the object of providing the best possible accommodation for the artisan, at the least possible rent consistent with a fair dividend. It is, however, very properly, conducted on thoroughly sound commercial principles, and not as a charitable undertaking. As showing the gain to the health of the community afforded by such dwellings as the company provide, His Excellency's attention was drawn to the remarkable fact that the proportion of children under five years of age, living in their dwellings, is double the proportion of the same class living in the rest of Dublin. In other words, while Dublin has ten children under five years of age out of every hundred, the company has, in their dwellings, twenty children under five years of age out of every hundred. Without such a company as this, which could give an assurance that they would provide accommodation for those whose wretched habitations might be destroyed, the hands of the corporation—as the Lord Mayor mentioned in his speech on the occasion—were tied. The title of the Artisans' Dwellings Act was a misnomer. The Act only enabled the corporation to destroy unhealthy and dilapidated buildings; but, save in very exceptional circumstances, there is no provision for the public authority building on the sites when they are cleared. To destroy such dwellings, unfit even, as they were, for human habitation, would, in the absence of other accommodation for their inmates, only make the case worse.

THE NORTH OF IRELAND BRANCH.

WE have to point out the omission, from our list of Branches published in the annual programme of the Association in the JOURNAL of December 11th, of one of the most important Branches in Ireland; namely, the North of Ireland Branch. The North of Ireland Branch was successfully formed, mainly through the determined and arduous efforts of Dr. John Moore, in April 1878. The Branch now numbers 109 members, and is doing good and useful work, as are also the other Branches in Ireland. The President is Dr. J. W. T. Smith of Belfast; the Vice-Presidents, Dr. E. Thompson of Omagh, and Dr. T. K. Wheeler of Belfast; and the Honorary Secretary, Dr. John Moore of Belfast. It is to be regretted that mention of it should have been omitted, by an oversight, from the important list of Branches of the Association.

THE HEALTH OF DUBLIN.

ACCORDING to the Registrar-General's returns for the week ending the 11th instant, the death-rate in Dublin was lower than that registered in any week since October 4th, 1879; but, nevertheless, was higher by 9 per 1000 than the average rate in twenty large English towns for that week. The week was also remarkable as being the first week for the last four months in which the births registered exceeded the deaths. Typhus fever is still on the increase; and it is stated that the hospitals on the north side of the city have not, at present, sufficient accommodation for fever patients residing on that side. The Dublin Sanitary Association have drawn attention to the fact that, since August 1st last, there have been forty-one cases of fever admitted to Cork Street Fever Hospital from Plunkett Street. This street is in one of the twelve districts of the city which, in 1876, were condemned as "unhealthy areas", under the provisions of the Artisans' and Labourers' Dwellings Improvement Act. The Corporation have already cleared two of these areas; and it is a matter of much congratulation that they have now turned their attention to this hotbed of vice, as well as of disease. We trust it may soon be cleared away.

HEALTH OF CORK.

DURING the four weeks ending the 4th instant, the deaths registered in Cork amounted to 143, of which 19 resulted from infectious diseases, and 20 were infants under one year. The annual death-rate per 1000 inhabitants gives a total ratio of mortality of 23.52; from general diseases, 20.97; from infectious diseases, 3.14; and an infant mortality of 3.33. The births numbered 137, being at the rate of 22.65 per 1000. This return compares very favourably with the corresponding period last year, when the urban death-rate amounted to 30.28 from general

diseases, and 8.48 from infectious diseases. The high mortality was then due to scarlatina: a disease which has now, as an epidemic, all but completely disappeared. During the past two months, typhus fever has prevailed to a rather unusual extent, not only in Cork, but throughout the entire country; but this prevalence may be regarded as only temporary; it being a disease which, never entirely absent, is subject, without assignable causes, to frequent but brief fluctuations.

HEALTH OF IRELAND: QUARTERLY REPORT.

DURING the quarter ended 30th September last, there were registered in the 801 registrar's districts in Ireland, 30,251 deaths, being equal to an annual ratio of 1 in every 44.0, or 22.7 per 1000 of the population; and 21,360 deaths, affording an annual ratio of 1 in every 62.3, or 16.0 per 1000. The birth-rate was 1.9 per 1000 under, and the death-rate 1.4 above, the average of the corresponding quarter of the past year. The deaths from the principal zymotic diseases amounted to 3,657, or 14.3 per cent. of the total deaths recorded, and were equal to 57.4 in every 100,000 of the population. This number is 1,961, or 53.2 per cent. over the deaths from the same causes in the corresponding quarter of 1879, and 831 over the average mortality for the third quarter of the three years 1877 to 1879. The excess of deaths from zymotic diseases was due to the increased prevalence of diarrhœa, which was more prevalent and fatal during the quarter than in any corresponding quarter since the year 1866, when cholera was epidemic. The most remarkable outbreaks of diarrhœa occurred in the towns or town districts, especially in the metropolitan districts. Small-pox caused 76 deaths against 182 in the preceding quarter; measles, 190 against 266; scarlatina, 519 against 570; diphtheria, 65 against 68; whooping-cough, 557 against 612; fever, 627 against 877; simple cholera, 45 against 3; and diarrhœa, 978 as compared with 482. There were 628 inquests held during the quarter—a number equal to 1 in every 34 of the total deaths registered.

THE SMALL-POX IN LONDON.

THE outbreak of small-pox in the East-End of the metropolis is fortunately on the decrease. It may be mentioned that the common lodging-houses in this part of London have been very free from the disease, a fact which is due no doubt to the watchfulness displayed by the police authorities, who periodically visit houses of this class, and who, in cases of illness occurring of an infectious nature take means to remove the risk of contagion by destroying the bedding and thoroughly fumigating the premises.

In order to deal with the prevailing epidemic of small-pox, the managers of the Metropolitan Asylums Board held a special meeting on Monday last, Dr. W. Brewer presiding. Mr. Jebb, the clerk, read a return showing that the numbers of small-pox cases in Deptford had increased week by week during the last six weeks from 12 to 132; in Homerton, from 90 to 110 (after 40 had been sent to Fulham as convalescents); at Stockwell, from 13 to 87; at Fulham, from 3 to 44; being an increase from 113 to 373; while the beds available are 48 at Deptford, none at Homerton, 16 at Stockwell, and 196 at Fulham—a total of 260—most of them remote from the centre of the prevailing epidemic. Mr. J. Hodge presented a report from the Deptford Asylum Committee, recommending that pavilions should be erected in the grounds of the Deptford Asylum, the whole cost to be about £6,000; and reporting that the Local Government Board had offered facilities for this course. Mr. Galsworthy moved, and it was resolved, that the report be referred back, in order that plans of permanent buildings might be drawn. He also moved that a letter should be sent to the Local Government Board, calling attention to the increase in the number of small-pox cases in the metropolis, and to the comparatively few beds unoccupied at the disposal of the managers; and saying that if these beds and the eighty additional beds proposed to be provided at Deptford were filled, the managers, unless their position were accurately and satisfactorily defined in the pending appeal to the House of Lords in respect to the Hampstead Hospital case, would not feel themselves justified in incurring fresh responsibility by the acquisition of other sites, or the erection or hire of additional hospitals. This resolution was also carried; and it was likewise agreed to ask the president of the central authority to confer in conference the chairman of the board and the chairmen of the several asylums.

At a recent meeting of the St. James's Vestry, Mr. Bradshaw, the chairman of the sanitary committee, called attention to the increase of small-pox and other infectious diseases in London, and to the necessity of further provision for the reception and isolation of non-pauper cases. Dr. Edmunds, the medical officer of health, said that, during the last three weeks, one case of typhus fever, two cases of small-pox, and one of diphtheria, had occurred in the workhouse; and that a considerable increase of scarlet fever and whooping-cough had taken place among children in St. James's. He thought that at this season of the year—when people kept large fires going, and shut up their windows and outer doors—the present increase in these diseases was what might fairly be expected.

In view of the present extension of small-pox in the metropolis, the Local Government Board have issued a circular to the vestries and district boards of works, acquainting them that the Board are in communication with the various boards of guardians, with a view to exceptional visitation by vaccination officers of houses and tenements in infected neighbourhoods where there may be reason to suspect the presence of unvaccinated children. The Board point out that it would materially conduce to the efficiency of such action by the vaccination officers, if the sanitary authorities would instruct their officers to take note, in the course of their daily inspections, of any case of small-pox present in any house, or lately removed therefrom; and, without delay, to give information on the subject to the vaccination officers of the district; and they express a hope that the vestries will agree to adopt this course. It is greatly to be hoped that there may be no lack of co-operation in the efforts made to stamp out the epidemic.

OPENING OF THE BIRMINGHAM MEDICAL INSTITUTE.

THE Birmingham Medical Institute was opened this week by the Mayor (Alderman Chamberlain), at a meeting of members and subscribers in the library of the Institute, Edmund Street, an address being delivered upon the occasion by Dr. Risdon Bennett, President of the Royal College of Physicians. The chair was occupied by Mr. D. W. CROMPTON (President of the Institute), and there was a large attendance. Amongst those present were Mr. G. Dixon, Mr. J. T. Collins; Drs. Bell Fletcher, Russell, Griffiths, Wade, Underhill, Savage, Sawyer, Gibbs Blake, A. Hill, Bassett, B. Foster, Johnston, Richards, Saundby, Agar, Cheedle, and Keyworth; Messrs. A. Baker, S. Berry, J. S. Gamgee, Solomon, Clay, L. Tait, J. Carter, D. Thompson, W. Williams, Ross Jordan, Manley, J. Lloyd Owen, F. B. Osborn (architect of the Institute), B. N. Smith (builder), and Priestley Smith and W. G. Archer (Honorary Secretaries).

The MAYOR said he had complied with great pleasure with the invitation to open that Institute. The history of the Institute was probably already known to all of them. Its commencement was due to the enlightened liberality of the late George Fabian Evans, who gave £1000, to be applied for the general benefit of the medical profession. To that sum was added £5000, given by Mr. Wragge out of the Ingleby Fund; and that £6000 made their endowment fund, if he excepted the value of the land, which had been kindly given to them by the Rev. George Inge, who had on this occasion, as on many others, shown the interest he took in the intellectual development of their town. That endowment fund would produce an income of something like £310, or rather more, *per annum*. It was not a very large fund; and, while not, like Mercutio's wound, as wide as a church door, or as deep as a well, it would go a long way towards paying the necessary standing expenses of the building. The building itself had been erected, and everything paid for, and they owed nothing except a small sum for the furniture. They, therefore, started very well upon a very excellent undertaking. The object of the Institute, as he understood it, was the higher education of the medical profession, and that higher education was to be promoted by such means as that of the excellent library in which they were assembled—a lending and a reference library on purely medical subjects—a library that he hoped to see extended from year to year. In addition to that, they had opportunities there for lectures and papers to be read, and of discussion amongst themselves; also for the exhibition of rare specimens, and possibly of interesting cases arising amongst their patients. The importance of the advantages which would thus be afforded to the medical profession could hardly be exaggerated. In the first place, none of them were so extremely wise that they could dispense with the wisdom that they could glean from other people. Then, again, as they took an interest and a pride in the profession, or the class to which they belonged, so they naturally wished to see the credit of that class or profession raised in the estimation of the general public; and he had a very strong faith, derived from a considerable experience of public life, that the result of union and society amongst men was not to bring down the level to that of the lowest, but to raise it to that of the highest. None of them were willing to admit in public the mean

springs that too frequently actuated their motive; and, if they began by the profession of a higher ideal, the result invariably was that their practice followed that higher profession. Therefore, he thought that union amongst a body of that kind was for the general benefit of all. Apart from the gain to the general profession, there was a great gain specially to the younger medical men who were not attached to any of the general hospitals. When a young man left college, and started in practice, he was not usually blessed with large pecuniary means; and the expensive books, works of reference and of current literature which it was necessary for him to read, if he wished to keep himself abreast of the advancement of knowledge, were too costly for him to lay hold of. It would therefore be greatly to the advantage of such to be able to come to a place like the Institute, and to read and study new works from time to time, as they came out. He had already said that people in union naturally took the higher rather than the lower level; and he was glad to see that already there had been some effect in that direction, and that some tendency to narrow exclusiveness had been checked; and that, by one of the articles of their association, the Institute was open to every legally qualified practitioner. While he commended the Institute to every medical man or woman in Birmingham, he also would strongly commend it to those in the district. The future of Birmingham was understood at present, he thought, by but very few; but those who were more actively engaged in its inner life could see very clearly that Birmingham was going to be a town of much greater importance in the future than it had been in the past. There was not the slightest doubt that Birmingham would be an assize town, and would become a great midland metropolis of very great importance. The importance of the Medical Institute to practitioners in the surrounding district would correspondingly increase, and it would afford a valuable means for their meeting and conversing with the medical men of the town. He had spoken of the advantages of the Institute; but there was also a caution of which they must not lose sight. There was a possibility that, by too much association on the part of those engaged in the same pursuits, a narrow caste view might be encouraged, and a great and beneficent profession like that of medicine might be narrowed down so as to be looked upon as an exclusive interest rather than as something for the benefit of all mankind. He was glad to think that there was not a very great danger of that narrow view being encouraged by the members of that Institute. He thought so the more, because he was aware that they felt themselves to be a part of the town, and the town a part of them. It was for that reason they invited him, as mayor, to open the Institute. The Institute would, if carried out upon the right lines, be of great benefit to the town, as it would also be to its members. He had the greatest pleasure in declaring the Institute to be opened; and in wishing the members prosperity in their highly honourable profession.

Dr. RISDON BENNETT, who was cordially received, then delivered the inaugural address. He remarked that, whilst acknowledging the compliment which they had paid him by inviting him to inaugurate their new institute, he confessed to some sort of feeling of being guilty of misappropriating an honour, which, he could not but think, had they been mindful of the maxim of rendering honour to whom honour was due, should on that occasion have been conferred on one or other of their distinguished colleagues who had been mainly instrumental in getting up the institute. Seeing, however, that their aspiration originated in the wish to honour the memory of their late distinguished and highly esteemed townsman, Dr. George Fabian Evans, he felt that it would be a gratification to him (the speaker) publicly to express his concurrence in their estimate of his professional character and social worth, and in their desire that *vita mortuorum in memoria vivorum posita sit*. When, also, he came to consider the way in which, keeping in view the generous purpose of their deceased friend, they had strenuously sought to constitute their association as to make it most conducive to the general interests of their profession, he felt that the accident of his own position made it a duty as well as a privilege to accede to their request. He congratulated them on the successful completion of their enterprise, the result doubtless of no little labour and self-sacrifice; he congratulated them, too, on the evidence which it afforded of a due appreciation of the means for promoting the best interests of their noble profession, and of that harmonious action which augured well for the maintenance of permanent concord and union. Birmingham had acquired an enviable distinction by its patriotic spirit, its municipal enlightenment, and the generous efforts of its citizens to promote not merely its commercial prosperity, but also the intellectual and moral advancement of the community. It was, therefore, only fitting that those of its inhabitants to whom was committed the maintenance of health, the prevention and cure of disease, should associate themselves in combined public effort to advance the interests of that science with which the welfare of each citizen was indissolubly bound. In the possession of noble hospitals, a medical school, and distinguished practitioners and teachers, they had means and appliances for the education of those who were entering the profession of which they might well be proud. They were abundantly supplied with facilities for securing that preliminary general education which was now happily felt and acknowledged to be essential for the aspirants to their ranks. And, after all their complaints and shortcomings, they had good reason to rejoice and not be ashamed at the improvement that had taken place in the education of their members. Dr. Bennett spoke of the advantage of the institute to the younger members of the profession, in affording them opportunities for general culture, and remarked that their library must inevitably be provided with the current literature of the day, and its perusal was necessary to keep them *au courant* with the advance of science. Just as their own experience ripened, and in proportion as they were conversant with the record of the labour and experience of their predecessors, they found that a great deal that came before them dressed in the fashion of the day, and jubilant as novelty, was by no means new, and a good deal more that was anything but true. The interval between a discovery and the time when it became available for them was oftentimes considerable, and this not unfrequently, because they needed light in some other directions before they could see that which prior knowledge held forth. Speaking of the works a library should contain, he said a public professional library should contain not only sets of the best periodicals, ordinary books of reference, and expensive illustrated works, but also a well selected number of old authors not likely to be much read, but needful occasionally for those who were engaged in historical or other special inquiries. He must not forget that there were other features of their institute besides its library. They desired that it should advance professional knowledge by means of physiological and pathological laboratories and museums, by the delivery of lectures, and the establishment of prizes and rewards. On the last point he said nothing, believing that it was only by careful consideration and judicious management that prizes and rewards in connection with such an institution could be made productive of much good, or even free from some serious objections. It was needless to say that laboratories for conducting physiological and pathological investigations were essential requisites for the advancement of their knowledge, and equally needless to say that they could not, except in very rare cases, form a part in their private establishments. It was true that they were generally to be found connected with their schools and hospitals; but to this connection with hospitals at least there were often serious objections, even if they could, so connected, be made available for the purpose of any number of private students. The busy practitioner often needed the help that a central place like that would afford him for his immediate purposes, and he would now be able to have recourse to the appliances provided by the institute. It was a common source of vain regret that, with the individual skill and sagacity of those who passed away from them, there was also lost the benefit of their extensive experience. But need this be so to the extent that it was? If they could not hope for systematic practical work from men at the close of, instead of at the beginning, of life, might they not often leave them brief informal *résumés* of their life-experience, which they might not choose to publish, but which might be deposited in the archives of such an institution as that, and prove valuable to their successors, practitioners in the same localities, among a population subjected to the same morbific influences? A series of such records would not only preserve a certain amount of the matured experience of those who had gone before, but would also constitute valuable materials for the medical history of the district, especially in connection with such meteorological and other data as might be collected by the institute. That the institute would be made available for the ordinary purposes of a medical society, for the reading and discussion of papers on medical subjects, it was needless to say. And he was sure that it was their desire that it should be a mutual improvement society. If so, might he say that it seemed to him desirable that the topics for discussion should be chiefly of a practical character. Therapeutical questions, above all others, were those which demanded most attention from them in the present day, and they, more than all else, might be most advantageously discussed by a body of practitioners. Pathological specimens might be exhibited and described, the results of scientific inquiries might be communicated; but the practical questions of the day, and especially therapeutic questions, the results of each man's experience, his failures and success, the requirements of which he had been made conscious, the difficulties that he had encountered, the new phases in which disease had presented itself to him, the prevalent aspects of disease —all these were pre-eminently topics the mutual discussion of which was likely to be attended with most benefit. Having alluded to the benevolent objects of the institute, he concluded by wishing God-speed to their enterprise in all its high aspirations and beneficent aims.

On the motion of Dr. RUSSELL, seconded by Mr. S. BERRY, a vote of thanks was accorded to the Mayor for opening the institute, and to Dr. Bennett for his address.

The MAYOR and Dr. BENNETT briefly acknowledged the compliment, and the proceedings terminated.

In the evening, a dinner took place at the Grand Hotel.

ANATOMICAL DEPARTMENT OF THE NEW MEDICAL SCHOOL, UNIVERSITY OF EDINBURGH.

IN the number of the JOURNAL for October 9th, a brief notice was given of the anatomical department of the new university buildings, which had then just been opened. Now that the session has fairly begun, and the anatomical work is going on briskly, in the new buildings, it may be of interest to many of our readers if we give a more extended account of this part of the new school, with a few notes as to the methods of teaching employed.

It is now ten years since the university authorities seriously realised the necessity for providing increased accommodation for the teaching of its medical and other scientific departments. This had been brought about by a combination of circumstances, which we need not enter into here; but as an indication of how much the anatomical department had outgrown its accommodation, we may mention that, when that part of the present university buildings in which, till July last, the anatomical teaching was carried on, was planned out by Monro *secundus* towards the end of last century, the number of dissectors, out of an anatomical class of about 400, was only 20; while during last winter session alone, the number of students in the dissecting list reached 566. Various schemes were at first thought of, but at last it was decided to have new and entirely separate buildings for the medical faculty, thus leaving more space for the other faculties in the present university buildings. Accordingly, a private subscription was set on foot, and, after some trouble, £80,000 was raised; to this, Government promised to add another sum of £80,000; and with this in hand the work was begun. The present site in Park Place and Twist Row was purchased, and, about two years ago, the building operations were begun. Since that time, the work has been pushed on as fast as possible; and in virtue of its greatest need, the anatomical department has been got ready first; all efforts having been made to have the new rooms occupied this winter.

The work of dissecting is carried on in one large room, 108 feet long, by 39 feet wide, and 27 feet high. The light is excellent, and is obtained chiefly from three north roof-lights, extending all the way along the room: and set at such an angle as to prevent snow from lying upon them—an important consideration in a northern climate. There are in addition, six windows, eight feet wide, by sixteen or seventeen feet high, in the north wall of the room, looking into the anatomical quadrangle. Ventilation is provided for by movable frames in the two roof-lights, opened and shut by an apparatus at each end; also by ventilating shafts along the walls, and by ventilators in the large windows. Four fireplaces also aid in ventilation, while at the same time helping to heat the room; but the chief heating agents are steam-pipes, placed at intervals along the north side. Part of the space on the floor is taken up by a large sink, and by wash-hand basins; while part is also occupied by cases for special dissections and preparations to which the students may refer. Opening from one end of the large room are cloak-rooms, lavatories, and other necessary provisions for a large body of students; while at the other end are the Senior Demonstrator's office, and other rooms for the use of the demonstrators and for preparing dissections. Black boards of stained ground glass have been let into the wall at intervals, and framed copies of Ellis and Ford's plates have been hung round the walls, while at a higher level are suspended diagrams illustrating the incisions and other important points which require frequent explanation. The students' lockers are placed along the greater part of the south wall.

In the large room, forty-five tables can be easily arranged for dissecting, after allowing for the space occupied by the sink, wash-hand basins, and preparation cases; and if further room should be needed, there is another well appointed room, above the cloak-room, capable of holding ten tables more, so that at least fifty-five bodies can be dissected at one time.

The lecture-room is a magnificent amphitheatre, lighted by a single large cupola from above, and seated for 478 students. The desks are of iron, and the woodwork is of varnished red wood; the railings and fittings being solid and strong, and of a style in keeping with the rest of the building. The rows of benches rise rapidly one above another, so as to give a clear view from the back, down on the area where the lecturer stands.

A large well lighted room, facing the east and south, has been set apart for the study of the bones and other dry preparations. Here, besides the ordinary series of bones in cases, a series has been mounted, in which the muscular attachments are painted and labelled; and there are others illustrating the cranial articulations and other important points. There are, in addition, cases containing models of the development of the viscera, casts of frozen sections, and other casts and models likely to be of great service to the student.

The general anatomical museum is still unfurnished, but ample space has been provided, and it will be in every way worthy of the rest of the building.

The microscope room, lighted from the north by large side windows, gives good accommodation for microscopic demonstrations; and a smaller adjoining room has been adapted for original research and the preparation of specimens.

On the ground floor, below the lecture-theatre, the cellars are arranged; and every facility for the preparation and storing of the subjects has been provided for. A lift gives ready communication with the whole series of rooms above.

The methods of teaching in the dissecting room are, in most particulars, the same as those employed elsewhere.

The staff of demonstrators for the present winter is as follows:—Senior Demonstrator, D. J. Cunningham, M.D., F.R.S.E.; under him the following—Charles W. Cathcart, M.B., C.M., F.R.C.S.L. & E.; A. Thomson, M.B., M.R.C.S.; B. Wainewright, M.B., C.M.; and R. F. Rand, M.B., C.M.; who are in the dissecting-room from 10 A.M. to 4 P.M. daily; and also Messrs. Ashdown, Munro, and Benjafield, each of whom come for several hours daily. The tables are systematically visited, at fixed hours, by certain of the demonstrators, so that no student is omitted; while, at other times, the demonstrators are ready to help any who may require assistance.

For the encouragement of good and careful dissection, two Bursaries are annually offered: one for senior and one for junior students. These were given by the widow of the late William McKenzie, Esq., formerly demonstrator of anatomy in the university; whose own dissections of the arteries are still among the best in the Anatomical Museum. Slate troughs have been provided for holding dissected parts, so that students may at any time revise their work, when not actually engaged in dissecting. For a similar purpose, a number of special dissections have been mounted in cases and placed in the room. In the old dissecting-room, for want of room to display them, no attempt was made to provide such dissections; but now a good series has already been put up, illustrating the brain, larynx, and tongue, thoracic and abdominal viscera, and the important spaces and regions of the body; while many more are in progress. Several important and interesting frozen sections have also been mounted; and when this and the other series are completed, the students will have an exhaustive set of preparations to which they may at any time refer.

Besides the daily lectures on Systematic Anatomy by Professor Turner, demonstrations of Regional Anatomy are given at different hours on four days a-week, by Professor Turner and Dr. Cunningham, alternately; and on two days a-week demonstrations are given by some of the other demonstrators to junior students. The chief feature of these latter, is that the special parts are pointed out to each member of the class individually. Demonstrations of a similar character are given to senior students, towards the end of the session, on the brain, the ear, and the eye.

The progress of the students is tested by written examination for first and for second year's students; while, for third year's men, oral examinations on the parts are conducted by the Professor.

The number in the anatomical class, in one or other of its departments, has this winter reached the unprecedented extent of 730.

From what we have said, it will be seen that the work of this truly enormous anatomical school is systematically organised and carefully carried out; and alumni of the University of Edinburgh may feel confident that the thoroughness and care for which its teaching has always been famed bids fair to be maintained, and, if possible, surpassed in the magnificent new buildings, of which they all may be justly proud.

INTERNATIONAL MEDICAL CONGRESS.

THE following is the proposed list of subjects for discussion in the Section of Mental Diseases, subject to revision before December 31st, 1880.

Section VIII. *Mental Diseases.—Anatomy:* 1. Modes of Preparation of Nervous Tissue; 2. Morbid Appearances due to Modes of Preparation; 3. Minute Structure of Special Parts of Brain.—*Physiology:* 1. Relation of Cerebral Localisation to Mental Symptoms as Hallucinations; 2. Hypnotism.—*Pathology:* 1. Of Idiocy, Morphological and

Histological Changes; 2. Relations of Insanity to Gout, Renal Disease, Exophthalmic Goître, and to Coarse Brain-Disease.—*Clinical Folie:* 1. "Folie à Double Forme"; 2. Influence of Intercurrent Diseases on Insanity; 3. Insanity due to Toxic Agents.—*Therapeutical:* 1. Use of Baths, of Narcotics, of Chloral-Hydrate, of Opium, and of Alcohol; 2. New and Unusual Remedies.—*Asylum Administration:* 1. Cottage and Village Treatment; 2. New Legal Codes—Austrian, Italian, English Projects.—*Civil Relations of the Insane:* 1. Marriage, Wills; 2. Insanity and Aphasia.—*Criminal Relations of the Insane:* Special Asylums for Insane Criminals.

All communications regarding Section VIII should be addressed to the Secretaries.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 12th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, December 18th, 1880.

SOUTH-WESTERN BRANCH.

A MEETING of this Branch will be held in the Athenæum, Plymouth, on January 11th, at 2 P.M.; Dr. HOGARTH CLAY, President.

Members intending to make communications are requested to give notice as soon as possible to

SUTHERLAND REES PHILIPPS, M.D., *Honorary Secretary.*

Wonford House, Exeter, December 20th, 1880.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

THE next meeting of this District will be held at the house of Alexander Morison, M.D., 7, The Terrace, Green Lanes, N., on Thursday, December 30th, at 8.30 P.M.

Dr. Morison will read a paper on Musical Cardiac Murmurs.

Mr. Samuel Benton will exhibit a patient cured of Knock-Knee by Mechanical Means.

Dr. Dowse will read short notes of a cure of Elephantiasis by the Continuous Galvanic Current.

Mr. B. G. Morison will exhibit a patient with Pseudo-Paralysis of the Lower Limbs.

Dr. Potter will introduce the subject of a Home Hospital for North London.

THOMAS STRETCH DOWSE, *Hon. Sec.*

December 15th, 1880.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE second ordinary meeting of the session was held at the Grand Pump Room Hotel, Bath, on Thursday evening, December 9th; ALEX. WAUGH, Esq., President, in the chair. There were also present forty-two members.

New Members.—G. Budd, M.B., Clifton; Mr. J. H. Wathen, Clifton; Mr. R. J. Bryden, Bristol; Mr. E. M. Knapp, Bristol; and W. B. Roué, M.B., Redland, were duly elected members of the Association and the Branch.

Communications.—The following communications were made.

1. Two cases of Pseudo-Hypertrophic Muscular Paralysis were shown by H. F. A. Goodridge, M.D.

2. Case of Progressive Muscular Atrophy, with sections of cord, shown by A. W. Fox, M.B.

It was resolved that discussions on these cases should be deferred to the next meeting.

3. Case of Brain-Lesion, with Hemiplegia on the same side. By Ernest Field, M.B.

VICTORIAN BRANCH: ORDINARY MEETING.

AN ordinary meeting of the Victorian Branch was held on August 25th, in the Royal Society's hall, Melbourne; Dr. CUTTS, President, in the chair.

Adulteration of Food.—Dr. HENRY, the Honorary Secretary, drew attention to an article which appeared recently in the *Melbourne Argus* with reference to the adulteration of food, and to the great difficulty of obtaining a conviction against the sellers of adulterated food, through notice being required to be given them by a purchaser, who intended to have the food analysed, of his intention. He (Dr. Henry) had, since the article appeared, waited on the Secretary of the Central Board of Health, and that gentleman had informed him that the Board had in hand a Bill to amend the Public Health Statute.

An Intercolonial Medical Journal.—Dr. ROTHWELL ADAM proposed the following resolutions:

"(*a*). That a committee be appointed to take steps, in conjunction with the other Branches of the British Medical Association in Australia and New Zealand, to establish an Intercolonial Medical Journal.

"(*b*). That advantage be taken of the International Exhibition time to ascertain the opinions of the various Branches, by personal conference with the committee, by any members in Melbourne at that period."

An amendment by Dr. NEILD, that the subject should be referred to the Council, with a recommendation to refer it to a subcommittee to deal with it, and bring up a report at some future meeting of the Branch, was agreed to.

Accident Cases in Hospitals.—Mr. RUDALL read a paper on the indiscriminate admission of persons who, when they met with an accident, sought admission to the public hospitals, though able to pay for private medical attendance. It was true that in some cases a donation to the hospital was made by the patient on leaving; but the surgeon would probably not feel himself at liberty to accept a fee, even if it were offered. Mr. Rudall had not lived in any city where the police were so prone to immediately carry off to the hospital every subject of an accident, with little or no inquiry; although it was not impossible that a sufferer from apoplexy or fracture of the base of the skull might be lodged in the watchhouse under a charge of drunkenness, and for many hours undergo no medical examination. He hoped that the Victorian Branch would take the subject into consideration, and give expression to a collective opinion which might have its deserved influence, especially on those concerned in the administration of hospitals. It was no part of the duty of the visiting surgeons of hospitals, or at any rate of the larger hospitals, to decide on the propriety of a patient's admission on other circumstances than the nature of the case as seen from a professional point of view. When a person, of whatever position in life, met with a severe accident in the neighbourhood of a hospital, it was not unreasonable that he should be immediately brought to it for the first surgical attention; but, unless removal should be dangerous, or at least prejudicial, to him, he should not remain there, if, on the ground of social position and pecuniary circumstances, he were not properly a hospital patient.—Mr. GILLBEE said that no doubt there were many cases of accident admitted to the hospitals which ought not to be admitted, as the persons were able to pay for medical assistance. Whenever an accident occurred in the streets, the police at once rushed off with the subject of it to the hospital, although, as he (Mr. Gillbee) believed, the persons injured would in nine cases out of ten prefer to be taken to their own homes. There was also too great use made of the hospital by all classes generally; and nothing in the colony had done so much as that to pauperise the people. The only way, in his opinion, to prevent such improper use of the hospitals was to establish self-supporting hospitals and dispensaries.—Dr. NEILD said that what was referred to by Mr. Rudall was the fact of persons who had received accidents, and were able to pay for medical advice, being needlessly admitted to the hospitals. In such cases, the patient generally made a donation to the institution; but the donation was never equal to the medical attendance and services given to him; and yet the person making the donation supposed, after he had made it, that he was not indebted either to the hospital or to the public. The fault of the indiscriminate admission of accident cases rested generally with the police.—The CHAIRMAN considered Mr. Rudall had brought the subject forward at a very opportune time, as several cases had very recently been taken to the hospital, and kept there, although the patients could well afford to pay for medical attendance, and might have been treated outside. He knew a case that had occurred very recently, where a person very high in the civil service had an operation performed in the hospital which might have been done at his own home. The indiscriminate admission of cases to the hospitals affected not only medical men, but the general public, who had to pay for the cases. It also especially affected the poorer people who were fit subjects of admission to a hospital, because some of them might be refused admission in consequence of beds being occupied by people who should be treated at their own homes.—On the motion of Mr. GILLBEE, it was agreed that a letter should be forwarded to the Chief Commissioner of Police, drawing his attention to the fact of the police taking nearly all cases of accidents to the hospitals, and requesting him to instruct the police to make inquiries in such cases, and see if the persons could not be taken to their own homes.

SPECIAL CORRESPONDENCE.

PARIS.

Movable Stoves.—Succour of Victims of Accidents in the Streets.—Hospital Nurses.

AFTER the "odeurs de Paris", the "poëles mobiles", or movable stoves, are occupying the attention of the public; and both the lay and the medical papers are devoting columns in praise or condemnation of the latter. This article of household furniture is of American importation, and is found exceedingly convenient and economical; but, from the number of fatal accidents that have from time to time occurred from asphyxia, and other dangers incidental to the use of these and other similar stoves, the Parisians are beginning to fall shy of them, and seem to be disposed to go back to the old-fashioned fire-places. In a hygienic point of view, no doubt the latter are preferable, because they are safer; but this consideration does not counterbalance the advantages derivable from stoves which, with the most ordinary precautions, can be rendered equally as safe, provided thorough ventilation is ensured in the rooms in which they are placed. The medical societies of Paris have taken up the subject; and M. Boutmy, the well-known chemical expert, found, on analysing the gas emanating from an American stove, that it was composed, in volume, of 16.7 per cent. of carbonic oxide; 9.3 of carbonic acid; 73.9 of nitrogen, hydrogen, and watery vapour; and, in comparing these figures with those given by Dr. Angus Smith, in an analysis of the gas emanating from the chimney of a factory—viz., carbonic oxide, 1 to 3 per cent., according to the extent of the draught in it; carbonic acid, 6 to 7; nitrogen, 79 to 81; protocarbonate of hydrogen, 0.13 to 0.78—it will be found that the proportion of carbonic oxide emanating from the stoves is sixteen times more than that from the chimney: hence, the greater danger of stoves over the ordinary fire-places; but, as I have just remarked, this may be obviated by insuring thorough ventilation. Very lately, two young ladies, who slept in the same room, were found dead in their bed; and the accident could be attributed to no other cause than asphyxia, produced by the noxious gases emanating from the stove in their bedroom.

Dr. Nachtel, to whose initiative is due the institution of a night medical service in New York similar to that of Paris, and to which you referred in the JOURNAL of the 27th ultimo, read a most interesting paper, at a recent meeting of the Academy of Medicine, on the Ambulance Service as it exists in New York, for the succour of the victims of accidents in the streets. Dr. Nachtel, with praiseworthy disinterestedness, proposes the establishment of a similar service in Paris, in order to overcome the difficulties that exist, to say nothing of the time lost, in affording medical or surgical aid to those requiring it under the circumstances mentioned. Dr. Nachtel entered fully into the working of the Ambulance Service in New York; and his communication, which will be found in the *Bulletin* of the Academy, was listened to with attention, and he descended from the tribune in the midst of the plaudits of the members present. A Commission—composed of MM. Larrey, Legouest, Vulpian, and Chéreau—has been appointed to report on the communication.

You are aware that, in several hospitals and asylums in Paris, the "sœurs de charité" have been replaced by "garde-malades", or sick-nurses selected from the lay community; and you may imagine the difficulties that must have been encountered in carrying out such a radical change in an institution that has been in existence for centuries. Setting aside the religious aspect of the question, there can be no doubt that the sisters, or nuns, are better suited for nursing the sick, to whom they can wholly devote their time and energy, untrammelled as they are by the everyday duties of social life. Moreover, while the French in general, and the women in particular, are not an intemperate people, it is a fact that can hardly be denied, and I can say from personal experience, that the generality of lay nurses are addicted to drinking. A case in point occurred lately in one of the Paris hospitals, in which a very serious operation on a female patient (ovariotomy) had been performed, and the surgeon, in order to insure rest and quiet, had the patient placed in a room by herself, under the care of an ordinary nurse, who was to administer a certain quantity of brandy, a bottle of which was left under her charge for the night. The unfortunate patient was completely neglected; and, in the rounds of the *interne*, in the early morning, he found the *garde-malade* lying dead drunk in a corner of the room! It need hardly be said she was immediately dismissed. *Apropos* of *garde-malades*, the *Gazette des Tribunaux* publishes this week a report of an "infirmier" (male sick attendant), of the Hôpital Saint Antoine, having been sentenced by the Tribunal Court to a year's imprisonment, for having taken upon himself to apply the strait-jacket to a typhoid patient labouring under delirium, who died the next day.

CORRESPONDENCE.

A CHRISTMAS OFFERING: BRITISH MEDICAL BENEVOLENT FUND.

SIR,—In 1873, a suggestion from me appeared in the BRITISH MEDICAL JOURNAL, that each member of the Association should be invited to send five shillings as a Christmas offering to the British Medical Benevolent Fund. I venture to repeat the suggestion, believing the assistance given would be most useful to many who are suffering from the long-continued financial depression. If only one-half of the 19,520 members of our profession in the United Kingdom sent the five shillings, £2,440 would be raised—a welcome addition to the fund, at very slight sacrifice to anyone. — Yours very faithfully, STANLEY HAYNES, M.D.

Malvern, December 21st, 1880.

*** We shall be glad to receive such Christmas offerings of this or larger amount, and to publish lists of them from week to week.

THE MODE OF ELECTION OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—Mr. Pollock's letter in your number of December 11th on this subject calls for the serious attention of all those who are dissatisfied with the present method of election, and who are anxious to strengthen the bond between the College and the great body of its Fellows. The Fellowship has, I believe, been steadily rising in public estimation, as the examination has been raised in character, and made a better test of professional capacity. And this has been the case in the provinces to an even greater relative extent than in London, so that the provincial Fellows are a much more powerful and intelligent body than formerly. Of these, it is notorious that only a small proportion take part in the elections; and yet the part which they take is so active, that the proportion of provincial members of Council seems constantly rising. Now, I have no wish to exclude provincial surgeons from the management of the College, yet everyone must see that the Council could not work with more than a certain proportion of members who can only with great difficulty and at great expense find the time to attend its meetings; who have still greater difficulty in attending the numerous committees at which the business is prepared; and who are utterly incapable of serving in the laborious office of President. It is really a vital question for the College, that the proportion between London and country Fellows on the Council should be settled by some manageable consultative body, and not by the haphazard process of a general election; and, for this object only, I should welcome Mr. Pollock's proposed Committee of Election. It would, however, have uses even more important than this, for it would satisfy that legitimate demand for a voice in the affairs of the College, which is urged by the country Fellows so constantly, that I do not remember a year without some demand of the kind being addressed to the Council; and it would, at the same time, do all that can be done to extinguish that undignified system of personal solicitation which certainly does prevail under the present mode of election.

The only objection to it which I see is, the difficulty and expense of obtaining a fresh charter, and this would no doubt be overcome if the feeling of the Fellows and Members of the College appeared to be strongly in favour of this or some similar scheme. I would, therefore, suggest to you the propriety of ascertaining the feeling of those numerous Fellows and Members who constitute the Branches of our great Association, on the broad outlines of Mr. Pollock's proposal—for the details, of course, are to be regarded as merely suggestive. If a large majority of those Branches were to address representations to the Council in favour of such a change, it must necessarily command their deliberate attention. And if a new charter were in prospect, along with the change in the mode of election, many other changes must be discussed. Mr. Pollock's suggestion of a change in the tenure of the Presidency, by which that great office would be made more of a personal distinction, and less of a mere mark of seniority, and by which the personal influence and authority of the President would be more felt in the management of the College, is one that, in principle, I should think, would find many supporters. The qualifications necessary for the office of Examiner, whether in Anatomy and Physiology (now unhappily separated from each other) or in Surgery, ought, in my opinion,

to be more clearly defined. The control of the Council over the details of the examination, especially over those of the primary examination, which is conducted almost entirely by examiners not members of the Council, ought to be made more of a reality. The connection between the College and the Hunterian Museum is a subject which might very fairly be discussed. The College has two great public functions, in comparison with which all the rest of its proceedings, though important to the profession, are comparatively insignificant to the outer world; viz., the examination of candidates for admission into the profession, and the maintenance of the Hunterian Museum. As the latter is in great part a scientific collection, just like the natural history collections of the British Museum, and is freely at the use of the public, is it fair that the whole expense of its maintenance should fall upon the College—*i. e.*, in reality upon the students who present themselves for examination? For the income of the College is derived from the students' fees; and, if the College were relieved of some part of the expense of the museum, a corresponding diminution could be made in the diploma fee. Nor ought the relative position of the College of Surgeons to the other great professional bodies to be omitted from the view of any one formulating a new charter. It is a scandal that the Colleges of Physicians and Surgeons, and the Society of Apothecaries, should regard themselves, and be regarded by the public, as rival and independent bodies, occupying the same ground, and bidding against each other. If they were confined to their own respective provinces of medicine, surgery, and pharmacy, and all candidates for a London diploma were obliged to present themselves before each of them, the problem of medical reform in England would be solved, as far as the great question of qualification goes. But I am sensible that I am wandering into that Utopia in which professional squabbles are expected to be settled by common sense.

I hope I have said enough to show that Mr. Pollock's proposal is well worthy the attention of the Branches of our Association, and contains the germs of questions of even greater importance.—I am, sir, yours, etc., T. HOLMES.

December 18th, 1880.

GUY'S HOSPITAL.

SIR,—The North of Ireland Branch of the British Medical Association have expressed very categorically an opinion which is, no doubt, very general in the profession, but which is not in accordance with the facts, and which is tending, at the present moment, to produce a great deal of irregular and silly protest, and, if it led to any action at all, would lead to mischievous action. The first resolution passed states "that Dr. Habershon and Mr. Cooper Forster, in resigning their appointments, have taken the only course open to them consistent with the honour, dignity, and interests of the profession; and that the profession will incur deserved reproach if it spares any effort to secure their honourable reinstatement."

Now, in the first place, the action of Dr. Habershon and Mr. Cooper Forster is entirely personal to themselves, and unconnected with their colleagues; and if this is the only course open to them, then their colleagues would deserve just reproach for not having adopted the like course. The fact is, they adopted this course at a time when there was no quarrel between the staff and the treasurer and governors, and when the staff generally had accepted certain terms, including the appointment of a taking-in committee, with two representatives of the staff on the committee, which they had agreed to try, and which is believed to be working well. When this agreement was made with the governors and the treasurer, Dr. Habershon and Mr. Cooper Forster agreed with their colleagues to continue to act as medical officers of the hospital; and subsequent to that arrangement nothing is known to have occurred which can have given any reason for the act of resignation. Further, when the resolution says "that the profession will incur deserved reproach if it spares any effort to secure the honourable reinstatement" of these gentlemen, the fact is blindly left out of view that they were within a month or two of their ultimate necessary period of retirement, which they only anticipated by a very short time; nor could any question of their reinstatement, under any circumstances, arise. Their retirement, at so unfortunate a moment, in disaccord with their colleagues, was only another example of isolated, and—if I may be pardoned for saying so—irritated and unwise action. It was an example of disunion, and not of unity; and it is not, in my opinion, deserving professional support. Had they remained at their posts, after agreeing to do so with their colleagues, they would probably have rendered services where they have now done harm; for there is good reason to believe that, at the close of their professional connection with the hospital, which would only have occurred within a very short time, the majority of the governors would have elected them as governors of the hospital, at the same time that the post of honorary consultants was conferred upon them; and thus the first step would have been taken towards infusing a medical element into the court of governors, and this by a natural and unstrained process.

Again, the resolution regrets that the profession has not combined "to enforce the compliance of the treasurer and governors with the requirements of the staff in all matters relating to the nursing of the sick". But, on the contrary, it is believed, on all sides, and on the authority of individual members of the staff, that their requirements are complied with in virtue of the regulations carried out under the new arrangements. It will be time enough to talk of the enforcing of these arrangements when complaint is made that they are not complied with.

Another resolution regrets the absence of any sign of such concerted action by the physicians and surgeons of other metropolitan hospitals as to encourage the junior staff to follow the example of their seniors; but the junior staff deprecate any such action; and not only have not taken any steps whatever to invite or ask for it, but have indicated very plainly their desire to be left alone to settle their differences with the governors themselves. The machinery of the British Medical Association has at any time been at the service of Guy's Hospital, if they had chosen to ask for it; but they have preferred to act by themselves and for themselves; and any concerted action on the part of the staff of the other hospitals could, at the present moment, have no meaning, as it certainly has no encouragement from the Guy's staff.

These resolutions might well have applied to a state of things three months ago, had the Guy's staff been then at all unanimous in desiring such aid; but, as a matter of fact, they preferred to take their own course, and to compose their difficulties by communication between themselves and the governors. There has never, at any moment, been any room for such concerted action as these resolutions call for; nor has there ever been any indication that the staff of Guy's Hospital would have welcomed it.

It is another thing that the public should step in, and call for an improved lay administration of a hospital which, in consequence of the recent differences, can no longer be said to offer the assurance of undivided regard for the welfare of the patient and the Borough, which may properly be expected from it. This, I am glad to see, has been done; and, in calling for an inquiry into the propriety of an improved administration of Guy's Hospital, the public at large have a strong case, arising out of the scandals which occurred during the late differences between the treasurer and the staff.—I am, dear sir, yours obediently, A METROPOLITAN HOSPITAL SURGEON.

December, 1880.

SIR,—In the JOURNAL of last week is published a resolution so mysteriously worded, that I should be, in common I imagine with members generally on the Metropolitan Counties Branch, glad if those gentlemen who are responsible for the resolution would give some explanation of it. It runs as follows.

"That, taking into consideration the general question of hospital management, as brought out by the disastrous events at Guy's Hospital and the York Road Lying-in Hospital, so similar in their general features, this meeting is of opinion that the Council of the Metropolitan Counties Branch is disqualified from taking steps to call a general meeting on the subject of the former institution; and, therefore, suggests to the Committee of Council of the Association, that any steps necessary should be taken immediately by that Committee."

As a humble member of the Metropolitan Counties Branch, I have, I confess, for some time been much surprised that that Branch has not taken any action in respect to a matter which I should have thought came especially within the sphere of its usefulness. If there were any subject on which the Metropolitan Counties Branch might have been expected to pronounce a collective opinion, it is that of the recent and still existing trouble at Guy's Hospital, in which the dignity and professional character of the staff, and of medical men generally, have been so seriously attacked. It is one of the main objects of the British Medical Association to promote professional dignity, and to maintain professional concord; and how or in what sense the Metropolitan Counties Branch is disqualified from acting in the matter, is a thing which I, in common with members generally of the Branch, would, I believe, be very glad to be advised; and, especially, how it happens that the South London District of the Branch are unanimously resolved on that matter.—I am, sir, yours obediently,

AN OLD GUY'S MAN, M.B., M.A.

"LISTERIAN" OVARIOTOMY.

SIR,—As the discussion at the Royal Medical and Chirurgical Society, last week, shows pretty strongly that there is a considerable difference of opinion as to the relative merits of antiseptic or non-antiseptic ovariotomy, I may be permitted to record my own most recent

experience of the operation. I have had fifty operations, during a period of about two-and-a-half years; and, in these, I do not include other cases of abdominal section—such as simple exploratory incision, removal of myoma, or incomplete cases, etc.—of which there were twenty-nine in the same period. I hope, in due course, to be enabled to publish a complete list of all such from the commencement of my practice.

Of the fifty ovariotomies, only one patient died. This series included thirty-four for ovarian tumour (ovariotomy proper), and sixteen for oöphorectomy. The results were twenty-one successive recoveries; then one death; then twenty-eight successive recoveries. The death occurred in the case of removal of a parovarian cyst, forty-four hours after operation; it was very sudden, with symptoms of coma. The cases were taken without selection, and were of the average difficulty and danger. Two of them were, I consider, much above the average in this respect. In the case of J. B., aged 39, a large left multilocular cyst, easily removed, twelve hours afterwards, when I was sent for, I found her in extreme collapse. The abdomen was reopened, under the spray, and the ligature was found to have slipped; the pedicle was caught and tied again, and quite two pints of clotted and fluid blood were scooped out of the abdomen and pelvis. After a most tedious *toilette du peritoine*, the wound was again closed, and the patient did well.

In the second case, E. R., aged 39, a tedious and difficult operation, I placed a drainage-tube, as the tumour had been so adherent as to require partial enucleation. Six hours after the operation, the "sister" at the hospital telephoned to me that they missed a torsion-forceps. On seeing the patient at once, I found her fairly well, though in pain; and I recommended a further search. Next morning, exactly twenty-four hours after operation, she was in intense pain, anxious, quick pulse, though the temperature was not much raised; but, as the forceps could not be found, I concluded that it was in the patient's abdomen; and, under the spray, I cut the uppermost stitch, and made from it a fresh opening into the abdomen, above the umbilicus. After a short search, I found the forceps, with lymph upon it, lying down against the left side of the spine. I made the fresh opening so as not to interfere with the drainage-tube, or to allow its contents to enter the abdomen. The patient made a perfect recovery.

I believe all the operations were performed strictly antiseptically. The spray solution, in most cases, was 1 in 20, occasionally 1 in 30—making the spray itself about 1 in 40, or 1 in 60. The wounds were dressed, in about the first half of the number, with gauze; and, since then, with the carbolised absorbent cotton-wool, introduced by Mr. Gamgee. I have never pretended to conduct the treatment after operation strictly antiseptically: for I have looked upon it as of the very first importance to conduct the operation itself with the strictest antiseptic care, until the peritoneal wound has closed, which is well known to take place very quickly; and, after that, that the abdominal wound may be treated, on ordinary principles, as an incised wound; which plan will not influence the result, and is a matter of a very short period, more or less, in the ultimate recovery of the patient. Of course, many of the cases healed without any pus; but I have been convinced that others have not healed quite as quickly as those of Mr. Tait, who has not regarded antiseptic principles as of the same importance as myself. Of this I have never been anxious, so long as I was satisfied that the peritoneal cavity had been exposed to only a carbolised atmosphere: for it is well known how easily this cavity is shut off when the edges of the wound are brought together, even before the sutures are tied, making it sometimes no easy matter to insert one's finger—as, for instance, to extract the flat sponge.

I have usually ascribed the more tardy healing of the wound, when such did occur, to the action of the dressing rather than of the spray, as my carbolised wool was made without measuring the acid, and was known to be more strongly impregnated at one time than another.

In none of the cases was an excessively high temperature, or a frequent pulse, observed, which could possibly be considered due to carbolic poisoning.

In eighteen cases, the clamp was used; and, in thirty-two, the ligature: in one of the latter, a drainage-tube was also inserted. In the patient who died, the pedicle was tied. One patient was in the fourth month of pregnancy, and was afterwards confined at term of a living daughter.—I am, yours truly. THOMAS SAVAGE.

Birmingham, December 18th, 1880.

VACCINATION.—Dr. S. B. Farr, medical officer for the Andover Workhouse and No. 1 District, has again been awarded, for the third time, the first-class grant for efficient vaccination, the sum of £14 9s., in addition to the fees paid by the guardians.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE NEWCASTLE THROAT AND EAR HOSPITAL.

SPECIAL hospitals are rapidly extending to all the large centres of population, and this institution has only been in existence for two years. Imitation is the sincerest flattery, and so the founders of a similar hospital in the Gray's Inn Road may be gratified to hear that not only have the Newcastle people copied their basis of constitution, but they have headed their report with Charles Dickens' description of the London Throat and Ear Hospital. The profession will no doubt be gratified to know that each of those special institutions is "commended to sufferers as a special hospital; to the poor as an open hospital; and to the benevolent as a provident institution." The Newcastle Throat and Ear Hospital bases its claim to be called a provident institution on the fact that those patients who are able are expected to contribute a small weekly or monthly sum, towards the expenses of their treatment; the applicants themselves assessing the amount of their contributions. By this system, it is declared that the pauperising tendency of gratuitous aid is avoided. Be this as it may, it is a noteworthy fact, that a similar system of patients' payments has made many of the older special hospitals quite callous to the depression in trade, because the bulk of their income comes from the patients which these hospitals relieve. At the Newcastle Throat and Ear Hospital during the year ending March 31st, 1880, one thousand out-patients contributed £89 3s. 6d., although the system was quite new to the applicants. The subscriptions and donations during the same period amounted to £79. If St. Bartholomew's, or St. Thomas's, or Guy's Hospital, adopted a similar system to-morrow, the respective out-patient departments, at a similar rate, should yield £12,500, £5,000, and £5,500 per annum. Why do not the treasurers of these hospitals give the system a trial, and so make good the heavy losses from their forms?

THE REIGATE COTTAGE HOSPITAL.

THIS is one of the best managed of all the cottage hospitals. Its practice varies much. In the winter, the beds are either empty or occupied by cases of little interest; whilst the summer often crowds the hospital with severe accidents, and much good surgery is often to be seen at Reigate. Until recently, Mrs. Walter undertook the arduous duties of lady-manager, which she discharged most admirably. She has found it necessary to devote less time to the work lately, and therefore a paid lady superintendent has been appointed. The committee are now revising the rules, and we counsel them to follow those in force at Harrow-on-the-Hill. The Reigate Hospital has always received payment from the patients; and out of a total income of £926 received in the twelve months ending June 30th, 1880, patients' payments amount to £144. The accounts are admirably kept, and the system adopted is worthy of imitation. One hundred and eighty one patients were admitted, of whom twenty-six were cases of accident; and fifty-four operations were performed. The operations include three amputations and one double amputation of the thigh, excisions of the hip and elbow-joints, and a case of ovariotomy (unsuccessful). This is good evidence that the surgeons of cottage hospitals do not lack surgical boldness.

HERTFORD BRITISH HOSPITAL (PARIS).

INSTITUTED in 1871, this very valuable hospital was rebuilt by Sir Richard Wallace, and was formally inaugurated on the 16th of April, 1879. Originally it was but an appendage to an ambulance, and it owes its origin to the two sieges of Paris in 1870 and 1871. It is well and crisply administered, and the following by-laws regulating the relations of the medical attendant to the nurse, and the nurse to the patient, are instructive, because the committee have only just revised the rules. The physician is required to give from time to time, as he may deem necessary, or on the requisition of the nurses, such instructions and information to the nurses as they require, to enable them to obey his orders, and to discharge their duties in an efficient manner. The nurses are required to treat the patients tenderly, and in strict accordance with the instructions of the physicians, which they are to take care to understand sufficiently to be able to carry them out. Of course there is nothing unusual in these regulations, which simply embody the practice at all well-managed hospitals. Unfortunately, the revelations in connection with the bad nursing arrangements at Guy's Hospital, have rendered it necessary that all hospital rules should be absolutely unmistakable on the subject of the nurse's subordination to the physician.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

NEWCASTLE-ON-TYNE.—Mr. Armstrong's last report is a very interesting document, and is adorned with a number of coloured disease-charts, plans, and maps, which much help in the understanding of the text. It shows the health-officer to be working well and earnestly, and to be keenly alive to the sanitary defects and requirements of his enormous district. During last year, there were 5,381 births and 3,458 deaths in the borough, equal to rates of 36.6 and 23.5 per 1,000, or appreciably less than the mean for the five preceding years. The rate of mortality from the chief zymotic diseases was 3.7 per 1,000, as compared with rates of 4.4 and 2.4 in 1878 and 1877. Diseases of the respiratory organs caused 562 deaths, against 452 in the year preceding. The number of deaths of infants under one year of age was 784, as compared with 888, 842, and 971 in the three previous years. Non-certified deaths contributed 124 cases to the general mortality, as compared with 119 in the previous year. Eighty-two, or about two-thirds of these, were deaths of children under one year of age; and of this number no fewer than 56 were attributed by the parents or guardians to "convulsions" or "debility". During the year, 117 accident cases were "under the influence of drink" when brought to the Newcastle Infirmary, as compared with 321 cases in the preceding year. The admissions to the fever hospital were remarkably few, having been 38 in all. The most noteworthy feature in the use of the hospital during the year was the stamping out by its aid of two outbreaks of typhus in different parts of the town. Of scarlet fever, which caused in all 284 deaths, against 219 in 1878, only 8 cases were received into the hospital—a proportion which seems most ludicrously small. Several interesting outbreaks of this disease occurred during the year; one in particular seemed to be associated with the supply of milk from a certain dairy. Enteric fever caused 33 deaths; and measles, which in the spring assumed an epidemic form in the borough, caused 98 deaths. From diphtheria 4 deaths occurred, one of which was in a family where 7 persons were attacked by the disease. Mr. Armstrong's account of the detailed sanitary improvements effected is very full, but of no general interest. The examination by the medical officer of health of all plans of new buildings deserves, however, to be mentioned as an important reform. The regulation of dairies in the borough under the Act of 1878 seems to be very imperfect, and numerous cases of infectious diseases are reported in the houses of dairy-keepers. Mr. Armstrong concludes his report with an essay on the causes of the spread of infectious disease, and the possibility of its extinction, in which, fortifying himself by quotations from Mr. Simon and Dr. Russell of Glasgow, he shows the necessity of early information being given of the existence of infectious disease, of the provision of adequate hospital accommodation, disinfecting apparatus, and the like, together with homes of refuge for the poor while their houses are being disinfected.

WEST SUSSEX.—Dr. Kelly's reports have always been interesting and useful; and his last is rendered still more valuable by tables showing for each district the mortality from various causes over a long series of years. In the whole district, the births of 2,634 children, and the deaths of 1,292 persons, were registered during the year. Taking the population of the district as 85,102, the birth-rate was 30.9 and the death-rate 15.1 per 1,000 living. In the four previous years, the death-rates were 17.0, 16.3, 14.5, and 16.0 per 1,000; so that the rate for 1879 shows an improvement on the average. The prolonged and intense cold of the first quarter proved very fatal to young and old. The infantile mortality for 1879 was at the rate of 88 per 1,000 births, against 107, 107, 85, and 101 in the four preceding years. Thirty-seven deaths occurred from accidents, including 9 from drowning. Fourteen persons committed suicide, and of this number 9 were male and 5 female. The deaths from zymotic diseases numbered 79, or 0.9 per 1,000. This rate is lower than in any previous year. Measles occasioned 9 deaths, scarlatina 2, diphtheria 22, whooping-cough 17, enteric fever 9, and diarrhœa 8 deaths. Diphtheria was most prevalent in the Midhurst and Petworth districts, and was present in an epidemic form at Lurgashall. At the latter place, there were in the summer some cases of sore-throat; but it was not till October that the disorder rapidly spread. In most of the cases, the disease was very mild; and no medical man was called in, as the parents thought that the children merely had bad sore-throats. Dr. Kelly's experience leads him to believe that diphtheria is far more frequent on the weald clay than on any other soil; but he shows cause against the usually accepted dictum that there is an intimate relation between dampness of soil and phthisis. A somewhat curious outbreak is recorded of diarrhœa at West Worthing, seemingly caused by the drinking-water in some of the house-cisterns having become contaminated through the overflow-pipe being in connection with the drain.

CLEATOR MOOR.—The unfavourable weather and an epidemic of measles conspired to raise the mortality of this district considerably above the average; the death-rate being 19.53 per 1,000, against an average of 16.0. The total number of deaths was 154, of which no fewer than 85 were in children under five years of age. It would have been interesting to have learnt from Dr. Eaton the conditions which contributed to this unusually large proportion of infant deaths. Zymotic diseases caused 28 deaths, 20 being in children between the ages of one and five years. Measles and scarlatina were the most fatal diseases of the group. Bronchitis caused 29 deaths, and pneumonia 3; 11 of the 32 deaths being in children under one year old. Phthisical disease accounted for 30 deaths, which is 50 per cent. higher than the average of the four years previous to 1878. The wasting diseases of infants caused 21 deaths, the highest number on record. Nine of them were due to marasmus, 9 to debility, and 3 to premature birth. The establishment of a hospital for infectious diseases is a step in advance.

SIDMOUTH.—In a health-resort like Sidmouth, the question of the temperature is of no small importance. Dr. Pullin reports of the district that it is effectually sheltered on three sides by hills 500 feet high, and that on the south it has an uninterrupted seaboard of some fifty or sixty miles; that the soil is an easily permeable one; and that the camellia, magnolia, and myrtle bloom freely in the open until late in the autumn. The mean temperature for last year was 47.1°, being the exact mean of the preceding eight years, and only a quarter of a degree below that of Penzance and Torquay. The mean daily range of temperature was only 9.8° in 1879, the mean of eight years being 11°. Gifted by nature with so equable and non-relaxing a climate, it behoves Sidmouth to be careful that these natural advantages are not marred by the presence of unsanitary conditions and unwholesomeness in its midst. The authorities of the town would appear, indeed, to have thoroughly awakened from the slumbers from which Mr. Netten Radcliffe roused them about three years ago, so far as the removal of nuisances is concerned; but the sewerage and water-supply of the district are still incomplete. There is time to rectify these defects before another season begins; and the authority must not be lulled by the present absence of disease into supposing that this immunity will of necessity continue. During last year, 72 births and 70 deaths occurred in the district, equal to rates of 20.3 and 20 per 1,000 respectively. The cause of the very low birth-rate during the last two years is, Dr. Pullin states, "not easily accounted for". Eight deaths took place in children under one year old, and two between that age and five. Nine of the deaths were those of visitors; and exactly a half of the deaths were in persons above the age of sixty years, nine of them being between eighty and ninety-five. Bronchitis seems to have been very fatal, though the number of deaths is not stated. The remarkable immunity of the resident population from phthisis is noteworthy.

KENSINGTON.—The series of reports on the public health of Kensington, which have now reached their twenty-fourth year, constitute by themselves quite a feature in sanitary literature. In addition to the usual comments on the mortality statistics and sanitary history of Kensington proper, one has come to look in Dr. Dudfield's reports for a succinct and able *résumé* of the sanitary questions which have most engaged public or professional attention during each recurring year. Thus we find dealt with, in the present report, the Hampstead Hospital case, the metropolitan accommodation for the isolation of infectious diseases, the "disqualification by medical relief" Bill, Mr. Dodson's ill-advised Vaccination Bill, the spread of glanders, and the rival opinions of Dr. Frankland and Dr. Tidy on the Thames as a source of drinking-water. With regard to Kensington more particularly, Dr. Dudfield reports that there were in the parish during last year a total of 4,790 births and 2,966 deaths, equal to rates of 30.6 and 19.1 per 1,000. The deaths of children under one year numbered 722—a decrease of 101 as compared with the number in 1878, attributable to the diminished fatality of whooping-cough and diarrhœa. The deaths under five (1,218) were fewer by 211 than in 1878, and were equal to 40.8 per cent. of the deaths; and the deaths at sixty and upwards were 713, or 23.8 per cent. of the total deaths. The deaths in the first and fourth, or colder quarters of the year, exceeded by 340 the number in the intermediate second and third quarters. This great difference was

largely due to the fatal prevalence in winter of lung-diseases, combined with the comparative lowness of the mortality in summer from infantile diarrhœa. The death-rate from zymotic disease was much below that of the metropolis generally. With the exception of whooping-cough, which presented an average fatality, and diphtheria, which was slightly in excess, the mortality from each of these diseases was below the average. The deaths were equal to 11.6 per cent. of the deaths from all causes, and to a rate of 2.2 per 1,000 persons living. Scarlatina caused 41 deaths, some interesting examples being given of the unsuspected ways in which the infection is often spread. Diphtheria caused 26 deaths, measles 60, and whooping-cough 93. The deaths from the three diseases grouped under the head of "fever" were 23, 8 below the number in 1878, and exactly half the corrected decennial average. A remarkable outbreak of enteric fever, attacking six persons out of a household of ten—viz., three young ladies, two servants, and a charwoman—was probably due to the infection of the water-closet by the latter. Small-pox was prevalent in the parish during the greater part of the year. Of the 139 cases recorded, 112 were over and 27 under fifteen years of age; 110 were removed to hospital, and 29 were treated at home. Dr. Dudfield again examines with considerable care the indictment which has been raised against the Fulham Hospital of spreading small-pox, and says truly enough that a medical officer "can have but one desire in reference to a hospital, if it appeared likely to spread infection in his district—viz., to get rid of it as quickly as possible. It is not without much time, thought, and labour devoted to investigation of the question, that I have come to the conclusion that the charge against this hospital is not borne out by anything that its opponents have published, or by anything that I myself have been able to find out; but that, on the contrary, the hospital is a distinct boon to the locality, by the facilities it affords for the isolation of the sick".

HAMPSTEAD.—Dr. Gwynn has unwittingly taken a retrograde step in making the statistics in his last published report relate to the fiscal instead of to the calendar year. Such a mode of calculation is universally condemned by sanitarians, as frustrating any comparison with the statistics of other districts similarly situated; and it is a pity that Dr. Gwynn did not in this respect follow the example of his predecessor, Mr. Lord. The figures now given seem to relate to the fifty-two weeks ended March 27th, 1880—an obviously unscientific period for comparative purposes. During that period, there were 1,046 births and 595 deaths in the parish, equal to rates of 22.98 and 13.07 per 1,000 of the estimated population of 45,500. The birth-rate is higher, and the death-rate lower, than in the preceding year. Of the total deaths, 33.6 per cent. were of children under five years of age, and 26.72 per cent. of children under one year. This compares favourably with the proportion for the whole of the metropolis. Seventy-eight persons died between the ages of sixty-five and seventy-five, 48 from seventy-five to eighty-five, and 12 from eighty-five upwards, one person attaining the age of ninety-six. Zymotic diseases caused only 40 deaths —a very considerable decrease on the numbers for former years. None of the diseases of this class seem to have been very prevalent, though whooping-cough caused 11 deaths. Constitutional diseases caused 122 deaths, of which no fewer than 22 were from cancer. Consumption was fatal in 66, and diseases of the respiratory organs in 117 instances. Dr. Gwynn's remarks on the difficult problem of providing fitting dwellings for the poor are worthy of serious consideration.

LYTHAM.—Dr. Pountney has not much of interest to chronicle with regard to this district for the year 1879, except that the births numbered only 2 more than the deaths. The deaths were at the rate of 17.8 per 1,000, as compared with 17.4 in 1878. By far the largest proportion of these deaths occurred in the first quarter, when also there was an unusual amount of sickness in the district, owing to the cold and bleak weather. The quarterly death-rates were equal to annual rates of 26.4 in the first, 14.4 in the second and third, and 15.2 in the fourth quarter. Twenty-one of the 89 deaths occurred in children under five years of age, and 35 in persons over sixty years. Very few cases of infectious diseases were reported; and only 6 zymotic deaths occurred, against 14 in 1878. Drainage works seem to be approaching completion in the district; but the abandonment of the project of erecting a sanatorium is unwise.

MEXBOROUGH.—Mr. Sykes's report on this district is very practical and good, and it is to be regretted that it has not been published in some more worthy fashion. He reports that, on the whole, the health of the town during 1879 was very good; and that the mortality was at the comparatively low rate of 18.16 per 1,000. This, in a town where the great majority of the adult male population is engaged in dangerous and unhealthy occupations, such as coal-getting, glass-blowing, iron-working, and earthenware-making, must be held to be satisfactory. It is not so satisfactory, however, to find that, out of the 109 deaths, no fewer than 74, or rather more than 67 per cent., occurred in children under five years of age; and 46, or a little more than 42 per cent., in children under one year. This infantile death-rate is very high, though it is but fair to add that there was also a high birth-rate (44.6 per 1,000), which makes the proportion of deaths under one year to be 172 per 1,000 births. Mr. Sykes has devoted considerable attention to the causes of the excessive death-rate among infants, and he finds improper feeding and injudicious exposure to have a considerable share in it. Of zymotic diseases, scarlatina caused 7 deaths, measles 5, and whooping-cough 9. Only 3 fatal cases of diarrhœa were recorded. Measles began to be epidemic in October; but, though it was clearly spread and fostered by school-congregation, the managers refused to close the schools as recommended by the sanitary authority, with the result that the epidemic lingered in the district a long time, and spread to an adjoining town. The drainage of private streets seems to require early consideration; and the question of an outfall for the main drainage is also important. Mr. Sykes reports a continued excellence in the quantity and quality of the town water-supply, and speaks in terms of approval of the system of emptying ashpits adopted by the Local Board in 1878.

POPLAR.—The unusual arrangement is made in this district of appointing two officers of health—one for the south, the other for the north district. We believe it is only in one other metropolitan district (Wandsworth), and in one or two provincial towns, that such an arrangement obtains. In commenting on the last reports of the Poplar health-officers, we took occasion to suggest the advisability of the statistics published by each being uniform, and to deprecate the making of the reports up to March 31st, instead of to the end of the calendar year (see vol. i, 1880, p. 400). We regret to observe that the same defects are still noticeable in the reports just published. Dr. Corner gives a much more detailed account of the health and statistics of the south district than does Mr. Talbot of those for the north district; but both officers join in condemning the action of the Board of Works in declining to open the hospital it has provided at great expense in West Ham, "because the number of cases was not sufficient". The real reason would seem to be, that the Board of Works wanted the patients to pay for their maintenance, forgetting that the cases that it is most important to isolate are those that are destitute and living in overcrowded and filthy neighbourhoods. To such, free admission to hospital is a *sine quâ non*; and, if the Board of Works be not prepared to take this view of the case, it had better not have spent the money for the hospital at all. The death-rates of the districts were 18.8 and 20.6 per 1,000 respectively. Scarlatina, measles, and whooping-cough were very fatal in both districts, and in each the mortality amongst children was very high. It is satisfactory to find that the much-complained-of nuisances from factories in the district are being steadily repressed.

WITHINGTON.—The report on this district is one of great value from an etiological point of view. Amongst other cases of interest reported by Dr. Railton, may be mentioned the following. Of seven houses attacked during the year with measles, four were invaded at about the same time in February. Three of the houses adjoined each other, and were isolated from all other buildings. In seven weeks, the fever ran through all three families, attacking every one who was not protected by a previous attack. In this manner, out of a total of sixteen children who lived in the three cottages, fourteen were taken ill, one of the cases proving fatal. The children who escaped had previously suffered from the disease. No attempt seems to have been made to prevent contagion, the children lying or playing together the whole time. In a family living in a small house, four cases of scarlatina occurred; the father being a coachman, who was in the daily habit of sitting by the side of his master in an open carriage as he drove him to town. This gentleman contracted the fever, together with four other members of his family; and Dr. Railton can only account for these latter cases by supposing that the coachman conveyed the contagion in his clothes. In another outbreak of scarlatina, the centre of infection was a school; and in another the disease was propagated by means of infected milk. This was, in fact, an offshoot of the Fallowfield epidemic reported upon by Dr. Herbert Airy (see vol. i, 1880, p. 107). During last year, there occurred in the district a total of 432 births and 203 deaths. On an estimated population of 15,000, these figures are equal to rates of 28.8 and 13.5 per 1,000. The mortality amongst children under five years showed a marked improvement, in comparison with the three previous years. Zymotic diseases caused 21 deaths, against 20 in 1878 and 39 in 1877. The action of the Local Board

with regard to infectious disease seems to be very energetic and successful. Dr. Railton is evidently doing very good sanitary work in the district. He reports that he personally inspected 290 houses during the year; and of these 256 were reported to the Sanitary Committee, with the result of 57 legal notices for amendments being issued and complied with.

BOURNEMOUTH.—On an estimated population of 13,000, the death-rate of Bournemouth for last year was 21.4 per 1,000. Excluding 123 deaths amongst visitors, the death-rate of residents is estimated at 12 per 1,000. Sixty-four deaths occurred in children under one year, and 18 between the ages of one and five; whilst 62 deaths were recorded in persons over sixty years of age. One fatal case of small-pox (imported) occurred, and four of scarlet fever—the latter disease occurring under circumstances which made the need for means of isolation very marked. Mr. Nunn observes that a much greater freedom from measles among the poorer classes has been noticed during the past two years, which he attributes to the regulations adopted at all the day-schools, the managers of which now insist that any child having had infectious disease shall not return until certified by a medical practitioner to be free from infection. Fourteen deaths occurred from whooping-cough—all in children under five years of age. Ringworm prevailed in most of the day-schools of the district. Mr. Nunn regrets the great tendency to cut down the pine trees of Bournemouth, as being injurious to the best interests of the town as a health-resort.

ABERGAVENNY.—Dr. Steel records in his last report certain considerable changes, or promise of changes, for better, in this borough, though it is evident that continuous supervision over its sanitary condition is necessary. The death-rate for 1879 was high—21.5 per 1,000 of the estimated population; but the prevalence of zymotic diseases was not the reason for its being swollen. In fact, only three deaths from the seven principal diseases of this class were registered. Tubercular diseases and diseases of the respiratory organs were, on the contrary, very prevalent and fatal.

NOTIFICATION OF INFECTIOUS DISEASE AT NOTTINGHAM.

SIR,—In a recent article in your JOURNAL you reflected upon the Town Council of Nottingham for begrudging, as you allege, an outlay of £250 a year,—the estimated annual cost of securing early knowledge of the existence of infectious disease.

You also charge the Town Council with spending the ratepayers' money in "other and more vain-glorious ways".

I beg to state that both these charges are wholly unfounded. I was acting for the Town Council in the year 1878, and by their instructions I passed through Parliament the clauses requiring the compulsory reporting of infectious disease. It was the intention of the Council, in incurring the expense of obtaining such powers, to put them into force at once. This was manifest from the fact that as soon as the Bill became law the Town Council empowered the Health Committee to carry out its provisions. Under the direction of that Committee the Medical Officer of Health prepared the necessary notices and forms.

As soon as the public of Nottingham became fully aware of the coercive character of the clauses in the Act, it was apparent that any attempt to put them in force would lead to open rebellion, and would give rise to a state of public feeling with which it would be impossible for the Health Committee successfully to contend. The Medical Officer of Health himself reported that a number of the largest practitioners in the town would refuse to comply with its provisions, and he suggested to the Committee that it would be prudent to deffer the putting in force of these clauses until a better state of public feeling should arise.

I say, emphatically, there was no question of "begrudging" the money; and I state boldly that my Town Council would not "begrudge" ten times the amount, if it was demonstrated that such an expenditure was necessary to prevent the spread of any infectious disease.

If proof of this were needed, I may refer to the action taken by the Town Council a short time since to stamp out a threatened epidemic of small-pox. In that case the Health Committee employed a large number of the medical men in the town as public vaccinators. The Committee opened vaccination stations in every district threatened with the epidemic. The Committee were cautioned by the Inspector of the Local Government Board that they were exceeding the powers conferred upon them, and that they ought to have waited for the action of some other body; but time was too precious in such a case to be wasted in red-tapeism, and the Committee went forward in what they were advised were the best means of dealing with the question. They took possession of a large piece of land, and under the superintendence of our energetic borough surveyor, Mr. M. Ogle Tarbottom, there sprang up almost in a night, large and commodious wards, into which infected persons were immediately conveyed. The Town Council most willingly sanctioned at that time the expenditure of £10,000 incurred by the Health Committee, and applauded the vigorous policy which that Committee had pursued. The plans of these garden-hospitals were so much approved of by the Local Government Board, that the Board have had copies of them taken for the use of their officials.

With regard to the second charge which you have made, I beg to state that the expenses incurred in the building and endowment of the University College resulted from the necessity expressed by the working men of Nottingham, that they should be put on a par with the towns of Germany, France, and Switzerland, in the race for the manufacture of industrial products. Already Nottingham firms are opening manufactories on the Continent. If we are to hold our own in an international competition, it will be neccessary that our mechanics and artificers should know something of the principles which underlie their several trades and occupations, and of the economical considerations which adjust the relationship of capital and labour.

Considerable endowments for the College are forthcoming, and it is to be hoped the College will some day be independent of the rates. Whether this be so or not, the policy of the Corporation in erecting the buildings is not a "vain-glorious" one.

It is a policy forced upon the Town Council from without by the exigencies of the community. Upon this question perhaps you will allow the representatives of the ratepayers to be the better judges, and withdraw the unkind observations which I have no doubt in an unguarded moment escaped from your pen. Surely the supporters of a policy which is founded upon providing for the people and their sons and daughters the highest education to which their industry, ambition, and genius may entitle them to aspire, is one which deserves the support of all men of culture.—Yours faithfully, SAM. OSB. JOHNSON, Town Clerk.

Municipal Offices, Nottingham, 8th December, 1880.

* No stronger illustration could be found of the unwisdom of the course which the Town Council is pursuing, than that which is furnished in the above letter. It is with the precise object of warding off terrible visitations, such as that to which Nottingham was subjected some years ago, that the information which the Town Council has now power to obtain is required. It is well known that, with dangerous infectious diseases, such as small-pox, typhus fever, or scarlet fever, preventive measures, in order to be effective, must be directed against the first or commencing cases of an epidemic, otherwise it will have assumed uncontrollable proportions before it is possible to take active steps for its repression. It is not the expenditure of a large sum under the influence of a general panic, the result of a widespread and alarming epidemic, that we are advocating, but the annual outlay of a comparatively trifling sum in preventing the recurrence of such an epidemic. We do not hesitate to say that, with an early knowledge of the first cases, and an effective machinery for dealing with them, one-tenth the sum expended by the Council would have sufficed to stifle at its birth that epidemic of small-pox which cost them so much money and so many valuable lives. The reason assigned by the town clerk for not carrying out the provisions of the Act is one that astonishes us. The Association numbers amongst its members many Nottingham gentlemen, and no reports of violent opposition on the part of the medical profession such as that alluded to have ever reached us. In fact, such opposition could hardly be raised on reasonable grounds, seeing that, under the Nottingham Act, the duty of reporting the occurrence of the infectious diseases, specified in Clause 22, does not devolve on the medical attendant, but on the householder, the medical attendant simply being required to give the householder a certificate of the nature of the disease, for which certificate he is properly paid. We do not desire in any way to underrate the importance of the work in which the Town Council is engaged, in promoting the intellectual culture of the people. Our sympathies are entirely with the Council in this respect. But we do emphatically protest against the sacrifice of other important interests to this cause. It will be generally admitted that one of the most important duties with which Town Councils are now charged, is that of the care of the public health. It is a duty which cannot be neglected with safety to the people. The old Ciceronian maxim, *Salus populi suprema lex*, expresses a truth that cannot be gainsaid, and it is one that should always be present in the minds of municipal authorities.

SIR,—May I ask your opinion upon the following point, connected with a Poor-law Medical Officer's duties: I am medical officer in one district of a union, and also medical officer of the workhouse. My partner, who is also my deputy, sees some children in the workhouse, who have been deserted, and is called upon to give evidence before the magistrates. Is he not entitled to a fee for such evidence? The Clerk refuses to pay, on the ground that my partner was only doing my work; and, that as medical officer, I am bound to give evidence before the magistrates, free of charge. I may say, there is nothing in my contract with the guardians to that effect.—I remain your obedient servant, T. H.

*** It is not uncommon for the clerk to decide adversely to the interests and rights of the medical officer on slender grounds. In the case stated, the clerk is manifestly in error, for no district medical officer is required, either in person or by deputy, to attend before the justices or a magistrate, and give evidence in any case arising out of the performanance of his duty, without payment. The amount of the fee is determinable by the distance travelled and time occupied; and is generally decided at the time, by the court, who either order the same to be paid there and then, or give a certificate entitling the medical officer to a specified payment, either by the treasurer of the county or from the borough funds. Our correspondent, by neglecting to ask for payment at the time, may now have some difficulty; but we would advise his applying to the magistrate for his fee, and if refused, let him lay the facts of the case before the Local Government Board, who may order payment by the guardians. In future, we would advise that no evidence be given until promise of payment has been obtained. Clerks expect to get favour from their boards by going against the doctor.

POOR-LAW MEDICAL APPOINTMENTS.

CALLANAN, Michael, L.K.Q.C.P.I., appointed Medical Officer to the Roscarbery District of the Clonakilty Union, *vice* F. Fitzgibbon, L.K.Q.C.P.I., deceased.

DINWIDDIE, D. W., M.D., appointed Medical Officer and Public Vaccinator to No. 2 District of the Bellingham Union, *vice* E. C. Robertson, L.R.C.P.Ed., resigned.

FIRTH, Eustace, M.B., C.M., appointed Medical Officer to the Debenham Dtstrict of the Bosmere and Claydon Union, *vice* W. W. Cuthbert, M.R.C.S.E., resigned.

KNOX, Thomas, L.K.Q.C.P.I., appointed Medical Officer to the Workhouse of the Lisnaskea Union, *vice* W. J. Sandels, M.R.C.S.Eng., deceased.

WALSH, Michael, M.D., appointed Medical Officer to the Kilfian Dispensary District of the Enniscorthy Union, *vice* W. F. P. Carmody, M.D., resigned.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

ATKINSON, Francis Edward, L.R.C.P.Lond., appointed Medical Officer of Health for Craven Combined Districts (Skipton R.D., *vice* F. W. Barry, M.D., appointed Sanitary Commissioner for Cyprus.

SYKES, W. J., M.D., appointed Medical Officer of Health to the Borough of Portsmouth, *vice* George Turner, L.R.C.P.Lond., resigned.

THE Maidstone Local Board and Urban Sanitary Authority have increased the salary of Mr. Matthew A. Adams, Medical Officer of Health, from £150 to £200 *per annum*.

MILITARY AND NAVAL MEDICAL SERVICES,

FLEET-SURGEON CHARLES JAMES DEVONSHIRE, B.A., M.D., (1880), has been placed on the retired list of his rank from the 30th November.

THE death of Dr. Charles Roe, lately employed as a civil surgeon with our forces in the field, is reported. Dr. Roe, who has died at the early age of twenty-five, had gone through the Russo-Turkish war with the Ottoman army, serving in the hospitals of Rasgrad, Rustchuk, and subsequently at Constantinople. After severing his connection with the Turkish army, Dr. Roe got an appointment from the Stafford House Committee, and held situations of responsibility both at Constantinople and Salonica; and when leaving Turkey, was presented with the war medal and the Order of the Medjidie. He then made several voyages as medical officer to India and America, in the service of an ocean steam navigation company. On the Zulu war breaking out, Dr. Roe volunteered for service, and going out as a civil surgeon did duty during the war, with the lines of communications at Thring's Post, and elsewhere. In March last, he was given an appointment at Cape Coast Castle, where he has fallen a victim to the deadly climate of the West African coast. Dr. Roe was a native of Queen's County, Ireland, and received his medical education in Dublin, getting his degree as surgeon at the early age of nineteen. He was for a short time resident surgical pupil at the Meath Hospital and County Dublin Infirmary.

ARMY MEDICAL OFFICERS.

SIR,—I beg to inquire, is it the fact that army medical officers are allowed to indulge in private practice? I ask the question, because, in my neighbourhood, they are constantly called by those members of the profession who aim at excluding the regular consultants. A great injury is thus inflicted on men who have house-rent to pay and taxes to meet. If they be not allowed, to whom should application be made to prevent them?—Yours, MEDICUS.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 16th, 1880.

Bathe, Anthony John, Southampton.
Farrer, Robert Thompson, Brighouse, Yorkshire.
Galpin, George Luck, Grahamstown, Cape of Good Hope.
Garman, John Cornelius, Plumstead, S.E.
Norvill, Frederic Harvey, Royal Infirmary, Bristol.
Wilson, George John, Western Road, Brixton.

The following gentlemen also on the same day passed their Primary Professional Examination.

Hingston, Richard, London Hospital.
Horsfall, Thomas, Leeds School of Medicine.
Webster, George Leonard, King's College, London.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC IN IRELAND.—At the Michaelmas Term Examination for the Degree of Bachelor of Medicine, held on Monday and Tuesday, November 29th and 30th, the following candidates passed in the order of merit specified.

John C. Martin, George D. Patterson, George Scriven, James J. Johnston, John Mason, Austin Cockle, John R. Fraser, William Smyth.

At the Examination for the Degree of Bachelor in Surgery, held on Monday and Tuesday, December 6th and 7th, the following candidates were successful.

John C. Martin, William S. Gordon, John M. Nicoll, Henry L. Clare, Stuart Davis, John R. Fraser.

At the Examination for Diplomas in State Medicine, held on Thursday, December 9th, and following days, the Diploma was granted to

Robert J. Polden, M.B., B.Ch. Univ. Dubl.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, December 6th, 7th, 8th, and 9th, the following candidates were successful.

For the Licence to practice Medicine.

Francis E. Ackerley, Liverpool; *Joseph Boyd, Co. Roscommon; *Robert Jones, A. Browne, Co. Galway; Arthur Wellesley Cadman, Spondon, near Derby; Edmund Corcoran, Enniscorthy; *William Joseph Cottrell, Ratoath, Dublin; Edward Thomas Geoghegan, Dublin; James Foulis, Joseph, Liverpool; Richard Francis O'Brien, Co. Waterford; *Janet M[illegible], Rochdale; London; William Augustus West, Newbridge; George Herbert Withington, Manchester.

Those marked * and Joseph Patrick Kealy, obtained the Licence to practise Midwifery.

The following Licentiates in Medicine, having complied with the provisions of the Supplemental Charter of December 12th, 1878, have been duly enrolled as Members of the College.

Thomas Tarrant, 1854, Surgeon-Major H.M. Army; George Jonathan Mitchinson, 1859, Lincoln; Robert Bradshaw, 1859, Carrick-on-Shannon; Mark Anthony Harte, 1861, Staff-Surgeon R.N.; David John Browne, 1869, Londonderry; Henry Lowndes, 1873, Liverpool; David Edgar Flinn, 1874, Walsall; William Kildare Miley, 1877, Glasgow.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ANGLESEY, County of—Public Analyst. Applications, with testimonials, not later than January 1st, 1881.

ARMAGH UNION—Medical Officer for Keady Dispensary District. Salary, £120 per annum, with £20 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 29th instant.

CHELMSFORD UNION.—Medical Officer and Public Vaccinator to the Tenth District. Salary, £35 per annum. Applications, with testimonials, not later than December 28th.

CHESTERFIELD UNION—Medical Officer and Public Vaccinator to the Clay Cross District. Salary, £12 per annum, with vaccination fees. Applications by December 31st, 1880.

DORSET COUNTY ASYLUM—House-Surgeon. Salary, £70 per annum, and £10 additional as Secretary. Applications, with testimonials, to the Chairman, on or before January 10th, 1881.

GERMAN HOSPITAL, Dalston—Honorary Assistant Physician. Applications, with testimonials, to the Honorary Secretary on or before January 12th, 1881.

GRANARD UNION—Medical Officer for Granard Dispensary District. Salary, £100 per annum, with £16 per annum as Medical Officer of Health, registration and vaccination fees. Election on the 1st January, 1881.

HOXNE UNION—Medical Officer to the Hoxne District.

*LONDON LOCK HOSPITAL, 91, Dean Street, Soho.—House-Surgeon. Salary, £50 per annum, with board, residence, and washing. Applications, with testimonials, to the Secretary, on or before January 15th.

*MACCLESFIELD GENERAL INFIRMARY—Junior House Surgeon. Salary, £70 per annum, with board and residence in the Infirmary. Applications on or before January 1st, 1881.

*MANCHESTER ROYAL INFIRMARY—Resident Medical Officer for the Convalescent Hospital at Cheadle. Salary, £150 per annum, with board and residence. Applications, with testimonials, on or before January 22nd, 1881.

MOUNTMELLICK UNION—Medical Officer for Coolran Dispensary District. Salary, £30 per annum, with £15 yearly as Medical Officer of Health, registration and vaccination fees. Election on the 19th January, 1881.

NEWCASTLE-ON-TYNE DISPENSARY—Visiting Medical Assistant. Salary, £120 per annum. Applications, with testimonials, to the Honorary Secretary, on or before December 24th.

NOTTINGHAM DISPENSARY—Resident Surgeon. Salary, £200 per annum, with furnished apartments, gas, and coals. Applications, with testimonials, on or before December 20th; election January 3rd, 1881.

PAISLEY INFIRMARY—House Surgeon. Salary, £80 per annum, with board and apartments. Applications, with testimonials, on or before December 27th.

ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon. Applications on or before December 30th.

*ROYAL HANTS COUNTY HOSPITAL—House-Surgeon and Secretary. Salary, £100 per annum, with board and lodging. Applications, with testimonials, to the Secretary, before January 5th.

*ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields—House-Surgeon. Applications to the Secretary, on or before December 31st.

RYDE, Borough of—Medical Officer of Health.

SALFORD AND PENDLETON ROYAL HOSPITAL — District Surgeon. Salary, £80 per annum, with board and lodging. Applications, with testimonials, to the Secretary, on or before December 27th.

*ST. JOHN'S WOOD AND PORTLAND TOWN PROVIDENT DISPENSARY—Surgeon. Applications, with testimonials, to the Honorary Secretary, on or before December 31st.

TOBERCURRY UNION—Medical Officer for Workhouse, at a salary of £50 per annum, and £20 yearly as Consulting Medical Officer of Health. Election on January 3rd, 1881.

UNIVERSITY OF EDINBURGH—An additional Examiner of Pathology. Applications and testimonials to the Secretary not later than January 12th, 1881.

*VICTORIA HOSPITAL FOR SICK CHILDREN—Medical and Surgical Registrar. Honorarium of sixty guineas per annum. Applications, with testimonials, on or before January 3rd.

WALLASEY DISPENSARY—House-Surgeon. Salary, £140 per annum, with furnished residence, coals, and gas. Applications, with testimonials, to the Honorary Secretary, on or before January 5th, 1881.

WOLVERHAMPTON FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION—Resident Medical Officer. Applications, with testimonials, not later than February 1st, 1881.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

[illegible]AWITH, James Jackson, M.R.C.S., appointed Visiting Surgeon to the London Dispensary for Diseases of the Throat, Tavistock Crescent, W., vice G. Hastings, M.D., resigned.

GRAHAM, J. N., M.R.C.S., appointed Assistant Honorary Surgeon to the Darlington Hospital, vice S. Lowes, L.S.A., resigned.

HARRISON, Geo., L.R.C.P., appointed Assistant House Surgeon to the Liverpool Northern Hospital, vice C. Sykes, L.R.C.P. Lond.

HUNT, F. A., L.R.C.P.Ed., M.R.C.S.Eng., appointed Resident Obstetric Assistant to St. George's Hospital.

JONES, Robert, M.B.Lond., appointed Assistant Medical Officer to the Earlswood Asylum, Surrey, *vice* Spence, M.D., resigned.

KIDD, Percy, M.B., appointed Casualty Physician to St. Bartholomew's Hospital, *vice* V. D. Harris, M.D., resigned.

MAC DOWELL, C. W., M.D., appointed Visiting Physician to the Carlow District Lunatic Asylum, *vice* M. P. Howlett, L.R.C.P.Edin., deceased.

MARTIN, J. W., M.D., appointed Physician to the Sheffield Public Hospital for Skin-Diseases.

NETTLESHIP, Edward, F.R.C.S., appointed Ophthalmic Surgeon to the Hospital for Sick Children.

SHEARS, C. H. B., L.R.C.P.Lond., appointed House-Physician to the Liverpool Northern Hospital, *vice* D. M. Fraser, M.B., resigned.

SMALE, Morton, M.R.C.S., appointed Medical Tutor to the Dental Hospital of London, Leicester Square.

STOKES, H. Fraser, L.R.C.P., appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children, *vice* Walter Edmunds, M.D., resigned.

VACHELL, E. S., M.R.C.S., late House-Surgeon to the Radcliffe Infirmary, appointed Senior Resident Medical Officer to the same institution.

WILLIS, Julian, M.R.C.P.Edin., appointed an Honorary Medical Officer to the Kilburn, Maida Vale, and St. John's Wood General Dispensary, *vice* A. Wise, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

MACNEILAGE.—At 14, Whitworth Terrace, Spennymoor, on December 20th, the wife of David Macneilage, L.R.C.P.Ed., of a daughter.

MARRIAGE.

FOWLER–WATSON.—On the 18th instant, at St. James's, Piccadilly, by the Rev. J. Dyer Tovey, M.A., Robert Fowler, M.D., 12, Old Burlington Street, W., and of Bishopsgate, E.C., to Judith, second daughter of the late John Watson, formerly of Rosenheim, West Hill, Putney Heath, and 74, Lower Thames Street.—No cards.

STANLEY—SLEAPER.—On Dec. 4th, 1880, by licence, at the Parish Church, Lambeth, by the Rev. C. H. Wright, M.A., William Henry Robert Stanley, M.D., University of Dublin, to Anis, eldest daughter of William Sleaper, Lambeth.

THE Scholarship (fourth year) in Physiology, Anatomy, and Surgery, Queen's College, Cork, has been awarded to Charles Havelock, A.B.

PUBLIC HEALTH.—During last week, 5,591 births and 3,261 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. The annual death-rate was 21 in Edinburgh, 19 in Glasgow, and 26 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Wolverhampton, 13; Norwich, 15; Portsmouth, 16; Brighton, 16; Sheffield, 17; Newcastle-upon-Tyne, 17; Leicester, 17; Salford, 17; Hull, 18; Leeds, 18; Bradford, 19; London, 20; Bristol, 20; Oldham, 20; Birmingham, 20; Manchester, 21; Liverpool, 21; Plymouth, 24; Sunderland, 25; and the highest rate, 26, in Nottingham. The annual death-rate from the seven principal zymotic diseases averaged 2.6 per 1,000 in the twenty towns, and ranged from 0.7 both in Wolverhampton and in Newcastle-upon-Tyne, to 3.8 and 4.5 in Hull and Sunderland. Scarlet fever showed the largest proportional fatality in Bristol and Sunderland; measles in Brighton and Salford; and whooping-cough in Nottingham and Hull. The death-rate from fever (mainly enteric) was unusually low. In London, 1,377 deaths were registered, which were so many as 495 below the average, and gave an annual death-rate of 19.6. During the past eleven weeks of the current quarter, the metropolitan death-rate has averaged 21.0 per 1,000, against 22.7 and 23.5 in the corresponding periods of 1878 and 1879. The 1,377 deaths included 33 from small-pox, 51 from measles, 64 from scarlet fever, 12 from diphtheria, 22 from whooping-cough, 9 from different forms of fever, and 10 from diarrhœa—being altogether 201 zymotic deaths, which were 77 below the average, and were equal to an annual rate of 2.9 per 1,000. The deaths referred to diseases of the respiratory organs were 307 last week, and no fewer than 239 below the average; 189 resulted from bronchitis, and 79 from pneumonia. Different forms of violence caused 42 deaths; 54 were the result of negligence or accident, including 12 from fractures and contusions, 2 from burns and scalds, 4 from drowning, and 12 of infants under one year of age from suffocation.—At Greenwich, the mean temperature of the air was 43.3°, and 2.2° above the average. The general direction of the wind was W.S.W., and the horizontal movement of the air averaged 17.7 miles per hour, which was 4.8 above the average. Rain fell on five days of the week, to the aggregate amount of 0.76 of an inch. The duration of registered bright sunshine in the week was equal to 6 per cent. of its possible duration. The recorded amount of ozone was considerably below the average during the week.

THE USE OF ALCOHOL IN THE TREATMENT OF AURAL POLYPI.—Professor Politzer, in the *Wiener Medicinische Wochenschrift* for July 31st, recommends the use of rectified spirit for the destruction of those remains of polypi in the ear which are beyond the reach of instruments. He says that the attempts to cause them to shrivel by dropping into the ear concentrated solutions of acetate of lead, perchloride of iron, or sulphate of copper, or by touching them with tincture of opium or of iodine, are in most cases unsuccessful. Indeed, the long continued use of the above-mentioned saline solutions is not unfrequently followed by a fresh growth of the polypus, brought about by the irritation produced by the application. Equally uncertain as agents for the destruction of proliferations are caustics, such as solid nitrate of silver, perchloride of iron, powdered sulphate of copper, chloride of zinc paste, and chromic acid. Besides the fact that cauterisation is frequently without effect, it is necessary to apply these remedies to the proliferations alone, and to avoid their action on the neighbouring parts; and the skill required for this can only be obtained by long continued experience. But, even in the hands of the specialist, cauterisation is of value only when the perforation in the membrana tympani is of sufficient size, and the roots of the polypi do not extend too far upwards or backwards. The galvanic cautery is more effective; but, Dr. Politzer says, it is not likely to come into general use among practising surgeons, as it requires a complicated apparatus, and skill in application. It is, therefore, important for the practitioner to have within reach a simple remedy, which will act far more certainly and safely than the above-named remedies in a great number of cases of granulations and polypous growths; such an agent is rectified spirit of wine. This has been recommended by Hassenstein of Gotha for the destruction of vegetable parasites in the external meatus; and Dr. Politzer has found it especially useful in otitis mycosa. Löwenberg and Weber-Liel have recommended alcohol in chronic suppuration of the middle and external ear. In certain cases of chronic otorrhœa, Dr. Politzer finds alcohol to be an excellent remedy, but regards it as inferior to boracic acid or concentrated solution of nitrate of silver. He has, however, obtained remarkable results from the use of rectified spirit in cases of suppuration of the middle ear, attended with the formation of granulations and polypous growths in the external auditory meatus, in the tympanum, and on the membrana tympani. In applying the alcohol, it is necessary first to remove the purulent secretion from the tympanum by insufflation of air, and then to syringe the ear with lukewarm water; the fluid remaining in the ear being removed by the introduction of a long roll of Bruns's cotton-wool. The head being then inclined to one side, at least a teaspoonful of moderately warm alcohol is poured into the external meatus, and allowed to remain ten minutes or a quarter of an hour. In most cases, the application produces only a slight sensation of warmth, only rarely a strong feeling of burning or severe pain; this, however, is generally of very short duration, and is often troublesome only during the first few days. If the pain be too intense, the alcohol may at first be diluted with a little distilled water. The alcohol should be poured in three times a-day; and when, after treatment for some time, its effect has been produced, the applications should be reduced to two, and ultimately to one daily. Immediately after the application of the alcohol, the hitherto red granulations and polypi assume a pale grey-reddish colour, dependent on the coagulation of the mucus and albumen on the surface. After prolonged contact with the new growth, the spirit of wine penetrates into its superficial layers, causing coagulation of the contents of the blood-vessels and contraction of the tissue. The action of the alcohol does not depend on the structure of the growth. Soft round-celled polypi are, indeed, more frequently and quickly caused to disappear than firm fibromata; but even the latter not unfrequently shrivel up so completely after a prolonged application of alcohol, that not even the smallest trace of them remains behind. In concluding his paper, Dr. Politzer sums up the indications for the use of alcohol as follows: 1. For the removal of the remains of polypi in the external auditory meatus, on the membrana tympani, and especially in the tympanum, which cannot be removed by operation; 2. In cases of multiple granulations in the external meatus, and on the tympanic membrane; 3. In diffuse excessive proliferation of the mucous membrane of the middle ear; 4. In cases where the instrumental removal of polypi is rendered impossible by mechanical impediments in the external meatus; 5. Experimentally, as a substitute for operation in the cases of timid persons and of children, in whom operative proceedings are difficult, and often can only be carried out under anæsthesia.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.—National Orthopædic, 10 A.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.—North-west London, 2.30 P.M.

FRIDAY..... King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 2.30; Skin, W., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu., Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Hunterian Society, 7.30 P.M., Council Meeting. 8 P.M., Mr. Jonathan Hutchinson, "The importance of recognising the Pre-cancerous Stage of Cancer".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

WHITE WINE WHEY AS A STIMULANT IN INFANTILE SICKNESS.

SIR,—I readily endorse the remarks made by your correspondent, Dr. Meeres, in last week's JOURNAL regarding white wine whey as being generally useful in cases of vomiting in infancy. Two or three times within the last couple of months, in cases similar to that adduced by Dr. Meeres, have I seen its good effects in infants from three to six months old, who were affected by vomiting and partial collapse. Dr. Meeres, however, I think, probably goes a little too far when, from a case of this kind treated successfully by wine whey, he draws the inference that the alcohol was the sole cause of the treatment being efficacious.

I have the greatest faith in the efficacy of the alcoholic treatment of disease in many cases; but in the case adduced, whilst a great deal may have been due to the alcohol in overcoming the undue sensibility of the mucous membrane of the stomach, and giving a filip to the general system, I am persuaded as much was due to the fact that a food was presented to the stomach in its weak and irritable state which it could receive, and those articles of diet, such as "Swiss milk and water, cream and water, lime water, etc.", having been kept entirely from the child for a time, until its digestive powers returned.

In the act of making the whey, of course, the caseine is removed from the milk; and this being conducted without the stomach instead of within it, renders the digestion easier. How much is due to the alcohol, and how much to the whey, might be ascertained easily by trying whey obtained from milk in the process of making cheese, or that from rennet; as whey is by no means insignificant in regard to nutritive qualities. If this simple experiment be found to answer the purpose as well without the addition of either brandy or wine, then it would appear to me to be a more satisfactory proof of the use of alcohol in medicine than the other case I may note that frequently, on the occasion of ordering white wine whey, I have been told that it did not always make the same, although the same precautions seemed to be taken. I came, ultimately, to the knowledge and conclusion that it should be made with milk at least half a day old; as, if it be made with recent milk, it does not "break" up or coagulate properly. How is this? It occurs to me that it is for the reason that the envelopes of the oil-globules become thinner when the milk is old.—I am, etc.,

J. MACNAB.

Stirling, N.B., December 14th, 1880.

DURATION OF USE OF SPLINTS FOR FRACTURES.

SIR,—Can you, or any of your readers, oblige me with the name of a work on fractures, giving the usual length of time during which it is necessary to retain the splints in the various fractures? Yours truly,

A SUBSCRIBER.

SIR,—Will you kindly state, in your answers to correspondents, whether a licensed apothecary, L.S.A., registered, can legally vaccinate? Can he recover fees for vaccination performed by him? and is his certificate of successful vaccination valid in law, and one which should be received by the vaccination officer?—I am, yours truly,

DUBIOUS.

THE INVENTION OF SPECTACLES.

SIR,—Your annotation, in the JOURNAL of the 4th of December, anent the invention of spectacles, recalled to my mind a note I have in my scrap-book, a copy of which I herewith subjoin.

"Quant à l'invention des lunettes, rien de certain. Il est humiliant de penser qu'elles étaient connues en Chine bien avant Roger Bacon, et le Florentin Salvino degli Armati, qui les aurait inventées vers 1280. Nous savons cependant que Néron était myope, et qu'il assistait au jeu du Cirque avec une émeraude taillée dans l'axe concave qu'il plaçait dans le coin de l'œil."

Thus it will be seen that the date of the invention of spectacles goes much farther back than that mentioned in your note. Verily, "there is nothing new under the sun". I am sorry I cannot give you the source of the above quotation, as it is a cutting from a scientific article of a newspaper; but as it is in print, it may be considered authentic.—I am, sir, yours obediently,

ALEX. BOGGS, M.D.

—, Rue St. Honoré, Paris, December 19th, 1880.

COMMISSIONERSHIPS IN LUNACY.

SIR,—With reference to your remarks, in your issue of December 11th, on the report of Dr. Nairne's retirement from the Lunacy Commission, and the public appointment, as his successor, of a medical man who has not specially studied insanity, or been engaged in its treatment, I trust, for the sake of all engaged in lunacy practice, that such an unfair appointment may not be contemplated by those in power. Ignorance of asylum management and requirements should not be considered a recommendation for an appointment where the duties consist in supervising those engaged in treating this disease and conducting asylums.

The Commission in Lunacy, at present, consists of eleven members, counting its noble chairman; of these, only four are medical men; and of the six visiting commissioners, only three are medical. The specially trained physician element is not at all too heavily represented. There are, at present, seventy-six medical superintendents in county and borough asylums and public lunatic hospitals in England and Wales. All of these are men of experience, and the majority have acted for several years as assistant-physicians prior to getting their present appointments. It would be quite easy to select out of this number four men, at least, whose age and health render them eligible for a commissionership, and whose medical reputation and successful asylum management give promise of energy, efficacy, and ability in entering a new office. In the survey required before appointing a new commissioner, more than London should be considered.

It will be hard lines for those who really work in lunacy practice if, at this time of day, the only five special prizes—the Lunacy and Chancery appointments—are not made inducements and encouragements for excellence, industry, and talent, in the special department. When Dr. Nairne was appointed it was essentially different: the selection was much more restricted. I am, your obedient servant,

December 11th, 1880. FAIR PLAY, M.D.

TESTS FOR ARSENIC.

SIR,—In the BRITISH MEDICAL JOURNAL of to-day, we observe, under the heading "Easy Test for Arsenic in Fabrics", and stated to be from the *Practitioner*, a test for arsenic which is an extremely unreliable one for general purposes. You will, perhaps, permit us to point out that the blue colour containing a large quantity of arsenic, the subject of legal proceedings between ourselves and a colour manufacturer, of which a sample is enclosed, does not give any reaction by the method suggested for examination. Our experience, gained in our efforts to prevent the use of arsenical colours in our factory, has taught us that there are other highly arsenical colours which would escape detection by the proposed test in like manner. We enclose a few samples. It is highly important that no test should be relied upon unless it will detect arsenic *per se*, not only when combined with copper.—We are, sir, yours faithfully,

WM. WOOLLAMS & CO., Paperstainers.

December 13th, 1880.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to the Manager, at the Journal Office, 161A, Strand, London, and not to the Editor.

THE ANTIQUITY OF THE DRAINAGE-TUBE.

SIR,—The following passage from the *Memoirs of Captain Creichton* may be of interest to some of your readers. These memoirs were compiled by Dean Swift from the manuscripts and oral relations of Creichton, who had been a "remarkable cavalier" in the reigns of Charles II and James II, and were published in autobiographical form in the year 1731. In the skirmish at Aymoss, which took place in the year 1680 or 1681 (the old soldier is, unfortunately, somewhat careless about his dates), Creichton received a broadsword wound in the umbilical region, of which he tells the subsequent history with some minuteness. I give his own, or rather the dean's, words, but abridge considerably.

"My surgeon having neglected to tie a string to the tent of green cloth which he used for the wound, the tent slipped into my body, where it lay under my navel seven months and five days. When the tent was first missing, neither the surgeon nor anybody else ever imagined that it was lodged in my body, but supposed it to have slipped out of the wound while I slept. While I continued at Edinburgh, I ordered some pipes of lead to be made in a mould, through which the thin corruption which continually issued out of the wound might be conveyed as through a faucet. These pipes I cut shorter by degrees, in proportion as I imagined the wound was healing up at the bottom. When I was in Ireland, I made a coarse pipe myself. This pipe, after the wound was washed with brandy, always remained in my body till the next dressing; but being made without art and somewhat jagged at the end, it happened one morning, when the pipe was drawn out as usual in order to have the wound washed, the tent followed."

Are the rough and ready "pipes" of the shrewd old cavalier the first recorded instance of the drainage-tube? Whether or not, he deserves credit for his ingenuity.—I am, sir, your obedient servant,

CONOLLY NORMAN, F.R.C.S.I.

District Asylum, Monaghan, Ireland, December 15th, 1880.

MORPHIA FOR SUBCUTANEOUS INJECTION.

SIR,—Our attention has been drawn to a communication which appears in your issue of the 30th October, in which Mr. Martindale claims, as the most suitable form for the hypodermic use of morphia, a solution of the acetate, as prepared according to a method which he formerly made public. At the same time, Mr. Martindale gives an unfavourable opinion of the tartrate of morphia for subcutaneous injection. As it is now more than four years since the tartrate was introduced by us for this purpose, with subsequent satisfactory results, we take the liberty of requesting you to permit us this opportunity of stating the grounds upon which we consider that the conclusions in question, arrived at by Mr. Martindale, are not supported by facts.

The great objection to the acetate of morphia is its unstable character. Were it possible to retain it in an uniformly neutral and permanent solution, no salt is better adapted for hypodermic use than this one. Those conditions, however, are impossible of attainment, because of continued escape of acid, resulting in the continuous separation of the morphia, whereby the strength of the solution is weakened and becomes unreliable, and the syringe containing it will become clogged. The tartrate, on the other hand, is a permanent salt, and its solutions remain neutral.

Mr. Martindale's solution of one part of acetate in six parts of its aqueous solution could be obtained only by an excess of acetic acid. Under such circumstances, a solution can be made so strong as even to be syrupy; but an acid character at all is always an objection in a solution for subcutaneous injection.

Our neutral tartrate of morphia is sufficiently freely soluble for all practical purposes, one part dissolving entirely on being shaken up for two minutes in twelve parts of water, or, in very cold weather, with aid of the heat of the hand. In a solution of this strength, we have observed no change to take place by keeping. If a very strong solution be desired, one part dissolves readily in six parts of water at blood-heat, and several days will elapse before crystallisation takes place; while any such separation may easily be redissolved by application of a slight heat.

Mr. Martindale asserts that the tartrate is not so rich in morphia as the acetate; but this is erroneous: the proportion of acid and water together being, in the case of the former, 23.7; while, in that of the acetate, they amount to 25 per cent.—We are, etc.,

T. & A. SMITH.

Edinburgh, December 8th, 1880.

CELL-FORMATION.

SIR,—I am anxious to learn on the authority of some competent histologist what theory, with regard to cell-formation and genesis, is most widely accepted by modern science. I understand that the French and German schools are still at issue on the point, and should be glad to know, whether any recent investigations or researches have tended to reconcile their differences, or to incline scientific favour more decidedly in either direction.

According to Prof. Robin's views, known as the theory of extra-cellular genesis, the primitive anatomical element accretes to itself a quantity of nutritive matter, superior to its needs; and this matter being elaborated by it, is, subsequently, in part, rejected, and thus accumulates in the cell-space, exterior to the anatomical element. This extra- or inter-cellular substance, Prof. Robin designates under the name of *blastèma*, and affirms that in it, spontaneous developement of proto-plasmic nuclei takes place. Around the nuclei, thus generated, the blastema modifies and divides into as many polyhedric masses as there are nuclei, thus forming new cells. The primitive anatomical elements, or blasdodermic cells appear, according to this theory (which is identical with that of Schwann), to have but an ephemeral existence; the secondary cells, spontaneously generated in the blastema, giving rise to the formation of tissues, probably by endogenous segmentation.

Is this view correctly stated and does it actually obtain credit to any extent? If so, must it be held to exclude the German theory of intra-cellular formation? or, may one consider the two theories compatible, and to what extent, and under what conditions?—I enclose my card, and remain, yours obediently,

ENQUIRER.

HOSPITAL DRAINAGE AND VENTILATION.

SIR,—If your correspondent "T.", in your JOURNAL of November 27th, desire to witness in operation the perfect influx and efflux ventilation of a room that will hold more than three hundred persons, as well as a cheap and portable mode of instantly disinfecting any room with a chimney in it, I shall have much pleasure in exhibiting it; also a plan by which the sewage gases can be consumed during the night by the ordinary gas lamp, etc.—I remain, yours truly,

Spalding. ANCELL BALL, J.P., Physician.

DEATHS FROM ANÆSTHETICS.—Mr. Cant, house-surgeon to the Lincoln County Hospital, writes, with reference to the tables in last week's JOURNAL, that no death from the inhalation of ether has occurred in that institution.

ANCIENT EGYPTIAN DENTISTRY.

SIR,—I observe, in your JOURNAL of November 27th, a short discussion at the Odontological Society of Great Britain on ancient Egyptian dentistry: Whether teeth stopped with gold had been found in mummies, or not? an affirmative statement having been made by Sir Gardiner Wilkinson, and negatived by several others, after careful inquiries and personal investigations. I do not write either to corroborate the one or the other, only humbly to observe, as it may interest some of the members of the Society, curious on the subject of old teeth-stopping, etc., to know, that I have seen, in the Etruscan Museum of Corneto, the ancient Tarquinia of Etruria—(a few hours' railway distance from Rome)—teeth in a skull, bound together and kept in their places by gold thread cleverly twisted in and out amongst them; and I think I have also seen solid gold-stopping there, or in the Etruscan Museum of the Vatican, or at Signor Augusto Castellani's here. Etruria, of course, was not Egypt, and Etruscan remains were perhaps posterior to Egyptian mummy times; yet modern researches have brought to light some similarities in their tombs and tomb contents. Their architecture, too, in some instances resembled Egyptian; and I may mention also the scarabæus gems, so common in Etruscan collections, point as their origin to the deified beetles of the Nile. May they not have adopted the teeth-tying with gold thread and the stopping of decayed teeth with gold from the Egyptians?—Yours truly,

JOHN GRIGOR, M.D.

No. 3, Piazza di Spagna, Rome, December 6th, 1880.

SIR,—Adverting to a discussion on ancient Egyptian dentistry that is reported in your issue of the 27th ult., and with especial reference to that part of it which throws doubt on the accuracy of Sir Gardiner Wilkinson's statement, allow me to present you with a cutting from *Notes and Queries*, of October 11th, 1879, which appears to uphold it.

"*Stopping Teeth with Gold* (5th S. xi. 448, 497.)—Sir J. Gardiner Wilkinson, in his *Popular Account of the Ancient Egyptians*, Lond., Murray, 1874, vol. ii. p. 350, states: 'And it is a singular fact that their dentists adopted a method not very long practised in Europe of stopping teeth with gold, proofs of which have been obtained from some mummies of Thebes'. *I remember some time ago also seeing in the Mayer Museum at Liverpool, the jawbone of an ancient Egyptian with a false tooth secured by a golden wire.* A. W. M."

I underline the part to which I refer, and, I believe that additional confirmation of the fact—for such, I think, it is, may be found in Thomas Pettigrew's *Egyptian Mummies*; or in Bunsen's *Egypt's Place in Universal History*.

Describing the battle in which Kootle-ood-Deen, the General of Mahomed Ghoory defeated (*Circetes anno* 1450 or so), and slew the Rajah with an arrow, which pierced his eye, Ferishta says (*Rise of the Mahomedan Power in India*, translated by Briggs, vol. 1, p. 892) that the "corpse of the Rajah was recognised by his artificial teeth, which were fixed in by golden wires".—Yours, etc.,

Warrington. W. CURRAN

P.S.—The same Ferista relates, *apropos* of the Cæsarean section and artificial feeding in fever, etc. (*Ibid.*, Vol. 1, p. 545), that "the wife of Kaly Khan, his own cousin, was smothered by the fall of her house, when pregnant. Her husband caused her to be instantly opened (about the period noted above), and saved the life of the infant, who was called Bulloo". As regards the artificial feeding, he adds, Vol. 2, p. 3, that baby's life was saved in a dangerous illness "by conveying sustenance (to him) through moistened cotton, applied to his lips". Verily, there is nothing new under the sun!

OPIUM-POISONING OR PHTHISIS?

SIR,—As a young practitioner, will you kindly allow me to ask the profession, through your columns, if the following is the usual way in which coroners deal with cases of poisoning? and also if the course I adopted was the right one, and whether I should take any further steps in the matter?

A short time since, I was sent for to see a poor man; and, at the bedside, was informed he had been under the care of a M.D. of the Metropolitan College, New York, but that the friends were dissatisfied. I found the patient labouring under complete collapse; he was almost pulseless, and had been violently sick. There was considerable lividity of the extremities; the skin was in a cold perspiration; the pupils firmly contracted, and insensible to light. He was with difficulty roused, and again subsided into a semiunconscious state. He had, in addition, slight bronchitis. I diagnosed opium-poisoning; and, upon questioning the wife, was told that the symptoms came on after administering medicine sent by my Trans-atlantic contemporary. I ordered this to be discontinued, and prescribed the usual remedies for such a case. He died after about forty-hours. I informed the coroner's clerk that the man had died from opium-poisoning. The coroner was informed of the facts, and sent to the above-mentioned M.D., who furnished a death-certificate, stating the cause of death was phthisis, and admitting that he had prescribed laudanum for the man. This certificate was considered satisfactory. I enclose my card.—I remain, yours, etc.,

FINIS CORONAT OPUS.

*** Our correspondent acted quite correctly.

CHRYSOPHANIC ACID.

SIR,—Will you allow me to point out to Mr. Balmanno Squire an error into which he has, by an oversight, fallen regarding the cost of chrysophanic acid at the time to which his letter in your columns refers? It was I myself who sent him the drug, and asked him, as a dermatologist, to investigate its properties; subsequently, I also gave some to my friend Dr. Ashburton Thompson, who took it himself internally, and administered it to three hundred and sixty-four patients.

The history of the cost of the drug is briefly as follows: At the request of a physician in Belsize Park, I obtained some goa powder from Bombay, for the especial use of some patients of his who had been accustomed to the remedy (in India) for tropical ringworm. In due course, this goa powder, *pó di Bahia*, or Araroba powder, arrived; and, just about the same time, a quantity was placed in the hands of Professor Attfield, through whose research the whole subject was threshed out, and this great Indian secret traced to its probable botanical source. The cost then of goa powder was enormous, owing to its being a secret remedy. In Dr. Attfield's analysis, proof was given that goa powder contained in 100 parts: moisture, about 1; glucoside, a bitter principle or principles, and a variety of Arabin, about 7; chrysophanic acid, 80 to 84; resin-like bodies, 2; woody fibre, 5½; mineral matter (ash), ½. Subsequently, Mr. E. M. Holmes confirmed the botanical source of the plant; and as its active constituent was chrysophanic acid, I at once made a quantity of it in our laboratory, but from the goa powder originally obtained at an enormous cost. Hence, the charge of ten shillings per ounce was then reasonable, and the subsequent reduction in the commercial supply was owing to the fact that the market soon afterwards became full of it. Of course, the active part Mr. Squire took in his department increased the demand very greatly; but it was the publicity given to the disclosure of the secret (as the original source) which brought the price down to a nominal cost.—Yours faithfully,

35, Baker Street, W. A. W. POSTANS, F.C.S.

An Unusual Case of Hæmoptysis.

SIR,—I was particularly attracted by a case which appeared in the JOURNAL of October 16th, 1880. I refer to "An unusual case of Hæmoptysis under Dr. Clark, reported by Dr. Burnet". It is reported that the diagnosis made was "mitral regurgitation causing the blood to be extruded and infiltrated into the tissue of the lung, with subsequent hæmoptysis, simulating tubercular disease". The conclusions arrived at are: "1. That blood may be extravasated and may simulate tubercular disease: 2. That temporary derangement of a valve may quickly arise and disappear again." After careful perusal, I arrive at totally opposite conclusions. It appears to me that effects have been considered as causes. I believe that bronchial hæmorrhage (depending probably on hæmorrhagic diathesis of the bronchial mucous membrane, or suppression of menstruation) gave rise to the pneumonia, and caused the cardiac murmurs—anæmic in character. The remarkable point is this, that there were "no murmurs heard on first admission". How then could the hæmorrhagic condition of the lung depend upon a morbid state of the heart, which had developed after the hæmoptysis had taken place? Besides, the hyperæmia, depending on obstructed circulation, resulting in exudation of blood into the air-vesicles, with subsequent hæmoptysis, would probably be attended with a troublesome dyspnœa, due to both lungs being engaged. The fact of the disease being unilateral would point to a constitutional, rather than to a local causation, in this particular case. Constitutional tendencies to hæmorrhage, as from the nose, or to scrofulous enlargement of glands, are as often as not unilateral, whereas the hyperæmia of regurgitant disease of the heart is always symmetrical, although it may not continue to be so when exudation takes place. It would appear to me that Niemeyer meets this case exactly, when he says, "bronchial hæmorrhages occur oftener than is generally believed in persons who are not consumptive, and who never become so." I would be glad to be told I am in error if I am wrong, for the subject is one in which I feel great interest.—I am, yours truly,

T. J. GALLWEY, M.D., Surgeon A.M.D., 30th Regiment.

Ranikhet, Bengal.

Instantaneous Dressing.

SIR,—I would like to draw attention to a suit for dressing at one movement. I got one two months ago, and I find that, when my night-bell rings, I can be dressed—with entire suit, white collar and cuffs complete—and by the side of my client in the street under one minute and a half. The suit is registered and made by James Maltby, 8, Hanover Place, Regent's Park, N.W.; and costs three guineas. There is no waistcoat; but the coat and trowsers are attached by elastics, so that the trowsers are put on, then the coat, and all is complete. Of course, socks, boots, and hat, are to be put on; and it is these which take up the most time. This "United Suit", as it is called, robs the sound of one's night-bell of half its horrors.—I am, yours truly,

ANGLO-SCOTT.

London, December 7th, 1880.

Vaccination Grants: a Caution.

SIR,—The inspector, on visiting my district, acknowledged the vaccination was perfectly satisfactory; but, on examining the books, discovered several cases which my assistants had inadvertently inserted in the list which strictly belonged to other districts. The inspector has considered that sufficient to justify him in withholding the grant on this occasion; so I have had the honour of supplying all the gentlemen in my neighbourhood with lymph who have obtained the grant, and losing it myself because I have been guilty of doing a little too much good vaccination. I must confess, though I have received the grant on many occasions, that I do not consider the system elevating to the profession.—I am, etc.,

VARIOLA VACCINA.

The Pathology of Sea-Sickness.

SIR,—Since my letter on the above subject appeared in the JOURNAL of November 20th, I have received a note from Dr. Pollard of Liverpool, kindly informing me that the original author of the theory to which I drew attention was Dr. Wollaston; and that a paper upholding the same theory, by Sir J. Alderson, may be found in the BRITISH MEDICAL JOURNAL for 1872, vol. i, pp. 255 and 442; as also one by himself, in opposition to the theory, on page 607 of the same vol. of the JOURNAL. I refer those interested in the subject to those papers.

Dr. Cook speaks of the theory as "ingenious, but eminently fallacious"; but the only reason he gives to prove its fallaciousness, is that the sickness ceases although the cause continues; I think the explanation may be found in the fact that the brain becomes accustomed to the unequal blood-supply, and it thus ceases to be an irritant.—Faithfully yours,

THOS. SANSOME.

West Bromwich, December 7th, 1880.

Use of Spiders in Ague.

SIR,—I observe that a rather animated correspondence is maintained in the JOURNAL on the therapeutic efficacy of cobwebs and spiders. It would surely be worth while to put the subject of discussion to the test of physiological experiment, as is practised with many other objects of more recent discovery. Surely, it is unphilosophical without this, to jump at the conclusion, on the mere ground of analogy, that they are wholly inert. I recollect that M. Ozanam, who sometime—and at no distant date—conducted a medical journal in Paris, and was afterwards physician to the Shah of Persia, instituted a series of experiments on the physiological action of crushed spiders when administered by the mouth in the human subject. This elaborate course of experiments included many species, some of very large size, as found in Persia and the East. The outcome of these experiments revealed the fact that certain of these spiders possessed exceedingly powerful diaphoretic properties. I know that I have in my possession a copy of M. Ozanam's *brochure*; but I have no leisure, at present, to disengage it from the accumulation of many years. It is, no doubt, however, yet procurable in Paris (*Ozanam sur les Arachnides*). I think I must have procured my copy about twenty years since.—I am, etc.,

7, Westbourne Park, Dec. 15th, 1880. GEORGE GASKOIN.

Naso-Pharyngeal Catarrh.

SIR,—I practise in a river-valley running down from the Pennine range, and reside nearly 600 feet above sea-level. From six to ten miles the hills attain a height of 900 to 1800 feet. The intervening distance is divided by various rivulets which have cut their way through the glacial drift, which is the prevailing subsoil. Much of the land is not drained and the rest badly done.

The climate is always humid, and rapid alternations of temperature are common. I have a good deal of exposure riding and driving, and am often severely chilled. As a consequence I have suffered for years from naso-pharyngeal catarrh. During summer I am tolerably well; but as winter approaches, my ailment increases, and for two years past I find the Eustachian tubes and tympanic cavity have become affected, leading to considerable deafness.

Having hitherto found no substantial benefit from treatment, will some of your readers who have had experience of such cases say whether I may hope for such otherwise than by change of residence, and thereby greatly oblige,

A SUFFERING MEMBER.

Effects of Opium and of Morphia.

SIR,—Morphia is, no doubt, a valuable anodyne, but it often causes pain and distressing sickness when given in the form of pill, even with cayenne as a corrigent. As it seems impossible to foretell the unsuitable cases, I have almost given up the use of the pills. Yet I think that, by combination with belladonna or hyoscyamus, the distressing symptoms might be checked. With belladonna, the drug is useful for dysmenorrhœa with much pain. It is not reliable for the after-pains of labour. The liquor morphiæ rarely, if ever, causes the distressing symptoms. I am inclined to think that the pulvis morphiæ would be safe. I fancy much of the dispensing in hospitals is slipshod. Is "M.R.C.S." sure his patient actually took an opium pill, or was it morphia? Opium rarely causes bad symptoms of pain and sickness.—I am, sir, yours obediently,

UNIT.

Horse Insurance.

WILL some of the readers of the BRITISH MEDICAL JOURNAL kindly say, Do they insure their horses and vehicles against accidents? What insurance company do they recommend?

DR. MCEWAN (Dundee).—Your note shall appear early.

Famine and Ophthalmia.

IN connection with the distress in Ireland, it may not have been generally noticed that one of the consequences of a famine, is a more general prevalence of ophthalmia. The late Sir William Wilde, then census commissioner, in his report on the status of disease in Ireland during 1851, points to the fact that Ireland has suffered, century after century, in almost periodic succession, famines, the result, amongst other causes, of abnormal atmospheric vicissitudes which render the crops unfruitful, and the prevalence of certain epidemic constitutions, fatal alike to vegetable and to animal life. One hundred and fifty such famines are enumerated in the Irish annals, and during the last century, twenty-five out of the hundred years of the period were years of absolute want. He quotes Giraldus Cambrensis, who asserts that "so many born blind, so many lame, so many deformed, so many wanting some of nature's gifts he never met in any other land." Sir William adds that, "with the exception of Norway, Ireland presented, when the census (for 1851) was taken, the largest proportion of blind, compared with its population, of any country in Europe of which the statistics are known." The last census returns, taken in 1871, fully corroborate these remarks, and they show that a greater proportion of deaf, dumb, and blind, then existed in Ireland than in any other portion of the United Kingdom, the numbers being 1 in every 455 of the population of Ireland, while in England and Wales, the proportion was 1 in every 686, and in Scotland, 1 in every 658. In his report, Sir William Wilde enumerates the epidemic of ophthalmia, as one of the various results of the famines; and he states that after the famine of 1848-9, "between the years 1849 and 1852 both inclusive, 118,835 cases of ophthalmia, principally among children under fifteen years of age, were treated in the union workhouses of Ireland, besides vast numbers in the rural districts and cities." It will be instructive to see when the figures of census next year are available, whether similar deductions can be drawn from them, as from those of 1871.

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REMARKS
ON
THE APPLICATION OF SIMPLE COLLODION TO THE MEMBRANA TYMPANI IN THE TREATMENT OF VARIOUS DISEASES OF THE EAR.*

By WILLIAM A. MCKEOWN, M.D.,
Surgeon to the Ulster Eye, Ear, and Throat Hospital, Belfast.

THE subject of the paper, as noticed in the JOURNAL of the Association, is "The Treatment of Relaxed Membrana Tympani". My experience, however, has so extended since I furnished that title to the Secretaries of the Otological Section, that a very comprehensive title would be necessary to give an adequate idea of the scope of this paper. I purpose, in fact, to deal with many of the questions of aural surgery, as, for example, the treatment of relaxed membrane; the prevention of the adhesion of the membrane to different structures within the tympanic cavity; the rupture of adhesions; the maintenance of the normal relation of the membrane to the ossicles, and of the ossicles to each other; the prevention and relief of labyrinthine pressure; the prevention of the shortening and retraction of the tensor tympani; and the mode of keeping a perforation of the tympanic membrane open for a time more or less long.

At first sight, it may seem strange that so many of the evils met with in cases of aural disease should be classed together; but I trust to show that they are closely linked together in cause, and equally so in treatment. It may, I think, be laid down as fundamental, that almost all the evils specified arise directly from a drawing in or pushing in of the membrane of the tympanum, during the course of catarrhs of the Eustachian tube and drum. The first object of treatment, therefore, should be to keep the membrane in its position, and replace it when it gets out of it. This has been practically recognised for some time; but the means employed are frequently inefficient and sometimes injurious. The inflation of the drum by Valsalva's method, by Politzer's, by the Eustachian catheter, suction on the membrane by the air-pump, and air-tight occlusion of the meatus, as recommended by Politzer, all aim at this. We all know how often the improvement on inflation is of very short duration, perhaps for a few minutes, a few hours, or a few days; and how often it is totally useless. I question whether any of us have an idea how often violent inflation brings about more or less relaxation of the membrane, and disarrangement of the delicate balance normally existing between the ossicles and the structures with which they are connected. Further, when changes have existed for some time, and the ossicles have taken up a new and faulty position, in which they have become settled, what influence can a momentary insufflation have on parts which have become the subject of structural changes of a more or less permanent character? If the membrane have been too much depressed for months or years, and the tensor tympani have become, as a consequence of the prolonged approximation of its origin and insertion, shortened and retracted, will insufflation have the slightest chance of lengthening it? Experience answers in the negative. We really require some powerful slowly acting agent, whose influence will be exerted for long periods. This we find in collodion. Applied on the membrane, it adheres tenaciously, contracts considerably, diminishes the concavity of the membrane, pulls it with the handle of the malleus outwards, increases the resistance of the membrane, and exercises a far-reaching influence on the middle and inner ear.

Whilst experimenting some time since on sound, I required fine membranes made very tense. I found it occasionally difficult to have the membranes free from wrinkles and depressions. It occurred to me to apply collodion; and I found that, by its aid, I secured perfectly smooth and tense membranes. Afterwards, reviewing the cases which came before me daily, for which aural science so far had done nothing, I thought I might at least relieve one class, viz., that in which relaxation of the membrane was a prominent sign. Surely a relaxed membrane could be tightened up, just like the lax membranes with which I had been experimenting. On my first trial of the collodion, I used it too sparingly, and the improvement which resulted did not last long. On the 2nd of May last, I tried it thoroughly in a case which had been under my care for three years, and for which I had ceased to do anything but give a placebo. As this case brings out a number of points in a striking manner, I will give a short statement of the most salient.

CASE I.—Jane H., aged 41, spinster, was under my care from time to time for three years for catarrh of the drum and its results, and treated by me according to recognised methods. With the left ear, she heard my voice (moderate tone) at a distance of three feet, but hearing varied much. The noises in her ears were of the most distressing kind. At times, the noise was like that of a thunderstorm; again like that of machinery; sometimes like the blowing of a horn. The sounds of other persons' voices were greatly confused ("entangled", as she put it). Her own voice seemed to her to have a most unnatural tone. She formerly sang in church; but since she became deaf, her own voice seemed to her so inharmonious that she was obliged to cease singing. At times she was quite bewildered; and she told me that she believed her noises would have made her mad, had she not been obliged to earn her bread. On examination of the membrane, I found a number of depressions between the upper part of the handle of the malleus and the posterior wall of the meatus. All these depressions became bulgings on inflation of the drum by Valsalva's method. I applied collodion freely. Her hearing was immediately improved, and continued steady. She came to hear my voice (moderate tone) at the distance of eighteen feet, and the noises in the ear ceased. The confusion of voices and the unnatural character of her own voice also disappeared. Now she can sing as she used to do. The depressed part became quite flat. On July 29th (that is, about three months after the application), I thought the layer of collodion was loose. I syringed, and found that the loosening was only partial, and it did not come away at all readily. The hearing remained good, and the depression had disappeared, probably owing to the long-continued bracing up. The membrane seemed too lax, however, and I put on another coat two days afterwards.

I shall only add another case out of many of a similar kind.

CASE II.—Sarah H., aged 44, a widow, came to me on July 28th. With the right ear, she could hear a moderate voice at the distance of two and a half feet. There was no noise in the ear. I found a depression behind the handle, and the incus quite close to membrane. There was a distinct flap on insufflation. The depression disappeared, showing that I had to deal with simple relaxation without adhesion. I applied collodion. On July 31st, she heard a moderately toned voice at a distance of nine feet. The membrane behind the handle was at this time flat.

And now I will endeavour to detail, step by step, the important results which have followed from my primary idea. For the sake of clearness, I will now put aside the flapping membrane, and deal with other forms of depressed membrane. We have, then, firstly, the uniformly depressed membrane, with or without adhesion, at or near the tip of the handle, the change being mainly an exaggeration of the natural concavity of the membrane; and, secondly, the irregularly depressed membrane, with adhesions. I thought that, if collodion would brace up a flapping membrane, it would surely tighten up a membrane depressed and tense, and restore the ossicles either quickly or slowly to somewhat of their normal position and relations.

Collodion does nor act at all uniformly in these cases. It has brought about the following results in my hands.

1. It has torn through an adhesion of the membrane to the promontory, leaving a perforation.
2. It has pulled the membrane and handle outwards, diminishing the concavity generally, and restoring mobility to the membrane and malleus.
3. It has demonstrated adhesions by pulling the non-adherent parts outwards, leaving a well-defined depression at the seat of adhesion.
4. It has ruptured the dermic and fibrous layers of the membrane, leaving the mucous membrane exposed.
5. It has improved the hearing in the majority of cases—in some instances remarkably.
6. It has sometimes diminished, and at other times removed, noises and other unpleasant subjective sensations.

I will now endeavour to prove what I have said by the reports of cases. It may tear an adhesion, and leave a perforation.

CASE III.—John C., aged 35, consulted me on June 19th. He stated that he had been becoming gradually deaf for four years. With the right ear he heard at the distance of one foot a moderately loud voice; with the left at a distance of two feet. He had a constant throbbing in the ears, and always heard a noise like that of a loud storm at a distance. His ears felt plugged. His family doctor recommended him to use Valsalva's method, but it was only with the greatest trouble that he had been able to inflate the drum. I asked him to try, and I found that he did not succeed till he had blown repeatedly. By Politzer's method, I nflated the drum at once, and there was a distinct flap of the membrane.

* Read in the Subsection of Otology at the Annual Meeting of the British Medical Association in Cork, August 1879.

On observing, whilst he inflated the drum by Valsalva's method, I found the tip and handle were quite unmoved, whilst the posterior part of the membrane moved well. Suction relieved his noise temporarily. There was too great concavity of the membrane, and a white spot was noticed anterior to the tip of the handle, and a whitish reflex through the membrane from the inner wall of the tympanum. The usual treatment brought no improvement. On June 22nd, I applied a coat of collodion on the right membrane, and sent him home. On June 29th, he returned. I syringed and removed the collodion, and found that there was a round perforation at the white spot previously observed. He could blow air through it easily. I injected medicated fluids through the tympanum from the meatus twice daily, every day, except the first. On the fourth day, the perforation was closed. I applied collodion to open the perforation. On July 4th, the membrane was open again, and remained open till the 7th inclusive. I repeated fluid injections as usual, sometimes once and sometimes twice daily. No inflammation occurred. On June 3rd, I put a coat on the left membrane. On the 5th, I found a linear tear at the lower part of the membrane, and, when he inflated the drum, a bulging of a reddish colour took place. No doubt this was the mucous membrane of the tympanum which had not been ruptured. I did not complete the perforation. On July 10th, I noted that there was still a bubbling sound in the right ear on inflation, and that I could observe air-bubbles inside the tympanum. He could hear me with that ear at a distance of three feet as well as he used to do at one foot. As regards the left ear, there was no change whatever in the hearing; but the membrane and handle moved, and he experienced no trouble whatever in inflating the drum. There was no improvement whatever in the noises at any period of the treatment, except momentarily during suction.

The following is another case of rupture of the dermic and fibrous layers of both membranes, pulling these and the handles outwards.

CASE IV.—James S., aged 29, came to me on June 14th. He stated that he had been deaf for fourteen years. He heard a moderate voice at one and a half feet off the right ear, and one foot off the left. Upon insufflation, the membrane of the left ear moved, but the handle remained stationary. The membrane was too much depressed. On June 23rd, I punctured the right membrane, applied collodion peripherally to keep the puncture open, and injected a weak solution of caustic potash afterwards from day to day. I kept the puncture open for a considerable time, but I have not noted the exact number of days. I applied collodion also on the left membrane; it contracted so much that it caused a long slit through the dermic and fibrous layers. The hearing was improved in the right ear to the extent of three feet, and in the left to two feet. The mobility of the membrane and that of the handle of the malleus was restored and the concavity diminished.

CASE V.—Mary R., aged 31, was with me in February 1876, when I noticed that the membrane was much depressed, particularly anteriorly. The short process was prominent, the long process foreshortened. I saw her again on the 1st of August last. She could hear me speak close to her ear. She experienced a constant singing noise; the membrane was depressed, at the tip of the handle especially. Insufflation made no change. I could not say whether or not there was an adhesion of the membrane to the promontory. I applied collodion. When it dried, I found the handle of the malleus standing out; but in front there was a deep depression, which evidently indicated adhesion. The hearing was improved up to a distance of about four feet, but the noise remained unchanged.

CASE VI.—Mary S., aged 40, consulted me on July 25th. She heard with the left ear a moderately toned voice at a distance of four feet, and with the right at a distance of two and a half. She had experienced a singing noise as long as she could remember. Both membranes were much too concave. Air passed in slightly by Valsalva's method. By Politzer's method, the drums were inflated, and the hearing was thereby increased to a distance of seven feet, but the improvement began to diminish immediately. I found that the membranes moved when she used Valsalva's method, but still remained too concave. I applied collodion to both membranes on her first visit. On July 30th, she heard with each ear at eighteen feet distant, but did not think the noise was lessened. The improvement in the hearing continued. On August 1st, she reported that the singing had never been so slight.

The next case illustrates the improvement in hearing, with total cessation of noise, though with adhesion of the membrane to the promontory in one ear not ruptured.

CASE VII.—Eliza M., aged 67, consulted me on July 22nd. She stated that she had been deaf for nine months. With the right ear she heard my voice (moderate tone) at a distance of one and a half feet; with the left ear she heard at three feet. A noise like that from a seashell had subsisted for six months. I found the right membrane opaque and depressed. In front of the tip of the handle there was a dimple. The left membrane showed a considerable depression, affecting the whole space in front of the handle; while the handle itself was foreshortened and its short process prominent. The Eustachian tube was patent. Inflation improved the hearing distance of the right ear up to six feet. In the left ear, the hearing remained at three feet. I applied collodion. On July 24th, she heard with each ear a low voice at fourteen feet, and subsequently the hearing improved still further, and the noise disappeared. The depression of the left membrane was very considerably reduced in extent, and the handle was pulled out. I have not a note of the state of the right membrane.

The next two cases illustrate an extreme degree of collapse, localised at the posterior part of the membrane—the membrane being pushed in so as to clothe, as it were, the incus and the inner wall of the tympanic cavity.

CASE VIII.—John H., aged 25, consulted me on July 28th. The left ear had been deaf four years. He never suffered from any discharge from the ear. He was troubled with a constant singing noise. He heard my voice (moderate) at a distance of one foot and a half. There was a remarkable depression behind the handle of the malleus. The membrane was actually pushed in in such a way as to clothe the incus and articulation with the stapes. Below, it was in contact with the inner wall of the tympanum, as shown by touching with a probe. On insufflation, air passed slightly, but no change in the hearing ensued. I applied collodion freely on July 28th. On July 30th, he thought he was only a little improved. The membrane was lifted up between the incus and malleus. There was still a depression below and one behind the incus. On July 31st, he heard a moderate voice at a distance of four feet. On August 1st, the noise was less. I used the Eustachian catheter, but no change ensued.

CASE IX.—Mary P., aged 40, had been under my care in 1874. I noted at that time depressions in both membranes. She came again on my invitation on August 2nd. She stated that even when a young girl she could not hear well, but she had been pretty much as she was now for fifteen years. When she was with me five and a half years ago, I gave her acetic ether to inhale and blow into her ears; but she did not think it did her any good. Afterwards, she used some popular remedy, with negative results. She heard a noise like that of rushing waters when with me previously, but she had had none for some time. She heard my voice (moderate tone) with each ear at a distance of two feet. The left membrane showed a deep depression of the whole membrane behind the malleus. The membrane was bright posteriorly, but showed anteriorly a white patch, as if from a deposit on the inside of the membrane. The depressed part lay upon the incus, and there were two deep depressions between the incus and the posterior wall of the meatus. The right membrane behind the handle was depressed, but was not quite in contact with the incus. There was some depression also anteriorly. On insufflation, there was a flapping of each membrane. These depressions of both membranes were generally reduced, but the part of the membrane behind the incus in the left ear was unchanged. This was evidently a case of relapsed flapping membrane, with adhesion behind the incus in the left ear. I applied collodion to both membranes. The right ear heard at six feet of distance, whereas previously it could hear only at two. The greater part of the depressions of the left membrane were elevated, but there was at first no change in the hearing. I believed that I had applied too little collodion to the left membrane. I applied more just before leaving for this meeting, and have not had an opportunity of ascertaining the result definitely. [See "Addendum".]

And now, gentlemen, I come to a question which has exercised the ingenuity of aural surgeons for a considerable time: viz., how to keep a perforation of the membrane open for a longer or shorter period. You are aware that even considerable sections of the membrane heal with such facility, that artificial perforations are seldom resorted to. Healing, in fact, takes place in from one day to four or five days, and surgeons have found it inexpedient to repeat the process. I leave it to the future to determine in how far the method I have already indicated in the reports of some of my cases, and which I will now describe, may replace all former methods of intratympanic medication. If we can, as I shall endeavour to show, keep a perforation open for a considerable time, and use injections, or pump through the ear vapour, not once every few days, but once or twice daily, surely, if intratympanic medication be of any value (and I may express my conviction that there is a great future before it), we will be able to carry out treatment much more efficiently through an opening in the membrane than through the Eustachian tube. But, it may be asked, how can collodion effect this object? Its action differs in no respect from that in the case of relaxed membrane. When a section is made, and collodion applied on the membrane peripherally, the contractile action makes the margins of the wound gape; and applications renewed from time to time may keep up this gaping for a considerable period, and perhaps render the opening permanent. I put

the plan to the test in one of the worst cases under my care. The following are my notes.

CASE X.—John M., aged about 70, had been deaf for very many years, after a severe cold. He had been coming to me for some time, but I observed no change from treatment. I was obliged to shout close to the right ear to make him hear. The membrane was depressed generally, and so changed in character that not a single part of healthy structure was to be seen. I could not recognise the malleus. He was unable to inflate the drum; but, by Politzer's method, I succeeded in passing a very little air into the drum, and I found a part of the membrane, about a line in diameter, moved slightly. I perforated it, making an opening of not a line in length, and I found it was not easily made. I applied collodion peripherally, and for eleven days injected medicated fluids. Although he had such difficulty in inflating, fluids passed from the meatus through the nose in a regular stream from the very first. No improvement in hearing had taken place when I saw him last; but the Eustachian tube had become so open that he could inflate easily, and the anterior segment of the membrane moved.

In another case, I tried what collodion would do in keeping open a mere pin-hole perforation in a thickened membrane.

CASE XI.—John C., aged 73, deaf of the right ear for very many years, has been under my care for some time. I was obliged to speak close to the ear to make him hear. The membrane was rigid looking, thickened, and rather flat. I inflated the drum very imperfectly. He was troubled with a constant noise resembling an escape of steam from a loose joint. I punctured the membrane on July 21st, and injected for several days, with no improvement. I did not carry out the collodion treatment as efficiently as I might perhaps have done; but at any rate the opening was on July 28th a mere pin-point, and I thought I would give up the injection and try to keep this point open. I applied collodion on the membrane, and from day to day injected through the ear, by Politzer's method, vapour of iodine, chloroform, and acetic ether. The ether and vapour whistled through quite freely. The peculiar noise from which he had suffered so long entirely disappeared during the treatment by injection with vapours. On August 2nd (the day I left Belfast for this meeting), I found the pin-hole point still open. N.B.—On my return, two weeks afterwards, the small opening was closed, its site being indicated by a little clear depression, and a little noise had returned. It will be observed that this small opening was kept patent for at least twelve days. I trust I have given sufficient data to secure for this method of intratympanic medication at least a fair trial.

The possibility, by means of collodion, of rendering an opening permanent has been already hinted at. I have not yet met with a case in which that could be considered a desirable object, and therefore have not put it to the test. It is obvious that, for this purpose, the opening should be considerable (indeed, a circular or oval piece should, perhaps, be removed); that intratympanic injections of fluid should not be used; that the ear should be allowed to have comparative rest. If the margins can be made to gape widely enough for some time, the cut surface may cicatrise, and thus a permanent opening be secured.

I may remark, in passing, that all the methods hitherto adopted are violent methods; and, in fact, quite opposed to the dictates of our experience in other branches of surgery. Who ever heard of the margins of a wound on the skin being kept open by pressing into it a foreign body? If we cut across a cicatrix from a burn in the neck, we do not try to prevent union by pledgets of lint in the wound, but by keeping the margins widely apart by traction, exerted by keeping the shoulder down and the head to the opposite side, and so in other parts of the body. When a bougie of whalebone, or Politzer's eyelet, or any other contrivance, is put into a perforation in the membrane, irritation is kept up, the margins are kept raw, contraction takes place, and the foreign body must either be removed, or the membrane ultimately casts it off. The plan I suggest is founded on a principle totally different from anything hitherto adopted in aural surgery, viz., peripheral traction.

But, if the contractile power of collodion will do so much to remedy the evils resulting from tympanic affections, can it prevent them? May it be applied in cases in which there is catarrh of the Eustachian tube and drum? The following case bears on this point.

CASE XII.—Owen C., aged 40, consulted me on July 28th. He stated that he had been ill one month; that his left ear was deaf; that he felt stupid, and had a feeling of great weight on the left side; and that he experienced a constant noise like that of a waterfall. He heard my voice (moderate) at the distance of two feet with the left ear. The membrana tympani was vascular in parts, dull at others, and in particular depressed posteriorly. It was quite dry. He could not inflate the drum by Valsalva's method, and there was no sound heard on swallowing. The air passed in with much difficulty by Politzer's method, and I heard a bubbling sound. The hearing was improved to a distance of eight feet. There was a good deal of pharyngeal catarrh. I applied collodion to the membrane to prevent collapse and adhesion. The depressed part was rendered tense. On July 29th, though he could not inflate the drum, the feeling of weight and the noise were almost completely gone. He heard me read in a very low voice at the distance of ten feet. On insufflation, I did not detect any bubbling, but there was quite a musical sound, probably from some obstruction. On August 2nd, he heard a whisper at ten feet distance. Of course I employed other treatment, directed to the pharynx and Eustachian tube; but the case shows that collodion may be used as an auxiliary without causing any pain or inconvenience, notwithstanding a catarrh of the drum with free exudation.

I have had many other cases, more or less interesting, but I cannot further extend the paper. I may add that you must not take the cases as in any respect exceptional. The employment of collodion has come to be with me a matter of daily resort. In fact, on July 28th and 29th, I applied it in eleven cases, some of them already described, which came before me in the ordinary course of public and private practice—once in subacute catarrh; six times for regular depression; once for extreme collapse of the membrane; once to keep a perforation open for tympanic injection; twice to flapping relaxed membrane.

It now only remains for me to refer to the prevention of the retraction or shortening of the tensor tympani, and the relief of intralabyrinthine pressure. If we accept, and I think there is no ground for disputing it, that the depression of the membrane and handle of the malleus approximates the points of origin and insertion of the tensor tympani, and if the in-pushing of the handle leads to pressure of the stapes in the fenestra ovalis, then it can hardly be open to discussion that the maintenance of the normal curve of the membrane will prevent both these consequences, and the evils resulting therefrom, immediate or remote.

I, therefore, claim for collodion an extensive use. There seems to be an analogy between its action on the ear and that of atropine and iridectomy on the eye. As atropine prevents adhesions and breaks them up, and thus saves the eye from repeated attacks of iritis, may not the tightening of the tympanic membrane at the period of the attack save the ear from future danger in a similar way? As atropine and iridectomy save the optic nerve from injurious pressure, may not collodion prevent tension on the acoustic nerve by easing the stapes in the fenestra, and thus keep the nerve safe till the tympanic or Eustachian disease disappears? I am much pleased, gentlemen, to have had the opportunity of submitting my observations to the criticism of this the most important meeting of aural surgeons ever held in these kingdoms.

ADDENDUM.—Since the publication of the abstract of the foregoing paper in this JOURNAL, I have had several inquiries regarding the mode of application of the collodion. Some supplementary remarks may, therefore, be acceptable.

It is prudent to have an idea of the contractile property of the particular specimen to be used, by pouring a few drops on the back of the hand, and taking the dimensions of the patch by compasses, both before and after contraction takes place.

In case of relaxation and depression of part of the membrane, the whole of the depression and a rim surrounding should be painted. If the whole membrane should be too much depressed, then a rather free coat should be applied over, at any rate, the lower three-fourths of the membrane.

I may note that cases characterised by immediate improvement after inflation and quick relapse are almost certain to be greatly relieved at once by collodion. I commonly paint it on with a camel-hair brush. It must be done quickly when several touches are necessary. Sometimes, when the case is so bad that rupture of the membrane or of adhesions may be desired, I pour a few drops on the membrane through a speculum, and then turn the head with the ear downwards, so as to allow part to run out. In fact, if it were at all easy to apply a drop on the membrane, that plan would be preferable to painting with a brush. For two or three minutes after the application, patients complain of a burning heat, and, after contraction takes place, a feeling of constriction is experienced. A little pain is occasionally felt.

The collodion does not adhere to the walls of the meatus. After the application, it is usual to find membranous patches of collodion in the meatus, obstructing the view of the membrane more or less. These may be removed. Sometimes, however, a patch standing out may be connected firmly with the coat on the membrane. In such case it must not be removed, as traction might be exerted to an injurious extent on the membrane, and the membrane would either be ruptured or the dermic layer pulled off with the collodion.

If it should be desired to remove the collodion, it is not at all easy to do so, even after the lapse of a long time. To effect its removal, I syringe gently with warm water, having some sulphuric ether added to

it. More trust must be put in time than force—indeed the utmost gentleness must be used. I usually succeed in a few minutes.

APPENDIX.—The result in the case of Mary P., on whose membrane I applied collodion on August 2nd, is so interesting that I think it well to complete the history. After returning from Cork, I saw her on August 18th. She stated that, after the application, she had had pain in the ear; that on August 7th (that is, five days after the application), she had a slight discharge, which had since continued. On examination, I observed an irregular rupture of membrane at the postero-inferior segment, with some discharge. The opening was considerable. Air whistled through when she inflated the drum. I thought it well to inject weak solutions of iodide of potassium, carbonate of soda, and caustic potash. This I did for a week, but without improvement. I ceased the injections, and resolved to try how long I could keep the perforation open. I applied collodion on the membrane, so as to exert traction on the margins of perforation, and ceased further treatment. The ear has been perfectly dry ever since and free from pain. On September 8th, the perforation was round, and at least three-quarters of a line in diameter. For some time the hearing had not improved; but, on the date mentioned, she could hear a very moderate voice at ten feet, whereas she had formerly only heard at the distance of two feet. The important fact to be noted is that, from August 7th till September 8th, a perforation was kept open by the very simplest means.

THE PRESENCE OF FAT IN THE URINE.

BY THOMAS OLIVER, M.B.,
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ON reading a foot-note in the chapter on Chylous Urine, in Dr. Roberts's *Handbook on Urinary and Renal Diseases*, I see that, while he is fully aware of the occurrence of cases in which the fat which is present in the urine is globular and not molecular, he is unwilling (and I think rightly) to regard them as belonging to the same series of cases as those comprised under chyluria. And certainly they differ in a few respects. As the two cases I am about to report resemble a case published by Dr. Bramwell in the *Edinburgh Medical Journal* for 1858, p. 714, about which there seems to have been some doubt, I may be excused for thus bringing forward a paper to substantiate what has already been observed. In speaking of the characters of chylous urine, Dr. Roberts says: "On standing awhile, it sets spontaneously into a trembling coagulum, which, after a time, redissolves and breaks up into flaky clots. Not unfrequently, this coagulation takes place within the bladder, and occasions serious pain and difficulty in micturition. The milky appearance of chylous urine is due to the presence of a finely divided fatty or oily matter. This is thrown up as a creamy layer after the urine has stood for some hours. When chylous urine is agitated with ether, the fat is dissolved, and the secretion assumes the transparency and colour of healthy urine...Chylous urine is invariably coagulated by heat and nitric acid. The specific gravity is generally below the average. When examined microscopically, chylous urine is found to contain a variable number of granular nucleated corpuscles, like those of mucus or chyle, and generally, but not always, red blood-discs. The fatty matter almost invariably occurs in the form of excessively minute granules (resembling the molecular base of the chyle), which are not resolvable into visible globules under the highest powers of the microscope." With these characters before us, we can easily see wherein the two cases hereunder mentioned differ from those of chyluria. In the first case, there was, on one or two occasions at least, observed a gelatinous-looking coagulum occupying the centre of the glass of urine and suspended all the way through it. This spontaneous coagulation, so to speak, was not constant; nor was there any precipitate with heat and nitric acid. On the addition of nitric acid to some of the cold urine, no opalescent line was appreciable, owing to the intensity of the milky colour of the urine; and the same remark applies to heat. Heat only intensified the colour of the urine without producing any precipitate. Occasionally, after standing for a few days, a creamy layer was found to occupy the surface of the fluid. Microscopical examination revealed the presence of myriads of fat-globules of various sizes; the appearances observed being not unlike that got in a similar examination of milk. Agitation with ether, while it dissolved the fat-globules, did not remove the milky colour of the urine altogether; and the average of the specific gravity of the urine collected at different periods was higher than that of chylous urine. There was a resemblance to chyluria, however, in the course of the disorder. The presence of fat in the urine was not persistent: its presence was interrupted for days, only to reappear again; its existence was often unknown until the urine was examined; occasionally, however, it was preceded or accompanied by a general feeling of *malaise*, headache, or pain in the epigastrium. In both of the cases that fell under my observation, there were epileptic fits, and the urine which was examined after these seizures was sometimes milky, and rich in fat-globules.

CASE I.—On February 3rd, 1877, while in practice in Preston, I was called to see Caroline F., aged 27, who was said to be in a fit. When I arrived at the house, I found that the fit had passed off. She had recovered consciousness, and now complained of extreme pain in the head and of being very tired. The patient was a well-developed muscular woman, of sallow appearance. She was pitted with the marks of small-pox, and had a goîtrous swelling of the neck. The heart and lungs, on careful examination, were found to be healthy. Pulse 72. The skin was moist; the bowels costive. I asked her friends to let me have some of her urine for examination; meanwhile giving her a smart dose of compound jalap powder and a mixture of bromide of potassium and chloral.

February 4th. She felt rather better. The bowels had acted well; the tongue was clean and moist. She had passed urine freely, and without pain; but, as it was mixed with that of her friend, I did not see it. The fits had not been so severe nor so frequent. She was still languid, and complained of pain in the epigastrium and loins. She told me that she had small-pox eight years ago, when in Bolton, and that she had not enjoyed good health for the last two years. Since this last period, she had been subject to fits, of the approach of which she was sometimes aware. The pain in the head, of which she said she was seldom free, was increased. There was a peculiar feeling in her legs, which moved upwards. She uttered a scream, and fell unconscious on the ground.

February 5th. She was somewhat improved since yesterday. The fits still continued. The specimen of urine received this morning, and which was passed without difficulty, resembled milk in appearance. It was the urine first voided this morning; it was acid, of specific gravity 1014. Heat only tended to increase the opacity without producing coagulation. There was no reaction appreciable with nitric acid; for, from the opacity of the urine, no distinct line of opalescence could be made out. On allowing the urine to stand for some hours, there appeared suspended in it a gelatinous-looking coagulum of a somewhat flocculent nature at its sides. This substance, when examined microscopically, was found to consist of an enormous number of fat-globules of various sizes; the appearance of the field being not unlike that got in an examination of human milk. No tube-casts were seen. There were a few epithelial cells and mucus-corpuscles.

February 6th. She continued to improve. The urine was to-day of a light yellow colour, clear, of acid reaction, and had a specific gravity of 1018. It bore no resemblance to the milky urine of yesterday. Under the microscope were seen a few fat-globules, octohedral oxalates, mucus-corpuscles, and epithelial cells. She was ordered to take liquor ferri perchloridi dilutus.

February 7th. She had only had two fits since yesterday. She told me that she had, when living in Bolton about a year ago, an attack somewhat similar to the present, and at that time she passed milky urine. The blood examined to-day gave negative results. Urine acid, clear, specific gravity 1031.5, with a copious deposit, presenting to the naked eye the appearance of oxalates with a dark hood resting on its surface. No albumen nor sugar was present. Examined microscopically, it was found to contain caudate cells, octohedral oxalates, squamous epithelium, and fat-globules in greater abundance than in the specimen of yesterday. (Dr. Marshall kindly confirmed the presence of fat in this urine.)

February 14th. She had continued to improve until to-day, when she came to my house complaining of great pain in her head. She had been taking the iron with benefit. She was ordered croton-chloral-hydrate.

February 15th. She was, if anything, rather better to-day. She did not send any of her urine for examination, as she began to menstruate yesterday.

February 18th. The urine sent to me to-day was of a light straw colour, of specific gravity 1019; it contained a soft downy deposit not unlike mucus; no albumen nor sugar. Under the microscope, fat-globules were seen in abundance, a few crystals of uric acid; large squamous epithelial cells, many of which were studded with fatty points, while one or two contained fat-globules.

February 22nd. She had had headache to-day, but felt able for her work in the mill. Occasionally she felt sick when at her work. In reply to questions, she stated that she had never had scarlet fever nor dropsy, and had never taken cod-liver oil. She suffered at times from leucorrhœa. I again examined her carefully, and found all the organs normal.

February 23rd. The morning urine was of a very light straw colour, specific gravity 1018, with a faint mucus deposit, which was loosely sus-

pended in the fluid. It contained mucous cells and a very few fat-globules. A number of large flat epithelial cells were seen, and these were studded with fatty points.

February 25th. She stated that she passed some milky urine this morning; but, through carelessness, I was not furnished with any of it for examination.

February 26th. She had a fit in the mill this morning, and had to be taken home. She again complained of great pain in the head, chiefly the frontal region. She had been sick once or twice. The urine passed this afternoon, three or four hours after the fit, was of very pale colour, of specific gravity 1011; no albumen. Under the microscope, it was seen to contain large rounded epithelial cells studded with fatty points. A few small fat-globules were also seen floating about. Croton-chloral-hydrate was ordered.

March 1st. I had seen nothing of this woman for the last two days. She was very well to-day. She stated that the medicine relieved her headache. Ophthalmoscopic examination gave negative results. The urine passed this morning looked thick and turbid; it was acid, and had a specific gravity of 1028. Addition of ether did not altogether remove this turbidity. The urine to-day was found to contain albumen, 4 per cent. Under the microscope, myriads of fat-globules of various sizes were seen. A few squamous epithelial cells were seen, and these were studded with fatty points. Two or three octohedral oxalates were present.

March 3rd. She felt pretty well to-day. She had had slight vertigo and headache, and slight inclination to vomit. The urine was of specific gravity 1016, clear; no albumen.

March 8th. She was not so well to-day. She had had two fits, and complained very much of headache and dimness of vision. The bowels were constipated. The urine was of specific gravity 1016; no albumen. It contained a few mucous cells, octohedral oxalates, and fat-globules. The compound jalap powder and liquor ferri perchloridi were repeated.

March 11th. This morning I examined the specimen of urine which was sent to me on the 1st of March. There was a thick milky-looking scum on its surface, which, under the microscope, was seen to be composed of myriads of oil-globules, and there were also seen the ova of the fungus *mucor mucedo*. The ova were elongated, and had not the glistening look of the oil-globules.

March 13th. The urine was of specific gravity 1030, acid, of a light yellow colour, with a fawn-coloured deposit of urates. A few oil-globules were present.

March 25th. She had, since March 13th, been pretty well until to-day, when she had another fit in the mill. She looked very pale. The bowels were constipated. The urine was of specific gravity 1032; it was not examined microscopically.

July 16th. I had seen nothing of this patient for the last two months.

Case II.—September 21st, 1877. Mrs. D., aged 37, draper, had been subject to epilepsy for the last ten or eleven years. At the age of seventeen, she had one or two attacks of *petit mal*. Her husband lived apart from her, and his intemperate habits had caused her much anxiety. Her youngest child was nearly a year old. When she was carrying him, her feet swelled very much; at, present, only the right foot was swollen. Headache was the most prominent symptom. She was sallow, pinched, and worried-looking—the latter condition was probably aggravated by the cares of business. The epileptic fits usually came on at her menstrual periods, at which time the discharge was pretty profuse as a rule. She improved for a time under the administration of any remedy; iron, quinine, bromide of potassium, and chloral had all done good. I had frequently examined her urine, and found it at times to contain albumen.

September 22nd. The urine passed yesterday morning was sent to me to-day. It was of a pale straw colour, with a specific gravity of 1025. On heating the urine, it became turbid; but this disappeared on the addition of a drop or two of acetic acid. Under the microscope, it was found to contain a large number of fat-globules of various sizes, crystals of phosphates, a few mucus-corpuscles; no albumen. Yesterday, she complained of not feeling well; she had pain in the epigastric region, and altogether felt ill and indisposed from lassitude.

September 23rd. I was only furnished with two or three teaspoonfuls of urine for examination. It contained a few small fat-globules and phosphates.

September 25th. The urine was very pale, of specific gravity 1013, acid; very little sediment. A few crystals of uric acid and one or two epithelial cells were all that could be detected under the microscope.

March 8th, 1878. This patient was still in very indifferent health. She was subject at times to epileptic fits, but was able to conduct her business.

Frequently I have detected the presence of albumen in the urine after epileptic seizures; and it was this fact that led me to an examination of the urine in these two cases. The patient Mrs. D. is, in my opinion, the subject of chronic Bright's disease (contracting form); and I base my opinion on such facts as these: a steady but progressive emaciation, almost persistent headache, her sallow tint, the occasional presence of albumen in the urine, and the tendency to menorrhagia; and other circumstances, which might be considered factors of production, are not wanting, such as extreme anxiety and worry from domestic troubles and the cares of business. If this diagnosis be correct, then it is just possible that the kidneys have reached the stage of what Dr. George Johnson calls the "granular fat kidney", in which there is a fatty degeneration of the cells in the cortex, a tendency for these fatty molecules to form globules, which, by a solution of the cell-wall, escape into the tubules and get carried away by the urine. This is the only explanation I can offer for the presence of fat in her case; and for its presence in the urine of the other I can offer no explanation. In the case of C. F., albumen was detected in only one out of the eleven samples of urine furnished for examination; and although tube-casts were earnestly sought for, they were never detected. Of the questionable relationship of the discharge of milky or fatty urine to the epileptic seizures, I can say nothing. The presence of fat in the urine may be only a coincidence. The connection of the discharge of a milky urine with the fits was a fact which had been observed by the patient herself, and which I had the opportunity of corroborating on one or two occasions.

Since writing the above, I have been informed of three similar cases, which occurred in the practice of Dr. Hope of this town. The urine was milky in all the cases, and, under the microscope, was extremely rich in fat-globules. Fat was found in the urine of a woman after parturition, and in one of the other cases it occurred at a time when the patient had been exposed to prolonged muscular exertion with a good deal of anxiety, and its voidance was followed by an extreme degree of prostration and faintness. All of his cases, too, improved under the administration of iron.

A CASE OF DIPLEGIA.*

By JAMES CUMING, M.D.,
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A NUMBER of cases of double facial paralysis, or diplegia, as the affection has been termed by Wachsmuth, are on record; but the malady is rare; and I have thought that a case of this affection which I have had an opportunity of observing with some care might interest the section.

The patient, a girl aged 17, had been employed in a factory, where she worked in a very warm room. As she found the heat disagreeable and weakening, she applied to the manager, and obtained a change to a cold room. A little time after this, she became affected with facial paralysis of the right side, with its accompanying distortion of the features. At the end of three or four days, the unpleasant twisting of the face ceased, in consequence of the paralytic condition involving also the muscles of the left side. A fortnight afterwards, she was admitted to hospital, complaining that she could not shut her eyes, and that she could not open her mouth when she laughed.

The face presented the peculiarities which have attracted the attention of all observers of this disease; a smooth expressionless aspect, which has been likened to a mask; a watery tearful appearance of the eyes, which the patient was unable to close; a partially collapsed condition of the alæ nasi, and the lips parted, the patient being unable either to close them or to open them widely. When she laughed, which she did readily enough, a strange disagreeable chuckling sound was produced, which was not in the slightest degree suggestive of merriment, and which showed not only how much of the pleasurable effect of laughter depends on facial expression, but also how much the character of laughter is modified by the lips. Sensibility was quite perfect; there was no embarrassment in mastication, except that caused by the alimentary materials getting between the cheek and the jaw, and requiring to be pushed between the jaws. The saliva escaped from the mouth when the head was bent forward. Deglutition was quite unimpaired, the appetite was good, and the general health excellent. There were no symptoms pointing to any cerebral lesions.

When the head was bent forward, on investigating the less obvious phenomena, it was found that the velum palati hung down in a more perpendicular and less arched manner than usual, and that the uvula was flaccid and moveless. The tongue could be protruded without difficulty, but not in a horizontal direction. When asked to put it far out,

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

she always turned it downwards towards the chin; and, when an effort was made to turn the tip upwards, she could not touch the skin of the upper lip at all. The tip, indeed, could only be very slightly directed upwards, so as to reach the mucous membrane of the upper lip.

The sense of hearing seemed altogether unchanged; she experienced no undue sensitiveness to noise, and no abnormal acuteness of hearing. The voice was slightly nasal in tone; the labial consonants *p* and *b* could not be pronounced; *o* and *a* seemed to be articulated fairly enough, but, of course, without movement of the lips.

She stated that for the first day or two, everything had had a saltish taste, but that this had passed off, and that there was now nothing particular in her sense of taste. She was tested, when blindfolded, with solutions of salt, sugar, quinine, tartaric acid, aloes, and other substances of a pronounced taste; and it was found that there was no diminution or perversion of taste; on the contrary, the perception of gustatory impressions seemed very prompt and decided, rather above the average in acuteness, and certainly was keener than in several of the students who assisted in the investigation.

On examination of the electro-muscular excitability, it was found that no muscular contractions could be produced by the induced current applied directly over the muscles, and used up to a strength which was smartly painful, and a good deal in excess of what caused vigorous contractions in the forearms and on the faces of some of the assistants. Nor could contractions be produced by exciting the nerve near its emergence at the stylo-mastoid foramen. With the voltaic current, however, it was quite different; the poles of a small battery, composed of four small pairs of Stöhrer's elements, excited smart contractions when the current was slowly interrupted. Excitation of the nerve by the voltaic current had no effect whatever.

The treatment consisted in galvanisation of the muscles, and subsequently in the employment of the induced current. Blancard's pills were also given. Voluntary power gradually returned; first to the side originally affected; afterwards, and more imperfectly, to that which had been last paralysed. Excitability under the induced current did not return till some time after a certain degree of voluntary power had been regained.

REMARKS.—This case seems to raise some questions of considerable importance in relation to the pathology of the facial nerve. The involvement of the palatine muscles is generally held to indicate distinctly that the nerve is affected as high up as its geniculation. Physiologists are pretty well agreed that the connection of the facial with the innervation of the palate is made by some motor fibres which pass from the geniculate ganglion through the great superficial petrosal to the spheno-palatine ganglion, although it seems somewhat doubtful what are the exact muscles which thus receive their motor supply. When the morbid condition of the nerve reaches a point so high as this, it is usually regarded as pretty certain that the sense of taste will be in some degree impaired or rendered less prompt, in consequence of the fibres of the chorda tympani in the facial trunk suffering as regards their power of conduction.

The relations of the chorda tympani to the sense of taste have been somewhat differently explained by physiologists. Claude Bernard supposed that the paralysis of the motor fibres in this nerve led to a deficient erection of the papillæ of the tongue, and so prevented proper contact between them and the sapid substances which might be applied to them. Schiff is of opinion, however, that gustatory fibres pass along the chorda tympani in a centripetal direction, reach the trunk of the facial, and thence pass probably by the great superficial petrosal nerve to the spheno-palatine ganglion, and ultimately to the superior maxillary division of the fifth nerve. So far as this case goes, it indicates that the sense of taste is not dependent in any appreciable degree on the integrity of the chorda tympani.

Next as to the sense of hearing: Roux was the first to direct attention to this, having noticed it in himself when suffering from facial paralysis; and it was afterwards made the subject of an elaborate paper by Landouzy. It has been said that an unusual susceptibility to noises, or an abnormal power of hearing musical notes, is present in a considerable number of cases of facial paralysis. This has been variously explained: by Brown-Séquard, as the result of hyperæsthesia of the auditory nerve from paralysis of its blood-vessels, causing hyperæmia; by Longet, by paralysis of the tensor tympani, which he supposes to be supplied by a branch from the facial, allowing the membrane to enter into undue and excessive vibrations; and, more recently, by Lucae and Hitzig, who refer the phenomenon to paralysis of the stapedius muscle, and resulting overaction of the tensor tympani. Now, not only was this symptom absent as far as regards undue sensibility to loud noises in this case, but it was absent in every case of facial paralysis that I have seen for many years; and I have carefully examined a number of cases with special reference to this question. The singular kind of susceptibility to electrical excitation by the voltaic current when the induced has no effect was first pointed out by Halli and Baierlacher, and has been called by Erb, rather unhappily, the "reaction of degeneration". It coincides in point of time with, and is probably caused by, incipient changes in the muscle. Neumann has suggested that muscles which have undergone a certain degree of pathological change lose the power of reacting to currents of very short duration, while they react more intensely to currents of longer duration. Even a strong voltaic current will not, he says, cause a reaction if its duration be only momentary. It was very remarkable how, as improvement took place, this exaggerated sensibility to the voltaic current gradually diminished; and how, even after a certain degree of power of voluntary motion had been attained, no contractions could be induced by a pretty strong electro-magnetic machine.

Finally, a point of the highest practical importance, as indicating the line which should be followed in dealing with affections of this nature, is the determination of the nature of the morbid process in such cases. Is it merely functional disturbance, or congestion, or of the nature of inflammation? The way in which the effect of a peripheral morbid impression ascends along the continuity of the nerve would seem to point to something of an inflammatory character; but we have as yet obtained no certain data from *post mortem* examination to enable us to do more than guess at this most important question.

TREATMENT OF PUERPERAL ECLAMPSIA BY CHLORAL.*

By HUGH W. THOMAS, M.R.C.S.Eng., L.S.A., Birmingham.

THE therapeutic value of chloral-hydrate as a hypnotic has long been recognised by numerous authorities both at home and abroad. Its value as an anæsthetic, more especially in puerperal eclampsia, is none the less evident. My experience of the drug, compared with other remedies in the treatment of this disease, has hitherto been very favourable, as will be shown in the brief notes below.

CASE I.—The patient was an anæmic multipara, aged 28, in her eighth month of pregnancy. She seemed to have enjoyed excellent health up to seven days preceding her confinement. Then the extremities became œdematous, and her urine diminished in quantity. When attacked, she was suddenly seized with a convulsion lasting about three minutes, followed by others of increased intensity at short intervals. Her medical attendant gave half-drachm doses of bromide of potassium every two hours without the least effect. When I first saw the patient (about seven hours from the commencement of attack), she was writhing under an intense paroxysm accompanied with all the other phenomena peculiar to the disorder. In fact, she was hardly free from a convulsion. Owing to the injured and swollen state of the tongue, it was impossible to give anything by the mouth. Thereupon, a dose of forty grains of chloral-hydrate was administered *per rectum* in thin gruel made with milk and the yelk of an egg. In less than five minutes, she became perfectly quiet. This was repeated at intervals of half-an-hour, and thus she was kept under perfect control until her delivery two hours later.

On examination, the os and cervix uteri were found to be two-thirds dilated and dilatable, the membranes were entire, and a vertex presenting. After gradual dilatation, the membranes were ruptured, Simpson's long forceps was applied, and the child (still-born) delivered without difficulty. The placenta gave no trouble, nor was there any *post partum* hæmorrhage. There being no return of the symptoms, the injections were now discontinued, when she fell into a sound sleep. About forty-eight hours after delivery, consciousness returned, the faculties being unimpaired, although the interim was a perfect blank. The uterine contractions were not in the least interfered with by the use of the remedy. Some catheterised urine was examined, and found to contain one-third of albumen. On the fourteenth day, the patient was out of bed, and in a month went into the country as well as usual.

CASE II.—The next case was one in which eclampsia occurred, on the third day following parturition, in a plethoric multiparous patient. Here the attacks came on at intervals of one and two hours. The dose of chloral ordered was half a drachm every three hours. Suffice it to say, there was no return of the symptoms after the first dose of medicine. She was up and about on the twelfth day.

In conclusion, I would offer a few remarks on the claims which chloral has upon us for its advantages over other remedies in the treatment of the disease under consideration. According to Professor Liebreich, it is a quick anæsthetic, non-excitant, leaves no bad after-

* Abstract from a paper read before the Midland Medical Society.

effects, and interferes but slightly with the cardiac nervous power. Its advantage over chloroform must, therefore, be at once apparent; for, not only is it a quick anæsthetic, and is followed by no bad effects, but it is easily administered. By repeated doses at regular intervals, my patients were kept perfectly under control. Again, its superiority over chloroform is evident when the practitioner happens to be single-handed, instances of which are of every-day occurrence in country practices, where surgeons are few and far between. The medical attendant would find it no easy task both to give chloroform and deliver his patient under such circumstances. Chloroform is also often followed by sickness, and, with the tongue in the condition which it usually is in eclampsia, would prevent anything that might come up into the throat from being got rid of, thereby favouring asphyxia. Not only can chloral be administered singly *per rectum*, but also in combination with nourishments, such as milk, eggs, etc.; thus saving the disturbance of the patient, as well as keeping up her vitality.

In the first case, bromide of potassium was administered, but with no good result, its action, in my opinion, being too slow in this formidable disease. Opium and its alkaloids have been advocated; but, where there is renal complication, they are injurious, and of necessity contra-indicated. My first patient being anæmic, bloodletting would not have been admissible; whilst in the second case it was not required; though chloral was given in both with the happiest results.

RASHES ON THE TONGUE.

By PROSSER JAMES, M.D.,
Lecturer on Materia Medica at the London Hospital.

THE remarks made at the Pathological Society on a case of "Peculiar Circular Wandering Rash on the Tongue", as reported in the JOURNAL, deserve to be supplemented, inasmuch as no one of the speakers claims more than a casual acquaintance with the subject. Perhaps, in the individual case, its erratic course and rapidity of disappearance were more important diagnostic points than the uncertain result of the search for a fungus. I should not, however, think the case of much importance (it does not seem to me so rare or peculiar) but for the fact that few seem to have been familiar with such appearances. I do not regard them as rare on any portion of the mucous membrane of the mouth. Further, not only such cases, but a number of others, will only be understood by comparing them with similar pathological processes on the skin. In fact, as I have elsewhere pointed out, the connection between the diseases of the skin and mucous membranes is fully illustrated in the mouth and throat; and, although the tongue is perhaps less apt to take on certain forms of disease than the rest of the buccal surface, it is prone to be affected by other circumstances. Slight forms of catarrhal inflammation are common enough, but do not often necessitate medical advice, and hence they are scarcely studied. But ulceration of the tongue, lips, cheeks, pharynx, and nasal passages is more troublesome, and proceeds from various causes. The irritation of teething is credited by almost all practitioners with numerous infantile mouth-troubles. But the forms of stomatitis arising from this, and the direct influence of mechanical or chemical injury, are less likely to be misunderstood than those associated with similar processes on the skin. Thus, in the exanthemata, we may watch exactly similar processes going on simultaneously on the skin and mucous membrane; or, as in other cutaneous affections, we may see them spread from the outer surface to the mouth. The pustules of small-pox are sufficiently significant. The rash of measles spreads from one structure to the other. On the mucous membrane, the course of these eruptions is more rapid than on the skin. Erysipelas is another example. Herpes and pemphigus strikingly illustrate the same facts. In scarlatina, the condition of the tongue at an early stage is proverbial, and much relied on in diagnosis; but the disease of the throat is too deep to compare with more superficial affections. Besides these examples, scurvy, purpura, and other diseases may, as I have long taught,* be advantageously studied on both the cutaneous and mucous surfaces.

While writing on affections of the tongue, I may be allowed to add that I have met with a couple of cases of the black tongue described in the JOURNAL a few weeks since. Anyone on the look out for this affection should be particularly on his guard against the possibility of being deceived by stains caused by food, medicines, and other articles. Several cases have come before me in which stains from unexpected sources were only proved to be of this nature by the most patient and exhaustive investigation.

* *Sore-Throat: its Nature, Varieties, and Treatment; including the connection between Affections of the Throat and other Diseases.*

PRIMARY ETHER ANÆSTHESIA.

By CHARLES COPPINGER, L.R.C.S.I.,
Surgeon to the Mater Misericordiæ Hospital, Dublin.

A REPORT was published in the American journals some months ago, by Dr. J. F. Weir, on the first insensibility produced by the inhalation of ether, in which he stated that primary anæsthesia, as it is commonly called in New York, had now become fully recognised in the practice of the hospitals in that city. I am not aware that this system of employing ether has received any trial in this country, and report the following case in order to call the attention of the readers of the BRITISH MEDICAL JOURNAL to what would seem to be an important addition to our methods of producing anæsthesia during operations of short duration, such as tooth-extraction, cauterisation of lupus, etc.

R. M., aged 44, an army pensioner suffering from urethral stricture and urinary fistulæ, was admitted to the hospital March 5th, 1879. Treatment of the stricture was commenced by the usual combination of the gradual and rapid system of dilatation, and continued until a No. 7 catheter could be passed into the bladder, and until one of the perineal fistulæ had closed. Some difficulty was now experienced in further dilating the stricture; which, as it was situated in front of the triangular ligament, did not include a large portion of the canal, and had been originally produced in a healthy man by an injury from the pommel of a saddle, we thought it a suitable case for a more active method of treatment.

The patient, who was a pallid nervous man, objected to anything in the shape of an operation without an anæsthetic. It was found that he suffered from a weak heart and a basic cardiac murmur, apparently due to his anæmia; and it was therefore decided to give a trial to the above-mentioned system of rendering the necessary procedure painless. He was accordingly placed in the recumbent position on the operating table, and Sir Henry Thompson's instrument for forcible dilatation passed into the urethra, until that portion of the apparatus, which includes the lever by which the dilating blades are separated, was situated opposite the stricture. Ether was now administered in the usual way, the patient having been first directed to hold his right hand upright in the air, while the elbow rested on the operation-table. After one minute had elapsed, the arm dropped; the ether-inhaler was at once removed, and the dilator quickly screwed out, until the strictured portion of the canal was larger than a No. 12 bougie. The instrument was then unscrewed and withdrawn, and a full-sized flexible catheter passed into the bladder. As might be expected, no after-sickness or other bad effect of the anæsthesia was complained of, but the patient assured us that he had been asleep, and had not suffered pain, adding that "he was surprised at having gone off so easily, as it took three-quarters of an hour on a former occasion to render him insensible". He was soon taught to use a catheter for himself, and in ten days left the hospital, the remaining fistula having closed.

About a fortnight after this patient's departure to the country, I was surprised to hear that he had died quite suddenly; and, from the circumstances of his death and the existence of the cardiac murmur noticed by us, we concluded that he had in all probability died of heart-disease. The case was one, therefore, as the sequel proved, in which the full administration of an anæsthetic would have been attended with special danger, and in which the use of ether or chloroform, after the ordinary method, might have added one to the sad list of fatal accidents occurring during the performance of comparatively trivial operations.

POISONING BY LINIMENTUM ACONITI: RECOVERY.

By CHARLES H. HILL, M.R.C.S.Eng., Barnsbury.

AT 11 o'clock P.M. on November 24th, I was hastily summoned to see a gentleman to whom a teaspoonful of linimentum aconiti (*B. P.*), diluted with nearly two ounces of water, had been administered by misadventure, in mistake for ordinary paregoric. The patient had some time previously been applying the liniment for torticollis, and had incautiously left the phial near a similar bottle of paregoric.

Upon my arrival, he was sitting up in bed calmly and in full possession of all his faculties, and told me the dose had been taken only about five minutes previously. He suffered no pain, and only experienced a tingling and burning in the mouth and fauces from the passage of the fluid. There was no gastric discomfort. His respiration was tranquil, but the lips and countenance appeared dusky. Pulse 96 and of good volume. There was no chilling of the surface. I immediately administered thirty grains of sulphate of zinc in half a pint of warm

water; and he quietly drank another pint of tepid water afterwards. In less than five minutes, vomiting ensued, which, being encouraged by tickling the fauces, thoroughly relieved the stomach of its contents, amid which a strong odour of aconite liniment was detected. Another emetic of zinc was taken, of the same strength as the first, followed also by a large draught of warm water. The whole was quickly and powerfully returned by the stomach, but unaccompanied with the faintest smell of the liniment. As the vomiting seemed to depress him somewhat, further drinking was discontinued, with the exception of a little brandy and water, which was not retained long. He now looked far less dusky, and the lips were regaining their natural colour. The pulse was still soft, and had risen to above 100; but this, together with a sensation of chilliness, was doubtless due to the vomiting.

In three-quarters of an hour after swallowing the poison, he first complained of its peculiar effects—experiencing a tingling in the temples, with a sense of enlargement of the whole frontal region, and with some slight disturbance of vision. The pupils were equal, but somewhat dilated. The numbness and tingling did not extend to the body or limbs, though the mouth and fauces were still dry and burning. There was also some heat at the epigastrium, with nausea, but both perhaps due to the zinc. He was cold, and the skin of the extremities felt decidedly chilly to the touch. The pulse had fallen to 81, and was soft and feeble. The bowels, moreover, were now freely moved. A glass of champagne was then taken, and kept down, whilst he was warmly covered up in bed; and at the end of another hour the effects of the poison had passed off, bodily warmth being restored, attended with a comfortable perspiration. He felt composed and inclined to sleep. At an hour later, he was dozing gently; all tingling had gone; vision was natural; pulse 75 and of good tone. He subsequently passed a quiet night, and was quite well next day.

REMARKS.—When it is considered that the amount of the poison taken was equivalent to about four hundred and eighty drops of the pharmacopœial tincture, some idea may be formed of the urgency of the case, which, in all probability, would have terminated fatally if timely vomiting had not been induced. Such being the case, the propriety of leaving poisonous liniments in the hands of our patients becomes very questionable; and the suggestion as to whether it would not be better to make their topical application ourselves, appears worthy of consideration, when the alternative may jeopardise life through carelessness or misadventure.

CLINICAL MEMORANDA.

SLOW PULSE.

VII.

I WAS called on the 13th of May last to Mr. ——, who said that he felt a shortness of breath and unable to go about much. Upon examining him, I found that the action of his heart was very irregular; his pulse weak and slow, 28 per minute. After prescribing for him, it became regular, with his pulse moderate in tone, still 28 per minute. He is seventy-one years of age, and I have seen him several times during the past six months, and have always examined his pulse, which has ranged from 28 to 30 per minute. He is well in every other respect. I have told him not to leave his home much, or stoop much, as in working in a garden; to smoke very little, and, as a stimulant, to take a little whiskey in moderation, which he does.

W. A. WANNAN, L.R.C.P.&S.E., Arbroath, N.B.

VIII.

IN many thousands of cases, both in hospital and in private practice, I have twice seen cases of slow pulse. The first case was that of a clergyman eighty-five years of age, whose pulse, in the six or eight years during which I knew him, never to my knowledge exceeded 32. He was a great reader, and had in his library a radiating fender. As he suffered from concentric hypertrophy, I cautioned his butler against leaving him long alone, lest he might fall into the fire. One Sunday, I had occasion to see a relative of his, and at the same time had an interview with him. At three the following morning, I was summoned, and found him dead in his bed, around which were standing eight servants or "friends" (as he called them), all of whom had lived with him fifty years, with the exception of the "novice", who had been there about twenty years.

In the autumn of 1872, I was called to see a gentleman aged 79, who, to use his own expression, "had never had ache or pain in his life". I found him with a pulse at 110; skin 102; tongue dry, but clean; slight friction-sound. Next day, having passed a bad night, his pulse had risen to 124; skin still 102; no augmentation of friction-sound. Three days after this, I found the pulse at 114, firm and regular. As syncope threatened upon the slightest attempt to assume the perpendicular position, he was necessarily kept recumbent, which, by the help of one of Alderman's screw-beds, we were enabled to carry out for every purpose. For months, the pulse did not exceed 17. The treatment consisted in moderate doses of iodide of ammonium and iodide of iron, with the administration every hour or two, by night and by day, of sustenance of some kind. At length, the pulse rose to 19. About this time, I had the pleasure to hold a consultation with Dr. Russell Reynolds, who found the pulse 19. The medicinal agents employed were adopted under an impression that during the early days some deposit had taken place on the membranous covering of the aorta. At length, the pulse rose gradually to 25, then 30, and at length to 42, at which time I allowed him to take gentle exercise daily, accompanied by the male attendant who had faithfully and assiduously seconded our efforts throughout. This man always had a stimulant at hand, and was enjoined never to go out of sight of a cab-stand, lest sudden exhaustion should supervene. He is still alive. In this case, as in the former, all his friends declared that they had never known his temper to be ruffled. R. GOSSET BROWN, M.R.C.P.

IX.

ON the 3rd instant, I performed ovariotomy on a woman aged 65, removing a tumour forty pounds in weight. Previously to the operation, her pulse was 46. She took the chloroform very well, and at the end of the operation the pulse was only 36. At this rate it continued for three or four days; it is now 40. The temperature has not exceeded 99.8°, and is now quite normal. The heart's sounds are quite healthy, and the beat very regular. The patient is a little woman, rather spare, and carries her three score and five years very well.

GEORGE GRANVILLE BANTOCK, M.D.

ALCOHOLIC INFLAMMATION OF THE MEDULLA OBLONGATA.

ALCOHOLIC inflammation of the medulla oblongata is usually included in the term "myelitis"; but there is no particular description of it in any hand-book of medicine which I have seen. Inflammation of the medulla (resulting sometimes in extension of the inflammation to the cerebellum, causing increased sexual desire, or to the cerebrum, producing insanity or death) is a disease caused by taking an excess of alcohol in small doses over a lengthened period of time. The principal sufferers are those of highly nervous temperament; it is seldom that the bilious or phlegmatic suffer from the disease; as, if they go to excess with alcohol, the result is usually apoplexy or inflammation of the liver.

The disease is usually characterised by dull constant pain over the region of the medulla oblongata. The patient has difficulty in getting sufficient air into the lungs to satisfy the demand. There is a feeling of *sinking* at the stomach; and, if a great quantity of alcohol have been imbibed over a lengthened period, there is stammering and occasional incoherency of speech.

The treatment principally used has been mustard poultices to the back of the neck, and supervision and stoppage of the tippling; but, as prostration is sure to follow, the physician has to watch and not let it go to a great extent, but administer a dose of brandy and tincture of gentian. By this means, the patient is allowed sufficient suffering to be a warning. His state is quickly improved, and that horrible torture is not inflicted on a nervous temperament which results from stopping the alcohol all at once. ALEX. NAIRNE, L.R.C.P.E., London.

A COIN IN THE ALIMENTARY CANAL FOR EIGHT YEARS: RECOVERY.

HAVING seen several letters in the JOURNAL upon foreign bodies in the alimentary canal, I have resolved to send a short account of a case that came under my notice about twelve months ago.

The patient swallowed a halfpenny when he was about seven years of age. He enjoyed good health for so long afterwards that his parents never attributed to that circumstance any slight illness that he may have had subsequently. He had no illness of any importance from the time of swallowing the halfpenny until he was about fifteen years of age, when he complained of pain in the epigastric region and loss of appetite. When he was being treated for dyspepsia, his father came to the surgery with a halfpenny which he had vomited, and said that he was vomiting blood. There was considerable hæmorrhage when the half-

penny was expelled, which continued for some time, but was ultimately overcome by the administration of ice and tannic acid. The coin, which is now in my possession, has a very peculiar appearance. There is a dark mark on both surfaces, about a quarter of an inch broad, which completely encircles it, as if it had been suspended by a band, and thereby been partly defended from the action of the gastric juice. At the edges, where it seems to have been unprotected, it is as thin as note-paper. The stamp on both sides can be seen, though rather indistinctly, and it bears the date 1862. I saw the patient several months afterwards, when he was enjoying good health. He was fifteen years of age when the coin was expelled; therefore, it was retained for about eight years. During that period, he was known to have vomited on more than one occasion. How was the coin kept in position? Why did it not pass through the pylorus, or be expelled when the patient vomited on previous occasions? And what prevented ulceration from being produced at an earlier period?

W. SOUTER, Hipperholme.

THERAPEUTIC MEMORANDA.

HOW TO CURE FITS OF SNEEZING.

DURING the recent rapid changes of temperature, I caught a severe cold in my head, accompanied by almost incessant sneezing. My unfortunate nose gave me no rest. The slightest impact of cold air, or passing from the outside air into a warm room, equally brought on a fit of sneezing. In vain I snuffed camphor and pulsatilla; the light catarrh still triumphed over me. At length, I resolved to see what the maintenance of an uniform temperature would do towards diminishing the irritability of my Schneiderian membrane, and accordingly I plugged my nostrils with cotton-wool. The effect was instantaneous; I sneezed no more. Again and again, I tested the efficacy of this simple remedy, always with the same result: however near I was to a sneeze, the introduction of the pledgets stopped it *sur le champ*. Nor was there any inconvenience from their presence, making them sufficiently firm not to tickle, and yet leaving them sufficiently loose to easily breathe through. This is really worth knowing; for incessant sneezing is among the greatest of smaller ills; and it seems only a rational conclusion to hope that, in this simple plan, we may have the most efficient remedy against one of the most distressing symptoms of hay-fever.

S. MESSENGER BRADLEY,
Surgeon to the Royal Infirmary, Manchester.

IRON AND DIGITALIS.

ALTHOUGH there are various forms of administration of iron and digitalis, combined in fluid form, these preparations are occasionally prescribed indiscriminately. Among these, that of the tinctures of muriate of iron and of digitalis with dilute phosphoric acid is the most rarely made use of. In this combination, the phosphoric acid acts chemically by preventing the formation of the tannate of iron, which occurs when the tinctures are administered alone; and therapeutically by introducing an acid in a pleasant form into the system, and not phosphorus, as is sometimes supposed: since the amount of phosphorus is so minute in proportion as to have little or no therapeutic effect. As an acid, it aids the astringent action of muriate of iron, and is of value in cases of gastric complication, where acids are indicated. The more common form of prescribing iron and digitalis is that of the ammonio-citrate of iron and tincture of digitalis; in which case an almost similar effect is produced on the heart- and blood-system, without the astringency of the muriatic and phosphoric acids, rendering it valuable in cases of gastric irritability. The absence of the phosphoric acid from the acid preparation causes the mixture to be unsightly and unpleasant. To remedy such defect is of great moment in the administration of medicine.

FREDERIC YOUNG LIVY, M.R.C.S.Eng.

SURGICAL MEMORANDA.

THE STAFFORDSHIRE KNOT.

I THINK Dr. Roper is quite mistaken when he says the Staffordshire knot and the clove-hitch are the same. With the latter I have been quite familiar for many years, as it was used in Edinburgh for tying men up for perineal operations. I am told that in London the same use is made of it; and anyone familiar with this form of knot must see that it is altogether different from the Staffordshire knot.

LAWSON TAIT.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF TUBERCULAR PERICARDITIS.

(Under the care of Dr. SANSOM.)

FOR the notes of the following case we are indebted to Dr. CASH READ, House-Physician.

Clara H., aged 6, was admitted on June 27th, 1879, with only slight symptoms of cough and languor. The relatives were not aware that the child was seriously ill. She had had no acute disease, save scarlatina three years ago; but had been slightly ailing for three months, and supposed to be suffering from "worms". There was no history of rheumatism. Physical examination showed an increased area of præcordial dulness; distinct pericardial friction in the neighbourhood of the manubrium sterni; as well as an area of deficient breath-sound, with some deficiency of pulmonary resonance, over the apex of the left lung. The diagnosis was pericarditis with effusion, and bronchopneumonia. The child appeared by no means ill-nourished; the subcutaneous fat was in very fair amount. The treatment consisted of inunction of ointment of unguentum hydrargyri two parts, extract of belladonna one part, into the præcordium; and a mixture of iodide of potassium and bicarbonate of potass. The physical signs of pericarditis remained marked for twenty-one days; the friction was of triple rhythm. There was no evidence of endocarditis. The sphygmograph showed the pulse to be of feeble elevation, but regular and of normal type. The cardiograph registered vibrations throughout the cardiac cycle. On July 18th, scarcely any signs of pericarditis remained; and in a few days all had passed away. There were also no noticeable symptoms, except a peculiar torpor. On August 27th, she was not so well; had a small quick pulse, short hacking cough, and dyspnœa (respirations 56). In two days there were almost complete dulness of the right chest; obscured breath-sounds, mingled with fine crepitations; and imperfect expansion. Much of this dulness soon passed off. The pleuritic effusion was absorbed, leaving patches of bronchopneumonia. On September 15th, the breathing was laboured; there were evidences of more fluid in the chest. The abdomen was enlarged. The decubitus suggested peritonitis; but there was no evidence of ascites. The torpor continued. She died suddenly on September 17th, death being preceded by convulsions. The fundus of each eye had been previously examined, with negative results, except fulness of the iris. The temperature for the first eight days was subnormal. Afterwards, there was marked evening rise to nearly 100° Fahr., till July 22nd; then a fall to about normal. From September 4th to 17th, there was nocturnal rise to 100° to 101.5°.

NECROPSY.—The lungs were studded with small tubercles. There was a caseous nodule of the size of a small orange on the right apex. Several patches of bronchopneumonic consolidation were found. About a pint and a half of serous fluid was found in the cavity of the right pleura. The pericardium was greatly thickened; the parietal layer was profusely studded with miliary tubercles; the visceral layer was smooth; the cavity contained about half an ounce of yellow fluid. The heart's surface was covered with a layer of lymph; on section, the muscle was pale and degenerated. There was no endocarditis. The valves were all competent. The liver and spleen contained tubercles. There was no fluid in the peritoneal cavity. The kidneys were healthy. Between the convolutions on the upper surface of the brain, here and there were small patches of pale exudation. There was a granular (tubercular) deposit on each side of the longitudinal fissure. A nodule of the size of a filbert was found on the surface of the right corpus striatum, involving the superficial part of its substance, and extending upwards into the lateral ventricle. This nodule was easily enucleated, and had, on section, the usual caseous characters of a tubercular growth. The ventricle contained much fluid. Grey miliary tubercles were found extensively about the Sylvian fissure.

REMARKS BY DR. SANSOM.—A case of tubercular pericarditis is sufficiently rare to make it desirable to put it on record. When the child was first brought, it was as an out-patient, and the slightness of the subjective signs was remarkable. The two points then made out were, that (*a*) there was pericarditis; (*b*) there was apical bronchopneumonia. So far for the proximate diagnosis; that of the more remote lesion was more difficult. No rheumatic signs were evident, nor any rheumatic

history; but I have seen several cases of rheumatic pericarditis without other manifestations of rheumatism. The apical bronchopneumonia was an important sign; but it was quite probable that this was a mere coincidence. Had there been any wasting of tissue, I should have strongly considered the probability of tuberculosis; but here the child was fairly plump. The obvious signs of pericarditis passed away (at the *post mortem* examination, the heart and pericardium occupied no larger a space than normal; and, though there was lymph on the heart-surface, the cavity was lined with smooth membrane, and with the weak heart there was no production of friction-sound); and it was noticeable that there was no endocarditic spoiling of the valves. This was only a very feeble argument against the rheumatic origin of the disease. The chief one was the advancing bronchopneumonia and pleuritis, together with the peculiar torpor of the child. As regards the lesions of the nervous system, these were declared by no paresis nor sign of localisation. Had the child been able to walk about, this might have been otherwise. Even until the last, I could not say with certainty that this disease was *ab initio* tubercular. That it was so, I think the necropsy abundantly proved.

REPORTS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, NOVEMBER 11TH, 1879.

ALEXANDER ROBERTSON, M.D., President, in the Chair.

Cases of Trephining.—Dr. MACEWEN showed two patients on whom trephining had been performed. In the first case, the operation had been rendered necessary on account of a simple fracture of the right parietal bone. Effusion took place into the orbit. A discoloured irregular patch appeared on the right side of the head. Left hemiplegia and twitchings ending in general convulsions, with elevation of temperature, showed themselves about the sixth day, and lasted till the operation. The bone was trephined over the discoloured patch and a disc removed, after which the dura mater was opened, and about two ounces of blood mixed with clots escaped. A few minutes after this was done, the brain-pulsations were felt through the wound. The operation was performed antiseptically, and the wound soon healed without a bad symptom. Six months after the operation, the boy remained well. The second case was one from whom a tumour was removed from the dura mater over the left orbit. The symptoms were: contraction of the left pupil; a small tumour bulging from under the supraorbital plate of the frontal bone; a severe and persistent attack of convulsions commencing in the right side of the face, right arm, and leg, and becoming general; increase of temperature; and serious implication of pulse and respiration. Trephining was performed at a spot where a small pea-like node was found in the left frontal bone. The bone was thick and soft, and a flattened gummatous tumour of the dura mater which extended down to the supraorbital plate was removed. No bad symptoms followed the operation, and the paralysis of arm and leg has now disappeared.

Depressed Fracture of Skull.—Dr. FERGUSSON (Peebles) showed a portion of cranial bone with a depressed fracture about an inch and a half long, the result of a blow from a brick. The fracture extended through both tables, and the fragments were depressed about half an inch. —Dr. GEORGE BUCHANAN also showed a portion of bone removed from a compound depressed fracture of the frontal bone. The patient had been knocked down by a piece of wood thrown off by a circular saw, and was admitted to the hospital in a semi-conscious condition. The finger could be passed directly into the frontal sinus, where the depressed portion of bone was felt. This was removed, and showed on its inner surface more than an inch of the first part of the longitudinal sinus. Cerebral matter in shreds appeared in the wound. No complication occurred throughout the case, and in two months the patient was dismissed quite well.

Chemical Composition of the Dark Bands of Muscle.—Dr. NEWMAN showed specimens and drawings illustrative of the chief points advanced in his recent paper on this subject in the *Journal of Anatomy and Physiology* (vol. xiii, p. 549). After pointing out the microscopic appearances of muscle in its different conditions—1. Shortened and at rest; 2. Stretched and contracted; 3. Expanded and at rest; and 4. Shortened and contracted—the following points were discussed. 1. The absence of transverse striation during perfect rest; its gradual appearance as a broad dark transverse bar with a double contour afterwards becoming narrow, the breadth being in an inverse ratio to the amount of contraction; also that during a state of rest the whole fibre appears doubly refractive, and that only when contraction has taken place the alternating stripes possess the property of single refraction. 2. The diminution of the longitudinal as associated with increase in the transverse measurement of muscle without any loss of volume. 3. The absence of longitudinal striation in a state of rest, and its appearance during contraction of the muscle. 4. The appearance of the thin dark lines or basal membranes in relaxed muscle and in muscle that is stretched and contracted, and their absence when the muscle is shortened and contracted. Microscopic specimens were shown illustrative of the composition of the broad dark bands (anisotropic material). It was demonstrated that, by the addition of certain re-agents such as acetic acid (0.5 per cent.), etc., a considerable number of the fibres hydrochloric acid solution (0.1 per cent.), soda solution (0.1 per cent.), are so altered that the fibrillæ and transverse striation are no longer to be seen. When these changes have taken place, there appear minute spheroidal highly refractive bodies, which at first occupy the position of the broad dark bands. These small masses were further shown to be composed of fatty matter. This combined fat was stated to amount to 0.523 per cent. of the weight of the muscle, whereas the fat separable by the direct action of ether only amounts to 0.115 per cent.

Uterus with Fœtus in situ.—Dr. DOUGALL showed the uterus of a woman who had died in the sixth month of gestation from cerebral hæmorrhage. The uterus and its contents were quite healthy.

Vesical Calculus.—Dr. CLARKE showed a phosphate of lime calculus containing in its interior five separate nuclei of blood-clot.

Aneurism of Common Femoral Artery.—Dr. GEORGE BUCHANAN showed a large diffuse femoral aneurism, with the ligatured portion of the external iliac artery. The patient was a male aged 43, and had only noticed the tumour three weeks before admission to the hospital. The tumour occupied the whole of Scarpa's triangle and bulged over Poupart's ligament. The external iliac artery was tied in the upper third of its course with carbolised catgut, which had been specially hardened in chromic acid. The operation was performed with antiseptic precautions, and the wound was healed in six days. Two days after the operation, a slight pulsation was perceptible in the sac, and in a few days it became quite distinct. The tumour, however, continued much smaller and firmer to the touch than before the operation. A month after the operation, the sac suddenly burst into the thigh, causing immense swelling of the limb, so that the patient sank and died in three days from exhaustion. On *post mortem* examination, it was found that the opening in the artery communicating with the aneurism was in its posterior wall, above the origin of the profunda. The catgut ligature was entire, and the knot apparently quite tight, but a probe could be passed through the artery within the ligature. Dr. Buchanan did not think that the knot of the ligature had slipped, but rather that its pressure had caused absorption of the tissue of the inner arterial coats.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 6TH, 1879.

EDWARD H. BENNETT, M.D., President, in the Chair.

Multiple Pyæmic Abscesses of Liver and Right Lung.—Dr. WALTER G. SMITH exhibited the viscera of a woman aged 45, who was admitted into the Adelaide Hospital October 1879, suffering from fever, extreme prostration, and jaundice. She was a strongly built woman, of excellent general health, and her first symptoms of illness dated from the beginning of last August, when she was seized with severe gnawing pain in the right shoulder, knee, and leg. She never had pain in the left leg. She had not undergone any operation, and had received no injury. A month before admission, dyspnœa came on, and increased in severity, but she had no rigors, and never sweated profusely. The only physical signs in the chest were rhonchus and sibilus over the right side. There was moderate jaundice, pyrexia, pulse 150, liver dulness not sensibly altered. Purpuric spots were scattered over the body; she became delirious, sank rapidly, and died four days after admission. A *post mortem* examination was made twenty-four hours after death. The heart was small, extremely soft, resembling the condition found in fatal cases of typhus. There were hæmorrhagic spots on the endocardium. Atheroma was present in the aorta, on the under-surface of the mitral valve, round the coronary orifices, and in the floors of the sinuses of Valsalva, but not on the free edges of the sigmoid valves. The left lung was congested, but there was no consolidation nor adhesions. The upper lobe of right lung was consolidated, friable, and broke down in freeing it its adhesions. On section, it presented large badly defined infi and in places a greenish marbled appearance, and exuded puriform fluid. The minute vessels were plugged with fib The lower lobe of the lung was congested and œdematous

no liquid effusion in either pleural sac. There was no ascitic fluid nor sign of peritonitis. The liver was enlarged, soft and friable. Its surface was buff yellow, mottled with innumerable hæmorrhagic spots and yellow patches. The cut surface presented numerous red consolidations, most of them softened, and exuding a brownish sanious fluid. There was no ulcer in the stomach, neither pyle-phlebitis, nor gall-stones.

Cirrhosis of Kidneys: Hypertrophy of Heart: Hydrothorax.—Dr. J. W. MOORE presented the heart, lungs, kidneys, and part of the liver of a hodman aged 19, who had died in the Meath Hospital after a long illness. There was extensive granular degeneration of both kidneys, although no history of gout, saturnine poisoning, or alcoholic intemperance was forthcoming. The heart was much hypertrophied, weighing fifteen ounces and a half free of clots. Its left ventricle was also dilated. There was some dilatation of the mitral valve, but no trace of endocarditis; a systolic mitral murmur had been audible during life. Double hydrothorax existed. He had been tapped some weeks before his death, when sixty-six ounces of serum of low specific gravity (1010) were removed by aspiration from the right pleura. The liver presented a good example of the nutmeg liver. There were pulmonary apoplexies and softening hæmorrhagic infarction in various parts of both lungs.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, NOVEMBER 21ST, 1879.

E. D. MAPOTHER, M.D., President, in the Chair.

Shock: Its Nature, Duration, and Mode of Treatment.—Dr. MAPOTHER, after a brief retrospect of the work done by the Society during the past session, proceeded to consider this subject. The most marked physical change caused by shock was, he said, contraction of the arterioles. Blows over the stomach would retard the pulse for days without change of temperature. Shock paralysed the dilator nerves. Tobacco and other drugs killed by interfering with the pulmonary circulation, not by weakening the heart. He then considered the relative power of enduring shock of the Saxon and Celtic races. Statistics showed that the English bore big operations better than the Irish, but that secondary complications were more likely to arise amongst the former. The German and French statistics showed the death-rate in ovariotomy to be high amongst the more nervous Celts. In like manner, the "sweating sickness" acted differently on races in the most remarkable way.

Sclerotomy.—Mr. SWANZY read a paper on this subject, in which he discussed the relative merits of sclerotomy and iridectomy in glaucoma, and detailed the line of reasoning followed by Dr. de Wecker of Paris, which led him to suggest sclerotomy. Mr. Swanzy had performed the operation only five times himself; but in all these cases the result was more satisfactory than that which he had obtained by iridectomy. All these were cases of simple chronic glaucoma, without pain, the patients merely complaining of dimness of sight, and the tension of the globe being increased; and such were the cases for which he thought the operation especially advantageous. He laid stress on the accurate performance of the operation as taught by Dr. de Wecker, and thought that much of the discredit which it had gained was due to that not being done, or to its employment in acute or otherwise unsuitable cases, in which he believed the older operation to be the best. He never performed sclerotomy where the iris did not act well to eserine, nor where the attack was attended with pain.—Mr. STOREY had performed sclerotomy in glaucoma seven times, in two of which iridectomy was afterwards performed; out of eleven sclerotomies performed at St. Mark's Ophthalmic Hospital, only four were recorded as having any improvement after the operation, except a temporary one.—Dr. FITZGERALD, Dr. JACOB, and Mr. BENSON also took part in the discussion.

Successful Trephining of the Cranium.—Mr. WM. THOMSON related a case of fracture of the skull occurring in a girl aged 12, who fell on her head, and was taken up unconscious, but soon recovered consciousness, which, however, did not last very long, being followed by convulsions and hemiplegia. As there was no depression, the diagnosis was "pressure from effused blood", and the trephine was used. The dura mater seemed tense and bluish, pointing to subdural hæmorrhage. Two hours after the operation, the urgent symptoms were gone, and paralysis gone; the child was bright and cheerful, and the recovery progressed without a bad symptom. In three weeks she left her bed, and in four weeks left the hospital well. He discussed the question as to treatment in cases of unilateral convulsions—expectant or operative. In this case, he considered the operation was imperative, as the symptoms pointed to extravasation.—Drs. STOKER, WHEELER, and ORMSBY took part in the discussion which followed.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

WEDNESDAY, OCTOBER 22ND, 1879.

S. O. HABERSHON, M.D., President-Elect, in the Chair.

On the Employment of Double Extension in Cases of Disease and Injury of the Spine and Pelvic Joints.—Mr. JOHN WOOD read a paper on this subject. The benefits of the application of extension in diseases of the joints were: 1. Absolute rest, whereby the muscles were prevented from acting; 2. Removal of pressure on the surfaces of the joints; 3. Prevention of displacement by muscular action; 4. Removal of tension, and diminution of irritation of the nerves. He had long treated disease of the hip by Gurdon Buck's plan of the stirrup, applied by adhesive plaster, counter-extension being obtained by raising the foot of the patient's bed so as to bring into play the centre of gravity of the trunk. But he had found the one-sided action of the extending force to cause or increase the obliquity of the pelvis, and to produce unequal action on the muscles of the spine. He, therefore, used double extension by applying weights to both limbs; and found that the patient was made more comfortable, and that even greater weights could be borne than by the other method. By keeping the pelvis horizontal, the tendencies of the limb to be abducted and adducted were constantly checked and regulated. The point of extension might be shifted from time to time from the ankle or foot to the calf or knee. Mr. Wood had also used double extension with good result in cases of disease of the sacro-iliac joint. He believed also that in cases of disease of the upper lumbar or lower dorsal vertebræ he had obtained considerable benefit by double extension, combined with aspiration of the abscesses which frequently formed. He had also treated a case of fracture of the lower lumbar vertebræ by double extension.—Mr. NOBLE SMITH had for some years been treating cases by this method. When resident at St. Mary's Hospital, he had carefully examined the *post mortem* appearances in four or five cases which ended fatally. In examining the seat of fracture in the spinal cases, he found that the upper vertebra pressed forward on the spinal cord, and thought it only reasonable to suppose that, by double extension carefully applied, this might be prevented. He asked if any sore or sloughing had occurred in the course of treatment.—Mr. GOLDING-BIRD mentioned a case which had recently been in Guy's Hospital under Mr. Durham. He thought Mr. Wood only claimed for its treatment that it gave physiological rest, which could be equally well secured by the use of Sayre's jacket, and with, he thought, equally good results.—Mr. WOOD, in reply, said there had been no sore or sloughing. Sayre's jacket did not answer well in some cases of fractured spine, especially low down. It was likely to get wet and lead to the formation of bed-sores. Nor did he think it useful for extending in such cases, the hold on the pelvis not being sufficient. He did not propose double extension in place of Sayre's jacket, but for cases where it was not applicable.

Pneumonia of the Apex.—Dr. F. T. ROBERTS read a paper on pneumonia of the apex. He said that, while the existence of apical pneumonia was admitted in books and by practitioners, it was only by practical experience in the observation of a great number of cases of disease of the chest that he had learned the importance of this affection. His first object was to claim for it more distinct recognition as an acute or subacute affection, which, if not diagnosed at an early period, was likely to lead to serious, and often irreparable, mischief. The disease had been met with in his experience under the following circumstances: 1. As the result of direct injury from fracture of the upper ribs; 2. From extension of inflammation from the lower to the upper lobe; 3. Secondary to phthisical disease previously affecting the apex of the lung; 4. In connection with pleuritic effusion, and, perhaps, with other conditions causing condensation of the lung-tissue; 5. In consequence of hæmorrhage into the upper part of the lung; 6. As a primary or idiopathic affection, in most cases obviously due to cold. Having discussed these various classes of cases, the practical lessons as regards diagnosis were next insisted on; in any febrile case not clear in its nature to remember apical pneumonia, and to neglect no pulmonary symptoms, however slight. As to treatment, he did not believe in any definite routine treatment for pneumonia, but preferred leaving the cure of morbid conditions to nature, if she seemed to be doing her work satisfactorily. He recommended cessation from labour, rest in bed, effervescent medicines, or those to check cough, quinine, and counter-irritation by means of small blisters or iodine.—The CHAIRMAN (Dr. HABERSHON) said the paper reminded him of an observation Dr. Addison used to make thirty years ago: "Never give a decided opinion in cases of apical pneumonia." He supposed many such cases occurred as had been described by Dr. Roberts, and he particularly referred to a case of severe hæmoptysis caused by an injury received while swimming, which was supposed to proceed from phthisis, and condemned as hopeless, but

recovered. These cases were very different from those originating in tubercular disease.—Dr. F. TAYLOR said Dr. Roberts had given a very complete account of apical pneumonia; but, with regard to the fourth class of cases, in which it was associated with pleuritic effusion, he asked what physical signs were to be depended on for diagnosis from those cases in which pleuritic effusion caused compression of the lung. He had met with the disease more frequently in children than in adults, and thought measles might be a cause of this.—Dr. GOODHART agreed that the affection was more common in children. He thought this might be accounted for by the lung becoming more frequently emphysematous in children, and pleurisy being more common. He agreed in the difficulty of diagnosis felt by Dr. Taylor.—Dr. ROBERTS, in reply, said one point he wished to impress was, that many of these cases came to him as out-patients. He had not met with the disease in children so frequently as the last two speakers had.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 7TH, 1879.

T. P. TEALE, F.R.C.S., President, in the Chair.

Excision of Wrist-joint.—Dr. LAWSON showed a patient whose wrist had been excised by Lister's method three years ago. The movements of pronation, supination, and extension were very good; flexion was not perfect.

Congenital Phimosis.—Dr. SLESSER related two cases of congenital phimosis. In one of them, a man aged 46, who was married and had two children, there existed a tight phimosis and severe pain during micturition. At the operation, seven calculi, weighing altogether two hundred and sixty-two grains, were found lodged in the dilated urethra of the glans penis. The calculi had not yet been analysed.

Disease of the Hip-joint and Sayre's Bandage.—Dr. IVOR MURRAY read a paper on this subject. A lady, aged 18, having a scrofulous family history, had inflammation in the hip-joint and great pain. She had been treated, before Dr. Murray saw her, with Sayre's splint, but without any benefit. She had greatly emaciated. She was placed with the sound leg on a stool, while the diseased leg hung down, and plaster-of-Paris was applied over the pelvis and down to the knee. The pain ceased in a few days, and the only inconvenience felt by the patient was the inability to sit in the ordinary posture. In ten months, she could bear weight on the leg, and in a year afterwards was quite well.—The PRESIDENT and Mr. W. H. BROWN supported this plan of treatment by the relation of similar cases.

A New Method of Dealing with the Urethra after Amputation of the Penis.—Mr. WHEELHOUSE read a paper on this subject. The method had been described (from a foreign source) in the BRITISH MEDICAL JOURNAL some time ago, and he had applied it with great success in several cases in which it had been necessary to remove as much of the penis as possible. A vertical incision was made through the skin of the pubes, and was carried round both sides of the root of the penis into the raphé of the scrotum. The penis being drawn forward, a twitch was placed upon it as far back as possible and tightened. The organ was next removed and the vessels were secured. The patient was then placed in lithotomy position, the perinæum laid open in the centre, and the urethra (into which a sound had been passed) was dissected from its connections for an inch or more, and was then turned down into the perinæum and brought out through the wound in it. The under surface of the urethra was next laid open for half an inch, and its margins were stitched to the edges of the perineal wound at a little distance in front of the anus. A soft Jaques' catheter was passed (and kept in for a few days). The wounds were stitched up, and when healed no trace of penis could be found. The inguinal glands were removed if diseased; and it was a question whether it might not be better to remove the testes in any case, diseased or not.

Case of Salutory Spasm Treated with Conium.—Dr. E. H. JACOB read notes of this case. A young man (who had formerly been in the Leeds Infirmary under the care of Dr. Eddison for the same disorder, and had been then relieved by large doses, four to six drachms, of succus conii) came under Dr. Jacob's care at the dispensary with a return of the complaint. At intervals, one leg would begin to quiver; then the other leg would do so; the startings increasing in energy until the patient involuntarily leaped from the ground six or eight inches. The tincture of conium in half-ounce and ounce doses was found useless. Succus conii in half-ounce doses three times daily stopped the paroxysms immediately. The cause of the disease was possibly a blow on the spine. The startings sometimes occurred during sleep.—In the discussion, the opinion was generally expressed that preparations of conium varied greatly in strength, even the succus conii being frequently quite inert.

REVIEWS AND NOTICES.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSSEN, Professor of Clinical Medicine in Munich, Bavaria. Vol. XVII. General Anomalies of Nutrition, and Poisons. Translation. Edited by ALBERT H. BUCK, M.D., New York. London: Sampson Low and Co.

THIRD NOTICE.

THE article on Vegetable Poisons by Professor von Boeck of Munich occupies nearly three hundred pages. No particular arrangement or classification is adopted. The subjects follow each other in an irregular manner, *i.e.*, without reference to their physiological, pathological, or botanical characters. The alkaloids form the basis of the article, the effects of seeds, leaves, and roots, from which the alkaloid are extracted, being only casually mentioned.

Each alkaloid is dealt with in a systematic manner. The author first gives a general description of it and its properties; he then passes successively to its etiology and dose, symptomatology and course, diagnosis, prognosis, treatment, changes which the substance undergoes in the system, and the application of chemical and physiological tests for its detection.

In reference to the diagnosis of Atropine poisoning, we find the following practical remarks. "It is well known to toxicologists that mydriasis, or dilatation of the pupils, is one of the earliest symptoms of this form of poisoning, and it is also one of the latest to disappear. One of the most distinctive symptoms, according to von Boeck, is dilatation of the pupils, which, even with minimum doses (according to Donders, the one-hundred-and-thirty-thousandth part of a grain = 0.00000046 *gramme*) lasts for several hours. When it is dropped into the eye only, the one pupil is dilated, whereas, in general cases of poisoning by atropine, both eyes are almost always equally affected. If somewhat larger quantities are introduced, the pupils are dilated to the maximum, remain motionless, no longer react to light, and thus a number of other symptoms are developed; for instance, a variety of disturbances in the power of seeing, utter incapability of focalising the eye, prismatic vision, double vision, occasional micropsia, and complete amaurosis. Mydriasis, with its consequences, sets in quite constantly, and may last a very long time. Gubler states that in one case it lasted fourteen days; at any rate, it is the symptom of atropine poisoning which is the last to disappear; indeed, it has been observed to last as long as three or four weeks. The supposed amaurosis of many observers is only apparent, and is the result of the loss of the power of focalising" (p. 668).

"Atropine kills by paralysing the heart in the first place; but perhaps, also, in some cases by exhaustion of the respiratory centres" (p. 671).

The author adopts the view of Schroff, that atropine and hyoscyamine are essentially identical in their action. Hellmann has proved that the products of decomposition of both alkaloids are similar in their action, and that hyoscyamic acid is as inactive as tropaic. He has also found that hyoscyamine, like atropine, paralyses the extremities of the vagus nerve, retards respiration, etc. (p. 689).

Poisoning by Solanine, Dr. von Boeck tells us, is not uncommon; but he admits that no cases of poisoning by the pure alkaloid are recorded. A girl aged 14 died from eating green potato-apples, which contain solanine. Unripe, sprouting, or diseased potatoes are noxious from the same cause, producing vomiting, purging, and other symptoms resembling an attack of cholera (p. 690).

The diagnosis of Physostigmine poisoning is very difficult, if there be no history of the case to help us. It must rest upon the existence of great general loss of power, together with contracted pupils, and an undisturbed sensorium. In such a case, it is hard to decide between Calabar-poisoning and poisoning by curare or by conium. The myotic or contracted condition of the pupils affords the greatest assistance. There are no satisfactory chemical tests for this alkaloid, which is also known under the names of eserine and calabarine. It may be separated from organic substances by means of benzine. As thus obtained, it causes decided contraction of the pupil in rabbits and guinea-pigs when only the seven-thousandth part of a grain is placed on the conjunctiva.

The primary symptoms produced by Colchicine affect the gastro-intestinal mucous membrane, and comprehend ordinary gastro-enteritis, which is in itself sufficient to account for a number of the symptoms "by the acute and considerable drain of fluid". There are severe pains

in the bowels, of the nature of colic, accompanied with vomiting and diarrhœa, intense thirst, and violent burning in the throat, œsophagus, and stomach. To these must be added collapse, cyanosis, a low temperature, and ischuria. The secondary symptoms concern chiefly the heart, muscles, and spinal marrow. Schroff found colchicine to be a powerful cardiac poison, and that it caused death by cardiac paralysis. Other authorities trace death to gastro-enteritis. Vomiting and diarrhœa follow also upon subcutaneous injection (p. 737).

From the history of symptoms, von Boeck properly points out the great difficulty of diagnosis. Gastro-enteritic symptoms, followed by collapse without loss of consciousness, are common to arsenic as well as to acute gastro-intestinal catarrh, and they may be also confounded with endemic or Asiatic cholera. There is great reason to believe that, in this country, cases of criminal poisoning by colchicine have been mistaken for disease, and certified as gastro-enteritis.

The appearances in the dead body are slight; the blood is usually thick, of a dark cherry-red colour, and but little coagulated. Dark red spots have been found in the œsophagus and stomach, and small ecchymoses in the latter (p. 738).

Santonine poisoning has of late acquired some importance from the accidents which have occurred to children, in cases where it has been employed as a febrifuge in excessive doses. These cases have been more frequent in Germany than in England.

Dr. Grimm refers to the death of a child, aged 4½ years, from six doses of nine-tenths of a grain (5½ grains). Snijders describes two cases of poisoning (not fatal) from santonine lozenges. The first was that of a child who had taken six grains; the second that of an adult from a dose of four grains of santonine. Violent vomiting and convulsions were the principal symptoms. The actual poisonous dose cannot be defined, but two-and-a-quarter grains have sufficed to cause symptoms of poisoning, while only large doses have usually proved fatal. The German *Pharmacopœia* fixes for a maximum medicinal dose one grain and a half, and the quantity given in one day should not exceed seven-and-a-half grains (p. 883).

The most remarkable symptom in this form of poisoning is the production of colour-vision. Objects appear of a yellow colour, even so soon as twenty-five minutes after a dose of five grains. This symptom seldom lasts more than twenty-four hours, and is sometimes intermittent. This impression of colour is sometimes the only observable symptom of the poison. Another attendant symptom is, that the urine is increased in quantity, and is coloured yellow. Rose regards yellow vision as a symptom of santonine narcosis, equally with the headache, sleepiness, hallucinations, etc. He made experiments with the spectrum on persons poisoned by santonine. The violet portion appeared at first colourless and then black, so that there is a distinct violet blindness in santonine poisoning. The violet rays are extinguished by the yellow vision. An examination of the urine is important for fixing the diagnosis. It appears of a dark saffron colour when it has an acid reaction, becoming crimson on the addition of caustic potash. If the urine be alkaline, it has a crimson colour. This is the only test for the presence of this substance. There are no chemical methods at present known of separating santonine from organic substances. The action of light upon the crystals is to turn them yellow (p. 890).

Fifty pages are devoted to Nicotine and Strychnine. Under the former, the author gives a full account of the effects produced by habitual smoking. The remarks on strychnine form a complete essay, dealing with the subject chiefly in its physiological and pathological aspects, but not presenting anything new. Chronic poisoning from medicinal doses may be sometimes mistaken for apoplexy, as in the case of a physician who had taken strychnine during five months as a remedy for paraplegia, without perceiving any results from it, when suddenly, at a meal, he fell over on his back, his eyes and his features became convulsed, the upper part of his arm arched, and his hands clenched. There was deep stertorous breathing, the pulse was full and slow, and the sensorium remained unaffected. Bleeding alleviated the symptoms, but a fresh attack shortly afterwards terminated fatally (p. 792). The temperature of the body may supply a means for diagnosis in ordinary tetanus. "In this disease," (apoplexy) "the temperature rises to 105.8°, and even higher, whereas in strychnine poisoning, especially in animals, the temperature is lowered considerably" (p. 793). The excretion of the poison by the urine is a slow process. It is also excreted through the saliva. The author shows that the physiological or frog test is liable to mislead the inquirer. There are many substances besides strychnine which produce tetanus in the frog, and, unless these be carefully excluded, an erroneous opinion may be formed. Thus, picrotoxin, nitro-glycerine, brucine, and even caffein, produce tetanus in this animal.

The chemical reactions from Curarine may lead to this alkaloid being mistaken for strychnine. Thus, concentrated sulphuric acid and potassium-bichromate bring out, as in strychnine, a beautiful blue colour, which passes into violet, and later on into cherry-red; but the transition is slower in curarine than in strychnine. While concentrated sulphuric acid alone imparts a red colour to solutions containing curarine, it has no effect on strychnine. The physiological test for curarine is more valuable. When injected subcutaneously into a frog or rabbit, symptoms of paralysis of the muscular apparatus set in, proving fatal to the rabbit, whereas the frog generally recovers (p. 841).

The author devotes a large space to the section on Morphine and its associated alkaloids. We find nothing here calling for special notice excepting the statement, that Dragendorff found morphine in the blood of a cat after only twenty-five minutes, and in the human blood six and a half hours, after death from poisoning. The author objects to the molybdic acid test, which produces a beautiful violet colour with morphine, even to the thirteen-thousandth of a grain, on the ground that it acts in a similar manner on papaverine, salicine, populine, and phloridzine, a result hitherto not noticed by toxicologists. It is a strange omission, that nothing is said about the detection of meconic acid, which is found only in opium, and is, therefore, highly characteristic of its presence (p. 881).

This article on poisons is brought to a conclusion by sections on Ergot and Mushrooms. They are full of valuable information to the medical practitioner, but our space will not allow us to make further quotations.

Dr. Ziemssen has shown good judgment in placing the article on Poisons in his *Cyclopœdia* in the hands of three such men as Boehm, Naunyn, and von Boeck. Each has done justice to the part assigned to him, and we look upon their conjoint work as representing the most complete modern views of Poisons and Poisoning.

THE LOCALISATION OF CEREBRAL DISEASE; being the Gulstonian Lectures of the Royal College of Physicians for 1878. By DAVID FERRIER, M.D., F.R.S. London: Smith, Elder, and Co.

THIS work, like its predecessor by the same author, constitutes one of the most important researches of the present day. They both deal with the solution of that difficult and complex problem which has hitherto baffled all the efforts of physiologists accurately to determine; namely, the functions of the brain. Undismayed by the apparent hopelessness of the task, by the failures of the most erudite psychologists, and by the magnitude of the undertaking, Dr. FERRIER has for some years devoted himself to this inquiry, and his experiments and observations have been conducted in so precise and scientific a manner as to give rise to conclusions of the highest value and importance. The presen research into cerebral localisation has been carried on in that way which is most likely to lead to fruitful results in any investigation; namely, a patient and systematic experimental inquiry into physiological action on the lower animals, and a collection of observations on the effects of injury and disease in man.

In his work entitled *The Functions of the Brain*, Dr. Ferrier gives the results of his physiological researches, and these are such as serve greatly to revolutionise our former conceptions on the subject. The cortex of the cerebral hemispheres, which has hitherto been considered to be of uniform function throughout its whole extent, is here maintained to originate a variety of sensory and motor phenomena. Certain portions of its surface are asserted to be purely motor; others are entirely sensory; some are associated with special sense, some apparently with intellectual states, and some with organic life. This localisation of function has been for the most part arrived at from experiments on the lower animals of the following nature. The surface of the brain having been exposed in different situations, certain ascertained points are irritated, and thereby definite results are obtained. These same parts are then destroyed, and as a consequence the functions previously excited are found to be paralysed. From this it is concluded with reason that, if irritation of a given area develop or increase a special action, and it alone, and if destruction or removal of the same obliterate it, the said locality must have close relation to, if it be not actually the seat of, the phenomena in question. The surface of the brain is thus mapped out into a series of regions, each possessing motor, sensory, or other functions. These may be further divided into departments of a more special character, as centres regulating the movements and sensations to different parts of the body. Further subdivisions may even be made, and the portions of the cortex which

originate voluntary motion to special muscles and sensation to particular organs can be indicated.

These varied cerebral centres having thus been determined by direct experiment on the brains of animals, the work before us is an attempt to confirm these physiological researches by observations on the effects of disease or injury in the human subject. The following is a brief sketch of some of the more important conclusions.

The Frontal Lobes.—It has been ascertained in animals, and more especially in the monkey, that irritation or destruction of the prefrontal region is followed by no special effects of sensation or motion. The character and behaviour of the animal, however, are altered, and it becomes dull and apathetic, with loss of attention and intelligent observation. Although the function of this portion of the brain is not yet fully determined, the author is evidently inclined to conclude that the frontal lobes are probably the seat of the intellectual faculties. Numerous cases are brought forward, and some are described in detail, of injury and disease of this region in man, without sensory or motor paralysis. The most remarkable of these is the "American crowbar" case, where a rod of iron an inch and a quarter in diameter passed through one of the anterior lobes of the brain, the patient living twelve years afterwards. The only symptoms thus induced were alteration and impairment of the intellectual faculties.

The Motor Centres.—Experiments on monkeys indicate the motor centres as being seated in the bases of the three frontal convolutions: the ascending frontal, ascending parietal, superior parietal, and paracentral lobules. Stimulation of these regions gives rise to movements on the opposite side of the body, and their destruction induces complete motor paralysis. Numerous cases are cited to show that, when there is disease of the whole of these portions of the cerebral cortex in man, the same results ensue, and complete hemiplegia is then induced without any modification of sensation. If spasm subsequently take place, it is due to secondary sclerosis of the motor tracts. The same phenomena follow lesions of the central ovale as occur in affections of corresponding portions of the cortex cerebri. The motor regions may be further subdivided; and physiological experiment has shown that irritation and destruction of certain definite limited areas of the surface of the brain cause spasm and paralysis of special localities. For example, in monkeys, at the base of the first frontal, and extending into the second frontal convolution, there is an area the irritation of which causes elevation of the eyelids, dilatation of the pupils, conjugate deviation of the eyes, and turning of the head to the opposite side. Several cases are cited from different authors in which similar symptoms occurred in the human subject as a result of disease, and, although usually followed by other complications, indicated that the lesion probably affected this region in the first instance; and, in one case of necropsy, disease was actually found in this situation. In the monkey, a portion of the motor area governs the movements of the leg; and even this may be further subdivided into certain localities influencing special movements of the limb. In this animal, stimulation of different parts of the superior parietal lobule, and the upper extremity of the ascending frontal and ascending parietal convolutions, gives rise to varied movements of the leg; and destruction of the same situations causes corresponding paralysis. Here, again, a number of instructive cases have been collected, which point out that the leg-centres in man nearly correspond to those in the monkey, as injuries and destruction of the same regions cause crural paralysis.

The centres of the movements of the arm and hand in animals have been found to cover a large space, as might be expected from their importance. These are situated in the posterior part of the superior frontal, in the upper and middle part of the ascending frontal, and in the larger portion of the ascending parietal convolutions; and different points in this somewhat extended region, as in the case of the leg, govern special movements of the limb. A number of clinical cases demonstrate that the same organs perform the same functions in man, and corresponding paralysis shows destruction of different portions of the cortex of this region.

The centre of the facial movements is situated in the ascending frontal convolution, posterior to the inferior frontal lobule; and, when this area is diseased in man, there is paralysis of the muscles of the lower portion of the face; but cases of lesion limited to this region are rare. As the crural, brachial, and facial centres are in close juxtaposition to one another, as might be expected, the same disorganisation ... cause paralysis of the leg and arm, the arm and face, or of all of ... subject.

... lingual centre is situated at the lower portion of the ... al convolution, opposite the posterior border of the in... lule; and destruction of this region causes paralysis of ... rticulation. These centres, however, have a bilateral ... side only be injured, the paralysis is incomplete and temporary. In addition to this objective symptom, there is a subjective one; namely, aphasia, or the loss of memory for words. This last is usually, though not always, associated with disease on the left side. A remarkable case is instanced, of a boy who was seized with aphasia and paralysis of the muscles of articulation, indicating, probably, disease on the left side. He recovered, and was afterwards afflicted with a lesion of this region on the opposite side. This was followed by permanent motor paralysis and complete aphasia. An attempt has been made to explain the frequent association of aphasia with disease on the left side by the fact that embolism of the middle cerebral artery is less common on the right side. But embolism is not the only lesion which causes this affection; and, taking all forms of disease into account, we find that the right island of Reil is as frequently disorganised as the left, and yet that the lession is rarely followed by aphasia.

Not only does destruction of the motor centres in the cortex cerebri paralyse the movements which they originate, but stimulation of similar areas gives rise to corresponding spasms or convulsions. Clinical medicine furnishes us with examples of irritative lesions causing spasms and convulsions of limbs or particular groups of muscles.

The Sensory Centres.—These are to be sought for in the occipital and parieto-temporal lobes. It has been definitely ascertained that section or disease of the posterior third of the internal capsule is followed by anæsthesia of the opposite side of the body. This result ensues, not from destruction of sensory centres, but obviously from a solution of continuity in the paths of centripetal impressions to the cortex. That sensory, like motor fibres, are distributed to localised areas on the surface of the brain is more than probable, although it has not yet been demonstrated.

When the occipital lobes of monkeys are irritated or destroyed, no appreciable sensory or motor disturbance takes place. The animals, however, usually refuse to eat, and rapidly succumb. The conclusion derived from this and other observations is, that the occipital lobes are specially related to visceral sensibility; but the function of this portion of the brain is not yet thoroughly understood. A number of clinical cases are cited, of disease in one or both occipital lobes without sensory or motor symptoms. In short, lesions of this region are usually latent; but, as our organic feelings are our chief incentives to action, it is highly probable that affections of the occipital lobes will cause profound mental disturbance.

The parieto-temporal region is that portion of the cortex cerebri situated between the motor area and the occipital lobes. It includes the supramarginal lobule and angular gyrus, the superior, middle, and inferior sphenoidal convolutions, the occipito-temporal convolution, the uncinate gyrus, and the hippocampus major. This region is the centre of ordinary sensation to the opposite side of the body, as well as of the special senses. Experiments on monkeys have shown that the angular gyrus is the centre of sight, as destruction of this area on one side causes temporary blindness of the opposite eye; and on both sides, permanent blindness of both eyes. The superior temporo-sphenoidal convolution appears to be the centre of hearing; the subicular region, of the sense of smell; and lesion of the neighbouring region affects taste on the opposite side of the tongue. Destruction of the hippocampus and uncinate gyrus causes impairment or abolition of tactile sensation on the opposite side of the body. Although localised areas can thus be determined in animals, in disease of the human brain the lesion is rarely limited to the region in question. Several cases, are, however, brought forward, where degeneration of the centres of special sense existed on one side without record of loss of function. The author believes this is due to want of correct observation, rather than to the fact that in this particular all analogy should cease between the brains of the monkey and man; and he points out that no case can be instanced where there was disease on both sides without complete loss of function.

The above sketch of Dr. Ferrier's conclusions can give no idea of the laborious and extensive series of experiments and researches undertaken by that observer, and all credit is due to him for the scientific and accurate spirit which animates the entire inquiry. The vast importance of the subject, and the complete revolution of previously conceived opinions which must be created if the views be confirmed, can only be fully realised by those who carefully study the details in the original works. With the exception of the illogical assertions of the phrenologists, the investigations of Ferrier, Fritsch, Hitzig, and Charcot and his able school of followers, during the last few years, are the first really scientific attempts to localise the functions of the brain; hence the subject is yet comparatively in its infancy. Doubtless much still requires to be worked out; and what has been done must be confirmed, as these eminent observers themselves admit. Still by their labours we have now a sufficient body of evidence before us, to convince even the most sceptical that localisation of the cerebral function must be accepted as a fundamental doctrine; but to what extent it remains with future researches to determine.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 27TH, 1879.

THE OFFICE OF REGISTRAR-GENERAL.

MAJOR GRAHAM has resigned the appointment of Registrar-General, which he has held and administered with successful energy for more than thirty-seven years. Appointed in 1842, through the interest of his brother, the late Sir James Graham, Bart., when civil registration was in its infancy, he has contributed not a little to its progress and success by his capacity for organisation, and for the control of about three thousand local registration-offices scattered throughout England and Wales. Since 1842, various changes in the law regulating registration have from time to time been carried out, which have combined to make the registration system of to-day very superior to that which was in operation when Major Graham assumed office. He had the good fortune, on his appointment, to find Dr. William Farr in charge of the statistical department of the office. Dr. Farr's statistical work in connection with the General Register Office—which, perhaps more than the labour of any other single worker, has tended to initiate and to stimulate national sanitary progress—has been so fully appreciated by the public, that there is no need to dwell upon it here. The Registrar-General himself has most liberally acknowledged, in the concluding sentences of his last annual report, his obligations to Dr. Farr, who has earned a world-wide reputation for the weekly, quarterly, and annual statistics published under the authority of the Registrar-General. The exceptional statistical abilities of Dr. Farr have for many years so identified his name with the General Register Office, that a large portion of the public, and frequently the press, have concluded that he was Registrar-General. This misconception, while it was a proof of the public appreciation of Dr. Farr's valuable services to sanitary and statistical science, involved no real disparagement of the services of Major Graham. The public knows little of the duties of Registrar-General, except those which appertain to public health and vital statistics. Major Graham has, however, for the past thirty-seven years, exercised a constant and efficient personal control over the machinery by which the marriage, birth, and death registers are called into existence, and from which Dr. Farr has evolved the vital statistics which have served as a model for such statistics in all parts of the civilised world.

In recording our deserved tribute to the value of Major Graham's long service as Registrar-General, we would willingly pass unnoticed the offensive tone which he has, in his reports, at times assumed towards the medical profession. This would have been the easier, had he not been sufficiently ill-advised to reprint and issue, during the past few months, to his three thousand registration-officers, a summary of some remarks which he submitted to the consideration of the Royal Sanitary Commission in July 1869. Those reprinted remarks only remind us unpleasantly of Major Graham's constant opposition and attempts to ridicule the registration of diseases, the registration of still-births, and the appointment of medical officers to assist coroners by primarily investigating all causes of death not certified by registered medical practitioners. No useful purpose would now be served by resenting the studied tone of disparagement which throughout those remarks he chose to assume towards the medical profession, or his ill-disguised sympathy for bone-setters, herbalists, and other quacks. Since these remarks were written, a new Registration Act has come into operation, which, among other changes, has made it compulsory upon medical practitioners to furnish medical certificates of the causes of death of their patients. Civil registration has steadily improved; and we wish that Major Graham would have allowed us to forget his prejudiced opposition to further registration reforms, which he was determined to leave to his successor, who, in 1869, he prognosticated would be "superior to him in ability".

It is announced that Sir Brydges Henniker, Bart., has been appointed to succeed Major Graham as Registrar-General. Beyond having served for a year or two as private secretary to Mr. Sclater-Booth, President of the Local Government Board, we are unable to discover any special claim or qualification for the appointment which he has had interest enough to obtain. The new Registrar-General may possess special fitness for the post; but when such an appointment as that of Registrar-General is filled up through private or political interest, as in the present case, doubt as to the result of the selection is with difficulty repressed. If the appointment of a Local Government Board official signify the subordination of the General Register Office to the position of a mere department of the Local Government Board, which is still governed by its Poor-law element, we cannot look with favour on the impending change. There can be no question that the General Register Office should form a component part of a national Public Health Department; but the Local Government Board, although charged with important public health duties, is still in spirit the Poor-law Board, and, as such, is unfitted to organise and control public health administration. Under present circumstances, therefore, we do not hail with satisfaction the prospective emasculation of the General Register Office at the hands of a nominee of the Local Government Board.

There is one other aspect of the impending changes in the Registrar-General's Department which cannot be passed over. It is well known that Dr. William Farr, who has served as Superintendent of the Statistical Department almost since the foundation of the office, was a candidate for the vacancy caused by the retirement of Major Graham. The Government best knows the grounds on which they set aside the claims of Dr. Farr, based upon so eminent a public service, in favour of the private secretary of one of the Ministry, whose qualifications for the post are at any rate unknown. Such misuse of patronage affords a discouraging commentary upon our system of party government, and paralyses the zeal and energy of the permanent Civil Service of the country. We are not surprised to hear that Dr. Farr, under the influence of his disappointment at not obtaining an appointment, for which his distinguished services appeared to give him the strongest claim, has placed his resignation in the hands of the Lords of the Treasury. It may, we trust, be hoped that the Government, which failed to recognise his claim to the appointment of Registrar-General, will signify their approval of his services by liberal interpretation of his claims for pension, even if they afford no other mark of their appreciation of his invaluable and original work in vital statistics. Under the new Registrar-General, and deprived of the services of Dr. Farr, the future of the General Register Office is not free from anxiety. The effect of its past administration has been one of continued usefulness and important assistance to sanitation. There is no reason why its sphere of usefulness should not be enlarged; let us, at any rate, hope that it will not be abridged.

THE NURSING AT GUY'S HOSPITAL.

ABOUT two months ago, the Treasurer of Guy's Hospital thought it desirable to appoint a new matron, whose principles involved "a new system of nursing"; this he unfortunately did without having previously consulted the medical staff. This isolated action on his part is much to be regretted, and has ended in a disruption and disorganisation of the nursing in the hospital. The new matron brought with her a system to which she has endeavoured to bend the previously existing arrangements. The result has been the resignation or dismissal of some of the oldest and most efficient sisters, as well as the loss of many of

the best trained and most competent nurses of the hospital; some of whom have spent the chief part of their lives in the service of the institution.

The new rules for nursing have been enforced without an effort having been made to find out whether or not they were practicable, or whether or not they would be disapproved of by the medical staff. Consequently, nurses who had been trained in special wards, and thus had the necessary special knowledge, were changed in rotation into other wards, where they had fresh duties to perform, of which they were ignorant, and which they had to begin to learn. This plan left the special wards, so treated, deprived of nurses able to do the necessary special work required of them. The injury thus suffered by the patients is manifest. Another rule is being enforced, which is as unnecessary as it is thoughtless and cruel. The matron has decided that those patients who are not confined to their beds throughout the day shall rise and dress themselves at five o'clock in the morning. Such treatment must in most cases retard, and in not a few absolutely prevent, the recovery of the patient. It was hoped for some time by the medical staff that this matter would be settled in a satisfactory manner, without becoming a matter for public discussion. They remonstrated in vain with the Treasurer. He replied by summoning a meeting of Governors, at which he took the chair, and at which a vote of confidence in him was passed. This meeting was composed of five Governors. The representatives of the staff were thus ignored. A question involving not only the satisfactory and peaceable working of such a large and important institution as Guy's Hospital, but the well-being of the thousands of patients who go there for medical relief, cannot be settled in such an arbitrary manner, and by so small a meeting, in a manner opposed to the opinions and experience of the medical staff.

The position of the Treasurer of Guy's Hospital is, to a certain extent, autocratic and despotic. It can, however, only remain despotic so long as the despotism is an intelligent one and conducted upon principles of constitutional compromise. If it be found that the present mode of administrating the hospital results in a dead lock, it becomes a matter for public investigation. Neither the profession nor the public can allow a charity, which is almost a national one, to be injured in its beneficent progress. Unless the present confusion can be satisfactorily set straight, it may be necessary that the subject of the organisation of the governing body of the hospital be inquired into by the Charity Commissioners.

The *Guy's Hospital Gazette* has set forth some of the disadvantages of the new system which it is being sought to force upon the hospital. The Treasurer has thereupon intimated to the Editors that no complaints could in future be allowed to appear in the *Gazette*. This arbitrary proceeding is tantamount to a confession on his part that his action regarding the nursing does not bear public investigation and discussion. It is to be hoped that more moderate counsels will prevail, and that the recommendations of the staff will be listened to before it is too late to avoid a more public scandal.

FACTORY LEGISLATION.

CORRESPONDENTS assure us that the present amended Factory Act, which has been in force from the 1st of January this year, does not work satisfactorily; and we, therefore, propose to make a few remarks upon it. The clause making compulsory the production of copies of birth-registers is found objectionable. The surgeon cannot certify for any persons, under sixteen years of age, who do not produce copies of their birth-registers when they are to be obtained. This has caused endless trouble and inconvenience. Although the Act has been in operation eleven months, the same difficulty exists now as at the commencement.

The factory employers justly complain, saying: "You know these children are quite fit to work the hours we require, and you will not pass them because they will not comply with the demand of the registrar to pay from two shillings and sixpence to three shillings and sixpence for a copy of the register of birth, which he is entitled to charge, being over fourteen years of age." Some of the employers have said: "You have several times refused to pass some that have produced birth-registers, because you did not consider them strong enough; now, if you have the power to refuse when the conditions are complied with, we think you ought to have the power to dispense with the register when you find the children physically strong enough to work the hours we require." All the factory surgeon can say is, that such is the law, and we wish that those who made it had to carry it out.

The surgeon has the power to refuse giving a surgical certificate for all persons under sixteen years of age, if they be suffering from any infectious diseases of the head or body generally, which renders them unfit or incapable of working the factory hours; but no discretion is left to him as to their physical capacity. It is, however, well known to all medical men that some children are much stronger at fourteen than others at sixteen.

The sixpenny fees settled by the Act are a grievance of which medical men may justly complain. There are about one thousand surgeons engaged in factory work, whose duty it is to visit factories periodically or specially, as required, for the purpose of examining and certifying children and young persons as to their freedom from disease and bodily infirmity which would render them unfit for working the time allowed by the Factory Act. They are also required to report upon accidents caused by machinery. In the performance of these duties, they are not assisted by the inspectors to the extent they ought to be. The surgeon resides within his district, and is brought into almost daily communication with the managers and overlookers, and is consequently continually appealed to for information which ought to be given by the inspectors; but, as the latter generally reside at some distance, and do not visit the factories more than three or four times a year, and in many districts less, it is thus apparent that the medical man is called upon to do, not only surgical but inspectorial duty, and for this important work he receives the munificent sum of sixpence for each certificate, if given at his residence. The system of grouping five certificates together, including a visit within one mile, for the fee of two shillings and sixpence, is an encouragement to keep the children at work before receiving the certificate longer than allowed by the Act. The value of the services rendered by the medical men was acknowledged by the Royal Commissioners, who were appointed to obtain evidence with a view to the consolidation of the previous Acts. In their report, it is stated: "That the certifying surgeons, by their scientific knowledge and intelligence, have largely contributed to the fair acceptance which these Acts are now obtaining among all classes they affect." They also testify to the ample evidence which came to their notice of the interest taken in the important share of their work in the administration of the Acts. In the face of ample evidence thus given of the value of the surgeon's work, the paltry fee of sixpence for each certificate is a niggardly economy which will not tend to keep up the surgeon's interest in his duties.

ENTERIC FEVER IN INDIA.

II.

IN the later parts of the report by Surgeon-General Ker Innes, to which we referred in last week's JOURNAL, the questions of age and recent arrival in India are discussed; and the accuracy of Bryden's doctrine, that both are important factors in increasing the susceptibility of our young soldiers to this disease, is duly insisted on and supported by statistics. The author then turns to the question, whether "any measures can be adopted in India for obviating or diminishing the annual losses from *enteric fever* among this class of men". This, of course, can only be answered by a reference to causation. "If the enteric fever of this country be a specific fever, depending upon a specific poison; and assuming, what is certainly required to sustain the theory of a continuous transmission of the disease, that the poison, or *materies morbi*, is capable of retaining its vitality or activity for long periods of time outside the body, and that the appearance and disappearance of the disease (with widely separated intervals of time) in a given locality where it has once become established, may consequently be accounted for without the introduction of any fresh

case; or, if it be essentially a filth fever, and originate spontaneously from pythogenic causes; then we can, on the first assumption, limit the spread of the infection; and, on that of the second, we should be able, by well-directed efforts, to secure its extinction as far as military cantonments are concerned." The possibility of the disease being maintained and spread by infection is then considered. Can it be accounted for by importation, or one or other of the following channels—contaminating of air, water, milk, or other beverages; soiled linen in connection with washing arrangements; a common latrine; conservancy arrangements; the extension of the disease from the natives, or from something connected with their habits? All that can be reasonably said on each of the above possible causes is carefully considered. The result arrived at is that, in the opinion of the author of this report, medical officers have utterly failed in India to trace out the intimate connection of this disease with filth-causes or specific infection, with which, according to European authorities, it is invariably associated. Such failure does not convince us that genuine filth typhoid does not exist in India. The evidence in this report is, to our mind, conclusive that the enteric fever of India is, in all essential particulars, the same as that of Europe; and it is difficult to believe that this filth factor, which is so powerful in this country, should not operate in India, however difficult it may be to prove it. We have, in our notice of Dr. Gordon's report, shown that, however perfectly filth may be excluded from modern barracks in India, and from the water-supply, it is impossible to expect that soldiers who suffer from this disease, and who freely frequent places not so guarded, and drink water and other beverages not under the control of the sanitary authorities, have not been exposed to filth causes. The author of this report candidly admits as much; for, in the twenty-seventh paragraph, he thus expresses himself: "While, however, I am very sceptical as to the applicability or adequacy of the causes assigned by European authorities to account for all, or anything like all, the facts in this country, I would, on the other hand, guard myself against being supposed to deny their existence. On the contrary, there is no doubt that enteric fever is an infectious disease, capable of spreading in a community under certain circumstances, and of adhering to, and forming part of, the medical history of a corps for a long time; and that many cases are traceable to a common cause, such as contaminated water or organic-laden air." We entirely concur in this opinion, for the reasons given above. It is not our business to reconcile it with the confident statement before given, viz., the failure to trace out the intimate connection of the disease with filth causes or specific infection.

Here we must pause; we cannot do so without once more thanking the author, or authors, of this report, which we consider a valuable contribution to military medical and sanitary science.

A NEW trial has been ordered in the Hampstead Hospital case, the defendants to pay the costs of the first action.

PROFESSOR ERB of Heidelberg has received a call as Professor in the Policlinik in the University of Leipzig; and Professor Czerny of Heidelberg has been invited to become Professor of Surgery in Prague.

DR. ADAMKIEWICZ, assistant in the Clinic for Nervous Diseases in the Charité Hospital, Berlin, has been appointed Ordinary Professor of General and Experimental Pathology in the University of Cracow.

MR. CHURCH reported to the Chemical Society, at its meeting of November 20th, the second part of researches from which he deduces that white foliage does not possess the power, even in sunshine, of decomposing the carbonic acid in the air.

AT the meeting of the Liverpool Medical Students' Debating Society, held on Friday, the 19th instant, under the presidency of Dr. Carter, Mr. Taplin read a paper on "The Army Medical Service". The majority of the members present voted in favour of Mr. Taplin's motion: "That the Army Medical Warrant (1879) is equitable, just, and likely in every way to prove beneficial to the service."

IN one of the hospitals at Berne, fifty patients suffering from severe frostbite were treated last week.

THE case of the death of Whitwell, who is alleged to have had fatal pneumonia induced by ill-treatment in Pentonville prison, will again call public attention to the health-arrangements of that prison.

DR. LETTS, formerly assistant to Professor Crum Brown in Edinburgh University, and latterly Professor of Chemistry in Bristol, has been appointed to the Professorship of Chemistry in Queen's College, Belfast, *vice* Dr. Thomas Andrews, resigned.

A PUBLIC meeting held at Eastbourne, having decided to erect a local hospital in memory of the Princess Alice, it is announced that £2,000 has already been subscribed for the purpose, leaving a like sum yet to be raised.

MEASLES is very prevalent at Bolton. There have been within a month two hundred and ninety-four cases, forty-four of which have ended fatally. The Medical Officer of Health has advised the closing of the schools.

THE managers of the Royal Institution have awarded the Actonian Prize of £105 to Mr. G. S. Boulger, F.L.S., F.G.S., for an essay on "The Structure and Functions of the Retina in all Classes of Animals, viewed in Relation with the Theory of Evolution".

DEPUTY SURGEON-GENERAL JOHN ANDREW WOOLFRYES, M.D., C.B., the Principal Medical Officer of the British forces during the Zulu war, has been gazetted Commander of the Order of St. Michael and St. George.

OWING to the ravages of fever in the Karnal, Gurgaon, Rohtah, Delhi, and Hissar districts of the Punjab, the officiating sanitary commissioner, Dr. Adam Taylor, has been ordered to proceed to these places with the view of ascertaining the cause of the epidemic.

ON the 11th instant, a new cottage hospital for Evesham and its neighbourhood was opened with much ceremony. The building has been built at a cost of £1,131, and affords accommodation for eight patients in four wards, two for either sex, together with operating-room, mortuary, and the usual offices.

THE Court of Appeal has dismissed the appeal of the London and South-Western Railway Company against the verdict by which a jury had awarded £16,000 damages to Dr. Phillips, a physician who had sustained injuries upon the company's line, which had incapacitated him from the exercise of his profession.

M. CAZENEUVE reports to the Académie des Sciences concerning the influence of phosphorus on the urinary secretion. Experiments on the dog and the cat show that phosphorus, given in toxic doses, causes increase of urea, phosphoric acid, sulphuric acid, the total nitrogen, and iron. The author disagrees with the view of certain physiologists who regard the liver as the principal organ formative of urea.

AT the Brackley (near Banbury) petty sessions, Mrs. Rhoda Bishop of Culworth House, the widow of a surgeon, was committed for trial on the charge of receiving into her house two lunatics without being licensed to do so under the Lunacy Regulations Act. She was admitted to bail. The prosecution was instituted by the Lunacy Commissioners.

THE death of Mr. James Long of Liverpool is announced. Mr. Long had attained his seventieth year, and had for thirty years lectured on anatomy and surgery in the Liverpool Royal Infirmary School of Medicine. He also acted for many years as one of the honorary secretaries of the Royal Infirmary. Mr. Long was highly esteemed among his professional brethren; and had contributed much, up to a late period, to the medical journals. We shall publish an obituary notice in an early number.

A PAPER with the curious title of the *Rag-Baby* is forwarded to us from Philadelphia, printed with green ink on white paper. We are distinctly of opinion that printing in green on white paper is a very great improvement over black upon white. It is probably more expensive and troublesome than black; but it is undoubtedly much more agreeable to the eyes; and though at first sight a little strange, as being an unaccustomed effect, it is, on the whole, not unattractive.

AT the last meeting of the Linnæan Society, Mr. Holmes exhibited, for the first time in England, the leaves, flowers, and portion of the trunk of the tree (*Andira araroba*) yielding the so-called Goa powder. This vegetable secretion appears to destroy and replace the woody tissue of the heart-wood. The source of the powder was long enveloped in mystery, but, from its containing chrysophanic acid, it was believed to be the product of a fungus. Recently, it has been found that the cane grows in Bahia, is sent to Lisbon, thence exported to the Portuguese colonies in the East, where it is used as a specific for ringworm.

DR. BROWN-SÉQUARD has laid before the Académie des Sciences some recent experimental researches on "a new property of the nervous system". Certain parts of the nervous system, he says, when under irritation, cause suddenly, or nearly so, a notable increase of the motor or sensitive properties of other parts of the system. Thus, transverse section of a lateral half of the base of the brain increases the motor properties of the parts of this centre before the section, while the opposite is produced on the opposite side; the same with section of the sciatic nerve, or a lateral half of the dorsal or lumbar cord.

NOWELL *v.* WILLIAMS.

IN the Common Pleas Division, on Saturday, an application was made on behalf of Dr. Nowell, who recently brought an action to recover damages from Mr. Williams, his brother-in-law, for alleged false imprisonment in a lunatic asylum, on which we commented at the time, for a rule calling upon Mr. Williams to show cause why there should not be a new trial. The application was made upon various grounds. In giving judgment, Mr. Justice Lindley said the opinion of the court was that the verdict was not against the evidence; but they held that a letter written to the defendant, and which had been admitted as evidence, should have been kept out. The rule was therefore granted on the ground of improper reception of evidence.

THE REGISTRATION OF INFECTIOUS DISEASE IN SWITZERLAND.

THE Board of Health of the Canton of Zürich have just taken an important step with regard to the prevention of infectious diseases. They have ordered that every case of such diseases, however slight, is to be reported to them; and for this purpose they have furnished every medical man with books provided with counterfoils. Sanitary commissions, instituted with this object, will be obliged to send instructions to the medical men when the cases are considered serious, and will prescribe the means of disinfection, the isolation of the sick, and other precautionary measures. The results of the information sent by the practitioners will be published every month, under the direction of the Board of Health,

THE LATE EXAMINATION IN THE MEDICAL DEPARTMENT OF THE ARMY.

SEVENTY-FOUR candidates presented themselves before the London examiners. When we consider the brief interval between the publication of the warrant and the examination, the number of candidates must be considered satisfactory, and good evidence that the new terms are regarded in the schools with favour. Of the above, sixty-five candidates were selected by the examiners; but, as seven more came up to the minimum standard, they were accepted by the authorities, evidently on account of the pressing need for army medical officers in all quarters. Judging from the marks gained in the London examination, we augur well of the qualifications of the majority of the successful candidates; Mr. Barker, who heads the list, has scored 2,590 marks of 3,100, which is the limit for the compulsory examination, and Messrs. Keogh and Clark are not far behind him, the former with 2,525, and the latter with 2,330 marks. Mr. Clark is, we understand, a son of Dr. Andrew Clark. Eighteen of the candidates have gained over 2,000 marks, and many others fall little short of the same respectable standard.

FOR PIGS OR MEN?

IT would be very interesting, the Editor of the *Analyst* thinks, if some of the millers would tell us if alum is ordinarily mixed with pigs' food. Of course, public analysts have no concern with the matter directly, but when samples of "flour fourths" are said to be intended for the food of pigs, and not men, the question naturally arises, "In what way can the alum do good to the pigs?" It has never been publicly stated that swine showed any preference for bread artificially whitened.

THE HEALTH OF QUEEN MARGHERITA.

EVERYONE who has seen the fair and amiable Queen of Italy must take an interest in her. She is the idol of the nation, and, by her tact, courtesy, and affability, does much to ensure the popularity of the House of Savoy, and to break down the barriers which still separate the "Neri", or adherents of the Vatican, from the Court at the Quirinal. All parties alike regret her illness. She left Rome in the beginning of July in perfect health, but exposure to the night air at the Lido in Venice during the summer brought on a slight ague, the intermittent attacks continuing even after her arrival at Monza. She improved rapidly after going to Bordighera, having had no further ague-fits there; and now it is satisfactory to learn from Professor Baccelli, who was sent from Rome to see her, that all that remains is weakness and anæmia, with liability to slight hysterical attacks. She would return to Rome at once, were it not thought more prudent for her to avoid the fatigues of the necessary receptions and entertainments of this time of the year. There is no truth in the report that the Queen is *enceinte*. It arose from the fact of Professor di Martino of Naples, a well-known obstetrician, having been summoned to Bordighera to take medical charge of her Majesty during the absence of the ordinary physician in attendance, Dr. Rossi.

AUTO-EXPERIMENT.

OF the devotion of the late veteran M. Michel Chevallier to the cause of scientific inquiry, an interesting anecdote is related from the early part of his career. A case of poisoning was to be tried at Paris, in which acetate of morphia had been used, and Chevallier, who had sold the salt to the murderer, was summoned as a witness. Anxious to have the full nature of this hitherto untried poison well established, and being limited as to time, he immediately undertook a thorough investigation of its toxic effects on his own system, and succeeded so well that at the trial he was able to give a detailed description of the symptoms attending the use of the drug in question.

PAYING PATIENTS IN ST. THOMAS'S HOSPITAL.

WE hear that a scheme has been submitted to the Charity Commissioners by the authorities at St. Thomas's Hospital, which contemplates the admission of "paying patients" to occupy the wards now vacant in that hospital under two arrangements. The first part of the scheme includes the establishment of "paying wards" on the home hospital system, in a part of the hospital which will be set aside for that purpose. They will have separate medical administration and a medical officer in charge, who will be paid out of the funds supplied by the payments of the patients. Any patients admitted to the wards will have the option of calling in consultation any medical man whom he pleases as his own visiting attendant, and he will arrange separately with such medical attendant as to fees, as though living in his own chambers. Another part of the scheme contemplates admission at lower rates to the ordinary wards of patients, who will be scattered throughout the wards, and who will make payment on a scale calculated only to pay the cost of maintenance. In this way, it is intended that the whole of the available beds at St. Thomas's Hospital shall be utilised. This scheme, although possibly open to criticism in some of the latter parts, is a palpable improvement

on that at first suggested, and includes many of the modifications which we pointed out as necessary in order to make it in any way practicable.

A NEW HOSPITAL.

THE sum of twenty-four thousand pounds has recently come into the possession of the little town of Halesworth, in Suffolk, for the purpose of building a hospital. This sum was left by a Mr. Patrick Steed, who came to Halesworth in 1824, and established there a large business as a maltster. By his will, the money was to be applied for founding a hospital after the decease of his wife, who died in 1876. A difficulty having arisen owing to the construction of the will, the amount has only lately been received; but the inhabitants have already had a meeting on the subject, and an admirable site has been procured at a trifling expense.

HOSPITAL SATURDAY.

THIS movement, so far as the metropolis is concerned, has never attained great success. Relatively to the other English towns, the amounts raised in London have been insignificant and unsatisfactory. If all the managers of the London hospitals were canvassed, we believe it would be found that there is a widespread feeling that Hospital Saturday has proved a failure. This opinion will be strengthened by the circular which has just been issued by the Council. In it they display much ignorance of the mode of management which prevails universally at the London hospitals. They declare, in this circular, that the Council are entitled to all the privileges accorded to other subscribers. This sentence is loosely worded; and it simply amounts to the assertion that that Council are entitled to nominate a governor to each institution which receives a grant. Many of the questions issued by the Council are regarded as unnecessary, inquisitorial, and prying; and, altogether, the hospital managers would not be sorry to see the movement dropped. This feeling is heightened by the knowledge that many of the patients to whom the Council give tickets are unfit objects of charity. It is notorious that the working-classes themselves regard the movement with anything but favour; and the small success hitherto attained seems to warrant the conclusion that Hospital Saturday in London could well be dispensed with.

A NEW CONVALESCENT HOME.

THE Teignmouth Infirmary was established in 1848, and at that time it was the only medical institution available for the towns of Dawlish, Newton, and Teignmouth. At each of the two former towns, however, cottage hospitals have been successfully established, and in consequence the income and the work of this institution have been seriously reduced. Under these circumstances, the managers have availed themselves of an opportunity which may not recur, and have sold the present infirmary buildings to the Great Western Railway Company. They have further decided to change the institution from an acute to a convalescent hospital. This decision is a wise one, as more convalescent homes are greatly needed. We commend the new scheme to the sympathy and support of those who take an interest in medical charities.

THE GASTRIC GLANDS OF MAMMALS.

MR. LANGLEY, in a recent contribution to the *Proceedings of the Royal Society*, reports that in the glands of the fundus of the stomach of all mammals investigated, viz., dog, cat, rat, and rabbit, the chief cells are, in rest, crowded with conspicuous granules; the border cells are either without conspicuous granules or are finely granular. During digestion, the granules in the chief cells diminish. The stomach of the rabbit has certain structural peculiarities; the principal of these is that a large portion of the greater curvature contains glands, in which the chief cells are not coarsely granular. The glands of the greater curvature contain scarcely more pepsin than the glands of the smaller curvature and pylorus. But in the smaller curvature and pylorus there are few, if any, border cells; whilst there are many in the greater curvature. Hence the border cells are not directly connected with the formation of pepsin. The glands of the fundus contain a very much larger amount of pepsin than the glands of the greater curvature; that is, where there are coarsely granular chief cells there is a large amount of ferment. Further, during digestion, the fundus-glands contain less ferment than in hunger—a fact observed first by Grützner—and it is during digestion that the chief cells have fewest granules. Hence, the conspicuous granules in the chief cells are directly connected with the formation of ferment. Since in passing from the fundus to the greater curvature we meet all stages of granularity in the chief cells, and since the chief cells of the greater curvature do not differ in any essential point from the pyloric gland-cells, he concludes with Heidenhain that the pyloric gland-cells and the chief cells of the fundus are fundamentally the same. He considers, however, the chief cells of the fundus to be a highly differentiated form of the pyloric gland-cells, a form more especially designed for the production of pepsin, and probably other solids of the gastric secretion.

A MUCH-NEEDED REFORM.

THE Council of the Hospital Sunday Fund, in setting apart one per cent. of the amount annually placed at their disposal, to enable them to give surgical instruments and appliances to deserving people, have taken a wise course. The regulations under which these appliances will be distributed are highly to be commended. Any minister of religion who makes application for a patient in writing to the Secretary of the Fund will receive a proper form of recommendation, which can then be taken to any of the participating hospitals or dispensaries. When the patient presents this recommendation to the institution he has selected, a member of the medical staff examines the case, and orders the necessary instrument, which he afterwards sees properly fitted. The surgeon then directs the patient where he can get the appliance he needs. As soon as he has obtained it, and it has been fitted to the satisfaction of the medical officer who has seen the case, an invoice, bearing the hospital stamp, is forwarded to the Secretary of the Fund, who in due course pays the instrument-maker. By this simple method, an incalculable amount of good has been already done, and all the abuses incidental to the system in force at the various surgical aid and truss societies are avoided. This new system benefits the patients who are really deserving, it simplifies the work of the medical staff of the hospitals, and materially aids the managers, who are by its means able to reduce the sum they were formerly compelled to spend upon surgical appliances. Mr. Henry N. Custance, the Secretary of the Fund, deserves great praise for the simplicity and completeness of the new system, which is sure to accomplish much good to all concerned.

MEDICAL HEROISM.

A CORRESPONDENT of the *Times of India* says that fever is raging in Kattywar, and adds: "The senior medical officer is sticking to his work with a devotion that commands admiration, seeing that he, too, is suffering from the plague of fever, and has to rise from his bed constantly to attend to the wants of suffering humanity. The province is fever stricken, and has been so for the past three years."

THE PROFESSION IN CAPE COLONY.

GLOWING accounts have been circulated in the daily press of the prospects of medical men going out to Cape Colony. In order to prevent any disappointment to gentlemen who may be induced to try their fortunes there, we publish a plain unvarnished statement of facts from a reliable correspondent. He writes:

Medical men are rushing out here in large numbers; and, from the sparse population, it is quite impossible they can all obtain remunerative practices, while the disadvantages of living are very great. The only compensating influence is the climate, which brought me here, and my family; but, as to society, there is simply none. Living is high, and house-rents enormously so. The Boers are a disagreeable set, and their language is something indescribable. They are very ignorant, and expect their medical man to divine their complaints by simply looking at them—feeling their pulse, examining their tongue—and they simply withhold any information that would throw light on their disease; and this is their favourite mode of proving a skilful physician; if he be wide of the mark in guessing, then he is set down as of no use. Then they

prejudiced against Englishmen and the English Government. In short, taking all the disadvantages into account, I do not think the remuneration greater than the average practice at home. Quacks are to be found everywhere, going from farm to farm, and I have reason to believe extract more money from the Boers than the legitimate practitioner. The distances to be travelled are very great, and the sleeping accommodation not of the most comfortable or agreeable kind. The food may be plentiful and wholesome, but it certainly is far from tempting in appearance. In short, I would not advise anyone to come out here.

An article in the *Graaff Reinet Advertiser* also warns young medical men from leaving England for Cape Colony with exaggerated ideas of stepping into easy and lucrative practice at once, whilst, as a matter of fact, the medical profession is now pretty well represented in the colony. When the Transvaal becomes more settled, and the country is brought thoroughly under British rule and administration, there may be a good field for medical men; but at present, as far as Cape Colony is concerned, the representatives of the healing art are numerous enough, and many of them are only making a living.

THE PRINCESS ALICE MEMORIAL IN DARMSTADT.

THE form which it has been decided that the English memorial to the late Princess Alice shall take is the endowment of the Hospital and School for Nurses in Darmstadt, which Her late Royal Highness founded, and in which up to the time of her lamented death, she took a great and practical interest. Indeed, the loss of the support which the late Grand Duchess gave to this institution would have seriously imperilled its efficiency, but for the aid which the trustees of the English Memorial Fund are enabled to permanently guarantee to it. The surplus, after the endowment of the hospital, will be given towards the maintenance of other kindred institutions in which the Princess was personally interested. The following inscription will be placed on the hospital in Darmstadt: "This Hospital and School for Nurses, founded by Her Royal Highness the Grand Duchess of Hesse, Princess Alice of Great Britain and Ireland, has been endowed for ever as a memorial of Her Royal Highness, by those in Great Britain and Ireland, India, and the Colonies who reverenced her pure and noble character and her life of loving self-sacrifice. Si monumentum requiris circumspice. Obiit December 14, 1878."

METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the supporters of this fund was held, at the Mansion House, on December 18th—Sir Rutherford Alcock, in the unavoidable absence of the Lord Mayor, presiding. The Chairman said that the Council had every reason to be satisfied with the result of this year's collection, it being larger than that of last year, notwithstanding the prevailing commercial depression. It was, therefore, evident that the interest which the public took in the fund was broadening and deepening; and it was further gratifying that the distribution of the funds had given general satisfaction. On the motion of the Rev. Dr. Kennedy, seconded by Mr. O. E. Coope, M.P., it was resolved: "That the laws of the constitution which have been in force during the past year be continued;" and the 13th of June was fixed for the next collection on behalf of the fund. The amount realised by the collection this year was £26,501, as compared with £24,904 last year. A discussion took place as to the propriety or otherwise of admitting the Royal Hospital for Incurables to the benefits of the fund, and the question was referred to the Council for consideration.

THE STATE OF MEMPHIS.

YELLOW fever is now conquered by the winter cold for the time at Memphis, and the citizens are returning. We are glad to read that, at the conference of the Sanitary Commission of the National Board of Health, the city authorities, and the committee appointed by the citizens' mass-meeting, David P. Hadden, representing the citizens' committee, pledged strict compliance on the part of the people in all suggestions advanced by the committee for the improved condition of the city. A new survey of the city is to be made. All our British experience is in favour of radical measures of local sanitation; destruction of all the sources and foci of contagion, for thorough disinfection is almost impossible under any circumstances, and complete purification of the soil, air, and water; effective canalisation, and complete removal of excreta; with an effective sanitary organisation for the immediate notification of disease, and means of ready and complete isolation. Our experience of quarantine, and our observation of its working everywhere, point it out as the most insufficient and untrustworthy of precautions; although at given times and places it becomes inevitable. But it proves nearly always a desperate resource and a broken reed.

THE "DREADNOUGHT" HOSPITAL.

THE coloured illustration in the Christmas number of the *Graphic*, by J. C. Dollman, in which the seamen of all nations are represented descending the staircase to the Christmas dinner in Greenwich Hospital, is an interesting study. In the foreground, a native of Cashmere is leading an aged pensioner; and, behind them, is a naval reserve man, with his arm in a sling, who has under his charge a *Warspite* boy, suffering from ophthalmia. Still further in the rear, are representatives of America, Portugal, France, Germany, Sweden, Russia, Italy, and Spain. Still higher up the staircase, we notice natives of China, the East and West Indies, South America, Brazil, Japan, and many other countries. All the faces are true to life, and were either sketched by the artist or taken from photographs. We understand that Mr. Dollman is painting a large picture on this subject for the next Royal Academy. In no other place can the lover of anthropology more readily study the distinctions of race; and anyone who is interested in the subject had better pay Mr. Burdett a visit at the hospital at one o'clock on Christmas Day, when the annual dinner will take place as usual. It is to be hoped that this hospital, which is one of the few entirely free hospitals of the country, will receive a due proportion of the Christmas donations of the charitable. We know of no more deserving institution.

THE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

MR. WILLIAM JOHNSON SMITH, Hunterian prizeman, has discharged the duties of Port Medical Officer for many months, during the late Dr. Harry Leach's illness. As *locum tenens*, he has won golden opinions from all with whom he has been brought into contact; and, should he become a candidate, his success should not, and probably will not, be a matter of uncertainty. Mr. Johnson Smith has for ten years acted as one of the medical officers of the *Dreadnought;* and his knowledge of seamen, and of the duties of Port Medical Officer, are considerable. It appears, however, that, until the salary is fixed, no steps will be taken to fill up the vacancy; and, meanwhile, Mr. Smith will continue to act as Port Medical Officer. So important a post should not be inadequately paid; and we venture to hope the Corporation of London will not offer less than £600, with the prospect of an increase to at least £800. Such a sum is the smallest amount that can be justly given if regard be had to the remuneration of other medical officers of health throughout the country. Dr. H. Campbell Pope, who obtained the gold medal in hygiene of the London University, is a highly qualified candidate, and will, no doubt, receive much support if Mr. Smith elect not to contest the appointment. To the candidates for the office must also be added the name of Mr. Browning, the Medical Officer of Health for Rotherhithe, who has, by many excellent papers and by reports of unusual value, shown high qualifications for such an appointment.

ELECTRIC PHENOMENA OF THE TISSUES.

AT a recent meeting of the Physical Society, Dr. Shettle of Reading read a paper on the influence of heat upon certain forms of induction-coils, considered more especially in relation to the inductive power which the blood exercises on the various structures of the body. The author found that, when a copper and a zinc wire were insulated from each other by parchment-paper and paraffined silk, and wound in close proximity to each other, an induced current was indicated on a galvanometer whose terminals were connected to the neighbouring ends of the zinc and copper wires respectively, the other ends being left free. When the latter were connected across, the deflection was *nil*. On raising the temperature of the two wires by causing hot water to flow

inside the coil into which they were wound, the deflection was largely increased. These experiments led Dr. Shettle to imagine there is a similar action in the animal body. The heart is made up of nerves and muscular fibres winding spirally, and some of these wind round each other so as to form a spiral cord round which the blood-capillaries also wind. Dr. Shettle compares these nerve and muscle bundles to the coils of zinc and copper wire in his experiments, and infers that electric currents may be induced in them as in the wires. The flow of the warm magnetic blood would also tend to produce currents in them. Dr. Shettle further drew attention to the fact that animals live and move in a magnetic field, and that electricity must be generated in them by their movements internal and external.

SECTION OF THE CILIARY NERVES.

THE origin of sympathetic ophthalmia is still a matter of discussion; it is, however, generally referred to the irritation of the ciliary nerves, and not to that of the optic nerve. According to the *Journal de Médecine et de Chirurgie Pratiques* for December 1879, M. Abadie has consequently come to the conclusion that by destroying by section the influence of these nerves, he would arrive at the same result as by enucleation of the eyeball. He has obtained this result in a good many cases. The section of the ciliary nerves did not modify the state of the eyes when the cornea was transparent; in the other cases, the patient tolerated the presence of an artificial eye, and sympathetic ophthalmia has thus been arrested.

SCARLATINA AT DERBY.

DURING the last eighteen months, scarlatina has been very prevalent at Derby. The outbreak commenced early in the third quarter of 1878, and at the termination of that quarter 33 deaths had been registered from it. Its virulence continued, and by the 31st December the number had increased to 61. During the first quarter of the present year, 63 more deaths from it occurred; in the second quarter, 71; and in the third quarter, 52. Thus, in five quarters, no fewer than 247 persons have died from this disease. In one of his reports on the subject, the medical officer of health ascribes the mortality to 1. The ignorance and indifference exhibited by people in going to and from the infected houses, and allowing their children to do the same; 2. The allowing of persons during the convalescent, but infectious, stage to go about the streets, or to school, or to play; 3. The ignorance on the part of those in care of the sick as to the means to be adopted with regard to infected clothing, bedding, etc.; 4. The overcrowding of houses by one family; 5. The fact that many of the sufferers are children whose parents object to allow them to go to hospital; and, finally, 6. The absence of knowledge as to the existence of such cases until a death occurs. Now, whilst some of these causes of prevalence cannot be overcome until people can be educated to a sense of the danger they are incurring to themselves and their neighbours, there are others that can be dealt with under the provisions of the existing laws on the subject; and we cannot doubt but that, if these laws had been put in force with adequate stringency at Derby, such a distressing record of scarlatina fatality would not have been presented. Especially are we surprised at the little effort that seems to have been made to secure isolation of patients. The Corporation have an infectious hospital, to which cases might have been removed; but this was in such a state that the medical officer of health felt that, before he could propose its opening to the Town Council, the wooden walls of the building should be lined, so as to keep out the wind and the cold, for "it would not be safe to locate patients in it who were afflicted with such severe maladies as scarlet fever." It is true that certain arrangements were made by which some patients were treated at the Derbyshire Infirmary; but that the outbreak should be allowed to attain such enormous dimensions without some really active steps being taken to secure isolation, is to us inexplicable. There would seem, moreover, extra reasons why the infectious hospital for the district should be thoroughly efficient and in readiness, since Derby has not only taken powers to itself under Section 93 of its Improvement Act of last session to require the notification to its medical officer of every case of infectious disease in the district, but has also taken powers similar to those of the Jarrow Town Council (see page 471 of the present volume), which can only be carried out with thorough efficiency when the Corporation fever-hospital is in complete working order.

THE CASE OF BADER VERSUS GORDON.

IN reference to this case, which we noticed in the JOURNAL of December 13th, we have received the following note from Mr. Bader.

"In June 1875, Mr. Gordon, aged 25, a barrister, consulted me for cataract in the left eye. He being myopic, I was doubtful as to the condition of the retina. At an interval of a week, he was examined twice. There was only cataract; I therefore explained to him that, to improve sight, the cataract would have to be removed. Mr. Gordon expressly wished not to be detained from business; he had the treatment by extraction, and that by absorption, explained to him; he selected the latter, on my assurance that he would not be confined to his bed. He clearly understood that, to render absorption more safe, there should be two operations: first, iridectomy; then the needle-operation. The appointments for these operations were made beforehand with Mr. Gordon. Why I should explain to a patient the mechanical details of an iridectomy, especially if he is to have an anæsthetic, I cannot see, in spite of the rider of the jury. Is it kind or wise to depress the patient's mind by such descriptions, and then to give an anæsthetic? Both operations went on well. After the needle-operation, Mr. Gordon called once, and then only reappeared in 1878. I again advised the treatment of the cataract; and, he discontinuing attendance, I sent him a bill for work done in 1875. Then Mr. Gordon refused payment, accusing me of malapraxis. Annoyed by this, I brought the action. To keep my name out of the papers, I was advised by an old friend to withdraw my claim; and, by appointment, saw Mr. Gordon at his chambers, and made the proposition. When Mr. Gordon insisted upon my paying his costs, which his solicitor put at £100, later reducing them to £60, I declared that the case should go on.—Mr. Gordon, from 1875 to 1879, was never detained from business; and, by the removal of the cataract, especially the iridectomy having been done so long ago, can have useful sight restored whenever he pleases. As to the advisability of removing cataract from one eye in young persons, the other eye being sound, Mr. Bowman, Donders, and von Gräfe advise it especially in young persons. Mr. Critchett says no; but, in his evidence, states that, quite lately, 'he had done the operation for two ladies'. If, for appearance sake, Mr. Critchett thinks himself justified to operate, how much more was I right in recommending the operation to a young barrister for the improvement of sight. Mr. Critchett, in his evidence, states that I never did any work for him, or saw patients for him. After the trial, to enlighten Lord Coleridge on this point, I produced testimonials, given to me about eighteen years ago, in which Mr. Critchett, in very flattering terms, expresses his satisfaction at my attendance on his patients at Moorfields, whenever he went for a vacation. I much regret the animus shown by Mr. Critchett, though his kind disposition towards me of years long gone by will always be a pleasant recollection."

We have to add, after reading this note, that our observation expressed agreement with the rider of the jury and the observation of the judge; and we are still of opinion that, before operating on a case where binocular vision still exists, the patient should be amply warned of the risks of operation; and we consider that, if thus amply warned, Mr. Gordon might not have undergone iridectomy under chloroform at the surgeon's house, afterwards going home alone, and undertaking next day a journey by rail.

VERTIGO A TYMPANO LÆSO.

OUR Paris Correspondent writes: Dr. Bonnafont, has recently addressed a note to the Académie des Sciences on the different forms of vertigo and nervous phenomena due to inflammation of the tympanic membrane and middle ear. He described a certain number of pathological conditions of the tympanum which produce nervous phenomena, which Flourens and von Goltz attributed exclusively to the semicircular canals. Flourens taught that, according as these canals are totally or partially divided, the animal submitted to operation turns to the right or to the left, or preserves its equilibrium, but appears to be seized with vertigo. According to von Goltz, the semicircular canals are the principal organs of the sense of equilibrium of the head. Dr. Bonnafont observed great number of analogous phenomena, but which were determine stirring inflammation of the membrana tympani and of the middle ear

pression of this membrane from without inwards by hardened wax, polypi of the auditory canal or by accumulation of mucus in the drum of the ear, causing a pressure on it from within outwards, communicating at the stapes, and from thence to the entire apparatus of the internal ear. All the patients suffered from vertigo, titubations, and sometimes even vomiting. None of them experienced the movement of rotation, but often want of equilibrium.

CLINICAL SOCIETY OF LONDON.

THE last two meetings of the Clinical Society have been chiefly devoted to the question of excision of the hip-joint. At the meeting of November 28th, Mr. Tyson of Folkestone read particulars of an interesting case of traumatic aneurism of the scalp, the result of a blow produced by a stray shot from a gun. Mr. Croft next exhibited a little girl, aged four years, whose two hip-joints he had excised for symmetrical disease, at an interval of three weeks, some five or six months beforehand. A full report of this case appeared in last week's BRITISH MEDICAL JOURNAL. In the course of the discussion, Mr. Croft mentioned that he had now done the operation in forty-five cases; and Mr. Parker observed that, in five of eight cases excised by himself, he had found sequestra of dead bone in the joint. Such experience being unprecedented in the practice of the other surgeons present, Mr. Parker was requested to furnish notes of his cases; and Mr. Croft was further desired to give particulars of all his cases to the Society at a subsequent date. This he accordingly did with praiseworthy readiness at the last meeting, and Mr. Parker also read notes of his interesting cases. We are unable this week, through pressure on space, to report the proceedings; but may mention that records of the forty-five cases had been laboriously arranged by Mr. Croft in tabular form for ready reference, whilst twelve of his patients had been brought from all parts of the country for inspection by members. Most of the operations had been done antiseptically, and showed excellent results. He gave the indications for the operation, and especially insisted on the value of excision at a comparatively early stage of hip-joint disease. The meeting was prolonged for three-quarters of an hour; and at its termination Mr. Croft satisfied the surgeons still present that four of his patients could stand steadily and firmly on the leg operated upon eight, seven, four, and two years ago respectively. Messrs. Holmes, Hulke, Lister, Morrant Baker, John Wood, Mac Cormac, and Howse took part in the debate which followed; and the President appointed Messrs. Hulke, Holmes, Bryant, Croft, and Howard Marsh as a Committee to investigate and report to the Society on the whole subject under discussion. Mr. Croft, in his reply, drew particular attention to the specimens of bone excised which were brought to the meeting for inspection, and which showed that the disease of the joint in all the instances had been far advanced before recourse had been had to the operation. He also insisted on the importance to the patient's subsequent progress of preserving the great trochanter.

CHOLERA IN BRITISH BURMAH.

THE population of British Burmah, as given in the Sanitary Commissioner's Report for 1878, is 2,952,296, showing an increase of 17,315 over that of the preceding year. The birth-rate was 19.9 per 1,000, as compared with 21.08 in 1877; and the death-rate was 17.37, as compared with 17.44 in the previous year. The registration of vital statistics was, on the whole, slightly less efficient than it was in 1877; and, as pointed out by the Sanitary Commissioner, the statistics of both years are evidently very far from correct. The total number of deaths from cholera was 6,759, or 2.28 per 1,000 of the population. The number in the previous year was 7,276. Out of 14,559 villages from which returns were received, 189 were affected by cholera. A serious epidemic occurred at Akyab in the month of May. It seems to have been imported by a native of Chittagong, who had left Rangoon, where the disease was very prevalent, on the 21st April, and reached Akyab on the 24th, dying there the same day. The next death occurred in the same house on the 6th May; there were four deaths in houses close by by the 7th June; and from that time the disease increased in force up to the 6th June, 61 persons residing in the neighbourhood of the house in which the first death occurred had died of the disease. It spread from thence all over the town, and caused, up to the 31st July, the deaths of 235 males and 49 females, as well as 10 deaths in August. The disproportion between the number of males and females who died was because the disease was almost entirely confined to the floating population, natives of Chittagong and India, who are, as a rule, unmarried males. They are very filthy in their personal habits, and are most careless as to the purity of the sources whence they derive their supplies of drinking-water. The Sanitary Commissioner saw them coming from a cholera-infected quarter (where dejecta must have been plentiful on the ground), and walk into the tanks to fill their water-vessels. It is not, therefore, to be wondered at that they suffered terribly from the disease. Epidemics also occurred in the Kyouk-hypoo and Moulmein Gaols; and in the months of June and July there was a serious outbreak at Konityua and other stations on the Irrawaddy Valley Railway. In the district of Rangoon, there were 694 deaths from cholera during the year, 144 occurring in June, and 416 in July. It principally affected natives of India; and its prevalence amongst them was caused by overcrowding, dirt, and impure water. Small-pox caused 1,406 deaths, or .47 per 1,000 of the population. Out of 14,459 villages from which returns were received, small-pox occurred in 28 only. To fevers were attributed 28,821 deaths, or more than 56 per cent. of the total number, as compared with 26,601 in the previous year. The number of deaths from bowel-complaints was 4,640, as compared with 6,879 in 1877. The subject of sanitation seems to have received considerable attention during the year in relation to both towns and villages; and at Rangoon and Prome the municipal commissioners devoted especial attention to the matter. A series of simple suggestions on village sanitation, drawn up by the Sanitary Commissioner, has been translated into the vernacular, and 10,000 copies have been distributed amongst the rural population. Moreover, the desirability of introducing simple sanitary teaching in the schools of the province has been brought to the notice of the Director of Public Instruction.

THE HOSPITALS OF MADRAS.

THE Report for 1877 of the Surgeon-General of the Indian Medical Department, on the Administration of the Civil Hospitals and Dispensaries of the Madras Presidency, has only been recently published. From it we learn that, on December 31st of that year, there were 165 hospitals and dispensaries in operation, eleven new dispensaries having been opened and one closed in the course of the year. The chief obstacle to the extension of medical relief in the provinces is the paucity of medical subordinates; and, although the means of medical education have been increased, they appear to be still quite inadequate to furnish the number of medical agents required to meet the urgent wants of the Presidency. From most districts there are recurring demands for new dispensaries which cannot be opened, simply because there are no subordinates to take charge of them. The suffering and sickness of the late famine crisis brought home to the poorer classes the great value of medical aid; and it may therefore be expected that, as the country is restored to its wonted prosperity, the demands for new dispensaries will greatly increase. The total number of available beds in the existing institutions is 1,872 for males, and 1,207 for females. Due attention seems, in most instances, to have been given to the repair and conservancy of the buildings. The total number treated in the presidency during the year was 82,820 in-patients, and 882,239 out-patients, or a total of 965,059 cases as against 820,595 and 754,348 in the two preceding years. The most remarkable feature in the figures for 1877 is the great increase of in-patients, the number being more than double that of the admissions of in-patients in 1876, and very nearly three times that of those admitted in 1875. This is no doubt a result of the famine, as its victims were beyond the resources of out-door relief. The daily average number of in-patients was 3,819, against 1,792 in the preceding year. The death-rate amongst in-patients was 199.14, and, amongst out-patients, 0.77 per 1,000. The privations of famine account for the enormous mortality.

The scarcity of both food and water over large tracts of the Presidency had a most disastrous effect on the health of the people; and, although actual starvation was only seen in certain districts, the health of the poorer classes in other localities was seriously affected by the dearness of all kinds of provisions. The young, the infirm, and the old suffered most, but many strong adults also fell victims to the combined effects of starvation and disease; and over large areas of the country, the health of the survivors has been permanently impaired. Amongst the population of the famine districts, bowel-complaints were especially common and fatal; and these, together with fevers, small-pox, cholera, dropsy, and other fatal forms of disease, completed a death-roll which in magnitude has no parallel in the annals of the Presidency. Of the cases treated, 1,679 were of small-pox, whereof 634 died; 132,152 (354 fatal) of malarial fevers; 21,800 in-patients, and 15,870 out-patients (4,122 fatal), of cholera; 38,010 (2,918 fatal) of dysentery; 41,576 (3,016 fatal) of diarrhœa; 15,847 of syphilitic complaints (47 fatal); 2,664 cases of labour (93 fatal); 56,893 of skin-diseases; and 81,892 of ulcer. The number of surgical operations on in-patients was 4,432, and, on out-patients, 20,151. Of these, 1,950 were major, and 22,633 minor, operations.

SCOTLAND.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS.

ACCORDING to the Registrar-General's report for November, there were registered in the eight large Scotch towns 3,182 births, of which 1,625 were males and 1,557 females; of these, 7.9 per cent. were illegitimate. There were 1,833 deaths registered, of which 938 were males and 895 females. It is pointed out that this is the smallest number of deaths in any November for twenty-four years, and is 880 under the average of the same month for the last ten years. The death-rates were per 1,000 as follow: Leith and Greenock 15, Dundee 16, Edinburgh 17, Glasgow and Paisley 18, Perth and Aberdeen 19. Forty-one per cent. of the deaths were of children under five years of age; Perth being lowest with 27 per cent., and Leith highest with 56 per cent. Zymotic diseases caused 274 deaths, or 14.9 per cent. Of 40 deaths from fever, 13 were returned as typhus, 26 as enteric, and 1 as simple continued fever. Whooping-cough caused 3.3 per cent. of the deaths all over, the Aberdeen rate being as high as 8 per cent. After whooping-cough, scarlet fever was the most fatal, and measles the least fatal, of the zymotics. There were 92 deaths from apoplexy and paralysis, 114 from cardiac diseases, and 57 from premature birth debility. Phthisis pulmonalis caused 213 deaths, or 11.6 per cent.; other inflammatory affections of the respiratory organs, 421 deaths, or 23 per cent. Four individuals were over ninety years of age, two of each sex, one of whom was ninety-eight. The mean barometric pressure was greater by 0.394 inch, the mean temperature greater by 0.4°, the wind-pressure greater by 0.67 lb., and the mean humidity less by 5, than during the same month in the preceding twenty-two years. The highest mean temperature was at Glasgow, the lowest at Edinburgh.

THE GLASGOW WESTERN INFIRMARY SAMARITAN SOCIETY.

THE annual meeting of the above Society, which is in connection with the Glasgow Western Infirmary, was held on the 15th instant. This Society, among other objects, provides clothing and surgical appliances for necessitous patients leaving the infirmary, gives temporary relief to their families, seeks to obtain employment for the cured, and sends convalescents to the different sea-side homes. From the report, it appears that the number of cases relieved during the past year amounted to 501, while nearly 300 convalescent patients had been sent to the different sea-side homes. The report was adopted; and, on the motion of Professor Gairdner, a hearty vote of thanks was passed to all those connected with the carrying on of the work of the Society.

IRELAND.

COUNTY MONAGHAN FEVER HOSPITAL.

THE election for a medical officer to the County Fever Hospital, in the vacancy caused by the resignation of Dr. Ross, took place on the 3rd instant, and caused considerable interest as to the probable result. Before the polling took place, the validity of certain votes was under consideration; and it was contended that, by the 47th Section of the Act of George III, everyone who subscribed a guinea at least a year before the election was entitled to vote. On the other hand, it was urged that no person had a right to vote who was not an annual subscriber of not less than a guinea, and had paid his last subscription a clear year before the election; and this view of the matter was ruled as the correct meaning of the Act by the Chairman, Lord Rossmore. There were two candidates, Dr. Woods of Monaghan and Dr. Hall, the former gentleman being successful by a majority of seven votes.

SURGEON-MAJOR REYNOLDS, V.C., LL.D.

AT the winter commencements of the University of Dublin, held on Wednesday week, the degree of *Doctor in Utroque Jure* (*honoris causâ*) was conferred, amidst much acclamation, on Surgeon-Major Reynolds. He was introduced to the Pro-Vice-Chancellor by the Public Orator, Professor Webb, in an eulogistic Latin speech. At the conclusion of the commencements, by permission of the Provost of Trinity College, a presentation of a revolver and case was made to Surgeon-Major Reynolds, in the Examination Hall. The chair was taken by the Rev. Professor Jellett, Senior Lecturer. The Rev. Dr. Haughton made a speech eulogising Dr. Reynolds for the noble conduct he had displayed in the defence of Rorke's Drift. He said that he was sure that, notwithstanding the numerous honours Dr. Reynolds had so deservedly received—the chief of which, in his (Dr. Haughton's) opinion, was the Gold Medal of the British Medical Association—Dr. Reynolds would prize the humble gift which he now, on the part of the subscribers, would request the Senior Lecturer to present to that gallant non-combatant officer. Dr. Jellett, in the course of an eloquent speech, spoke of the pleasure the University felt in bestowing the highest honour in its power on Surgeon-Major Reynolds, one of its own pupils; and said that, in rewarding merit of any kind, it should be remembered that not only the recipient, but the University itself, was honoured by its bestowal. Surgeon-Major Reynolds, having expressed his acknowledgments, said he was always proud to have belonged to Trinity College, Dublin; and hoped that, if any of his hearers entered the Army Medical Department, they would, if the opportunity arose, preserve the honour of the University of Dublin, as he had endeavoured to do. At the conclusion of his speech, Dr. Reynolds was carried out of the hall and across the quadrangle on the shoulders of the students, to whom he was subsequently obliged to address a few words on the new Army Medical Warrant, before being permitted to enter the Fellows' Room. The following inscriptions, the first from the pen of Mr. Tyrrell, Professor of Latin in the University, and the second by Professor Brady, are engraved on the ivory handle of the revolver.

"Iacobo Henrico Reynolds ob virtutem tantam ad Vada Rorkii Zuluviorum a. d. XI Kal Feb. MDCCCLXXIX praestitam condiscipuli amicique alii SS. Trin. iuxta Dubl. versantes hoc donum tantulum—χάλκεα χρυσειων—reddimus."

"Martis habens laeva deatraque Machaonis arma
Eripuit vitas hoste deditque suis."

The case bore the following.

"Presented to Surgeon-Major James Henry Reynolds, V.C., LL.D., by his fellow-students and other friends in Trinity College, Dublin, at the Winter Commencements, 17th December, 1879, when the Degree of LL.D. (*honoris causâ*) was conferred upon him by the University of Dublin."

In the evening, Dr. Reynolds was entertained at dinner in the Commons Hall.

ANIMAL VACCINATION.

REPORT OF CONFERENCE HELD ON THURSDAY, DECEMBER 18TH, BY THE PARLIAMENTARY BILLS COMMITTEE, TO CONSIDER DR. CAMERON'S BILL FOR ANIMAL VACCINATION.

Speeches of the Chairman, Dr. Warlomont, Dr. Ballard, Dr. Carpenter, Mr. Ceely, Professor Simonds, Dr. Crisp.

THE adjourned meeting on Animal Vaccination was held at the rooms of the Medical Society of London, Chandos Street, on Thursday, December 18th, at 4 P.M. The Chair was occupied by Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee; and among those present were Dr. Cameron, M.P., Dr. Alfred Carpenter, Dr. Robert Cory (of the Local Government Board), Dr. E. Ballard (of the Local Government Board), Professor J. B. Simonds, Dr. Hinckes Bird, Dr. Bridges (of the Local Government Board), Dr. Drysdale, Dr. George Henry, Dr. Collins, Mr. E. R. Denton, Mr. Ceely (Aylesbury), Dr. G. Wyld, Dr. E. Crisp, Dr. D. Nicolson, Mr. H. Lee, Dr. J. H. Gramshaw (Gravesend), Dr. Symes Thompson, Dr. Bowles (Folkestone), Mr. G. D. Brown (Ealing).

The CHAIRMAN stated that since the last meeting he had received numerous letters agreeing with animal vaccination, and he laid before the meeting a reply by Dr. Warlomont of Brussels to the speech made on the last occasion by Dr. Stevens of the Local Government Board. Information had also reached him of the existence of a flourishing animal vaccination service at New York, the Board of Health of which city maintained a farm in New Jersey for this purpose. He had also learnt, through Dr. Pietra Santa, of the existence of private animal vaccine establishments in Spain—at Barcelona, Vittoria, Alava, Seville, Valencia, and Havannah. It appeared that in 1874 Dr. Lanoix himself inoculated with his lymph a calf at the veterinary school at Madrid; and that the general centre of vaccination in the State, instituted in the capital in 1875 at the instance of the Royal Academy of Medicine, had as its aim the cultivation, preservation, and distribution of both kinds of lymph, humanised and animal. As regarded Russia, Dr. E. T. Wilson of Cheltenham had kindly drawn attention to an article in the seventh volume of the *St. George's Hospital Reports* (1872-74), in which particulars were given, from his own personal observation, of the successful working of the St. Petersburg animal vaccination station. Adverting to the conclusions arrived at by Dr. Seaton in 1869, Dr. Wilson stated that, as regarded the first difficulty of transmitting from calf to calf without interruption, it had been overcome at St. Petersburg, where the lymph had at the time of his visit been transmitted from calf to calf for the previous five years. At St. Petersburg, by taking the lymph with great care at the fifth and sixth days of eruption, the failures from calf-lymph had been reduced from 12 to 2 per cent. The St. Petersburg experience was the same as that at other places as to the keeping of the calf-lymph; but some lymph which Dr. Wilson brought over with no special care succeeded in the hands of a public vaccinator and produced well-developed vesicles. With regard to the number of vaccinations that could be performed with the lymph from a single calf, Dr. Frobelius, the superintendent of the St. Petersburg station, mentioned having made one hundred insertions, all successful, from five vesicles; and it was not uncommon to find from sixty to one hundred and twenty vesicles on a single heifer. Calf-vaccine was started at the Foundling Hospital of St. Petersburg in 1868, and had continued side by side with Jennerian lymph up to the present time. A heifer-calf, from two to four months old, was taken every fourth day; the abdomen was cleanly shaved on a table specially adapted for the operation, and from sixty to one hundred and twenty insertions were made in regular rows of from ten to fifteen pricks a-piece. A light bandage was then applied, and the calf rejoined its companions in a clean and well-ventilated stable. On the fourth day, the vesicles were ready. The lymph, however, was better on the fifth day, and none should be taken upon the seventh. It was pressed from the vesicle by means of a small tenaculum; and Dr. Wilson was assured that the effects were equally satisfactory, whether the vaccination was performed in the summer or in the winter. This information he (Mr. Hart) had thought it right to lay before the meeting. Among the letters he had received was one from Dr. J. S. Bristowe, President of the Society of Medical Officers of Health, who said: "While fully believing in the efficacy of arm-to-arm vaccination, and that the vaccine virus has lost none of its original virtues by repeated transmission from man to man, I am entirely satisfied, from the evidence which has been adduced, that vaccination direct from the heifer, properly prepared, is as certain, as efficacious, and at least as free from danger, as vaccination direct from the arm". Mr. Simon, of whom it was said at the previous meeting that, if he had continued in office as the medical adviser of the Government, he would have been prepared to recommend the use of the system, had written to say: "It is a fact that, before leaving office, I had been very desirous to make experimental study of the system of animal vaccination, in order to see whether we could practically get over the serious disadvantages which in 1870 prevented me from approving it; but whether I could wish to introduce the system for any of our national uses, would have been an entirely open question with me till I had gained the fuller knowledge which I thought necessary." Dr. Braidwood of Birkenhead, who was entitled to be heard on this question, said: "The example set me by such pioneers of medical science as Sir Thomas Watson and Mr. Ceely of Aylesbury seems the best under the circumstances; and I would, therefore, merely express thus my entire concurrence with your efforts to establish animal vaccination in this country."

The paper by Dr. WARLOMONT, in reply to Dr. Stevens, was then laid before the meeting. It was as follows.

I regret exceedingly that I shall not be able to be present at the adjourned discussion on the subject, whether it be expedient for the English Government to introduce animal vaccination officially into that country. I purposely state this question with precision, because it appeared to me to have been ill understood by the speakers who followed me at the meeting at which, thanks to you, sir, I was received with so cordial a welcome, for which I desire to thank my kind hearers.

I had, indeed, no thought of raising then all the questions relating to vaccination; such, for example, as that of vaccino-syphilis; that of the degeneration of lymph, human or other, by the lapse of time; the question, in short, which has given rise to so much and such lengthened discussion, of the transformation, still admitted by men of ability, if hotly contested by others, of the virus of small-pox into vaccine virus by the simple transmission of the former through the system of the cow. These are all points which, in order to clear the path, we may provisionally disregard; they will come up for discussion later on. I should then have had much pleasure in attending the meeting on the 18th, before the same assembly, in order to try to bring it back to the consideration of those fundamental principles which I have already laid down to them, and which seem to me to have been too much lost sight of.

One speaker only appeared to me to have kept to the true direction for the debate. His speech, full of spirit, wit, and appropriateness, in which he in very truth took "the bull by the horns", reopened the great line of thought, which we should do well, I think, to follow more closely if any good is to come out of the inquiry upon this burning question, to which public attention, not only in England, but throughout the whole world, is directed.

Ought the Government to introduce animal vaccination officially into England? Dr. Stevens, Government Inspector of Vaccination, speaking, however, only for himself, examined the question in a very logical manner, and treated it from an elevated point of view. He commenced by establishing—what we had not contested—that lymph has not degenerated; the complete protection, said he, which vaccination actually affords, in a considerable proportion of cases, is sufficiently proved by the subjects who have been submitted to it. Is it necessary, therefore, in view of an improvement, which is as yet not clearly made out, to substitute a new practice, which has not been proved efficacious, for a practice which is fully satisfactory? This was his argument.

It would be easy to reply to this gentleman that, if he wait for these proofs to come to him, he will wait a long time, if he do not obtain personal experience (on which alone he is resolved to base his opinion) of the new method. And, if he do not do this, ought he not to take into consideration the experience of others? Now, the proof of the efficaciousness of animal vaccination needs no longer to be established.

I know that the speaker is not convinced, and that he takes refuge in the maxim, "Better is the enemy of well"; but nothing is more annoying than this dictum thus applied. So long as vaccination shall not have annihilated small-pox, it has not done all that it ought or can do; and we are very far from this. The epidemics of small-pox which follow each other almost uninterruptedly prove to us that the better is certainly still to be searched for as regards prophylaxis.

Dr. Stevens is too enlightened a man, too capable and too conscientious an administrator, to wish to remain under whatsoever circumstances in the beaten track; and nevertheless, unconsciously perhaps, he desires not to forsake the high road. But he seems to forget—and he will pardon my saying so—that there is in every language a word to express this constancy to the track of the past; viz., routine. Dr. Stevens, let me say at once, is not a man to whom such a term would be appropriate. It is, then, necessary that he should seek with us that

"better" which he still refuses to recognise, and which certainly animal vaccination is capable of affording him.

Dr. Stevens does not admit that the public should be allowed to make its choice as to the kind of lymph it should demand from the State. The latter, he says, ought to choose the best guardian of its children, and not offer it any other. It would not be possible to express a better sentiment; but in this matter other things must also be considered. If we had to make our choice, it would not take long to make it: the calf would immediately be found everywhere as the only admissible vaccinifer. Why, then, do we maintain vaccination from arm to arm? Because it is more practical, and is necessary to help us to tide over the period of transition in which we find ourselves at present. Vaccination, as a general rule, ought always to be done in preference with lymph taken directly and immediately, living and warm, from the selected vaccinifer. Now, we are still very far from the time when in each town, village, and hamlet, a vaccinated calf can be placed at the disposal of the vaccinator or of the public. Up to this moment, the infant must fill the place of the calf; but, be it said, as a makeshift only. We desire, indeed, to declare that if we have, in all our writings, demanded the maintenance of vaccination from arm to arm, it is simply because we cannot yet do without it. In proportion as the new method extends, the old one will gradually be extinguished.

If, then, we take our stand from the point of view chosen by Dr. Stevens, and have to choose one or the other lymph to recommend to the public, to the exclusion of the one rejected, we shall have to face the difficulties of application and to count their cost. These difficulties compel us to give in. I would suggest, then, to Dr. Stevens and to the department in which he so worthily occupies a distinguished position, the Belgian system, respecting which I propose to say a few words, necessary to a right understanding of the subject.

The State Vaccine Institute of Belgium has specially for its object the cultivation of lymph on the calf, and its distribution gratis, as seed, to all the practitioners of the country as frequently as they need it to renew their stock. To allow the annual renewal of this stock by strengthening it from the animal which seems the most fit for the purpose, and in keeping up without break this seed at the disposal of practitioners, is the special function of the Institute. It does not then, as might be thought, furnish vaccine matter for as many vaccinations as there are subjects to vaccinate, but only the seed for the purpose of preventing interruption of the service.

As to the public, the State does not furnish it gratuitously with animal lymph, though it may choose to prefer it; but the Director is authorised to furnish it on payment of a fee fixed by the decree constituting the institution. For this fee, every person who is well off, desiring to have original lymph, whether for the performance of vaccinations or of revaccinations in his family, can procure it. But the State has nothing to do with the details; that is the business of the Direction. It is the same with regard to vaccination from arm to arm; the State has no concern with it. To carry out effectually such a practice, it would be necessary to have as many institutions as there are populous centres. It would be necessary to go into matters of detail which only concern municipalities.

All that the State does in this direction, and these are the limits of its action, is to authorise the Director of the Institute to admit to vaccination at his establishment all the subjects who have a preference for calf-lymph: the poor are admitted gratuitously. This is all the State can do. Beyond the Brussels district, the poor must content themselves with the lymph cultivated by the vaccinators, who renew it every season; and the well-to-do with the same lymph, or with preserved animal lymph obtained from the Institute. This system is far from being perfect, since the poor cannot have their choice. It must not, however, be forgotten that in Belgium, vaccination not being compulsory, the State has fewer duties towards the public in this respect than in countries where compulsion is the law. Here there is an absolute moral obligation, which Belgium would not disregard if vaccination were compulsory. Its first duty, and it would not seek to evade it, would then be to put a supply of animal lymph gratuitously, and in a supplementary manner, at the disposal of practitioners of whom the poor demanded it.

Thus established, the institution could immediately commence operations in Great Britain, and be of immense service. London would be the first station, and some other great centres would be provided with stations in their turn. The London establishment would be the central institution: it would never allow its stock to fail, and would be always ready to renew or to help provincial establishments, which, for the sake of economy or other reasons, might from time to time suspend their working.

We differ, then, as will be seen, from the opinion expressed by Dr. Stevens. According to him, the public must not have any option between the two lymphs; but we hasten to say that this option would not occasion any inconvenience, since, according to our view, both lymphs, properly cultivated, are equally efficacious. In leaving the option to the public, and in giving to every one the means of carrying out his choice, we shall be doing wrong neither to the individual, nor the State, nor to public opinion. The latter, on the contrary, will be satisfied in a manner which has long been desired and waited for.

I beg my honourable opponent not to persist in his opposition. No one respects it more than I do, no one understands better than I what it costs an official charged with a grave responsibility to lay a rash hand—and it is so for him—on an organisation which gives him comparatively excellent guarantees; but no one is more assured than I am of the truth of the precept which I love to recall to mind, that in such a matter not to advance is to recede.

Dr. BALLARD said that, if there were lurking in the mind of anybody present, consequent on some things which he had read, some sort of suspicion that the department of the Government which was charged with the control of public vaccination in the country was actuated by any feeling of prejudice against the system of animal vaccination, his presence that day, as a representative of the Local Government Board, by direction of the President, might be taken as in some way doing away with that suspicion. Other Inspectors of the Board were more experienced than he was in the public arrangements of the country, and could speak much more forcibly and with more effect than he could. Nevertheless, when it was suggested to him that he should be present as the representative of the Board, he hesitated to accept the charge on two grounds: first, because he was much more apt at working than at talking, and next because he thought that possibly his views on the subject might be in advance of those of the Board; hence, at his request, his friend Dr. Cory, Chief Inspector of the National Vaccine Establishment, was associated with him. He hoped that this conference would hear something from that gentleman before the evening was closed. In the first place, it appeared to him that something should be said about the grounds on which the demand made in the proposed Bill of Dr. Cameron was founded. One of these grounds was the alleged deterioration of the humanised vaccine as now propagated. This, however, was withdrawn by Dr. Cameron at the last meeting.

Dr. CAMERON said he did not withdraw it, but left it for the purpose of being criticised.

Dr. BALLARD said he took the liberty of criticising some of the arguments Dr. Cameron used in support of his view. Dr. Cameron held, on various grounds, that the humanised vaccine lymph had deteriorated. He (Dr. Ballard) did not think he should have been very much disposed to say anything about this, had not Dr. Cameron given his reasons in letters to the *Times*; and, although the inference he drew might be good, his reasons were not equally good. He said it was all very well to describe the last severe epidemic of small-pox as exceptional, but during the twenty-two years in which there had been compulsory vaccination it ought to have made some impression; and he also said that statistics showed either that the protective virtues of the lymph were mythical, or that there was something radically wrong in our national system of vaccination. The epidemic of 1871-72 was exceptional; but there was a reason for that which Dr. Cameron did not seem to have taken into account. The epidemic arose in one of the worst vaccinated districts in France, and its ferocity was exceptional, and it spread in France, Germany, all Europe, England, and America, and it carried with it wherever it went its intensely ferocious character. For this reason, the epidemic was excessively fatal. He had before him tables, constructed for him in the Registrar-General's Office, showing really that the mortality from small-pox had, during the vaccination period in this country, been gradually and steadily lessening, with the exception of the particular epidemic period of 1871-2. Between 1838 and 1842, the mean annual death-rate from small-pox per million was 571. From 1847 to 1849 it was 303. In the next five years—1850 to 1854—when compulsory vaccination was the law, the mortality was 274; in the next five years it was 198; in the next five, 190; and in the next five years, during which the Vaccination Acts were amended, it was 145. In the next five years came the epidemic of 1871 and 1872, and then the mortality rose to 445; but in the next four the mean annual death-rate from small-pox had fallen lower than it had been before, viz., to 97, and yet during 1877 there was a recrudence of small-pox. There had been a gradual and steady diminution of small-pox mortality; and if there were not to say they were to judge by total death-rate, but to take of will the mortality as it had occurred in recently vaccinated persons—where children under five years of age, what was found in the non-epi A more years? Why, an improvement in the protection of children. Fro s literally to 1856, the mean annual death-rate from small-pox in childre mpt what- five years of age was 653 per million. Between 1860 and 1 t been occu- ting the epidemic years, the mortality was 419 per million e very stirring under five years of age. From 1873 to 1876 it fell to 18

not look very much like deterioration of vaccination. He did not say that vaccine in the humanised propagation was all that it ought to be or all that it might be over the kingdom, or that there was not a deterioration of the lymph in places. He knew there was, and that in the hands of some medical men vaccine did deteriorate; but that was in the hands of careless men. He had seen vaccine propagated which, on the eighth day, had produced vesicles having a broad areola, and he had seen it propagated where the areola had been declared on the seventh day. That ought not to be. There was a way in which the lymph might be deteriorated, apart altogether from any inherent character that might deteriorate it. The Local Government Board had for some time taken care to improve the vaccine of the country, not in quantity only, but in quality, and to stimulate the local vaccinators to better work by instituting a system of rewards. But sometimes in poor neighbourhoods among the labouring population, if he found a public vaccinator thoroughly well vaccinating and producing good large marks and scars, he saw in a number of instances some practitioner rising up and saying to the mothers: "There is not the slightest use in having your children punished in this way; take your child down to my surgery." Well, the child was taken down, and one prick was put upon the arm, and the mother was told that that was sufficient. It was sufficient, no doubt, for registration. He said, "Shame on such men!" he could hardly think of them without indignation. Every tyro knew the results of inquiries on that subject made by Mr. Marson some years ago, which had been confirmed in the hospitals round about London. Every student had been told the results of Mr. Marson's inquiries. There were two ways in which diminished protection might occur. It might occur locally, but that had nothing to do with what Dr. Cameron referred to in his letter. Dr. Cameron fell foul of their revered old friend Mr. Ceely, who, he was happy to say, was present to defend himself, and was quite capable of doing so. He (Dr. Ballard) objected to the term in this letter "small-pox lymph" when speaking of the lymph, he was going to say, created by Mr. Ceely. He thought that term ought not to be used, and he also thought that Dr. Cameron himself would be disposed to withdraw it. He said the vesicles were undistinguishable from the genuine article. Well, if not, he should be disposed to say they were the genuine article. He would take the liberty of leaving Dr. Cameron in the hands of Mr. Ceely and his esteemed colleague and friend Dr. Cory, whose book should be in the hands of every man who wanted to know anything on the subject. The next subject he had to refer to was the chance of syphilis being communicated. He did not think he need say much about that; he had already said all that was necessary. But, after all, the risk of syphilis in humanised lymph was infinitesimal, and might almost be put out of the question. It had been supposed that the introduction of the system of animal vaccination would induce parents to have their children vaccinated who declined to have them vaccinated now. What did that mean? It would appear to be based on this notion, that the deficient completeness of vaccination in this country was due to some really reasonable objection that people had to vaccination. He did not think anything of the kind. After all, the last returns brought the unaccounted for in vaccination among children born in this country to about 4½ per cent.; and what was the reason? Those 4½ per cent. were not vaccinated, not because the parents objected to vaccination, but through accidental circumstances—through neglect. The time for vaccination came round, and perhaps the weather was wet, or the mother was engaged in a day's washing, or she had to cook her husband's dinner, and in that way the time passed by, and then, perhaps, they removed to another place. In some places, no doubt, there were objections to vaccination; but this was only in places like Cheltenham, where there were agitators on the subject. He did not believe that, if human vaccination was entirely superseded by animal vaccination, they would get a single anti-vaccinator to have a child vaccinated. He was not there in any way to apologise for the Medical Department, for that department, even in the matter of animal vaccination, had no shortcomings to confess; but, on the other hand, he claimed for the department public gratitude for what they had done, and, he might add, public gratitude for what they had not done. Think what the state of things was now. Think of this—1838, 1839, 1840, 1841, and 1842, which were not particularly epidemic years, but small-pox then carried away 571 per million of the population. In 1871, 1872, 1873, and 1874, two of which were epidemic years, and ferocious epidemic years, the mortality from small-pox was 445, actually less than it was during the first five years of the registration period in this country. Was not there in that matter to be [illegible] to the Government for? In 1840, the first Vaccination Act passed. In 1853 was the time of the first Compulsory Vaccination Act. [illegible] arm-to 1867, that Vaccination Act was amended, and it was not till [illegible] the original arrangement we had now in force was perfected. It had [illegible] very satisfactory time, and the Government of the country had been working to perfect the system, and the objects which the Government had in view had been, and it intended to have them in view—first of all, completeness of vaccination, as near as possible, to have every child in the country vaccinated; secondly, efficiency, that every child vaccinated should be vaccinated thoroughly; and, thirdly, that every child should be vaccinated safely. Completeness, efficiency, and safety were the three objects. Had not these objects to a very great degree been attained? First of all, as to completeness; he did not think there was very much to complain of in 4½ per cent. escaping vaccination; and he felt that number would be diminished. As regarded efficiency, it was his experience that efficiency was improving even during the time he had been inspector. He could see a great difference in his districts, and he could say that the character and quality of the vaccination was improving all the way through as to safety; and, with the exception of that unfortunate occurrence which they all knew of, he was not aware of a single case of syphilis having been communicated through vaccination. Dr. Stevens had never met with it; and he (Dr. Ballard) had never met with it at all. He believed humanised lymph was practically safe.

A gentleman asked whether the 4½ per cent. unvaccinated meant that percentage of births.

Dr. BALLARD said it did. He did not know whether every one present understood what the arrangements of the Local Government Board were for the attainment of its objects, but he wished it to be known that there was a system of looking after the children. Every child was registered, and was never lost sight of until it was vaccinated, unless the parents had submitted to the legal penalties for non-vaccination. In one of his letters, Dr. Cameron said the children were vaccinated only at intervals of six months, in England. In sparse populations, vaccinations only took place twice a year; but, in rural districts sufficiently populous, once in three months. In town districts, where there were eight or ten vaccinees, it was done weekly. The National Vaccine Establishment did not supply all the lymph which was in use in the country. Every public vaccinator was supposed to keep up his own supply, and was supposed to know the child from whom he got it. He was responsible, and was made responsible; but the National Vaccine Establishment would supplement the supply where a man lost it. Nevertheless, the department expected every public vaccinator to keep up his own supply. He (Dr. Ballard) had brought with him some of the papers which contained instructions for public vaccinators; and, if anyone had not read them, it would be just as well that he should, because it appeared that no precaution could be suggested which was not contained in those instructions. Further than that, those instructions were not only given, but the following them was enforced. He was sorry to say that, on several occasions, he had been the means of public vaccinators being requested to retire from the office they held, because they had not followed their instructions sufficiently to come up to the requirements of the Board. Public vaccinators must do their work properly and efficiently, or they must give up their office. For the reasons he had given, he repeated that the Local Government Board had no shortcomings to confess. As to animal vaccination, he wished it to be understood that Government was not in the same position as those who composed the present meeting, for it had serious responsibilities. Before it could accept or adopt any other method of vaccination than that which was now adopted, it must be satisfied that equally good results would follow from its use. It must first be satisfied on the scientific aspects of the case; next as to the administrative practicability of the adoption of animal vaccination. The first question it asked, for instance, was whether the adoption of vaccination in the heifer would give equal or greater protection, or greater permanence, than the humanised vaccination now in use. On that point, the Government at present was not satisfied. Dr. Seaton's inquiry was some years ago reported in the Fourth Report of the new series of the medical officer of the Local Government Board; but, last year, Dr. Seaton was again on the continent, and the results of his inquiry there were not so satisfactory as to lead the Government to think that equal or greater protection would be given by animal as by humanised vaccination lymph. He made inquiries at Amsterdam, the Hague, Rotterdam, and Berlin. He would mention some of these results obtained with fresh calf-lymph. At Amsterdam, complete success at all insertions was obtained in only 34 per cent. of the children vaccinated; at Rotterdam, it was 54 per cent.; and at Berlin, 21 per cent. At Surrey Chapel station, where fresh arm-to-arm vaccination was employed, the success was 97.8 per cent. It could scarcely be said then that animal vaccination, as far as knowledge had come to the Government office, was so satisfactory as arm-to-arm vaccination practised by an experienced operator like Dr. Cory. Then, as to complete failure, at the Hague, it occurred in 2.2 per cent.; at Rotterdam, the percentage of failures was not stated; but, at Berlin, they were 7.1 per cent. At

Surrey Chapel, out of 1,000 children vaccinated with human lymphs the complete failures were simply none. As to insertion success, the calculation of what was attained at Amsterdam was 700 or fewer vesicles out of 1,000 insertions with animal lymph. At Rotterdam, the number was not stated. At Berlin, it was 678. But, at Surrey Chapel, with humanised lymph, it was 978. It was remarkable that the numbers 678 at Berlin, and 700 at Amsterdam, were so much alike; it did not appear as if any imperfection arose from the mode of operation. The success, therefore, as far as the knowledge of the department went of animal vaccination did not appear to be so good as to warrant them to recommend a preference for it over humanised vaccination. Administratively, were certain difficulties in practice in establishing animal vaccination in the first instance. Moreover, they wanted to know more about the preservability of the lymph. Dr. Warlomont had said something about it, and he thoroughly welcomed Dr. Warlomont's speech. Then came the general question, the practicability of the proposals of Dr. Cameron's Bill, one of which was really to give parents an option with respect to animal or humanised lymph. That, he was afraid, would be found very difficult in practice to carry out. The Board considered that such an optional arrangement was quite inapplicable under the circumstances of our population. It might do very well for such a place as Belgium; but think of the population of England, Wales, Scotland, and Ireland—how many heifers, and experienced vaccinators by the new method would be necessary to meet the option of such a population? He thought the meeting would see the difficulties which crowded round the Government with such a proposal. The Board had no objection to animal vaccination in itself, or to vaccinators employing animal lymph. It might be had in England. Only within the last day or two, a colleague of his said a vaccinator had used animal lymph; and, at West Bromwich, a friend of his had done the same. So far from the Board having any objection, they were very glad those vaccinators had improved their stock. No objection was raised, or likely to be raised. What the Board objected to was being required at once, and before it had sufficiently matured its arrangements, to adopt a system of animal vaccination. For several years, it had been working at, and inquiring into, the subject. Dr. Seaton, several years ago, went on to the continent for the purpose, and made a report which was unfavourable. He went again; and, at the present time, Dr. Klein was engaged in a series of inquiries to settle, if possible, the relation between cow-pox and small-pox, which was in dispute. The Board was patiently and steadily continuing its inquiries; and he could not see what more could at present be wanted. It seemed to him to be perfectly unreasonable to expect that the Board, with its responsibilities, should be forced, as it were, into a line of action which it was not yet prepared to take. The efforts of the Board were to do the very best it possibly could to improve the vaccination of the country; and, if animal vaccination were the best method for obtaining that result, he had not a question in his mind that animal vaccination would, if practicable, be adopted by the Board. He was not saying the Board would do it, but that it was so anxious to do the best it could, that the public might depend upon it it would adopt what was best. One word for his chief. Dr. Seaton being ill, he felt bound to say a word on his behalf. Judging from certain statements which had appeared in print, and especially from the terms in which he had been alluded to, an impression had gone abroad that Dr. Seaton was bigoted. Of all people in the world, he really thought that Dr. Seaton was as free from bigotry or anything like it as anyone could be. He was the prime mover in the work of vaccination in this country; he had done more than any man in this country to promote the completeness of vaccination; and a debt of gratitude was due to him, and had yet to be paid to him, for it. Very much more would no doubt have been done if he had not been taken ill. Things had been standing where the public might have expected them to be moving; but he did not think that was to be put down to the failure of Dr. Seaton, who was not prejudiced, but had a complete honesty of purpose; and following, as he did, the most cautious administrator that was to be found—Mr. Simon—he thought Dr. Seaton had acted wisely in not pushing on anything in the line of experiment in connection with the public service of the country.

Dr. ALFRED CARPENTER (Croydon), said that it was quite evident to him that, if Dr. Ballard were not in the trammels of office, he would himself be promoting the measure they had met to discuss. The few observations which fell from him towards the end of his very interesting speech satisfied him (Dr. Carpenter) that, at any rate, he had strong feelings in favour of the course that the conveners of the meeting had thought proper to take. He (Dr. Carpenter) was about to mention a circumstance which occurred to him in early life, which convinced him that it was possible there could be deterioration of lymph. The circumstance could not perhaps arise now, under the more perfect knowledge we had; but it did arise then, and he had very little doubt it would help to increase the mortality from small-pox. When he was a young man, there was an epidemic of small-pox, and a great call for vaccination, both of adults and children. The adults had been previously vaccinated, and, when revaccinated, they had very fine arms, from which he took vaccine lymph and used it extensively. Two years afterwards, there was again an epidemic of small-pox in the same district; and several of those persons whom he had vaccinated with the lymph taken from the revaccinated adults had small-pox. They were not protected by that lymph as they were by the lymph taken from children. It was possible that, at the present time, a large number of adults were under the impression that they had been vaccinated with satisfactory lymph when they were not protected at all. Under the department superintended by Dr. Ballard and Dr. Stevens, adult lymph should not be taken; but he believed it was taken, because occasionally vaccinated adults had very fine arms. He never could understand why there should be deterioration, until he looked more particularly into the character of the matters which produced this disease, and then he could see an explanation. The disease was of a vegetable origin, and the germs (as Professor Cornwell had published to the world) were liable to have a sort of hybrid production. When hybrids became crossed, as they saw in France, they were not protected in the same way as the pure lymph which was taken from the cow. He was satisfied that it was necessary occasionally to have the lymph from the animal taken afresh, so that they might go back to the old stock and keep it among the people. That vaccination would never be protective against small-pox was self-evident, because small-pox would not protect entirely. The very worst case of small-pox he ever saw was in a man who, twenty years before, had had a severe attack, and at the time of his second seizure was pitted extensively. He died of small-pox in a very few days. We should never be able to remove it entirely; but, by going to the cow and having the lymph from the fountain-head, they were much more likely to keep up the protective influence that Jenner saw vaccination had. The question of communicating syphilis by vaccination would be brought into this discussion. It had happened to him to see once a case where syphilis had arisen in a vaccinated arm; but the origin of that case was very clear. The nurse with whom the child had been sleeping had syphilis; and there could be no shadow of doubt that the syphilitic matter had gone from the nurse into the arm of the child after the vesicle had risen, and there was an abrasion. That was manifest; and it was the only case in his long experience and connection with vaccination that he had seen, where there had been the remotest possibility of anything like syphilitic infection being present; and it was an unfortunate thing that this subject had been mooted, because from this meeting it would be spread broadcast that medical men had the opinion that it was possible to take syphilitic matter from a child born of syphilitic parents and vaccinated to another by means of lymph. He did not believe it possible, or that any one could bring forward a single proof of such a thing. There would be no evidence to show such a possibility. There was no more reason for shutting the door against vaccination on that account, than for closing a druggist's shop in the country because, by possibility, the dispenser might mix some poison with the medicine he was dispensing. He thought it a great mistake that that had been introduced, because there were a number of persons, of honest good intention, who were under the impression that they might receive infection by vaccination. He knew of several who would have their children vaccinated with lymph taken from the cow, and those persons should have the power to exercise an option. There was one thing he would like to see introduced into Dr. Cameron's Bill, that, when a person was brought before a magistrate for refusing to have his child vaccinated, instead of being condemned in a fine and costs, the magistrate should have the power to order the child to be taken out and vaccinated. Fines were a mistake. If the individual sent to the public vaccinator insisted on having vaccine from the cow, he would have the power to insist upon it if Dr. Cameron's Bill became law.

Mr. CEELY said they would not be able to annihilate small-pox, and he defied any one to show that he had claimed such a result. From the experience he had had, no such thing could or ever would happen. He had no prejudice in favour of the lymph. His object was to ascertain a pathological fact: whether it was true, or likely to be true, that variol and vaccine had any affinity? His opinion was that vaccine, in fact, spontaneous disease of man, was modified by the cow. He had practice of it, and Mr. Badcock had done it more frequently than any man there will kingdom. Animal vaccination was now in operation at Brescia, where They had produced first from one cow. The operations! A more failed in Lyons had been simply the insertion of small-pox forms literally Dr. Chauveau into a little pouch. It had been taken out attempt what-altered, and transferred into the arms of children. He must not been occu-the manner in which he and others had been spoken of the very stirring disease was perfectly ridiculous. If he had time, he

natural disease of the cow and the disease created by his and others' operations; but he was afraid it would take too much time. With regard to animal vaccine, he was in favour of it for this reason, that he thought it was an advantage now to recur to the natural disease of the cow. He liked to see good arms, and, when the lymph was not satisfactory to him, he liked to have recourse to the cow. When arms were not so good as he desired, he preferred to do them again. Very few people asked him for the animal lymph, but they were mostly private persons. In his district, they could not now find cases of natural cow-pox, but, forty years ago, dairies were full of it. He was very fond of animal lymph, because it gave such good results. He thought, when a vaccinator could not select his humanised lymph, or found it in any way failing in perfect results, he ought to have recourse to the cow. He did not think he and other like advocates were chargeable with disseminating small-pox among the people by taking the inoculated lymph from the cow.

Dr. DRYSDALE inquired how often Mr. Ceely had vaccinated the cow with the pox.

Mr. CEELY said twice only; once by dry means and once by liquid.

Dr. CAMERON asked how often Dr. Badcock thought it necessary to pass it through the cow.

Dr. CEELY replied that once was enough.

Mr. CEELY said that he did not approve animal vaccination as an exclusive system. It was impossible. He liked to see good arms; and, when he found good arms, he took the lymph from them.

The CHAIRMAN; You like a supply of animal lymph to produce stock for subsequent arm-to-arm vaccination.

Mr. CEELY: Yes; it should be kept up by all means for that purpose, and be always at hand.

The CHAIRMAN said he was sure the meeting would have heard with great interest an explanation of Mr. Ceely's beautiful drawings; but Mr. Ceely had evidently felt, as he himself had felt, that they had better be discussed on a future occasion.

Dr. CORY, said the death-rate from small-pox was much greater after bad vaccination than after good. After good vaccination, it was almost infinitesimal. If by having animal vaccination they were running the danger of a larger death-rate, they should be very cautious before adopting it. Facts and experiments were, therefore, needed. Dr. Ballard said there were two things not mentioned in the epidemic statistics. The proportion of attacks in ordinary epidemics of small-pox among the unvaccinated was 35 per cent.; but the proportional deaths in the great epidemic was 77, which showed the virulence of the epidemic. In vaccinated people in hospitals, it was only 6 per cent. Another thing also to be noted was, that with that epidemic the deaths occurred in people over 15, which included people who had been vaccinated prior to the vaccination laws being improved. As to deterioration of lymph, he had been vaccinating three or four years at Surrey Chapel, and he had seen no deterioration whatever. Besides that, the lymph had been used there since 1866; it had been passed through every week, child by child; and the characters, as far as one could judge, were precisely now what they were then. He did not think, where they had a sufficient number of cases to select from, that they got any deterioration, however many arms it passed through, if they selected their cases well. Dr. Carpenter mentioned one of the proofs of deterioration of lymph, which he (Dr. Cory) did not think to the point; for they knew the spurious results which were not from vaccine vesicles at all, but from secondary lymph, where there was a hard crust—places produced by irritation from the matter put in. Mr. Ceely had been asked why it was more easy to propogate calf-lymph by inoculation calf to calf than to inoculate the cow with the small-pox matter. He did not know it was a reason, probably, for that. When they took the lymph from small-pox cases, it was taken from the general eruption on the child's hand and not from the mother-vesicle.

Medical Officer SIMONDS said he might first observe that, in entering the animal vaccination room he did not occur to him that he should be called upon to make other communications. Having been asked to do so by the Chairman, however, what they had a right to expect they should be glad to contribute his opinion on the subject. had not done so, the question he would ask with reference to this matter [illegible] —1838, 1839, and 1840, as the origin of cow-pox? All who were acquainted with the epidemic years, but were well aware that there were some erroneous [illegible] population. In particular held by Jenner with respect to the conveyance of [illegible] epidemic years, and the disease from one animal to another—from the horse [illegible] sum 445, actually [illegible] was in consequence of that conveyance that the [illegible] highest period in [illegible] with a disease that he called cow-pox. In the [illegible] as [illegible] to the Committee it was unnecessary for him to say that among [illegible] officers [illegible] he was acquainted with the lower animals, that [illegible] arm-to-arm [illegible] 1867, that [illegible] negatived. He was of opinion that Jenner [illegible] original arrangement [illegible] animal, and that it was of a repetitive nature, [illegible] very satisfactory [illegible] time, [illegible] vations, he was well aware, did not possess any particular quality. Jenner saw variolous diseases in the cow, one only of which was of the genuine kind. To his (Professor Simonds's) mind, it had always been a question of doubt as to whether the cow herself was to be regarded as the animal only liable to her own variola. He was not there to say she was not; but he was there to say that, after an experience of something like forty years, frequently as he had seen eruptive diseases in the skin of the cow, he had never been able to recognise any of these as variola. He was, therefore, inclined to think that the cows which Jenner originally saw were cows not with generated disease, as it were simply *sui generis*, but that they had become accidentally infected with small-pox matter in consequence of the great prevalence of small-pox at that particular time. If they looked to what was then being done, they would see that inoculation was practised throughout the length and breadth of the land, and that Jenner week by week inoculated children to protect them against natural small-pox. They saw then the prevalence of small-pox in the country, and they knew full well that small-pox inoculation was practised, and there came a great diffusion of disease and greater malignancy. Then, again, they looked to Jenner's own statements, that it was not one particular dairy or two dairies that were affected, but many cows in that district. The disease was easily communicated from one to another, and from the cows to the human subject. In this way they were dealing with a disease which was continuous; but they had not seen such cases lately or at all. They had looked for the disease year by year, and had failed to detect a natural small-pox. Therefore, he was of opinion that it was a kind of accidental conveyance from the human subject to the cow, the cow being susceptible of it when the exposure to small-pox variola was so great; and, that being so, they saw, to a certain extent, how they had succeeded since then by the inoculation of the cow with small-pox matter. Mr. Ceely and Mr. Badcock had told them that there was new lymph introduced which had one origin—the origin by inoculation of the cow with small-pox matter; and if these gentlemen of experience could detect no difference between the lymph which was introduced by Jenner and this lymph, he thought they now saw identically the two things. Then they came to the peculiarities of variola in other animals, which led to a question whether they had a genuine variola in the cow and doubtful in other animals. He could best answer that question by saying that, with the exception of the sheep, he knew of no other animal that was affected with variola. There was an equine variola which was produced from the cow, but he had never seen variola in the horse. He knew it had been stated of late that cases of that disease had occurred in France, but all he said was that our observations had been extensive and minute, and they had seen nothing approaching to it in a horse or a dog, or any other animal except the sheep. Variolous eruption he had seen in the sheep. The peculiarity with regard to the eruption in the sheep was so marked that he thought Mr. Ceely would remember that, as far back as 1847, when small-pox was prevalent for three or four years, the late Dr. Gregory of the Small-pox Hospital saw at the Veterinary Hospital some sheep that were affected. In his mind's eye, he could see Mr. Ceely now examining it, and he said, "If ever I saw small-pox in my life, I see it there". Mr. Ceely would bear him out now, that, as to the period of incubation of the disease in the sheep and the manner in which the inoculation of the sheep comported itself, it agreed exactly with the disease of small-pox out of the human subject. With reference to the probability of the disease being one which was communicated accidentally to the cow, and that the cow had no variola of her own, some few years ago, he had the opportunity of speaking with Mr. Simon; and, in talking the matter over with him, he asked him if it were not strange, if the cow were the subject of a variolous disease herself, they never saw anything of it in the male, and never heard of bull-pox? How were they to account for a variolous disease which only affected one of the sexes? They would be hooted down in the streets if they were to talk of bulls and steers being affected. No; it was nothing but the poor unfortunate cow alone. With respect to animal vaccination, it appeared to him that they could only use lymph of that kind to supplement the current lymph of the day; and he quite agreed with the remarks of Dr. Ballard that, if the Government saw its way to that lymph being obtained with full facility, they would be the first to introduce it. It might be that there had been some such cases occurring in the cow, which had been referred to, which were called natural cases, and that they were conveyed to the calf, and that the lymph was being used in that way. He was, however, strongly inclined to think that they would find there was inoculation of the bovine animals with small-pox matter. With regard to the susceptibility of bovine animals to infection with small-pox matter, there was a grave difficulty in producing the disease at the present time by simple inoculation. Although Mr. Mason and himself inoculated many cows, they did not succeed at all. Mr. Ceely succeeded two or three times. Mr. Badcock succeeded

several times, but he had had something like one hundred cows to inoculate, and he did it with six or seven punctures each. Nevertheless, he only succeeded five times, which showed the insusceptibility of the cow to take that disease. But one case was quite sufficient to show how it was communicated by one to the other. If they were to look to these things more closely than they had, they would see the series of calf-lymph had precisely the same origin and the same qualities as that of Jenner; and there were a great many practical difficulties in the way of carrying this new proposition out, for supplying lymph for the protection of the country against small-pox. He believed there would be no more protection than at present. He repudiated altogether the idea of syphilis being carried from one individual to another by lymph which was used. There might not be sufficient care in selection. Dr. Carpenter had alluded to lymph being taken from revaccinated persons, and had explained that it had failed because a spurious disease was communicated, the person not being so susceptible at that time. It was an important question; and if he could in any way promote the objects of this conference, of getting a supply of lymph from the calf, he should be exceedingly happy to do so. At the same time, his view was that they would not succeed in obtaining better lymph in many respects than that which was now current; but if it were only a means to supplement the present supply, and to meet an emergency like an epidemic of small-pox, that would be something to attain.

Dr. CRISP moved the adjournment of the debate. Those who advocated the system of animal vaccination knew nothing about it. They were special pleaders. He had conclusious to disprove what the Chairman had written in the report printed in the BRITISH MEDICAL JOURNAL; and on that account he was anxious that the discussion should be deferred, as he had much to say about the calf and its purity. They were told they must come to the calf for protection—the poor and humble calf. Now, they knew that the calf was anything but humble, for he would give a man a kick, and laugh at him afterwards. It was perfect nonsense and conceit. He would be glad if the meeting would give others an opportunity of exposing some of the errors which men in high authority had endeavoured to propagate.

Mr. BAKER said so much had been learned during the last two meetings, that there was evidently a great deal more to learn. He seconded the proposal for adjournment.

Dr. CAMERON said, with reference to Mr. Simonds' observation as to the origin of cow-pox and of small-pox, that gentleman seemed to have overlooked the experiments made by the Lyons Commission, which operated on a very large number of cows in two or three Government establishments. They would have fallen into precisely the same error as Mr. Simonds, had it not been for a mere accident. In the course of their experiments, they inoculated some animals with small-pox and they got no results. The animals were put aside, and, in the course of further experiments, they did it with vaccine matter. They had observed on one of these animals a slight eruption. They gave M. Chauveau information, and he did it to others and got some eruption. Taking the lymph contained in the pouches, he inoculated human beings and cows, and he found in human beings a vesicle in no wise different from the vaccine vesicle. Then Mr. Badcock said, how could it be said it was not the true thing? If they read Chauveau's book, they would know more about it. Chauveau vaccinated back from this vesicle to the cow, and he got the papule. He then got a vaccine eruption, which was a totally different thing. In that way, they had a very simple means of testing to what extent there was variola. Let them go to the innocent cow and revaccinate her, and say in what percentage they got a vaccine eruption and a variolous eruption. Professor McCall, having occasion to make experiments of that sort, said he got no results during a prevalence, which looked as if that matter was variolous matter. He did not want to dogmatise, but to know the fact. Dr. Ballard had told them what the Local Government Board had done; but, notwithstanding they seemed to have done everything, they had not reduced the death-rate of small-pox. The death-rate had not diminished in anything like the proportion of the vaccinations. The death-rate in cases of small-pox occurring in vaccinated persons was a point to which attention had not been directed. He found by Mr. Simon's book that in the original days the deaths were *nil*. Coming down to the first statistics, from 1830 to 1840, the death-rate was only one per cent. in vaccinated persons. Dr. Ballard, while denying the possibility of deterioration of vaccine lymph which had been transmitted in an unnatural soil for so many years, supported the opposite proposition of increased inactivity in small-pox matter occurring in an unvaccinated population; and, as he remarked, it was fed on blood. The small-pox epidemic of 1872 originated in a badly drained district, and fed on blood. It came on and was extremely fatal. On what ground could he support the extreme activity of small-pox where it was fed on blood and where it was fed on water? Dr. Ballard had told them he recommended public vaccinators to improve their stock of lymph from the animal. A very curious example occurred in Glasgow. A vaccinator there, getting a point of animal lymph, used it and improved his stock. He had no theory on the matter; but he had since got a fresh supply, there being some little hitch in the pedigree of the cases previously. There was a passage in Dr. Seaton's report as to the failures of animal lymph, but Dr. Seaton directly contradicted the reports of the persons engaged. He said that in Amsterdam there were ten punctures made. Did it not stand to reason that there would be some failures? The French Academy went into the matter, and they came to the conclusion that animal vaccine was not in the least behind the humanised vaccine. The commission reported that, taking the proportion of vesicles and punctures, the success of animal lymph was fully equal to that of humanised lymph. Dr. Warlomont's report claimed for the calf a higher percentage of success than was got in this country. If they looked at the Berlin report, it claimed success in every case with animal lymph. He did not say which of the results was right and which wrong, but he quite agreed with Dr. Seaton's report on the subject. It was all very well to say Dr. Seaton was not prejudiced: he did not wish to say he was, but he made equally positive assertions opposed to those for animal vaccination in the report of 1868, and these would be proved to be fallacious. Every one of Dr. Seaton's arguments would be overruled and shown to be incorrect; and the result of the matter was, that now he objected to calf-vaccination. In consequence of the great number of non-successes, the vaccinators after ten years claimed perfect equality in the matter of success; and, so far as security was concerned, they claimed in many cases a great deal more. The deterioration of humanised lymph was one of the reasons which induced the Belgian Government to institute calf-lymph. On the strength of six months' transmission and retransmission alternately between the calf and the human subject, the opinion of the Belgian Government was arrived at, and a commission was instituted. He expressed regret if he had said anything with regard to variolous lymph which had given offence to Mr. Ceely. No one could have had less intention of wishing to depreciate Mr. Ceely's labours in advance of the science of vaccination. With respect to Dr. Seaton's book, they must remember that it was possible to look at a subject from two sides.

The meeting was then adjourned till next Wednesday, at 4 o'clock, at the same place.

OUR TROOPS IN CABUL.

OUR correspondent at Cabul writes: Every exertion is being made by the authorities to provide shelter in the cantonment of Shahpur from the severe weather which is rapidly approaching. With the exception of the sick of the Divisional Field Hospital and some of the native sick, the troops are still in tents; and, as the nights are cold, with thick ice on any water about camp, the ink in the bottles in the tents being also frozen, it is time all should be under cover.

On November 11th, there was a moderate fall of snow, preceded by a dust-storm and a bitterly cold wind, giving us a taste of what we may expect. The mornings up to this have been simply perfection, and the day-time warm and genial; the thermometer in the shade rising to 65°, 70°, and 75°, which, to those liable to ague, is very trying, the difference of temperature between day and night being so great. Shahpur cantonment is a long range of one-storey mud buildings, forming three sides of an oblong, the fourth side being enclosed by the hills of Bemarie. These mud buildings form a running line of one mile and three-quarters, intersected at certain intervals by large gateways, with numerous rooms at either side which have been detailed for the regimental and staff officers. The rooms for the soldiers are protected on one side (the inside) by a wide verandah; on the outside, or that facing Cabul, by a wide ditch and thick wall. The rooms measure 15 feet wide, 20 feet high, and vary from 15 to 90 feet long, with good fireplaces, doors, and glazed windows; the latter constructed since taking over the buildings. The whole of the Europeans will be thus accommodated, and some native troops. At the base of the Bemarie hills, inside the enclosure, the 5th Ghoorkhas and 23rd Pioneers, whose duty it is to defend these hills, are constructing mud huts, and are making rapid progress towards completion.

The houses in Bala Hissa are rapidly being dismantled of timber, doors, windows, and everything likely to be useful in the construction of barracks and huts, and, when we have taken all we require, there will be very little left intact of the Ameer's palace or other buildings, where treachery and villany of all descriptions have been concocted. A more filthy den than the Bala Hissa cannot well be imagined—rooms literally full of human excreta, apparently collections of years; no attempt whatever at sanitation. It is fortunate, therefore, that it has not been occupied by our troops, where disease must have arisen by the very stirring up of such pollution.

At Shahpur, the water-supply at first appeared a great difficulty, as it came from the Cabul river, which passes through part of the city; but some excellent springs and wells have been discovered, and every care is observed in their preservation by walls being built round them and the establishment of "water-police". The sanitary arrangements of the cantonment are strictly observed; latrines outside for day use, and inside for night, on the dry-earth system. The Divisional Field Hospital is working most satisfactorily, and the sick are to be shifted into a portion of the barracks almost immediately, where the wards and offices have been constructed, plastered, and lime-washed with remarkable rapidity. This is one great point with Sir Frederick Roberts—first care of the sick and wounded, for whom he grants anything in reason recommended by his Principal Medical Officer.

Our communications with Peshawar are now open. Generals Gough and McPherson having shaken hands a few days ago, our letters from England reach us in one month, which is, to say the least of it, quick despatch. Though well supplied with all the necessaries of life, still a few of the luxuries will not be unacceptable; and, now that the road is open, we are in hopes of being able to obtain specially warm clothing, liquor, tobacco, and other articles. Mittens, Balaklava caps, socks, gloves, and such-like, would be most acceptable, to say nothing of Cardigan jackets. A convoy of sick and wounded left for Peshawar on the 14th November, among the number being Surgeon Duncan of the 23rd Pioneers, who was severely wounded in the chest at the action of Char-Asia on the 6th of October.

Since the last campaign in Afghanistan, so recently terminated, Surgeon-General Innes, Principal Medical Officer British Forces, has induced the Indian Government to make several concessions, which will be of great benefit to the sick and wounded and the service in general, as well as the comfort of medical officers.

The sick-carriage has been placed at the disposal and directly under the orders of the Principal Medical Officer.

The position of the Divisional Field Hospital, or section of it, on the line of march, is to be in the immediate rear of the column, in advance of all baggage.

One non-commissioned officer of Native Army per hundred dooliebearers, placed under the charge of the European transport-sergeant, is to superintend the sick transport and relieve medical officers of the physical labour and worry they experienced during the late campaign. This is a most important concession, and one for which all concerned will be grateful.

An allowance of thirty rupees *per mensem* has been granted to surgeons not entitled to charges for the keep of a horse, and twelve rupees *per mensem* to medical subordinates for the keep of a pony. How this grant has been refused so long is surprising, considering that, in a climate like this, medical officers and subordinates could not be expected to do their duty after a long march, when their hard work really begins, in looking after the sick.

A sanitary officer and secretary in one has been granted the Principal Medical Officer of each Division, which will allow the administrative officer time to consult with the officer commanding, answer the numerous personal questions from executive officers, and consider the many applications for supplies, etc.; heretofore, the Principal Medical Officer has had no assistance, and his labours never ceased.

Surgeon-Major R. Lewer, 9th Lancers, has been appointed Secretary to Deputy Surgeon-General Porter, Principal Medical Officer Cabul Field Force.

THE WAR IN ZULULAND.

The Transvaal Force.—Utrecht.—The Natal Sores.—Lessons from the Zulu Campaign.

SINCE I wrote last, the forts along the line of communication to Ulundi from the frontier have been abandoned; the sick and wounded they contained being sent to the base hospital at Ladysmith. Latterly, there has been an increase of sickness amongst the troops, consequent on the reaction after the excitement of the campaign, and on the advent of wet weather. There are a considerable number of invalids still for England, and the arrival of the transports is eagerly awaited. The Boers are still threatening; and it is deemed necessary to keep a military force in the Transvaal for a year or two.

The Transvaal force consists of three infantry regiments, one battery of artillery, one regiment of cavalry, and one company of engineers. The 94th and artillery are now marching, under Colonel Baker Russell, against Sekukuni. The field hospital with this force is in charge of Surgeon-Major Hector, whilst Surgeon Wallace has charge of the 94th. There is also a civil surgeon for duty with the artillery. Surgeon-Major Johnstone is senior medical officer at Prætoria. At Standerton, a small station on the main road to, and one hundred and twenty miles from, Prætoria, a field hospital is established for the troops there, consisting of the head-quarters and right wing of the 21st Regiment, one troop of cavalry, and a half battery of artillery. Surgeon-Major P. Smith is in charge, with Surgeon-Major Townshend for the 21st Regiment, and Surgeon Bushe for the artillery. This latter force will move to Prætoria immediately. At Wakkerstroom, seventy miles from Standerton down country, and on the main road to Sydenburg, a large camp is pitched for the King's Dragoon Guards, 80th Regiment, the left wing of the 21st Regiment, a half-battery of Royal Artillery, and one company of Royal Engineers, with Surgeon-Major Stafford as senior medical officer, Surgeon-Major N. Jennings, and two civil surgeons, Glanville and Boomer, for duty with the regiments. At Utrecht, which, being still unhealthy, is to be abolished as a station for troops, Surgeon-Major Comerford is in charge; and at Newcastle, still lower down the road, is Surgeon-Major Skene. This enumeration, with Surgeon-Major Cahir as senior medical officer of the whole, comprises all the surgeons employed with the Transvaal field force. A Stafford house surgeon is with Colonel Villiers near Luneburg.

Utrecht, although situated more than two thousand feet above the sea, in the midst of the mountains, is an unhealthy spot. It is placed on a slope, at the bottom of which is a quagmire three miles long; both slope and quagmire being surrounded on three sides by a continuous chain of hills. It is, of course, a Dutch settlement, and the Dutch here have no knowledge of, or regard for, sanitation. There are some beautiful sites close to the number of straggling huts called Utrecht, and near the fine Buffalo River in the open, which would have answered for a settlement. The result is that Utrecht will be abandoned. Newcastle is a prosperous town, and very healthy. The camp at Wakkerstroom is pitched on rising ground, two miles from the "town", but there is a marsh intervening. The camp, however, is placed to windward of the marsh, and no baneful influence is experienced. Standerton consists of about one dozen of houses occupied, as is the case with the other villages described, by storekeepers, with supplies for the Dutch farmers around. Each village has a small post-office; a residence for a "Landrôst", or local magistrate. There are also a few other houses occupied by contractors, the local doctor, and the missionaries; these, with one or two so-called hotels, comprise the entire place. But there is not a doctor for every village, although the Dutch farmers and their families are constantly ailing; and enterprising speculators taking caravans of patent and other medicines through the country, often realise one thousand per cent. of their original outlay. The Natal sore is of frequent occurrence, and is by no means confined to Natal. It occurs from poverty of the blood, and usually selects the extremities for its appearance. It has been known to attack the nose. It begins as a spot like a flea-bite, followed by a pimple, which bursts, and leaves a sore that becomes a corroding ulcer, extending from the centre, and amenable to no known local treatment, until the tone of the general health is so improved as to exert its influence on the sore. It is in reality a kind of plague-spot, without being contagious. It attacks every age alike, and is often seen as large as a crown-piece, surrounded by a reddish areola, gradually fading. When healing, it scabs over simultaneously, and, when the scab is detached, it is healed. Sometimes when the general health is slow to recover, the scab which has formed will remain adherent for a time, thus threatening a reopening of the sore from a failure of the vital powers to complete the healing process. Quinine is, of course, a most valuable remedy, conjoined with the administration of soups and wine. A wound or a mere scratch will degenerate into a Natal-sore when the physical condition of body predisposes to such an issue; but, as may be expected, these latter forms are never so chronic as the idiopathic sores.

The Zulu campaign being now finished, the failings exhibited may be discussed. There is no doubt that, at the outset of the campaign, the *personnel* of the hospitals was insufficient for the number of troops despatched to the colony. It is stated that this was owing to there not really being enough men of the Army Hospital Corps to send out. If so, the blame rests with the military, and not the medical authorities at home; for it is well known that a proposed and necessary increase of the corps last year was negatived by the military executive. In the field force regulations by Lord Chelmsford, it is laid down that regiments are to supply extra orderlies, thereby carrying us back to the effete mixed system, so opposed to all order and efficiency. The number of orderlies, one to every ten sick or wounded, might be sufficient in the abstract; but, in the case of a large field hospital, it is not so. There are the water-carts to be looked after, the custody of the patients' arms and kits, the rations to be drawn from the commissariat, the sanitary arrangements to be supervised, the washing to be done, the superintendence of the sick transport, the numerous clerical duties, the cooking for the hospital, the discipline of the men, and various other duties which are quite distinct from the actual attendance on, and ministrations to, the sick and

wounded, which those unacquainted with the routine of a large hospital in the field—military officers, for instance—could never understand. It is hoped that the scale of orderlies for field hospitals in future campaigns will be increased to ensure unity of medical attendance, and the avoidance of introducing amongst the Army Hospital Corps the usually ineffective set of worthless men for hospital duties usually sent from almost every line regiment as a matter of course.

The arrangements connected with the transport of the sick, and for the medical stores in the field, were made by the military authorities, and showed, as in many former instances, want of regard for the comfort of the sick and for the medical supplies. The ambulances were at first almost grudgingly given, and the animals could be taken at will by the transport department, provided they were not actually in use. The result was that, on every possible occasion, whenever transport oxen were wanted, the hospital ones were taken; and, when these were required again, the reply was, "There are none available for you". The drivers of the hospital transport were servants of the transport department; and this latter always declined either paying them, or, indeed, having anything to do with them, except remove their oxen from hospital employ, and themselves, also, whenever possible. The truth is, that the campaign suffered from a want of brains to guide it. The inspecting general of lines and communications was comfortably settled at Maritzburg, never once moving up the line, as Colonel Collen did in Ashantee so effectively and regularly, to observe irregularities and investigate complaints. There were certainly assistant adjutants-general from engineer and other corps, raw hands to such duties as were entrusted to them. Whilst hundreds of oxen were starving and dying along the line, the military authorities were haggling at Maritzburg with conductors about rates of pay and other trifles—mere trifles under the then circumstances. What could it signify whether a conductor of wagons was paid ten shillings or twelve shillings a day for a few months, if by his presence up country he could save hundreds of oxen from neglect and starvation? It seemed that, at Maritzburg especially, the case of the square peg and the round hole was fully exemplified. There is scarcely a doubt that the purely military officer is totally unfit, from his training, for the purely administrative departments. The transport officers, nearly all combatant, commenced by suspecting the natives, and breaking faith with them as regards pay and period of engagement. All colonists will agree that no system could have been worse. Hundreds of transport-drivers have deserted, solely and purely because the transport officers were too lazy to draw out pay-lists for the men long in arrears. It was impossible not to feel surprise at such carelessness, and at hearing afterwards other and quasi-clever but unjust reasons, assigned for not paying the transport-drivers, which, together with the neglect of the transport animals from a deficiency of conductors and drivers, was the chief cause of the delay and of the enormous cost of the war to the taxpayers at home, who should be made acquainted with the facts. Of course the medical transport shared the consequences of such inefficiency, but only in a minor way, as Surgeon-General Dr. Woolfryes most ably coped with the difficulties; and the result is that not a single complaint has been made to the authorities of any instance of neglect of the sick belonging to the second division of Wood's column. Let the first, or the inactive column, answer for itself.

The ordnance department, in so far as it should have furnished supplies to maintain full equipment for hospitals, was a failure. A great number of young officials represented it, and they were manifestly young to their duties. On the other hand, the commissariat department was very successful, and was of great assistance in providing for the wants of the sick and wounded. The medical supplies, medicines, instruments, etc., sent out from Whitehall Yard were abundant, and reflect great credit on the medical authorities there. Indeed, the recently acquired liberty of action by the medical department in these matters will go a long way to bring the department into a condition of complete efficiency and usefulness to the army, in spite of the vain efforts to reintroduce the regimental system. The crown of the edifice now so laboriously constructed by our esteemed, able, and persevering chief will be his obtainment of the principle of selection for the administrative appointments, a failure in which is the only danger that threatens the department, and so far it does.

DUNMOW RURAL DISTRICT.—The death-rate of this district during 1878 was satisfactorily low (14.6 per 1,000). Of the total number of 288 deaths, 143, or as nearly as possible a half, were in persons aged sixty years and upward. Zymotic diseases caused 23 deaths, 5 of these being from enteric fever, which is hardly reassuring. Ordinary sanitary work appears to be well carried out in the district, and the particulars given of a detailed survey show that it is well looked after. The water-supply of many of the villages requires improvement, however, and the dilapidated state of some of the cottages should receive early attention.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Infirmary for Children.—Medical Instruction.—Clinical Teaching at the Royal Infirmary. Death under Chloroform.

WITH regard to hospital appointments, there has latterly been a dearth of change; but there is now a vacancy at the Infirmary for Children, owing to the resignation of Dr. Alfred Stephens, senior physician and founder of the institution. The well-merited promotion of Dr. James Armstrong, senior assistant medical officer, at the coming election, is practically assured, as no one contests his claims.

At the Medical Institution, the fortnightly meetings have been replete with interest since the reopening early in October. A well-selected series of cases and pathological specimens of unusual importance, with a long discussion on the "causes and prevention of puerperal mortality", have engaged the attention of members; while at the meeting on Thursday, December 4th, Mr. Rawdon, Surgeon to the Infirmary for Children, presented some cases of cleft palate and hare-lip which had been closed most admirably and successfully by himself, and were briefly but ably referred to in a paper detailing the process which he has adopted (chiefly from the directions of Mr. Thomas Smith), and in which he has acquired a leading experience in Liverpool.

In the matter of ethics and politics, an attempt has been made at the Medical Institution to secure the support of that body in favour of provident dispensaries. That attempt has failed, as the Institution very properly withholds the *ægis* of its protection or official countenance from schemes among which there may at any time be found organisations of unquestionable philanthropy and well-earned professional remuneration side by side with business ventures characterised by moral obliquity no less than by enterprise. The institution equally abstains from condemnation, which, while deservedly aimed at questionable undertakings, may improperly depreciate those of unsullied repute. It is obvious that the said "aloofness" is the only judicial and judicious course.

At the Royal Infirmary, the clinical teaching is being pursued with great energy and success. During the past summer, the lecturers were Dr. Glynn (on Clinical Medicine and the Principles and Rudiments of Physical Diagnosis and of Therapeutics) and Mr. Reginald Harrison (who chose for his topic some of the diseases of the Urinary Tract), who met their classes weekly in the operating-theatre, and whose discourses were attended with great punctuality not only by the students, but by practitioners in the town. During the three months now drawing to a close, the weekly lectures have been conducted by Dr. Davidson (on Clinical Medicine) and by Mr. W. Mitchell Banks (on Clinical Surgery). The latter gentleman has followed the method of collecting every Wednesday a series of cases illustrating diagnosis and treatment both in major and in minor surgery; cases in progress, such as Listerian dressings, performed before the class; and every now and then a major operation, with an account of the case before and its probable future.

At the surgical clinical lecture on Wednesday, December 3rd, during the removal of a small piece of bone, a man died under chloroform. He had previously had this anæsthetic, and borne it well; while he had before that had ether, and submitted to it but badly—in fact, so badly and with the onset of such struggling and asphyxia as to lead to a preference for chloroform in the present instance. Almost invariably, however, ether is employed at the Royal Infirmary, chloroform being but rarely substituted, except for reasons such as prevailed in the present case. This unfortunate event was the subject of an inquest on Saturday, December 6th, at which Mr. Clarke Aspinall, the borough coroner, presided, and at which the undoubtedly inevitable nature of the event was duly recognised and recorded by the jury. It is many years since a similar accident occurred at the Liverpool Royal Infirmary.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 14th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, December 19th, 1879.

STAFFORDSHIRE BRANCH: ANNUAL MEETING.

THE sixth annual meeting of this Branch was held on Thursday, October 30th, 1879, at the George Hotel, Walsall; twenty-three members being present.

Dr. Millington, in the absence of the President, introduced the President-elect, Dr. J. H. TYLECOTE, who then took the chair.

Vote of Thanks.—Dr. TOTHERICK proposed that the best thanks of this meeting be given to the retiring President, Mr. F. E. Weston, for his services during the past year. This was seconded by Mr. FOLKER, and carried unanimously.

New Members.—The following gentlemen were elected members of the Branch: Mr. W. Wilson, Birmingham; Dr. James Gordon, Walsall; Dr. Carter, Birmingham; Mr. B. H. Herbert, Uttoxeter; Mr. H. Langley Webb, Cheadle.

President's Address.—The President delivered an address "On the Geographical Distribution of Disease".

Dr. MILLINGTON proposed that a cordial vote of thanks be given to Dr. Tylecote for the admirable and instructive address which he had just read. It was carried with applause.

Report of Council.—Mr. VINCENT JACKSON read the annual report, as follows.

"Your Council has to report that during the year which has passed three ordinary meetings of the Staffordshire Branch have been held. At Stoke, *éclat* was given to the meeting by the reading of valuable papers, and the exhibition of Dr. Bigelow's instruments for crushing and removing, by one operation, stone from the bladder; also by an exhibit of very valuable surgical and other instruments. At Stafford, a discussion upon the general question of Branch representatives in the Committee of Council resulted in the following resolution being unanimously passed: 'That this meeting is of opinion that it is expedient that representatives of Branches in the Committee of Council should afford due information to their Branches of the proceedings of the Committee of Council, and that it is injurious to the Association at large that the minutes of the Committee of Council furnished to each member should be directed to be held as private and confidential.' To this important resolution, no reply has been received from the Committee of Council. At Wolverhampton, the meeting, which will always be regarded as an historical one, and to which the members of the Shropshire and Mid-Wales Branch had been invited to attend, was commemorative of the gift of the Bell Medical Library and a sum of one thousand pounds, the interest of which is to be yearly expended in the purchase of valuable medical and surgical books of reference for the use of the medical profession of the town and district. The demonstration of the application of the plaster-of-Paris jacket, and of Cocking's poroplastic corset, by Dr. T. J. Walker of Peterborough and Mr. Coxeter, surgical instrument maker, of London, was valuable and much appreciated. Your Council consider that the combined meetings of Branches—two or more—is a movement which should be encouraged, for whilst it must add much to their stability, usefulness, and popularity, it must also tend to awaken a renewal of personal energy, and to excite a spirit of healthy rivalry. It is satisfactory to your Council to observe that this plan has lately been adopted by other Branches.

"The names of the contributors to the work of the year are the following: Mr. J. Alcock, Mr. Reginald Harrison (Liverpool), Mr. J. Hartill, Mr. R. Garner, Dr. Joseph Hunt, Mr. Spanton, Mr. Wolfenden, Mr. L. Tait, Dr. Fernie, Mr. Folker, Dr. Millington, Mr. Vincent Jackson, Dr. Walker (Peterborough), and Mr. Coxeter (London); and the thanks of your Council are accorded to these gentlemen.

"The number of members is one hundred and twenty-four, eleven new ones having joined since the last annual gathering. The prosperity of the Branch is unabated, and from a financial, professional, and scientific point of view it is a credit to the Association and the county."

The adoption of the report was moved by Dr. JOSEPH HUNT, seconded by Mr. G. SHARP, and carried.

Mr. LAWSON TAIT proposed, and Mr. FOLKER seconded, that the attention of the Committee of Council of the Association be respectfully drawn to the resolution referred to in the report, and which was unanimously passed at the ordinary meeting of the Branch held at Stafford last February, and to which no answer has been received.

Financial Statement.—Mr. J. G. U. WEST read the statement of accounts for the past year, which showed a balance of £13 5s. 6d.

Next Annual Meeting.—Mr. GRAY proposed that the next annual meeting be held at Stoke. This was seconded by Dr. G. LOWE, and agreed to.

Election of Officers for 1879-80.—The following were elected. *President-elect:* W. H. Folker, Esq. *Vice-Presidents:* J. T. Arlidge, M.D.; E. F. Weston, Esq. *Honorary Secretaries:* Vincent Jackson, Esq.; J. G. U. West, Esq. *Council:* Henry Day, M.D.; E. Fernie, M.D.; J. Gailey, M.D.; F. J. Gray, Esq.; J. T. Hartill, Esq.; Joseph Hunt, M.D.; H. H. Morgan, Esq.; C. Orton, Esq.; G. G. Sharp, Esq.; J. Y. Totherick, M.D.; J. W. Wolfenden, Esq.; J. K. Wynne, Esq. *Representatives in the Council of the Association:* J. Alcock, Esq.; H. Day, M.D.; W. H. Folker, Esq.; W. G. Lowe, M.D.; W. Millington, M.D.; D. H. Monckton, M.D.; W. D. Spanton, Esq.; Moses Taylor, Esq.

Invitations to Annual Dinners.—Dr. TOTHERICK proposed: "That when the funds of the Branch will allow, the President, with the approval of the Council, shall be empowered to invite the chief magistrate and any other prominent individuals residing in the town where the annual meeting is to be held, to the dinner." This was seconded by Mr. J. HARTILL, and carried unanimously.

Votes of Thanks were passed to the secretaries and auditor.

Dinner.—The members dined together at the close of the meeting.

SOUTH OF IRELAND BRANCH: ANNUAL MEETING.

THE fourth annual meeting of this Branch was held at the Royal Cork Institute on Saturday, November 8th, at 4 P.M.

President.—The chair was taken by the President, Dr. EAMES, who delivered an address, and then vacated the chair in favour of Dr. D. B. O'FLYNN, who has been appointed President for the ensuing year.

Vote of Thanks.—A warm vote of thanks, proposed by Dr. O'Connor, President of the British Medical Association, seconded by Dr. O'Reilly of Lismore, and carried unanimously, was tendered to Dr. Eames for his dignified conduct in the chair during the past year.

The Annual Report of Council was read.

Meetings of the Branch.—It was resolved that the meetings of the Branch be held monthly instead of quarterly as heretofore.

New Members.—Seven new members were proposed.

Election of Officers.—The following were elected. *President:* D. B. O'Flynn, M.D. *President-elect:* N. J. Hobart, M.D. *Vice-Presidents:* R. O'Reilly, L.K.Q.C.P., Lismore; J. A. Eames, M.D. *Council:* Ringrose Atkins, M.D.; R. Burke, M.D.; H. Corby, M.D.; W. J. Cummins, M.D.; J. G. Curtis, L.R.C.P.Ed.; D. Donovan, M.D.; J. A. Eames, M.D.; N. Grattan, L.R.C.P.Ed.; C. A. Harvey, M.D.; J. R. Hayes, M.D.; N. J. Hobart, M.D.; H. M. Jones, M.D.; A. O'Connor, M.D.; R. O'Reilly, L.K.Q.C.P.; J. O'N. Sisk, M.D.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

A MEETING of this District was held at the Bow and Bromley Institute on November 20th; MARK LONG, M.D., in the Chair.

Communications.—The following communications were made.

1. A Case of Perforation of Bowel and Wall of the Body by a Spike of Grass. The patient, a boy, was exhibited by Mr. R. H. S. CARPENTER. On September 1st, 1879, he had been amusing himself putting ears of grass into his mouth, when all at once one slipped down. Five or six days afterwards, he complained of pain in the left side, and of inability to raise his left arm to a horizontal position. The pain continued; and on September 14th there was found, between the ninth and tenth ribs on the left side, near the angles, an abscess with the stem-end of the ear of grass just protruding. It was extracted the same evening, fourteen days after having been swallowed. There had been no constitutional disturbance.

2. Mr. R. W. PARKER gave a brief description of the Treatment of Spinal Disease by Plaster-of-Paris, and then put up two cases, one a case of cervical disease requiring the use of the jury-mast.

3. Dr. H. G. ORTLEAR read a paper on the Treatment of Phthisis, the discussion of which was postponed till next meeting.

CORRESPONDENCE.

"ESSAYS WANTED."

SIR,—In your last issue appears a paragraph stating that no essays have been sent in either for the College Triennial Prize or the Jacksonian Prize of the Royal College of Surgeons, and that no award of the former has been made for twenty years.

A partial explanation of this deficiency of candidates is given by the fact, that the College allows no persons except its own members to compete for these prizes. Opinions may differ as to whether the system of prize-essays is that best calculated to elicit good scientific work; but it cannot surely be doubted that the chance of getting good work is greater in proportion as the area of competition is enlarged. One instance is better than any amount of speculation. I know most intimately a member of the medical profession who was very desirous a few years ago of competing for one of these prizes, but was prevented by not possessing the qualification of membership. His essay may not have turned out to be of much account, but would have prevented the unsatisfactory announcement of "*no candidates*". This individual does not desire to be named, but signs himself merely

NOT A MEMBER OF THE COLLEGE OF SURGEONS.

December 20th, 1879.

*** We have reason to know that the writer was a most highly accomplished investigator, and the essay likely to have been valuable.

STATISTICS OF THE GLASGOW INFIRMARY.

SIR,—In your issue of the 13th current, reference is made to some alleged statistics from Glasgow, on which please excuse a remark or two. In the first place, it looks not well that such are accepted from a layman, whose ignorance of such matters has already been exposed before the Managers of the Royal Infirmary, and especially when a more mature and accurate account could easily be obtained from the surgeons. Secondly, the figures given are based on a false statement; viz., that "each surgeon had one day in succession, in which he received every patient that came for admission on that day, so that there could be no selection"; and which said layman knows not to be correct. And, thirdly, the numbers given refer to cases, nine-tenths of which had no antiseptic of any kind used in their treatment, as they did not admit of the use of such—a fact which will be at once admitted even by those who aver that they adopt the antiseptic system; and nearly all the burns under all the surgeons are treated by carbolic acid and oil. Very lately, a fair comparison was demanded of the managers, case against case of a similar kind; but it has not yet been accorded. If the so-called "antiseptic system" requires such bolstering, it rests, as I believe it does, on a very frail foundation. More may be said on this subject soon.—I am yours faithfully, JAMES MORTON, M.D.

Glasgow, December 15th, 1879.

*** In giving the figures at the International Congress at Amsterdam, Mr. McEwen, the President of the Glasgow Infirmary, mentioned that they had been drawn out by the Medical Superintendent and submitted to the surgeons of the Infirmary.

GUY'S HOSPITAL.

SIR,—I have read with much surprise the letter signed by a "Member of the Staff", relative to the nursing question at Guy's Hospital. The Lady Superintendent, whom the "Member of the Staff" calls "*Matron*", is Miss Burt, who has held a similar position in the Leicester Infirmary for the last five years, and whose leaving was much regretted by those who knew her, and by all the members of the staff. Miss Burt thoroughly reformed the system of nursing at Leicester, with the approval and co-operation of the staff. The plan of having a *lady* in each large ward establishes an admirable tone throughout the hospital; and, inasmuch as the patients are nursed with the utmost care and devotion, the staff, instead of "protesting" against it as at Guy's Hospital, were most grateful to Miss Burt for introducing such valuable reforms. On her leaving a few months ago, over £100 was subscribed by friends of the Infirmary, amongst whom was included every member of the medical and surgical staff, as a testimonial to her energy, skill, and administrative power in establishing a system of nursing in the Leicester Infirmary equal to any in the kingdom. This system is, I believe, in all its main features identical with that which has been so successfully carried out for many years at King's College Hospital. Under this plan, the staff of the Leicester Infirmary has lost no power or influence, and I do not think such an idea has ever crossed the mind of any of its members.

The staff at Guy's Hospital may be assured that Miss Burt will work with the single aim of conducing to the comfort and well-being of the patients, and the general improvement of the condition of the wards.—I am, sir, yours faithfully,

C. H. MARRIOTT, M.D.Lond., F.R.C.S. (by Exam.),
Surgeon to the Leicester Infirmary.

Welford Place, Leicester, December 15th, 1879.

THE VICTORIA CROSS.

SIR,—I find that at the Glasgow and Aberdeen Medical Graduates' annual dinner, when responding, on the spur of the moment, for the Army, I fell into the error of naming, as the hero of my narration, Dr. Sylvester, instead of Dr. Hale of the same division (Light). Dr. Sylvester very properly corrects me, and I leave it, with his letter to me, in your hands, to judge whether further correction is necessary as regards the very kind notice you take of the dinner in last week's JOURNAL. I express my regret that my error should thus give you trouble.—I am, sir, yours truly, THOMAS LIGERTWOOD.

Royal Hospital, Chelsea, S.W., December 16th, 1879.

Copy of Letter from Dr. Sylvester.

7, Bessborough Gardens, Pimlico, Saturday, December 13th, 1879.

Dear Dr. Ligertwood,—I have read your speech at the dinner of the Aberdeen and Glasgow University Club, reported in to-day's number of the BRITISH MEDICAL JOURNAL, and your reference to me and how I won the Victoria Cross. I am quite sure you did not intentionally exaggerate; but you have unwittingly made me a hero indeed, and an actor in an episode which, however, never transpired. It is true that, on the final assault on the Redan, I was in the advanced trenches, assisting the wounded to the best of my powers under a heavy fire; and afterwards, when our troops were beaten back, at the request of Sergeant Shields, V.C., I accompanied him to the open to give surgical aid to the adjutant of our regiment, the 23rd Royal Welsh Fusiliers, who was lying mortally wounded in a spot somewhat sheltered from the grape and roundshot with which the enemy were plentifully dosing us after our compulsory retirement. But the romantic story you related, how I personally withstood the whole Russian force in my efforts to protect him, is, I can assure you, fictitious. Perhaps you were thinking at the time of the assistant-surgeon of the 7th Fusiliers, whose name I have unhappily forgotten, but who was the first medical officer upon whom the Cross was conferred. He indeed did rally the men of his regiment, who, on some sudden onslaught of the Russians—a night surprise—were retiring precipitately. Drawing his sword, he rallied them, led them to the encounter, and drove the enemy from the entrenchment.

I think it would be well if the mistake you fell into were corrected, even though my reputation for conspicuous gallantry is somewhat dimmed.—Believe me, dear Dr. Ligertwood, yours sincerely,

HENRY T. SYLVESTER.

THE IDENTITY OF COW-POX AND SMALL-POX.

SIR,—At the vaccination conference on the 6th instant, objections were made by numerous speakers to the theory which has up till recently received very general acceptance in this country; viz., that cow-pox is a product of the same virus as produces small-pox in man. So far as I am aware, this opposition to one of Jenner's fundamental doctrines is based almost exclusively upon the results of the experiments of M. Chauveau of Lyons, whose arguments have been so ably combated by Dr. Seaton in the thirtieth section of his famous *Handbook of Vaccination*. Into the merits of the controversy I do not propose to enter, except to say that the Government, in repeating Mr. Ceely's and Mr. Badcock's experiments in inoculating cows with the matter of small-pox, would appear to regard the question as still an open one. I should wish, however, as this matter will probably come up for further discussion at the adjourned conference, to rescue from its present obscurity a fact which appears to me to be a very strong argument in favour of cow-pox being actually, as Jenner himself styled it, the variolæ vaccina.

In the year 1840, eight milch cows and two sturks were turned to graze during the daytime in a meadow at Oakley, in the Vale of Aylesbury, in which the clothes and bedding of a person who had died of malignant variola had previously been exposed almost constantly night and day for a week, and in which they were still always exposed at night, and not always removed in the morning before the readmission of the animals. On one occasion, at least, the cows were observed in the midst of the bed-flock, licking it up. Within twelve or fourteen

days of their admission to the meadow, five of the milch cows and one sturk exhibited simultaneously, or almost simultaneously, well-marked cow-pox. It was most clearly ascertained that the animals, which belonged to the place and had not been brought in from elsewhere, were in good health at the time of their admission to the meadow; and that there was no vaccine disease at the time anywhere in the vale. Mr. Ceely, who records the case in vol. x of the *Transactions of the Provincial Medical and Surgical Association* (p. 211-225), argues at some length in favour of cow-pox being induced in these animals by *variolous effluvia;* and the period of attack evidently corresponds entirely with what might be anticipated if this were the common cause of the outbreak. The case is certainly a very striking and peculiar one, and this must be my excuse for drawing the attention of your readers to it.—I am, etc.,

December 6th, 1879. FRITHIOF.

THE CANAL BOATS ACT, 1877.

SIR,—A year has now nearly elapsed since the above-named Act came into force over all the country. Perhaps the experience of an official whose duty during this period included the supervision of four hundred and ninety-two canal boats may not be uninteresting to your readers. I find that I have succeeded in effecting registration in only two instances; and I believe my metropolitan *confrères* have been scarcely, if at all, more fortunate. Certainly many of the larger boat-owners are willing and anxious to comply with the law; but their efforts are usually thwarted by the reluctance of the boatmen themselves to have registration effected, since their children are at once brought under the ken and domination of the School Board. Furthermore, the Act is admirably adapted for facilitating the escape of any offender against it. Suppose, for instance, I find a boat either uncertificated, unsanitary from any cause, or otherwise not complying with the Act, I have no power to detain it while I can procure a summons; and it "vanishes away and is no more seen" before the summons can be served. Then the regulations of the Local Government Board permit a choice of registration authority; and many boats that I know of have not yet made up their minds which to choose, nor will they while they have any children on board. At present, the Act is entirely a failure, and must be so until the hands of those administering it are strengthened by further legislative enactments.—I am yours obediently,

BENJAMIN BROWNING, R.N., S.Sc. Cert. Edinburgh,
Medical Officer of Health to the Vestry of Rotherhithe.

December 1879.

HOSPITAL ABUSE.

SIR,—The Secretaries of the Bradford Medico-Ethical Society would feel obliged to those of your readers who are well versed in the administrative department of any general or special hospital, and who will be kind enough to inform them whether they can suggest any check in the giving of medical or surgical relief to those who are able to pay for private medical or surgical advice. The abuse of charities in this way is recognised throughout the kingdom, and we are anxious to hear of any remedy whereby this great abuse may be minimised.—We remain yours faithfully,

JOHN ARTHUR, } *Hon. Secs.*
JOHN DUNLOP, }

Bradford Medico-Ethical Society, 35, Manor Row,
Bradford, December 15th, 1879.

A QUACK DOCTOR AND HIS PATIENTS.—On December 2nd, at the Halifax Borough Court, Joseph Carney of Prussia Street, Lady Lane, Leeds, *alias* "Professor Joseph", was committed for trial on three charges of obtaining money by false pretences. In the first case, he had called at the house of Thomas Sutcliffe, Halifax, and undertaken to cure the daughter of blindness. He had the physic with him, which he said was 7s. 6d. per ounce, and made up two bottles of medicine, for which he received £3. He wrote his address as "Professor Joseph, residence, Botanic Dispensary, Knott Mill, Manchester". Detective Harland went over to Manchester, but could find no such person or place. He also inquired into the truth of four testimonials, all said to have been given by Halifax people who had been cured of ailments, but could find none of the persons mentioned. Mr. George Jarmain, the borough analyst, proved that one medicine, to be used as eye vapour, consisted of aloes and chalk in solution; and the other, for internal application, of aloes alone. In other cases, the prisoner had supplied similar medicines to cure a "catch" in the throat and deafness. In one instance, he gave an address at Bradford, but Detective Harland found no such address. One witness had paid the prisoner £3 18s., and another 30s. Mr. Jarmain said the aloes mixture cost 1½d. a pint, and the chalk 1d. an ounce. Prisoner was admitted to bail.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

TYPHOID FEVER AND POLLUTED WATER.

ANOTHER epidemic, and that of the most serious proportions, must now be added to the long list of outbreaks of enteric fever due to polluted water. The town of Swansea, which has since 1873 and 1874 been comparatively very free from fever of a fatal type, suddenly began, in August and September last, to have, instead of one death a month, a fatal case of fever nearly every day, the number being in August thirty-one, and in September twenty-seven. Early in August, the officer of health received information from several practitioners of a great number of cases of fever in their practice; and at a meeting of medical men, held on the 18th August, 352 cases were reported, 314 of which had come under treatment during the previous fortnight. During the several weeks of August, 96, 183, 179, and 79 cases came under observation in the town; and during September, 54 more occurred. Adding 50 more cases for omitted returns, it appears that a total of no fewer than about 460 cases occurred in the borough during August and September, 63 of these being fatal. Of the fatal cases, 34 occurred in males and 29 in females, at the following ages: between one and five years, 7; five to fifteen, 16; fifteen to twenty-five, 25; twenty-five to sixty, 15.

As to the causation of the epidemic, there seems little doubt that the water-supply was the means of propagating the disease, though Mr. Davies is admirably cautious in dealing with the question. It appears, however, that the disease was almost entirely limited to the urban sanitary district, the rural district being nearly free from it; and those districts in the borough which were outside the area of water-supply were similarly exempt. Mr. Davies was unable to obtain any actual proof of specific contamination of the water; but it appears that the reservoir which at that time supplied the town with water in its natural state (unfiltered) was partly fed by a stream in very unwholesome relations with an ill-kept farm. The rainfall during the two months preceding the outbreak was very heavy; from June 11th to July 9th, 12.06 inches, and from July 9th to August 6th, 9.77 inches, of rain having fallen, the amount in the week ended August 6th being as much as 2.8 inches. On Saturday, August 2nd, a thunderstorm of great severity broke over the town, and was accompanied by a heavy fall of rain, amounting to 0.35 inch, which must have fallen in a few hours. Mr. Davies says that his visit to the gathering-ground of the reservoir on August 21st convinced him that there were conditions at the farm above spoken of, which rendered the pollution of the stream quite possible, and even probable, with the heavy rainfall which the district had experienced. There was no sickness of any kind at this farm at the time of Mr. Davies' visit, but the admission that there had been cases of fever at the house four months previously, coupled with the entire neglect of sanitary precautions, brings prominently forward the possibilities of specific pollution of the stream. Further than this, Mr. Davies has not been able to carry the investigation, which is much to be regretted, as it would have been eminently desirable to have the reasons of this very large epidemic thoroughly cleared up. But looking to the short duration of the outbreak, to the fact that it could not be connected either with the sewerage or the milk-supply, and to its diffusion all over the borough, there can be no sort of doubt that the water-supply was the cause of the mischief.

The same heavy rainfall seems to have had the effect of commencing an outbreak of typhoid fever at Alcester, in Warwickshire. On the evening of Sunday, August 17th, portions of the town were inundated by a flood so severe that the water rose to a considerable height on the ground floor of numerous dwellings, and completely covered several wells and privy ashpits. Part of the houses in the town are supplied with water by a company, and in not a single instance where it was satisfactorily shown that the company's water had been regularly used, did a case of typhoid fever occur; but amongst the houses still supplied by the shallow and polluted subsoil wells of the town (no doubt additionally polluted during the inundation by the washings of foul matters from privy-middens), eleven cases broke out during the last fortnight of August; the disease assuming extended proportions during the last week of that month. These cases were distributed all over the town, and were not confined to any special locality. Having regard to these acts, Mr. Fosbroke, the medical officer of health, in conjunction with the medical practitioners of Alcester, is led to the conclusion (which, indeed, seems irresistible) that the polluted condition of the wells mainly caused the outbreak, and that the floods assisted in disseminating the disease. In his report on the Evesham Urban Sanitary District for last quarter,

moreover, Mr. Fosbroke says that typhoid fever has assumed serious proportions in the borough during the past few months. From the beginning of the year to October 14th, thirty-six cases of that disease had occurred, three of which had proved fatal. The outbreak commenced about the end of June, attained its greatest height towards the end of July, and since then has gradually subsided. During the months of June, July, and August, Mr. Fosbroke registered no fewer than 15.85 inches of rain, and it is not, therefore, surprising that additional organic matter should find its way into the already polluted wells which form the water-supply of the borough. Mr. Fosbroke has little doubt, after careful examination of the circumstances of the case, that the source of the evil is to be sought in this polluted water; and in one locality there was particular evidence that such was the case.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ABERDEEN.—The annual report of Dr. Ogston for 1878 consists exclusively of statistics, with comments upon them; and it is not, therefore, possible to say much about it. The general death-rate for the year was 22.4, that from zymotic diseases 4.5, and that of infants under five years of age 8.9, per 1,000. Of the zymotic diseases, whooping-cough was most frequent and fatal in May and June, scarlatina in February and October, diphtheria in November, croup in December, diarrhœa in August, typhus in March, and enteric fever in February. The deaths from these several diseases in the order named were 123, 64, 44, 23, 60, 38, and 30. During the year, a total of 988 cases of infectious disease were reported to the sanitary staff by the medical officers of public medical institutions and private practitioners.

BERKSHIRE.—The combined district in Berkshire, under the supervision of Dr. Woodforde, is a very large one—too large almost for any medical officer of health of less exceptional activity than Dr. Woodforde. Its area is 375,534 acres (nearly 600 square miles) and its population 137,650. Dr. Woodforde's reports have always been of an interesting kind, and to his last he prefaces a valuable summary of the results to the public health of sanitary improvement, as tested by the mortality returns of the five years during which he has been in office. Comparing these statistics with those for the previous ten years, the actual number of deaths from all causes is found to have remained nearly stationary, notwithstanding the large estimated increase in population, and in zymotic diseases generally the diminution in the mortality has been rather more than a sixth; while in continued (mainly "enteric") fever, the decrease is considerably over 50 per cent. Equally distinct (though not to the same extent) is the diminution in the fatality of phthisis, the mean yearly deaths from which, estimated according to the increase in population, have fallen by a sixth during the period under review. On the other hand, the deaths from diphtheria and diarrhœa have remained at nearly the same rate as before; while there has been a distinct increase in the mortality from lung-diseases, due mainly to the prevalence of acute inflammatory affections of these organs, in the years 1875 and 1878. An equally distinct lessening is, moreover, shown in the mean yearly number of deaths at each age up to sixty-five for the five years period, and it is not until old age is attained that there is any increase of mortality. Further, even during the year 1878, in which the deaths were much above the average in childhood and after maturity, those occurring between fifteen and forty-five were fewer by a fifth than in the period from sixty to seventy. In the five years embraced in the review, the mean yearly death-rate from all causes has fallen from 19.2 to 18 per 1,000 living; the rate for zymotic diseases has decreased from 2.44 to 1.42 per 1,000, the percentage proportion borne by deaths in this class to the total mortality being barely 10.0 in the second, as compared with 12.7 in the former period. This improvement is, however, unequally divided among the various districts included in the combination: in urban areas, the evil effects of bad sanitary surroundings being intensified by the aggregation of dwellings and population to a degree that does not obtain in the scattered cottages of the rural districts. These comparative statistics are amongst the most useful evidences of sanitary progress, as they show, to a far higher degree than those for a single year can do, the improving effects of drainage, pure water-supply, and the removal of nuisances. Coming more particularly to the statistics of 1878, which are dealt with at the end of the report in a series of elaborate tables, we find that, during the year, a total of 2,536 deaths were registered, giving a mean death-rate of 17.8 per 1,000, the rates varying in the different districts, from 14.8 in the rural district of Easthampstead, to 22.3 in the urban district of Wallingford. Altogether, 381 deaths occurred from Class I or zymotic diseases, 12 of these being from small-pox, 23 from measles, 66 from scarlatina, 27 from diphtheria, 60 from whooping-cough, 28 from enteric fever, and 81 from diarrhœa. A great many outbreaks of small-pox are reported, the infection having in the majority of instances been imported from London. Through Dr. Woodforde's prompt action, however, these outbreaks were nearly all nipped in the bud, and everything was done in the absence of hospital accommodation to check the spread of the disease. Scarlatina was epidemic during the year at Abingdon, and in several villages there were severe local outbreaks. Much of the enteric fever seems to have have been due to polluted water; and, in some interesting cases recorded by Dr. Woodforde, no previous history of infection could be made out. The diphtheria chiefly occurred in places that were damp, and where the air was stagnant through the close proximity of trees to the houses. Sanitary works of the larger kind seem to be progressing slowly in the district, but the ordinary work of nuisance repression is being steadily and actively carried out. Dr. Woodforde may fairly be congratulated upon the amount of work already accomplished in his district, and upon the quality of his reports, which are at once practical and interesting.

BIRMINGHAM.—There is no lack of reports on the sanitary condition and progress of Birmingham. Every quarter, Dr. Hill issues a full account of the sanitary history of the borough during that period, with numerous appended tables; and in addition, he publishes an equally full annual report, which, besides other features of interest, contains numerous finely lithographed disease-maps. It is impossible to give within reasonable limits a full abstract of a report which concerns a district of nearly 400,000 persons, and we must therefore content ourselves with noticing some of its more prominent features. During 1878, a total of 15,964 births was registered, equal to a rate of 41.67, against 42.39 in 1877, and 39.38 in the ten years 1868-77. The deaths amounted to 9,962, or a rate of 25.2 per 1,000, as compared with rates of 24.8, 26.8, 26.3, 22.4, and 23.9 in the years 1873 to 1877. This rise is the result of an epidemic of scarlet fever, which raged in the borough during the whole year, but more particularly in the fourth quarter, and to the prolonged severity of the weather in November and December. The deaths of children under one year numbered 28.6 per cent. of the total deaths, and were 17.0 per cent. of the registered births. Zymotic diseases caused 2,421 deaths, or 25.1 per cent. of the total deaths. This is 845 more than the number for 1877, and 471 more than the average number for the five years 1873-7. Scarlatina was the most fatal of the zymotics, causing as many as 995 deaths, against 237 in 1877. The disease reached the height of its quinquennial epidemic wave in the fourth quarter, and during the present year it has died out. Dr. Hill attributes a large part of the increased mortality from this disease to the association of children in much larger numbers than formerly at private, national, and board schools. Diarrhœa proved fatal in 680 instances, 69 per cent. of the deaths occurring in infants under one year of age and 90.6 per cent. in children under five. Whooping-cough, which comes next in order of fatality, caused 455 deaths; and fever 147, 2 of which were certified as typhus, 119 as typhoid, and 26 as simple continued fever. Diphtheria was credited with a much larger number of deaths than in 1877 (83 against 52); whilst measles, on the contrary, has largely diminished in fatality, it being accountable for only 54 deaths, against 309 in 1877. During the year, the Borough Hospital continued to be extremely useful. It received 424 cases of scarlatina and 29 cases of small-pox, 17 of the latter being vaccinated and 12 unvaccinated. It is very satisfactory to find that the public are beginning to appreciate better the advantages offered by the hospital. The number of cases admitted in 1878 is larger than in any year since its establishment, not excepting 1875, when the severe epidemic of small-pox was ragiag. The disinfecting station has also been much more used than formerly, 6,976 articles being disinfected at about £210. During the year, sanitary work was pushed on with activity. Nearly 500 polluted wells were closed, 3½ miles of sewers were constructed, 5,992 pans were introduced, and 12,377 notices were issued for the abatement of nuisances.

CARDIFF.—Dr. Paine's report is long and interesting, dealing in a very thorough fashion with the sanitary requirements of the borough. The drainage of the central and western divisions is reported as satisfactory, but that of the east requires immediate attention. The water-supply is also an urgent question, many of the wells being irretrievably polluted, and the waterwork's supply being inadequate, and some of it suspicious. During the year 1878, 2,795 births and 1,468 deaths were registered, equal to rates of 35.3 and 18.5 per 1,000. The latter is the lowest rate recorded in any year since the formation of the district. The infantile mortality contrasts very favourably with that of the average of the kingdom, the deaths under one year being 14.9 per cent. of the births. Zymotic diseases caused 254 deaths, the average for the last three years being 296. The percentage of zymotic to total deaths was 13.4, and the zymotic death-rate was 2.5, as against 4.4 in the large towns, Whooping-cough and diarrhœa were the diseases that were

most fatal during the year, causing 70 and 73 deaths respectively. Of late years, phthisis has sensibly declined; and Dr. Paine attributes this to the improved system of drainage of the lower part of the town, and the great extension of building on the northern side, which has a subsoil of light porous gravel. The duties devolving upon the Medical Officer, with regard to the port of Cardiff, are of no light kind, but they seem to have been discharged with commendable diligence and promptitude.

BISHOP'S STORTFORD RURAL DISTRICT.—In this district, house-to-house inspections were begun by Dr. Ogle in 1876, the second of such inspections being carried on during 1878. There can be no doubt that these surveys are productive of good; but it must be very disheartening to find that nuisances, swept away in the course of one inspection, are found in full vigour at the next. The sanitary action of this authority seems indeed, from the report, to be of a very hand-to-mouth character; and the natural consequence is an abnormal amount of preventable disease. During 1878, 251 deaths were registered in the district, equal to a rate of 15.9 per 100. Of this number, 2 occurred from small-pox and 2 from scarlet fever, which was extremely prevalent at Broughing. Typhoid caused 5 deaths, three of which were in one village; and diphtheria, which has been very prevalent in parts of the district since 1875, 3 deaths. Whooping-cough caused 17 deaths, and was extraordinarily prevalent in various parts of the district, especially at Sawbridgeworth. A hospital and disinfecting apparatus seem to be much required for the district.

THE APPOINTMENT OF DEPUTY POOR-LAW MEDICAL OFFICERS.

SIR,—In your impression of this day, I notice a statement regarding the action of Mr. Bell Sedgwick, Vice-Chairman of the Marylebone Board of Guardians, and myself, in connection with deputies of medical officers. It is painful for me to remark that the author has perverted facts. Mr. Sedgwick and myself are the weekly official visitors of the public dispensaries connected with the Marylebone guardians, and responsible for the attendance of the medical officers in their duties to the General Board. We considered it advisable that any deputy appointed by a medical officer should be introduced to us, solely for personal acquaintance, on our official inspection, in the absence of the paid officer. What degradation could be in this I am at a loss to understand. For myself, I think almost all the medical officers of our north and south dispensaries, if asked, would be unanimous in stating, that I always acceded to their wishes, and was ever ready to support them as a professional brother should.—Yours truly,

J. MCGRIGOR CROFT, M.D., M.R.C.P.,
late Staff-Surgeon Her Majesty's Royal Army, Guardian and Vestryman of Marylebone.

Mandarin Villa, St. John's Wood, November 15th, 1879.

*** We commented on the action of Mr. Sedgwick and Dr. Croft in consequence of reading the report of the proceedings of the Board of Guardians, which appeared in the *Marylebone Mercury*. Dr. Croft's letter has not induced us to modify the views we then expressed in the slightest degree, so feeble an excuse aggravates the grievance.

MAGISTERIAL DEFINITION OF INSANITY.

SIR,—As it is just probable that my *confrères* of the Poor-law Medical Service may have (in their performance of their duties) to encounter a similar *désagrément*, I trust that, in their interest, and in that of the insane poor, you will insert the following in your next issue.

On October 14th, there was admitted into the insane ward of the Westminster Workhouse a young Pole, named John Sobieski. He had been found wandering at large by the police of the C Division, and came in with a certificate from the acting police-surgeon that he was of unsound mind. I saw him on the 15th, and found that he was very excited, at times incoherent, and had several delusions, the dominating one being that he was the Lord Jesus, etc. The next day, I filled in the usual certificate. On the following day, he was visited by Dr. Edmonds, who, in his certificate, contented himself with writing as follows: "He tells me he is the Lord Jesus." In addition to this, he put in the statement made by the ward attendant and others. Dr. Edmonds, as I understand, went with Sobieski to the police office in Great Marlborough Street. On his appearance before Mr. Newton, that magistrate proceeded to examine the lunatic; and after some conversation, decided not to countersign the certificate, as in his (Mr. Newton's) judgment, Sobieski was not insane; and that, too, in spite of his attention being called to the fact that Sobieski asserted that he was the Lord Jesus. Mr. Newton, stating that, in his opinion, such delusion was no proof of insanity, Sobieski was, on this decision, brought back to the workhouse. At the end of a week or so, as he had become quieter, I directed that, under observation, he should be set to work. A few days afterwards, I again found Sobieski in the insane ward, he having become violently excited. After this, I saw him daily for several days, and never had reason to doubt the correctness of my original opinion. At last his conduct became such, that I was compelled to take action; and, on the 13th ultimo, I added to my original certificate the following: "He now believes that there is a person under his bed, and that God has said he is to go out to-day; is at times guilty of insubordination and violence." Dr. Edmonds saw him on the 19th, and gave a similar account of his condition. He also accompanied him again, when Sobieski for the second time went before Mr. Newton, who, as on the former occasion, declined to sanction his removal, asserting that, in his opinion, Sobieski was of sound mind. The acting relieving officer then remarked that the medical officer would have to discharge the man; to which Mr. Newton replied, "If he does so, I shall write to the Local Government Board and complain of him". Two or three days later, I was informed that Mr. Newton had sent for the master of the workhouse, and had asked him what had been done with Sobieski. The master replied that he was [illegible] ne ward; whereupon the magistrate said, "Why do you not discharge him?" to which the master replied, "I cannot do that, as our doctor says that he is insane". He then left. These facts having been brought to my knowledge, I sent to the Local Government Board an account of the proceedings, and did not hesitate to express my opinion as to Mr. Newton's conduct. In due course I received a reply, intimating that the Board had referred the matter to the Commissioners in Lunacy. On the 3rd instant, two commissioners, Messrs. Nairne and Bagot, visited the House, and examined Sobieski. They promptly decided that he must be removed without delay.

It will be thus seen that a religious melancholic, with marked suicidal tendencies, has been kept (all but a few days) for nearly two months in one room, in which imbeciles, patients with delirium tremens, and others have been placed; and the prospect of recovery has been retarded simply because the magistrate, from an entire misconception of his duty, has thought fit to set up his own judgment against the opinion of the divisional surgeon, my own, and Dr. Edmonds; and, as it will be seen, against those of the Lunacy Commissioners; for, without their interference, he might have remained there for an indefinite time. Surely, where stipendiary magistrates demand the production of two certificates, they should be content and act upon them.—I am, sir, yours obediently,

JOSEPH ROGERS.

Dean Street, Soho, December 6th, 1879.

CERTIFYING OF PAUPER LUNATICS.

SIR,—I should feel much obliged if you could enlighten me upon the following point. Is it necessary or usual for the relieving officer to introduce the parish medical officer in all cases of insanity previously to their removal to the county asylum? For instance, in a case where the friends of the patient have applied to the relieving officer to effect the removal to the asylum, should he call upon the regular medical attendant (if so desired by the relatives of the patient) or upon the parish medical officer, to sign the necessary certificate of insanity? It appears to me that, if the Board of Guardians give instructions that their medical officer is to be sent in to examine cases of insanity without any intimation of his visit to the medical man attending the case, and against the express wish of all those connected with the patient, they are calling upon him to perform duties repugnant to his feelings as a gentleman, and quite contrary to the rules of courtesy and professional etiquette.—I am, sir, yours faithfully,

ENQUIRER.

*** If a medical officer be required by an order to visit a person resident in his district, whom he finds to be of unsound mind, or if without such order it come to his knowledge that a lunatic likely to become chargeable to the rates is resident therein, it is his duty to apprise the relieving officer thereof, who thereupon is required to give notice to a justice or to a magistrate, who directs that such lunatic should be brought before him, etc. It rests wholly with the justice or magistrate who should be the medical gentleman or gentlemen who should be called to advise him as to the supposed lunatic's state of mind, and to fill in the certificates. Boards of Guardians assume to have the power to appoint the medical gentleman who should examine lunatics, but such assumption is contrary to the statute, which expressly ordains that the power is vested solely in the justice or magistrate. All fees paid by Boards of Guardians to their medical officers or others for certifying for pauper lunatics would be surcharged upon them, if the attention of the auditor was drawn thereto, as the approval of the justice or magistrate of the amount, etc., is necessary to make such payments legal. We would advise our correspondent to acquaint the justice or magistrate of his district with the illegal assumption of authority by the Board of Guardians.

MILITARY AND NAVAL MEDICAL SERVICES.

ARMY MEDICAL SERVICE.—The following candidates were successful for appointments as Surgeons in Her Majesty's British Medical Service, at the competitive examination held in London, on December 8th, 1879.

	Marks.		Marks.
1. F. R. Baxter	2530	34. R. D. Donaldson	1750
2. A. H. Keogh	2525	35. H. L. E. White	1745
3. C. B. Hill	2420	36. C. M. Johnston	1740
4. J. R. A. Clark	2330	37. J. L. Hall	1705
5. H. E. B. Flannagan	2315	38. A. H. Burlton	1700
6. H. J. Michael	2310	39. E. North	1695
7. T. Dorman	2215	40. G. F. Poynder	1685
8. A. W. G. Inman	2185	41. J. K. Sherman Bigg	1675
9. T. M. Corker	2180	42. G. F. A. Smythe	1665
10. E. H. Myles	2145	43. H. T. Battersby	1655
11. G. S. Robinson	2125	44. A. Hewitt	1645
12. L. B. Moffitt	2115	45. F. Landon	1640
13. C. A. Webb	2085	46. P. Mulvaney	1635
14. J. G. S. Lewis	2065	47. J. E. Nicholson	1625
15. H. Martin	2050	48. T. W. Beale	1620
16. A. E. J. Croly	2045	49. F. E. C. Hood	1605
17. R. O. Cusack	2040	50. W. O. Wolsley	1600
18. L. E. Smith	2035	51. T. F. McNeece	1595
19. W. A. Cowen	2015	52. R. V. Smith	1590
20. R. H. Forman	1995	53. B. L. McCreery	1585
21. S. J. Flood	1985	54. A. P. O'Connor	1575
22. D. S. Williams	1965	55. A. McM. Bolster	1570
23. G. W. Robinson	1945	56. D. Wardrop	1545
24. N. Cameron	1940	57. G. T. Goggin	1530
25. J. Watson	1925	58. H. G. Christian	1515
26. O. Todd	1905	59. J. M. Jones	1470
27. A. O. Geoghagan	1876	60. F. M. Baker	1465
28. C. R. Egan	1870	61. C. Williamson	1440
29. J. D. Day	1805	62. R. Oliver	1415
30. W. R. Henderson	1805	63. A. Asbury	1400
31. R. T. Cumming	1800	64. P. M. Carleton	1375
32. A. M. Kavanagh	1765	65. F. R. Maclean	1305
33. J. H. Harwood	1765		

The following gentlemen, having obtained the qualifying number of marks, have also been accepted.

66. H. L. Cox
67. J. P. Carmody
68. R. W. Barnes
69. T. P. Walsh
70. G. H. K. McO'Callaghan
71. P. H. Fox
72. H. A. Wall

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted as Licentiates on December 22nd, 1879.

Adams, Alexander Peers, Greenholme, Kingston Hill.
Bates, Henry Leslie, Streatham Common, S.W.
Bond, Charles John, 30, Albert Street, N.W.
Branson, Cecil Lugard Smyth, 30, Tavistock Road, W.
Crew, William Thomas, 11, Falmouth Road, S.E.
Dimmock, Henry Peers, 13, Moore Street, S.W.
Ensor, Theodore Francis, Milborne Port.
Faulkner, Joseph, 36, Darnley Road, E.
Jones, Charles Montagu Handfield, 49, Green Street, W.
Lathbury, Charles John, Breaston, Derby
Lewis, Christopher John, 16, Park Place Villas, W.
Lewis, George Stephens, Guy's Hospital, S.E.
Lovell, Robert Haynes, St. Mary's Hospital, W.
Mort, Herbert Brownlow, Southport.
Rich, Evelyn Arthur, Winchester.
Townsend, Knowlson, 18, Broughton Place, Edinburgh.
Warrburton, Arthur, Betley.

The following candidate, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College.

McKee, Gerard Macklin Eccles, 2, Overstone Road, W.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 18th, 1879.

Cooke, John William Cross, Hockesly Priory, Colchester
Griffin, Henry Frederick, Banbury, Oxon
Loveridge, Arthur William, Hammersmith
McDonagh, James Samuel, 211, Hampstead Road, N.W.
Morris, William Albert, Caerleon, Monmouthshire
Underhill, George, Tipton Green, Staffordshire
Wood, Charles, High Street, Uttoxeter

The following gentlemen also on the same day passed their primary professional examination.

Camp, Charles Frederick, Guy's Hospital
Honman, Andrew, Charing Cross Hospital
Roberts, Thomas, London Hospital
Villanueva, Francis Horton, Charing Cross Hospital

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences in Medicine and Midwifery of the College, held on Monday, Tuesday, Wednesday, and Thursday, December 8th, 9th, 10th, and 11th, 1879, the following were the successful candidates.

For the Licence to Practise Medicine.—Hugh Harris and William Robert Minchin Young.

For the Licences to Practise Medicine and Midwifery.—Richard Winter Barney, Edward Frederick Sheehy Barry, Edmund Berry, James Joseph Harding, Charles Henry Hartt, Edmund Poole Howell Henn, Thomas Jackson, Michael Keelan, Eliza Foster MacDonogh, and Francis John O'Reilly.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

BEDFORD GENERAL INFIRMARY—Resident Surgeon. Salary, £100 per annum, with board and lodging. Applications on or before January 8th.

*BROMPTON PROVIDENT DISPENSARY—Medical Officer. Applications, with testimonials, to the Secretary, on or before January 3rd.

BURY DISPENSARY—House-Surgeon. Salary, £120 per annum, with furnished apartments, fuel, and lighting. Applications on or before the 27th instant.

*CHARING CROSS HOSPITAL—Surgical Registrar. Applications on or before January 3rd.

HOSPITAL FOR SICK CHILDREN, Manchester—Senior and Junior Resident Medical Officers. Salary, £100 and £80 per annum, with board and residence. Applications on or before December 31st.

MIDDLESEX HOSPITAL—Assistant to the Ophthalmic Surgeon. Applications, with testimonials, on or before January 3rd, 1880.

NAGHAN UNION—Medical Officer for Scotstown Dispensary District. Salary, £120 per annum as Medical Officer, with £15 per annum as Medical Officer of Health, exclusive of Registration and Vaccination Fees. Election on the 30th instant.

OUGHTERARD UNION—Medical Officer for Lettermore Dispensary District. Salary, £100 per annum, £10 yearly for boat hire, £12 per annum as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 31st instant.

*ST. BARTHOLOMEW'S HOSPITAL—Assistant-Surgeon. Applications not later than January 8th, 1880.

SEAMEN'S HOSPITAL SOCIETY—Visiting Physician. Applications on or before January 7th, 1880.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

*WORCESTER GENERAL INFIRMARY—Third Physician. Applications, with testimonials, not later than January 14th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

HARDWICKE, E. H., Esq., appointed a Factory Surgeon for the Birmingham District.

LENDON, Alfred, M.R.C.S., appointed House-Surgeon to the Bristol Royal Infirmary, *vice* G. H. Lilley, M.D., resigned.

O'BRIEN, Russell, M.B., appointed Medical Officer to the St. Saviour's Place Dispensary and Friendly Societies' Medical Association, York.

*SLOAN, Samuel, M.D., appointed Physician-Accoucheur to the Glasgow Maternity Hospital, *vice* R. D. Tannahill, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

MACDONALD.—On the 21st instant, at Dumfries, the wife of A. D. MacDonald, M.D., of a son.

THE METEOROLOGICAL SOCIETY.—The usual monthly meeting of this Society was held at the Institution of Civil Engineers; Mr. C. Greaves, President, in the chair. A paper on a Sand-Storm at Aden, July 16th, 1878, was read by Lieutenant Herbert H. Russell (8th Regiment); one on a new form of Hygrometer, by Mr. G. Dines. This is a modification of the hygrometer which was first described at the British Association meeting in 1872. The outside dimensions of the instrument, inclusive of the wood-casing, are about ten inches in length, three inches in breadth, and two inches in depth. The upper part consists of a vessel of thin metal, six inches long, two inches and a half broad, and one inch and a quarter deep. Beneath this, and detached from it, but connected by a pipe, is a small chamber, two inches and a quarter long and one inch and a quarter deep from back to front, standing about half an inch more forward than the vessel above, and with a piece of thin black glass in front. Inside this chamber, parallel to the front, is a division which separates it into two parts. This division does not extend quite to the top of the chamber, and is slightly turned over towards the front, so as to allow water to pass over it, and to induce the latter to flow more directly to the centre of the front of the chamber. The upper vessel is connected with the bottom and back part of this chamber by a small pipe, with a tap to it, which is turned from the outside. The front of the chamber has a pipe attached to the bottom, passing upward in an inclined direction, and terminating at the outside in a small lip or spout. A thermometer, with the bulb inside and over the front of the chamber, passes through an India-rubber collar at the top of it, and is protected by a groove sunk in the face of the wooden case. The action of the instrument is as follows. Water, of a lower temperature than the dew-point, is poured in the upper vessel, and, on the tap being turned, flows into the back of the small chamber, and thence, passing over the top of the middle division, flows downwards, cooling in its passage the thermometer and black glass, and eventually escapes by the small spout on the right side of the instrument. As soon as dew appears on the glass, the flow of the water is stopped beyond by means of the tap, and the temperature is read off by the thermometer. When ether is used, it is poured into the small spout, passes down the inclined pipe, and remains in the front part of the chamber. A piece of metal tube, ground so as to fit tightly the inclined pipe, and with an aspirator attached, is then inserted, and the dew-point is ascertained in the same way as by Regnault's hygrometer. A paper on the Diurnal Range of Atmospheric Pressure was read by Mr. R. Strachan. The author had compiled a table of constants, from thirty places in varous parts of the globe, which support Sir John Herschel's remark that "the diurnal oscillation of the barometer is a phenomenon which invariably makes its appearance in every part of the world where the alternation of day and night exists; and that, within the Arctic Circle, the diurnal dies out, or rather merges in, the annual oscillation". A note on a curious fracture of a Solar Radiation Thermometer was read by Mr. G. M. Whipple. Mr. R. H. Scott, F.R.S., exhibited and described a new form of Sunshine Recorder, which is to be used during the coming year at a considerable number of stations distributed over England.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30; Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 2.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SAYRE'S APPARATUS TO THE SPINE.

SIR,—At the Samaritan Hospital for Women and Children, I constantly apply Sayre's plaster-of-Paris bandages in the recumbent position. I have the patient's legs and buttocks placed upon one table, the head and neck on another, a space being left between for the trunk. One nurse makes extension by the legs, another by the arms. In this position, the plaster-of-Paris bandages can be applied quite as readily and as effectually as when the patient is suspended, and with less terror to the patient.—Yours truly,

A. WYNN WILLIAMS, M.D.

DR. DESMOND (Nuthill).—The certificate you quote is valueless, and ought to have no weight against you. He must be a bold man who, on being called to a case such as you describe, will undertake to say that no diphtheria has been present within fourteen days.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

A TOUCHING APPEAL.

SIR,—Dr. Heywood Smith has kindly inserted in your valuable paper an appeal on my behalf. May I ask you to peruse the following statement, and then, perhaps, you will kindly use your great influence for me? I am seventy-four years of age, and for some years have suffered from disease of the bladder and cancer. I was last year for four months in St. George's Hospital, and was operated on by Mr. Pollock, who removed the penis; but the abscesses still continue to discharge, and my strength is gradually giving way. I am quite unable to do anything in my profession from the prostration of system, and have not done so for some years. All my means are gone, and I am really almost destitute; and where I am staying I shall be obliged to leave, from inability to pay the poor people (it is a small place, where the proprietor breeds poultry). I knew them some years ago. Do, sir, I entreat of you, interest yourself for an old fellow medical. I can refer you to Mr. Pollock, Dr. Heywood Smith, Dr. Cooper Rose of Hampstead, and Dr. Cooper of Hampstead. These gentlemen well know what my sufferings are. You will, I am sure, excuse the liberty I am taking; but my great age and severe sufferings compel me to thus address you, and entreat your kind response to my painful application.—I remain, dear sir, yours respectfully,

FRANCIS B. DALTON, M.R.C.S.E., 1831; L.A.C., 1829.

Weston Turville, near Tring, December 18th, 1879.

*** Any subscriptions forwarded to the editor or to the JOURNAL office will be acknowledged in these columns and applied for Mr. Dalton's benefit.

SIR,—As the result of your kind insertion of my letter, I have received about £27 for poor Mr. Dalton, some of which I have forwarded to him, and with some I have enabled his wife to purchase stock for the shop, and Mr. Dalton has approved of the way I have laid out the money. A little more would still be very acceptable, to enable them to pay their way. I have acknowledged the receipt of each donation as it has come in, with the exception of one (anonymously) from Southampton.—Yours faithfully,

HEYWOOD SMITH.

Portugal Street, W., December 22nd, 1879.

A CASE OF HYDROPHOBIA.

SIR,—A young man, aged 25, died near here of hydrophobia on December 11th. He was bitten very slightly on both lips by a mad dog on the 3rd of January last. He did nothing to the wounds in the way of cauterisation, and suffered from no symptoms of the disease until the morning of December 8th, when he found a great difficulty in swallowing his tea at breakfast. That night his breathing became oppressed—so much so, that his friends thought he would be suffocated. The next day he seemed a little easier, but complained of a feeling of constriction about the throat, and of a difficulty in swallowing. Now and again he said he saw cats and dogs about the room. On the 10th, he could not swallow at all, and was quite delirious; on the 11th, he could swallow a little, but was pulseless, and gradually became weaker, and died quietly that afternoon.—Yours faithfully,

Frampton-on-Severn, Gloucester, Dec. 15th, 1879. R. E. BURGES, M.D.

ON THE TREATMENT OF LATERAL CURVATURE OF THE SPINE.

SIR,—I shall feel much obliged if you will kindly allow me space for the insertion of some remarks which I the other evening made at the Medical Society of London.

"In very mild cases of lordosis, I am perfectly of opinion that suitable gymnastic exercises, together with cold bathing and frictions, are generally sufficient; but, in the severer forms of rotary lateral curvature, the spine being spirally twisted like a corkscrew, extension is necessary in order to untwist it; having accomplished which, the cuirass should be applied in order to permanently secure thus much gained. Then, by daily gentle suspension, the straightening process is continued, the cuirass preventing its relapsing into its original condition; and so soon as it no longer forms a firm support, another must be applied, and so on till the cure is effected.

"The ordinary spinal appliances, having a pelvic band, and lateral supports with arm-crutches, and pads to press upon the cuirass laterally, I object to, for the following reasons: 1. The pelvic band very frequently excoriates the patient, besides feeling otherwise uncomfortable. 2. The lateral supports are useless as a means of extension, for the reason that the scapula, having no bony attachments to the spine, the shoulders may be pushed up to the ears without any extension of the spinal column; and the arm-crutches, from pressure upon the brachial plexus and blood-vessels, produce a disagreeable numbness, tingling, and swelling in the fingers, arms, and hands. Lastly, the lateral pads are incapable of straightening out the spinal curves. Suppose we take a piece of straight steel spring, and place it perpendicularly, with a sufficient weight on the top to cause it to curve in one direction, then a force acting against this horizontally, without first of all extending it or removing the weight, can only substitute a curve in the opposite direction, for the already existing one.

"With regard to the poroplastic jacket, heat and moisture are used to soften it for the purpose of adjustment, and, therefore, while worn, especially in the summer, the heat and perspiration from the body causes it to soften and give way to the deformity. From practical experience, I therefore give preference to the plaster-of-Paris cuirass for all forms of spinal curvature, if properly applied, no further exercise beyond daily extension being necessary."—Truly yours,

GEORGE CHARLES COLES.

20, Great Coram Street, Russell Square, W.C.

TEMPERAMENTS.

SIR,—Would any of your correspondents kindly inform me in what book I could gain information respecting different temperaments? I believe Professor Laycock has written on the subject, but I do not know in what work or publication to seek for it. Any assistance would confer a favour on yours truly, G. H.

A SUGGESTION.

WE desire to call the attention of those of our members who enjoyed the hospitality of the Irish people at the recent meeting at Cork, that the Duchess of Marlborough has appealed to the English people in the columns of the *Times* for donations for the relief of the starving poor in Ireland.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

DR. FOTHERGILL ON "SOCIAL PARIAHS" OF THE MEDICAL PROFESSION.

SIR,—I should like to say a few words in reply to Dr. Fothergill's article in your issue of the 6th instant. I may be pardoned for venturing to dispute his conclusions on the subject when I state I am an American myself, and that, like Dr. Fothergill, circumstances compelled me to be a village doctor for four years. During that time I had the pleasure and honour of knowing every one within six miles of my surgery. After eighteen months of single life, I married. My wife was an entire stranger to every one, and was neither by birth nor wealth entitled to any extra attention from our neighbours. Without one exception, every one called on us after my marriage, and during the time we remained there we were constantly asked out to dinners, balls, etc. In not one single instance were we "patronised": on the contrary, we were always made to feel that we were equally and cordially received by all we met. Dr. Fothergill's articles impute a great want of true manliness to the English country people, and I am only too glad to give my experience as against his. I, too, have some knowledge of professional life in America, and I certainly do not think that a medical man holds a higher social status there than here. I could name at least a dozen of my fellow-countrymen who came to England at or about the same time I did, and who are so well satisfied with their position, that, like myself, they have settled here. My patients, in the country practice I held, comprised all classes of society, and by one and all were we treated with perfect equality and courtesy. We had among our friends many clergymen of position and independent means, and from none did we receive anything but kindness. Of course, every medical man has trials and difficulties, but I contend they are not one degree more in England than in America.

Apologising for my letter, I may say I have written it more from a sense of what is due to English county and country families than from any idea that village doctors need defending as to their social position. If a doctor (village or town) is a competent man and a gentleman, he has nothing to fear.—I am, sir, faithfully yours,

GEO. H. H. DEWOLFE, M.D.Canada, M.B.Edin.

Wolfville, Totley, near Sheffield, December 16th, 1879.

SIR,—Dr. Fothergill's caricature, in an American paper, of the British country practitioner and wife, has been so well answered in your columns, that only the exceptional circumstances which have afforded me an unusually good opportunity of knowing the truth can be my excuse for trespassing on your space. An intimate personal acquaintance for nearly ten years with American life, during which time I enjoyed the hospitality of both town and country medical friends, enables me to state that, notwithstanding the presumed republican social equality of all classes in the United States, the position the average medical man holds there is not equal to that which he occupies in Britain. The principal reason for this is, that as there is no medical registration, it is difficult, unless from personal knowledge, to tell whether an American doctor is a legitimate physician or a pure quack. Even without Dr. Fothergill's candid confession, it was patent to any one who had ever spent any time in America, that he had never been there, and knew nothing of the actual social status of the American practitioner. As with us, a good man there is welcome everywhere, his profession procuring for him additional consideration.

By birth a Scotchman, and having the good fortune to have an Irish wife, I am thoroughly conversant with the estimation in which the profession is held both in Ireland and Scotland. There is no country in the world where our profession stands higher, socially, than in Ireland. Unless ostracised by personal disqualifications, the Irish practitioner has the *entrée* of the best society. In Scotland, the profession is held in much esteem, though not so highly honoured as in the "sister isle". Of Wales I cannot speak from personal knowledge. In England, I have had the privilege of being a village practitioner for three years, and a London practitioner for five years. In both positions my experience has been the opposite of that indicated by Dr. Fothergill. In the country, though I had to do with five rectors or vicars, and though I was constantly opposing their prejudices and habits, there was no attempt at "bullying" me; and my wife and myself gave considerable offence because we felt that the conscientious discharge of professional duties would not warrant frequent absences at dinner parties and other social gatherings miles away from our house in a village which was the centre of a district in which I was the sole resident practitioner.

But there is some truth in Dr. Fothergill's description of the English medical position. In Ireland and Scotland, a doctor is esteemed for his profession; in England, he is esteemed for his individual qualities. The reason is obvious. The personal misconduct of many practitioners, the keeping of shops for the retail of pennyworths of castor-oil and "sweeties" by others, and the giving of advice with a supply of medicine for fourpence by graduates in medicine and surgery, so combine to lower and degrade the medical profession in England proper, that it is to me a matter of astonishment any social respect is paid to any of us.—Your obedient servant,

London, December 20th, 1879. NORMAN KERR, M.D.

*** We have received so overwhelming a mass of protests against Dr. Fothergill's late letter in our columns, that it is impossible to publish more than a few, and these of the more moderately worded epistles. This little escapade must not be taken too seriously. No doubt Dr. Fothergill only meant to strongly emphasise some particular type which had struck his attention, and in doing so yielded to the temptation of over-drawing the picture and generalising it. We have felt the injustice as strongly as any of our correspondents, but it would not be kind or fair to Dr. Fothergill to treat this as more than a lapse of the pen and a temporary error of judgment.

A NOVEL METHOD FOR ARRESTING EPISTAXIS.

SIR,—Perhaps the following may interest some of your readers. I was called to see a patient about five miles' distance, no particulars having been given by the messenger. On my arrival, I found it was a severe case of epistaxis, which had been going on in spite of the usual domestic remedies, such as cold water cloths, etc., from 8 A.M. until my visit at 11 A.M. The loss of blood had been so excessive as to produce faintness, sickness, and other usual symptoms. Not knowing the nature of the case, I had come quite unprepared, but gave him a drachm of the fluid extract of ergot I had with me, and repeated the application of vinegar-and-water cloths to the forehead and nose, combined with elevation of the upper extremities, but without effect. I then attempted to plug the posterior nares with the assistance of a male elastic catheter, but its introduction produced such violent retching that I had to desist. I was now at a loss what to do, until the catheter suggested a means of applying the only available styptic, vinegar and water. Having removed the clots which filled up the nasal cavity, and passed the catheter well up the nostril, and having no syringe at hand, I filled my mouth with the mixture of vinegar and water, and thus injected it. At first this made the patient retch, but after one or two injections, I had the satisfaction of finding this procedure (unpleasant though it was to me) quite successful, the hæmorrhage soon ceasing, and not returning.

This case shows, among other things, the awkward position in which a country practitioner is frequently placed, owing to deficient particulars given by messengers.—I remain, dear sir, yours truly, C. CLARK BURMAN, L.R.C.P.S.Ed.

Bamburgh, November 13th, 1879.

FOREIGN DEGREES.

SIR,—I have this day received from Jena a letter, of which the following is a correct translation.

"Jena, November 9th, 1879. Honoured Sir,—Against the perfectly unjustifiable attacks to which our Faculty is exposed with respect to the granting of doctors' degrees in England, I beg respectfully to inform you that your statement, that our Faculty does not grant the degree of Doctor without examination, is strictly in conformity with the truth, as is clearly set forth by the enclosed copy of the rules. At the same time, I beg emphatically to state that these rules for the doctoral examinations have been in force since the year 1862, so that, since that year, no degrees *in absentiâ* have been awarded here at Jena. The diploma without date shown by Mr. Carpenter is, therefore, very old. The fact that Dr. E. E. Schmid is mentioned therein as Proctor, and Dr. Keiler as Dean, has enabled me to fix the time more approximately when the diploma was given. It would be in the summer half of 1860. Kieser died in 1862, and the enclosed Examination Rules date from that time. I hope, honoured sir, that full satisfaction will be rendered to you and to our insulted Faculty, and beg respectfully you will have the above statement of facts published, and remain, with the highest esteem, yours truly, Professor Dr. G. SCHWALBE, Dean of the Medical Faculty of University, Jena. To H. J. Hardwicke, M.D., etc., Honorary Secretary of the Foreign Graduates' Association of Great Britain."

Enclosed with this letter were the regulations of the Faculty of Medicine, of which the following is a correct translation.

"The conditions to be fulfilled by the candidate for the medical examination are as follows: 1. Certificates to be given as to the extent of medical studies (at least six terms), and the period of time which has elapsed since their completion. 2. Satisfactory testimonials as to character from the neighbouring head office of police. 3. A written essay upon any subject of medical science (in German or Latin). The same composition to be handed in, which is afterwards printed in the form of a dissertation. 4. Matriculation into this University. This is done when the candidate himself makes his appearance. 5. Payment of examination and promotion fees to the amount of 141 thalers must be made. In case the examination is not passed, the promotion fees and 52 thalers are returned. The examination will only be held in the German language. It comprises all branches of Medicine, viz., Anatomy, Physiology, General Pathology, Pathological Anatomy, Special Pathology, Therapeutics, Surgery, and Midwifery. No examination takes place in the holidays. The Faculty holds examinations from November 1st until March 15th, and from May 1st until August 15th. When the examination is passed, the student has to give in his dissertation, the subject of which he chose for himself. The Faculty examines the work to see if it is fit for publication. A dispensation from the Latin or German Disputation (or defence of thesis) may be granted when the examination is very satisfactorily passed. After the essay is printed, and also when the public disputation is over, the making out of the diploma takes place. The degree of Doctor will only be conferred in this Faculty of the University of Jena upon fulfilment of the abovenamed conditions. Dr. G. SCHWALBE, Dean of the Medical Faculty, University of Jena, November 9th, 1879."

I think, after reading the above letter, Mr. Carpenter must come to the conclusion that he is bound in honour to name the date of the diploma he published as having been conferred, without examination, by the University of Jena. Either the diploma was granted before the year 1862, or else it is a forgery, and should in neither case be produced in support of the aspersions he has endeavoured to cast on continental degrees. All that foreign graduates ask for is fair play, and I think the public must admit that, so far, they have not received it. If it could once be clearly shown that any continental university granted degrees, in the present day, without insisting upon good and searching examinations being first of all passed, then, I feel convinced, no body of men would more willingly raise their voices in condemnation of such an abuse, than the foreign graduates of Great Britain. But such has not been shown. On the contrary, all the accusations which have been levelled against continental universities have been at once and most satisfactorily met and refuted by foreign graduates, and yet this ungenerous and unfair persecution is persisted in. I am just now occupied with the publication of a book entitled *Medical Education and Practice in all Countries of the World*, in which I shall be able to show to the profession that, with the exception of some of the republics in America, there is not one single country in the world where an university degree in medicine, or any other such diploma, can be obtained, without passing searching examinations, as regularly conducted as are those of our own universities. One word in reply to the letter of "M.R.C.S. and L.S.A." This anonymous correspondent, who seeks to bring discredit upon all foreign degrees, no matter how, when, or where obtained, and who is either ashamed or afraid to append his proper signature to his letter, informs us that he negotiated with certain parties in England, about three years since, for the purchase of some foreign degrees. As is usual with these anonymous writers, "M.R.C.S. and L.S.A." carefully omits to mention from what country these diplomas were brought to England for sale. He knows perfectly well that there was not a single degree offered to him for sale belonging to an university of the old world, unless it was, like the Jena degree brought forward by Mr. Carpenter, of ancient date. Let "M.R.C.S. and L.S.A." deny this if he can. I should recommend him also, when he next makes such assertions, to be more explicit with respect to places and dates, and to append his own signature to his letter, as he seems quite to forget that such vague insinuations are likely to impugn the honour and integrity of most honourable institutions.—I remain, sir, yours faithfully,

Sheffield, November 15th, 1879. HERBERT JUNIUS HARDWICKE, M.D.

SIR,—In my letter of the 8th, I neglected to say that, in 1870-71-72, I had a lon correspondence with agents who were advertising in various papers, professing to procure degrees from foreign universities. They all, at the first, professed to be able to procure any degree from the continent, but when pressed to name the university, they all fell back on America, and candidly admitted that a German or Belgian degree could not be procured without an examination on the spot. They were all unanimous in naming Philadelphia as the Americans' university. On receipt of the money, the diploma would be sent. I had the opportunity of seeing one of these diplomas, and it certainly was elaborate; the stars and stripes, and the eagle, and the cap of liberty, were all there. This had been granted to a dissenting

minister who had been a druggist, and he had paid, I believe, £20 for it. In the list of ministers of the denomination to which he belongs, the letters M.D. are placed after his name.

Shortly after this, the correspondence between the American Consul in London and the University was published, and the charter cancelled. These degrees can still be procured from an agent in Jersey, who has a large stock by him. If continental degrees had been for sale, as some infer, these men would have had them, as one of them was a graduate of a German university which afterwards struck him off their roll.—Yours, etc.,

W. EASBY, M.D.

March, Cambs., November 17th, 1879.

SIR,—Under Mr. R. H. S. Carpenter's auspices, the question of foreign degrees seems to be drifting into a discussion concerning honorary diplomas generally. Mr. Carpenter attacks the London and Edinburgh Colleges of Surgeons for conferring their Fellowship as an honorary distinction. Mr. Carpenter appears to forget, or be ignorant of the fact, that such Fellowships are given only to those already possessing a registrable surgical qualification. I think that a Fellowship is a distinction which may well be bestowed by election, and not only necessarily after examination; it is not given to unqualified persons, thereby enabling them to get on the *Register*, but is granted only as a higher surgical distinction to those known to be worthy of it. It seems to me that a distinction may be drawn between diplomas through which a man gets on the *Register*, and which certainly should be granted only after searching examination, and honorary distinctions and degrees, as Fellowships and foreign M.D.s (genuine), conferred on those already possessing registrable qualifications.

With regard to foreign degrees, it would be interesting to learn from what Universities the diplomas purported to come, which were offered to "M.R.C.S. and L.S.A." at from £3 to £13 each. Mr. Nelson Hardy, who seems, according to Mr. Carpenter, to have made some remarks on the Edinburgh College of Surgeons for "selling" its Fellowships, is, according to the *Medical Directory*, himself one of the purchasers of the distinction. I suppose he considered it of value, or why did he purchase it? I cannot but think the sooner all this profitless correspondence is discontinued, and the pages of the JOURNAL given up to more valuable matter, the better.—Yours, etc.,

F.R.C.S.EDIN.

MEDICAL ETIQUETTE.

MR. JOSEPH WELSH has clearly, according to his own showing, acted in defiance of the plainest rules of medical etiquette. Such rules must not be set aside because of personal differences: indeed, where the relations between two medical men are strained, there is the more need to be careful in matters of etiquette. Dr. Davis appears to have shown unnecessary zeal in pointing out to the guardians that Mr. E. S. Lane had no registrable medical qualification; but this was no reason why Mr. Welsh (Mr. Lane's senior partner) should act as he did, and furnishes no excuse for his conduct.

SIR,—In reply to Dr. Blackie's letter in the BRITISH MEDICAL JOURNAL of last Saturday, headed "Medical Etiquette", I beg to state that I much regret having caused him any annoyance in seeing and reporting on his patient without having previously consulted him in the matter. I certainly presumed on the very friendly terms which had previously existed between us, and consequently did not hesitate to ask—*not insist*—the patient to remove the dressing and show me the wound, when I found it was impossible for me to form an opinion without doing so. I am glad to apologise for any want of courtesy which, in his judgment or in that of others, may have been in the transaction.—Believe me, yours faithfully,

Thrapstone, December 15th, 1879. WM. H. MASTERS.

ELECTRICITY IN CANCER.

DR. ANDREW ALLISON writes to the *Yorkshire Post* the following extraordinary letter.

"SIR,—As the following case is one of public interest, I beg to draw the attention of your readers to the effects of lightning upon cancer, and as I am not aware that the records of the healing art furnish a parallel case, I venture to solicit its insertion in your excellent journal. Many years ago, I heard the late Dr. Golding Bird say that electrical sparks drawn from a cancerous structure were the only means of cure which he could endorse. In confirmation of this theory, I beg to submit an instance of the therapeutical freaks of atmospheric electricity in cancer. Some years ago, I attended a farm labourer for cancer of the lip, who was about to undergo an operation for its removal. In the meantime he undertook a day's ploughing, when he was struck down by lightning, and taken home in a state of insensibility. Both of the horses were killed, and the wooden beam of the plough reduced to fragments. My patient emitted a strong odour of ozone, indicating great condensation of the adherent oxygen. A healing process was set up in the lip soon after the accident. The cancer gradually lessened, and in a few weeks every trace of the disease disappeared, and for years he enjoyed complete freedom from his former sufferings, thus leaving the inference unaffected that the electricity secured for my patient an extension of life, and many years' relief from the usual consequences of cancer. In my opinion, frictional electricity is one of the most reliable agents we possess in the cure of cancer. In proof of the cancerous character of my old patient's lip, I may state that his granddaughter, now residing at Driffield, lately became the subject of a cancerous tumour over the larynx, which, assisted by Dr. Eames, I removed successfully, and under special after-treatment the cure seems to be satisfactory. I shall not venture to give any theory of the specific action of electricity in carcinoma, as I shall reserve that phase of the subject for one of our medical periodicals, destined for professional use.—I am, etc.,

A. ALLISON, M.D.

"Bridlington, November 25th, 1879."

Dr. Allison appears, from the [illegible], to be a practitioner possessing the M.D. of St. Andrew's, as well as the diploma of the Apothecaries' Society, London, and the Faculty of Physicians and Surgeons of Glasgow. It is, therefore, incomprehensible that he should have thought fit to address this surprising communication to a daily paper. If Dr. Allison really means to say that he thinks he heard the late Dr. Golding Bird say that "electrical sparks drawn from a cancerous structure were the [illegible] which he could endorse", we can only say that [illegible] believe as representing the actual opinion of Dr. Golding Bird, and can only assume that Dr. Allison is labouring under a misapprehension of a very serious kind. Nothing in Dr. Golding Bird's [illegible] justify so absurd a statement. Further, if Dr. Allison has any reason whatever for believing in what he calls a theory of the specific action of electricity in carcinoma, he should certainly [illegible] It is much to be regretted that he should discredit himself [illegible] in a provincial newspaper instead of communicating it to the [illegible] of the members of his profession, who alone, [illegible] are capable of forming a reasonable decision on the opinions which he puts forth.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

UNIVERSITY DEGREES.

SIR,—To see, as one has done lately, a contrast drawn between the M.D. of London and that of Edinburgh, is supremely ludicrous, and it might be readily proved that the average M.R.C.S. England is, in regard to every professional test, quite its equal. When we come to the social comparison, I think Englishmen may be thankful that they are not blessed with the prefix Dr.

I am practising in a county far north, where M.D.s luxuriate, and the universal question is, how do these men pass; how is it that their social qualifications are *nil*? With us, as a rule, they rank with the middle class tradesmen of the district, and are born and marry amongst them, and certainly derive all their ethics from the same quarter. Hence M.D.s consider a shilling fee ample compensation for a visit and advice (I may remark by the way that my veterinary surgeon is not satisfied with less than one shilling and sixpence). Their education has in most cases, I find, been acquired at the various village grammar schools. And yet these men, returning from Edinburgh and Glasgow, flourishing on M.D., are actually permitted to consider themselves graduates of an university, and by the country's laws take precedence of us. It is a gross injustice. We should resent it collectively as Englishmen, and, as only a matter of right, should insist upon a nation conjoint scheme, which would at least place them upon a guaranteed profession equality with us.—I am, etc.,

M.R.C.S.

*** We publish this epistle, which might be supposed to be humorous, because of its evident seriousness, and the pregnant lessons to be drawn from it, of an exactly opposite kind to those intended.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald; The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. W. Rutherford, Edinburgh; Dr. Kinkead, Galway; Dr. George Johnson, London; Dr. Waters, Liverpool; Dr. Finny, Dublin; Mr. Lowndes, Liverpool; Dr. Lombe Atthill, Dublin; Dr. W. Fairlie Clarke, Southborough; Mr. Davies, Clun; Dr. A. Wiltshire, London; Mr. W. D. Hemming, Bournemouth; Dr. W. Walter, Manchester; Mr. H. Greenway, Plymouth; Dr. R. Farquharson, London; Dr. F. Bond, Gloucester; Dr. Pitt, Norwich; Dr. Oliver, Newcastle-upon-Tyne; Dr. Allbutt, Leeds; Dr. Eben Watson, Glasgow; Dr. Tilt, London; The Secretary of Apothecaries' Hall; Dr. J. W. Moore, Dublin; Dr. James Russell, Birmingham; Mr. S. M. Bradley, Manchester; Dr. W. C. Lake, Teignmouth; Dr. J. H. Simpson, Rugby; Mr. B. Hunton, London; Dr. E. Ballard, London; Messrs. Letts and Co., London; Dr. C. E. Underhill, Edinburgh; The Registrar-General of England; Mr. S. B. Coates, Belfast; Messrs. Arnold and Sons, London; Dr. Ligertwood, Chelsea; Dr. C. Marriott, Leicester; The Registrar-General of Ireland; Mr. G. Eastes, London; Dr. Smith, London; Dr. N. Kerr, London; Dr. G. Lamson, Bournemouth; Mr. A. H. Hudson, London; Mr. S. Osborn, London; Dr. A. Samelson, Manchester; Mr. Lawson Tait, Birmingham; Dr. Hay, Alloa; Mr. W. Donovan, Leicester; Dr. M. M. Bradley, Jarrow-on-Tyne; Dr. J. W. Burman, Richmond; Mr. H. Maclean, Red Hill; Mr. H. S. Gaye, Newton Abbott; Dr. G. Dabbs, Shanklin; Mr. C. E. Greenwood, Blackheath; Dr. F. Payne, London; Mr. A. Hall, London; Mr. G. Bury, Whetstone; Dr. Heywood Smith, London; Dr. Rabagliati, Bradford; Dr. W. Strange, Worcester; Dr. Parsons, Bristol; Dr. Diamond, Tunbridge Wells; Dr. Worthington, Sidcup; Dr. Robert Perry, Glasgow; Mr. J. R. Long, Manchester; Mr. F. W. Lowndes, Liverpool; Mr. F. Kneebone, Bedford; Dr. J. Meredith, Birmingham; Mrs. T. Colbourne, Weston-Super-Mare; Mr. F. Benger, Manchester; Dr. K. N. Macdonald, Cupar Fife; Dr. J. Rogers, London; Our Dublin Correspondent; etc.

BOOKS, ETC., RECEIVED.

How to use a Galvanic Battery in Medicine and Surgery. A Discourse delivered before the Hunterian Society. By Herbert Tibbits, M.D., F.R.C.P.E. Second Edition. Revised, and Incorporating Three Lectures upon Electro-Therapeutics. London: J. and A. Churchill. 1879.

The Pathology and Treatment of Venereal Diseases. By Freeman J. Bumstead, M.D., LL.D. Fourth Edition, Revised and Enlarged, and great part rewritten by the author and by Robert W. Taylor, A.M., M.D. With One Hundred and Thirty-eight Woodcuts. London: Henry Kimpton. Philadelphia: Henry C. Lea. 1879.

The Lay of the Bell (Das Lied von der Glocke) and other Ballads by Schiller. Translated into English Metre by Andrew Wood, M.D., LL.D., F.R.S.E. Edinburgh: William P. Nimmo and Co. 1879.

The Art of Perfumery, and the Methods of obtaining the Odours of Plants. By G. W. S. Piesse, F.C.S. London: Longmans and Co. 1879.

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